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# The Adjectives of Yueqing

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UNIVERSITY OF CALGARY

The Adjectives of Yueqing

by

Xufan Lu

A THESIS

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## **Abstract**

This thesis explores the question of whether Yueqing, a Southern Chinese variety, has a category of adjectives. It explores the morpho-syntactic properties of nouns, verbs and adjectives, and proposes that adjectival concepts are expressed by words that belong to the syntactic category of verbs in the language. It further examines the aspectual classification of adjectival verbs and non-adjectival verbs, and finds that adjectival verbs are a subclass of stative verbs. It also finds that although bare adjectival verbs behave like stative verbs, they are special stative verbs that have the potential to undergo aspectual coercion and represent situations that are similar to activities and achievements.

*Keywords:* Chinese, Yueqing, syntactic category, adjective, lexical aspect, situation type

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## List of Abbreviations

1	1 <sup>st</sup> person
2	2 <sup>nd</sup> person
3	3 <sup>rd</sup> person
A	adjective
Adv	adverb
AP	adjective phrase
ASP	aspect
CL	classifier
CLP	classifier phrase
COMPAR	comparative
CMPL	completive
CONJ	conjunctive
DEM	demonstrative
DIST	distal
DP	determiner phrase
EXP	experiential
GEN	generic
IMP	imperfective
INCL	inclusive
INCP	inceptive
MAN	manner
N	noun
NEG	negation marker
NP	noun phrase
OBJ	object
PASS	passive
PL	plural
POSS	possessive
PRED	predicate
PRF	perfective
PROG	progressive
PROX	proximate
RC	relative clause
REL	relative clause marker
SG	singular
SPEC	specifier
SUBJ	subject
SUPRL	superlative
V	verb
VP	verb phrase

## Chapter 1: Introduction

Is there a universal syntactic category of adjectives? Are there languages without a syntactic category of adjectives? If the syntactic category of adjectives is not universal, do adjectives constitute a distinct subclass of nouns or verbs? These are complex questions that demand in-depth study of the lexical categories of individual languages. This thesis, which explores the adjectives of Yueqing, constitutes an effort to address these questions.

Yueqing is the variety of Chinese spoken in the city of Yueqing in Zhejiang Province in Southern China, with approximately 500,000 speakers.<sup>1</sup> Yueqing is a relative of Wenzhou, the most well-known variety of Ou Chinese. Bao (2004), Li (1998) and Zhengzhang (2008) classify Yueqing under Ou and Ou under the Wu Chinese sub-family. Dong and Jin (1998) and Zhengzhang (2008) argue for significant Tai-Kadai elements in the Ou culture and languages based on both the history of the Ou region as well as traces in the present-day Wenzhou language. Dong and Jin (1998, p. 288) propose that the earliest form of Ou developed between 333 B.C. and 310 A.D. when the Tai-Kadai-resided Ou region was taken over and reinforced by waves of Chinese migration. Linguistically, Yueqing has been scarcely studied. The only published work on Yueqing is *the Dictionary of Yueqing* (2004). The level of diversity within Ou is high, and as a result, though the city of Yueqing is only an hour's drive from that of Wenzhou, the two varieties are not mutually intelligible.

This thesis is divided into two parts. Part I (Chapter 1-3) ascertains the syntactic category of adjectives in Yueqing; I argue that, in Yueqing, adjectival concepts are expressed by words that belong to the syntactic category of verbs. Part II (Chapter 4-5) investigates the aspectual properties of adjectival verbs, and reveals that they are a special class of stative verbs.

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<sup>1</sup> The number is a very rough estimation as the younger generations in Yueqing do not speak Yueqing.

Part I of the thesis examines the morpho-syntactic properties of nouns, verbs and adjectives in Yueqing to find out whether adjectives, in this language, belong to the category of nouns, the category of verbs, or a distinct third category. In this introductory chapter, I review the literature on the semantic properties of adjectives, in order to identify a set of words in Yueqing that are reasonable candidates for a lexical category of adjectives. Chapter 2 identifies diagnostic properties of nouns in Yueqing and applies these diagnostics to words that have the semantics of adjectives in Yueqing. Chapter 3 identifies diagnostic properties of verbs in Yueqing and applies these diagnostics to words that have the semantics of adjectives in Yueqing.

Part II of the thesis explores the lexical aspectual classification of adjectival verbs to determine whether they have the lexical aspects of verbs, i.e. whether they belong to one of the well-established aspectual classes—activities, accomplishments, semelfactives, achievements or states (Vendler 1957, Dowty 1979, Smith 1991). Chapter 4 develops diagnostics for lexical aspectual classification of non-adjectival verbs in Yueqing. Chapter 5 applies those diagnostics to adjectival verbs to determine the lexical aspect of adjectival verbs. Chapter 6 serves as the conclusion, and summarizes the findings of the thesis.

Before we dive into diagnostics for nouns, verbs and adjectives, we need to make two questions clear. The first one is: what are nouns, verbs and adjectives? We will find out that the categories of nouns and verbs are easy to distinguish from one another based on syntactic properties, but the adjectival category can be elusive. The second question is: what is the subject of investigation if we are not sure about the syntactic category of adjectives? There is a way to identify adjectives even if they are not the same syntactic category across languages. In this introductory chapter, I will first look at how the categories of nouns, verbs and adjectives have been defined in the literature, and then identify a group of potential adjectives in Yueqing based

on the semantics of adjectives. Section 1.1 goes over the morpho-syntactic properties of nouns, verbs and adjectives described in the literature. Section 1.2 looks at the semantics of adjectives. Section 1.3 develops a pool of potential adjectives in Yueqing that will be the subject of investigation for this thesis.

### **1.1 Nouns, verbs and adjectives**

This section looks at properties of nouns, verbs and adjectives that may be valid cross-linguistically. I focus on the ideas of Baker (2003), a generativist, and those of Dixon (2004), a typologist.

The term “lexical category” refers to the categories of noun, verb and adjective as opposed to functional categories such as determiners and complementizers. Lexical categories usually have large numbers of members and are open to new members, while functional categories have small numbers of members and are normally closed to new members. Linguists believe that all languages have nouns and verbs, but do not agree on the universality of adjectives. For example, Dixon (1982) declares that adjectives, as a syntactic category, are not universal in the world’s languages:

Some adjective-deficient languages express all adjectival concepts through intransitive verbs (as in the case of Chinese),<sup>2</sup> others express some through nouns and some through verbs (for example, Hausa), and others invoke further means (Chinook renders adjectival concepts through the major classes Noun and Verb and the minor class Particle). (Dixon, 1982, p. 3)

Later research (Baker, 2003, Dixon, 2004) indicates that an adjective class can always be identified in every language. Baker (2003) comes from a theoretical perspective, and argues that

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<sup>2</sup> The conclusion of Part I regarding Yueqing is consistent with Dixon’s original characterization of Chinese.

lexical categories can be defined by their features: nouns are [+N, -V], verbs are [+V, -N], and adjectives are [-N, -V]. [+V] denotes the ability to license a specifier (subject); [+N] indicates an identity (having a referential index); adjectives have neither of these categorical features, making them a distinct lexical category. Nouns, verbs and adjectives, according to Baker's system, should have the following distinct grammatical properties:

- (1)    verbs:            (a) cannot conjoin with non-verbs  
                               (b) are inflected for tense/aspect  
                               (c) assign theta roles to specifiers
- nouns:            (a) can be preceded by quantifier/determiner  
                               (b) can be antecedents of pronouns/reflexives/traces  
                               (c) can be counted/measured  
                               (d) can be canonical arguments—subjects and direct objects
- adjectives:        (a) cannot do what verbs and nouns do  
                               (b) in some languages can be modified by degree words  
                               (c) in some languages can be modifiers of nouns  
                               (d) in some languages can be resultative secondary predicates

The diagnostics Baker (2003) proposes are intended to be universal. They may work for nouns and verbs. For adjectives, however, Baker (2003) admits that in some languages where adjectives are verb-like, certain environments where verbs and adjectives occur can be neutralized, although the two classes have different abstract representations. For these languages, however, Baker argues that adjectives can still be distinguished from verbs in attributive modification constructions (to be discussed in Chapter 3). Still, the diagnostics listed in (1) cannot readily be used to identify the adjective class in any language, because, on the one hand, there are

categories other than adjectives that cannot do what V and N do, and there are languages where adjectives seem to do what V and N do, and on the other hand, the rest of the diagnostics for adjectives are not meant to be universally applicable.

Dixon (2004, p. 8) adopts a typological approach, and observes that nouns are primarily core arguments and verbs are primarily predicates. Dixon (2004, p. 1) argues that, in all languages, adjectives can be grammatically distinguished, even though sometimes only subtly, from nouns and verbs. The diagnostics Dixon lists are often language-specific, and those for verb-like adjectives include the following:<sup>3</sup>

- (2) verb-like adjectives:
  - (a) allow different number/kinds of affixes from verbs
  - (b) allow different modifiers from verbs (e.g. intensifier but not modifier of manner)
  - (c) have different semantic meaning from verbs when reduplicated
  - (d) can modify nouns directly, while verbs cannot
  - (e) allow comparative constructions, while verbs do not
  - (f) can form adverbs, while verbs cannot. (Dixon 2004, p. 15)

These diagnostics are not universal, which means that they might be useful in a particular language, or they might not. Also, the term “grammatically distinguished” is not a precise one and does not necessarily denote a categorical difference. From the assumption that adjectives can be grammatically distinguished from verbs, we cannot deduce that adjectives are a distinct class. Not all sets of lexical items that can be grammatically distinguished belong to distinct word classes. Observe that subclasses of verbs can be grammatically distinguished. For example,

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<sup>3</sup> I only list these because this thesis studies adjectives which are verb-like.

English stative verbs usually do not take the progressive suffix *-ing* (Lakoff 1966, Dowty 1979). We can say that they do not allow the same kind of affixes as eventive verbs do. For instance, the stative verb *exist* does not take the progressive suffix: we cannot say *\*I am existing*, but we can say *I am running*, where *run* is an eventive verb. This kind of grammatical difference is not a result of categorical difference, but an effect of the verbs' different lexical aspectual classification.<sup>4</sup> The progressive viewpoint aspect is only possible with dynamic verbs which involve continuous input of energy. Since stative verbs are not dynamic, they are not compatible with progressive aspect. In contrast, active verbs are dynamic and therefore can take progressive aspect. Therefore, it is theoretically possible that, in some languages where adjectives are verb-like, adjectives are indeed verbs, but they are verbs with a different lexical aspectual classification from the other verbs. Their distinct lexical aspectual classification could be the reason why Dixon sometimes find the differences between verbs and adjectives to be "subtle" in some languages. Therefore, Dixon's diagnostics for adjectives are not necessarily useful for Yueqing, and he also does not draw a clear demarcation between adjectives and other lexical categories.

To summarize, Baker (2003) and Dixon (2004) propose universal as well as language-specific diagnostics to distinguish adjectives as a distinct word class from nouns and verbs. In Chapters 2 and 3, I explore the lexical categories of Yueqing. I will develop language-specific diagnostics for nouns, verbs and – if there is such a category – adjectives. I will then determine to what extent they match up to the universal and language-specific diagnostics proposed by Baker (2003) and Dixon (2004). Being able to diagnose lexical categories in Yueqing will enable

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<sup>4</sup> Lexical aspect will be the topic of Chapter 4 of the thesis.



us to identify the morpho-syntactic properties of words that have the semantics of an adjective as compared to nouns and verbs.

Since adjectives are elusive in their morpho-syntactic properties, we need to find a way to identify them in Yueqing. Therefore, in the next two sections, I will present Dixon (2004)'s semantic characterization of adjectives, and use it to identify the potential class of adjectives in Yueqing.

## **1.2 Semantics of adjectives**

In this section, I present the semantic types of adjectives and examples that are universally applicable, as observed by Dixon (2004).

The semantics of adjectives seems to be more universally stable than their morpho-syntactic properties. Dixon (2004) develops a list of canonical semantic types (and examples) for adjectives cross-linguistically, as summarized in Table 1. The semantic types in the first four rows of Table 1 are found in languages across the world, even in languages with a very small set of adjectives, such as Igbo, which only has eight adjectives (Dixon 2004). These four semantic types are called the core adjective semantic types by Dixon (2004). The semantic types in the next three rows are found in languages with medium- or large-sized adjective classes, (Dixon 2004). The semantic types in the last six rows are found in some languages with a large class<sup>5</sup> of adjectives.

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<sup>5</sup> Dixon (2004) characterizes a medium-sized class of adjectives as having at least a few score members. However, he does not define the size of a large adjective class.

**Table 1. Semantic types and examples of adjectives (Dixon, 2004, p. 3-5)**

	<b>Semantic types</b>	<b>Examples</b>
<b>Core</b>	Dimension	'big', 'small', 'long', 'tall', 'short', 'wide', 'deep', etc.
	Age	'new', 'young', 'old', etc.
	Value	'good', 'bad', 'lovely', 'atrocious', 'perfect', 'proper (/real)', 'strange', 'necessary', 'crucial', 'important', etc.
	Colour	'black', 'white', 'red', etc.
<b>Non-core</b>	Physical property	'hard', 'soft', 'heavy', 'wet', 'rough', 'strong', 'clean', 'hot', 'sour', etc.
	Human propensity	'jealous', 'happy', 'kind', 'clever', 'generous', 'cruel', 'proud', 'ashamed', 'eager', etc.
	Speed	'fast', 'quick', 'slow', etc.
	Difficulty	'easy', 'difficult', 'tough', 'hard', 'simple', etc.
	Similarity	'like', 'unlike', 'similar', 'different (/strange)', 'other', etc.
	Qualification	'definite', 'true', 'possible', 'likely', 'usual', 'normal', 'common', 'correct', 'appropriate', 'sensible', etc.
	Quantification	'all (/whole)', 'many', 'some', 'few', 'only', 'enough', etc.
	Position	'high', 'low', 'near', 'far/distant', 'right', 'left', 'northern', etc.
	Cardinal and ordinal numbers	'one', 'second', 'first', 'last', etc.

A language that has a large number of adjectives is expected to have members of most semantic types listed in Table 1 (Dixon 2004, p. 5). This table is the basis upon which I identify potential representative adjectives in Yueqing for further analysis. In the next section, I will present a set of potential adjectives in Yueqing. Henceforth, since we are not certain whether Yueqing has a unique class of adjectives, before we reach a conclusion, I will use “adjectives” with double quotation marks to denote the group of words in Yueqing expressing adjectival notions in Table 1. However, I will use adjective (without quotation marks) when I refer to the lexical category of adjectives.

### **1.3 "Adjectives" in Yueqing**

On the basis of the previous section, this section presents the words in Yueqing that match the semantic types and examples in Table 1. I selected words in Yueqing that have an equivalent meaning to the adjectives listed in Table 1, and collated them in the following table. I

have also included some common concepts that are within the semantic types but are not found among Dixon's examples.

**Table 2. Common "adjectives" in Yueqing**

	Semantic types	
<b>Core</b>	Dimension	<i>du</i> <sup>6</sup> 'big', <i>sae</i> 'small', <i>jjieo</i> 'long/tall', <i>teu</i> 'short', <i>kua</i> 'wide', <i>xga</i> 'narrow', <i>sang</i> 'deep', <i>cchie</i> 'shallow', <i>cchy</i> 'thick', <i>si</i> 'thin'
	Age	<i>sang</i> 'new', <i>nie-ccang</i> 'young', <i>leo</i> 'old'
	Value	<i>xeo</i> 'good', <i>thang</i> 'bad', <i>khou-ei</i> 'lovely', <i>jjj-kuei</i> 'strange', <i>jjj-ieo</i> 'important', <i>jjj</i> 'strong', <i>zueo</i> 'weak', <i>xeu-tsz</i> 'good-looking', <i>ne-tsz</i> 'bad-looking', <i>ko-ccau</i> 'delicate'
	Colour	<i>xeo</i> 'dark', <i>ko</i> 'light', <i>bei</i> 'white', <i>xgong</i> 'red', <i>lou</i> 'green'
<b>Non-core</b>	Physical property	<i>jjuo</i> 'heavy', <i>cchang</i> 'light', <i>nga</i> 'hard', <i>nye</i> 'soft', <i>seo</i> [falling] 'dry', <i>seo</i> [dipping] <sup>7</sup> 'wet', <i>lieojji</i> 'clean', <i>fei</i> 'dirty', <i>tho</i> 'hot', <i>la</i> 'cold', <i>nang</i> 'warm', <i>lieo</i> 'cool', <i>seu</i> 'sour', <i>die</i> 'sweet', <i>ccie</i> 'sharp', <i>deu</i> 'blunt', <i>phei</i> 'broken'
	Human propensity	<i>kha-va</i> 'happy', <i>cchi</i> 'angry', <i>do</i> 'silly', <i>zie-lieo</i> 'kind', <i>cchong-meng</i> 'clever', <i>dei-fo</i> 'generous', <i>co</i> 'fierce', <i>cceo-ngeo</i> 'proud', <i>pa</i> 'full', <i>wae</i> 'hungry'
	Speed	<i>khue</i> 'fast/quick', <i>me</i> 'slow'
	Difficulty	<i>ne</i> 'hard', <i>kete</i> 'simple', <i>jong-i</i> 'easy', <i>khuang-ne</i> 'difficult', <i>khu</i> 'tough'
	Similarity	<i>zueo</i> 'alike', <i>fu-zueo</i> 'not-alike', <i>i-se</i> 'similar', <i>la-ja</i> 'different',
	Qualification	<i>ccang</i> 'real', <i>kou</i> 'fake', <i>zu</i> 'mature/cooked', <i>sa</i> 'immature/raw', <i>cceng-zueo</i> 'normal', <i>phu-thong</i> 'common', <i>tae</i> 'true/correct', <i>jjie</i> 'wrong', <i>xei-si</i> 'appropriate', <i>li-zz</i> 'sensible'
	Quantification	<i>tou</i> 'many/much', <i>seo</i> 'few/little', <i>kau</i> 'enough'
	Position	<i>keo</i> 'high', <i>ti</i> 'low', <i>jye</i> 'far', <i>jjang</i> 'close-by', <i>zi</i> 'aligned', <i>fu-zi</i> 'not aligned'

This table was collated after I had a basic understanding of all the categories in Yueqing.

Therefore, I did not include words that are definitely not expressed by "adjectives" in this table.

<sup>6</sup> In this thesis to represent Yueqing I use the broad transcription that I created after examining the phonetic inventory of the variety. After analyzing recordings of 498 commonly used Yueqing words, I identified 34 consonants, 11 vowels, 12 diphthongs and one triphthong. Here I list some IPA annotations of the less common sounds: z (in vowel position) [z̥], cj [ç], cc [c̥], jj [j̥], iu [ɥ], u [ɯ], eu [ø], eo [ɤ].

<sup>7</sup> The two words for 'dry' and 'wet' have the same phonological segments but different tones. In this thesis I use [even], [rising], [falling] and [dipping] to represent the four tone contours of Yueqing. I ignore tone registers for simplicity of exposition.

Concepts that are in Table 1 but not in Table 2 are included in (3):

- (3) (a) 'atrocious', 'perfect', 'necessary', 'crucial': these are expressed by phrases  
 (b) 'jealous', 'ashamed', 'eager', 'cruel': these are expressed by phrases  
 (c) 'other': this is a quantifier  
 (d) 'definite', 'possible', 'likely', 'usual': these are adverbs  
 (e) 'all', 'some', 'only': the first two are quantifiers, 'only' is an adverb  
 (f) 'north', 'south', 'left', 'right': these are nouns in Yueqing  
 (g) cardinal and ordinal numbers: these are numerals<sup>8</sup>

Here there is need to explain why I assert that these notions in (3) are not expressed by adjectives.

I will explain what I mean by phrases, quantifiers, adverbs, nouns and numerals in turn.

First, with regard to notions that are expressed by phrases, I use the term “phrase” to refer to syntactic constituents that are made up of at least two independent words. For example, ‘atrocious’ is expressed in Yueqing by *tang cje tang*, the literal translation of which would be ‘bad very bad’. This is not a compound, because this is a phrase composed of a reduplication of the “adjective” *tang* ‘bad’ and the degree adverb *cje* ‘very’. As expected of a phrase, it is free to expand into *tang cje tang tang tang tang* ‘very very very bad’. ‘Atrocious’ does not have an equivalent word in Yueqing, therefore it has to be expressed through the phrase meaning ‘very bad’. In the same vein, ‘perfect’ is expressed by *mau wueo ko* ‘impeccable’, lit. ‘no word to say’; ‘necessary’ is expressed by *jjieo jau* ‘should have’; ‘crucial’ is expressed by *ccei jeo-ccang* ‘most important’.

Second, I use quantifiers to refer to a small number of words such as *jjj-tha* ‘other’ and *sou-jau* ‘all’. These words are only allowed in prenominal positions, and are in complementary

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<sup>8</sup> The numerals are heads within the determiner phrase (to be discussed briefly on page 22 of this chapter and further in Chapter 2).

distribution with demonstratives. In Yueqing, demonstratives are heads of determiner phrases, which will be explained in detail in section 2.1.1. Since demonstratives are determiners, and quantifiers are mutually exclusive with demonstratives, quantifiers are likely determiners and therefore constitute a functional category instead of a lexical one. Therefore, I do not consider the possibility of quantifiers being “adjectives”. In (4), we can see that when a quantifier is used before a noun, demonstratives are not allowed. (4a) is the correct form with only the quantifier, classifier and the noun. (4b) is the correct form with the demonstrative, the classifier and the noun. (4c-e) are trying to add the demonstrative before and after the quantifier. None of these attempts work.

- (4) a.    jji-tha li        sy  
           other CL.PLU book  
           ‘other books’
- b.    hei        li        sy  
           DEM.DIST CL.PLU other book  
           Intended: ‘those other books’
- c.    \*hei        li        jji-tha sy  
           DEM.DIST CL.PLU other book  
           Intended: ‘those other books’
- d.    \*jji-tha        hei        li        sy  
           other                DEM.DIST CL.PLU        book  
           Intended: ‘those other books’

- e. \*hei    jji-tha    li            sy  
       DEM.DIST other        CL.PLU        book

Intended: ‘those other books’

Since quantifiers do not co-occur with demonstratives, it is probable that quantifiers are determiners like demonstratives, and hence cannot be “adjectives”. (Also, quantifiers cannot be classifiers, because they can co-occur with classifiers as illustrated by (4a).)

Third, I use the term “adverb” to refer to words that modify verbs. Adverbs in Yueqing precede verbs but not nouns. They are only allowed to modify verbs. Their characteristics are that they can directly precede the verb they modify, that they cannot be used in any form to modify a noun, and that they cannot be used as predicates. All the “adjectives” in Table 2 are alike in that they cannot directly modify verbs, but they can be used to modify nouns, and they all can be used as predicates. Therefore, I conclude the adverbs in Yueqing are a distinct class from “adjectives”. (5) demonstrates the properties of *zu* ‘only’. (5a) demonstrates how *zu* is used to modify the verb *ccau* ‘go’. (5b) demonstrates how *zu* cannot modify a nominal phrase<sup>9</sup> directly. (5c) shows how ‘only me’ is expressed through ‘only be me’, having ‘only’ preceding the copula verb ‘be’.

- (5) a. Ng    zu    ccaw    -ku            mi-kuae.  
       1SG    only    go        ASP.EXP        United.States  
       ‘I have only been to United States.’

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<sup>9</sup> In the thesis, I use the term “nominal phrase” to refer to both determiner phrases and noun phrases. The reason is that in Yueqing the modification adjunct to an argument can either adjoin above the determiner head or below the classifier head and above the noun phrase. In other words, the modification adjunct sometimes precedes the whole DP and sometimes just the NP. If *zu* can modify nouns, I assume it should appear in similar positions.

b. \*Zu ng zz vu-ti.

only 1SG be home

Intended: ‘I am the only one at home.’ (lit. Only me be at home.)

c. Zu zz ng zz vu-ti.

only be 1SG be home

‘I am the only one at home.’ (lit. Only me be at home.)

Adverbs like *zu* ‘only’ behave distinctly different from “adjectives”, therefore I do not consider these words “adjectives”.

Fourth, the words in (3) denoting orientations like ‘north’ and ‘left’ will be discussed in detail in section 2.3.2. They are nouns because they pass all noun diagnostics and none of the verb diagnostics. We will learn in the next two sections that nouns and verbs in Yueqing have completely different properties, and are very easy to distinguish. We will also learn that “adjectives” pattern with verbs in Yueqing. Hence, these orientation words cannot be “adjectives”. Examples for the properties of these words will be found in section 2.3.2.

Fifth, I use the term numeral to refer to words that occupy the position between determiners and classifiers in a determiner phrase. Cardinal and ordinal numbers in Yueqing are numerals. I exclude the possibility of them being “adjectives” because they are different from “adjectives” for the following reasons: first, “adjectives” can never appear between determiners and classifiers as numerals do; second, numerals cannot function as predicates while “adjectives” can: and finally, “adjectives”, when modifying a noun through a relative clause, adjoin above determiners or below classifiers. (6a) shows that cardinal numbers appear between a demonstrative and a classifier. (6b) shows that ordinal numbers are used in the same environment. (6c) shows that “adjectives” are not allowed in this environment. (6d) shows that

“adjectives” function as predicates. (6e) shows that numerals cannot function as predicates. (6f-g) shows that “adjective” modifying a noun must form a relative clause and adjoin to above the determiner or below the classifier.

- (6) a.    hei        se        pang        sy  
           DEM.DIST three CL.BOOK        book  
           ‘that three books’
- b.    kae            di-se    pang        sy  
           DEM.PROX    third CL.BOOK        book  
           ‘this third book’
- c.    \*kae            xgong    pang        sy  
           DEM.PROX    red    CL.BOOK        book  
           Intended: ‘this red book’
- d.    Kae            pang        sy        xgong.  
           DEM.PROX    CL.BOOK        book red  
           ‘This book is red.’
- e.    \*Kae        pang        sy        di-se  
           DEM.PROX CL.BOOK        book third  
           Intended: ‘This book is the third (one).’
- f.    xgong    gei        kae        pang        sy  
           red        REL        DEM.PROX CL.BOOK        book  
           ‘This red book’



g.	kae	pang	xgong	gei	sy
	DEM.PROX	CL.BOOK	red	REL	book
	‘This red book’				

Therefore, cardinal and ordinal numbers are not like “adjectives” at all, and should not be considered as a part of the class of “adjectives”.

I have gone through examples of the kind of words and phrases in Table 1 that express the corresponding semantic notions but cannot be grouped with the “adjectives” in Yueqing. Table 2 contains 85 commonly encountered “adjectives” in Yueqing, expressing canonical adjectival notions as observed by Dixon (2004). Of the 13 semantic types in Table 1, the “adjectives” in Yueqing are only missing the last semantic type. This is not surprising, because Dixon observed that in some languages adjectives may only represent some of the semantic types, and that certain notions of a specific semantic type may be represented by other classes. As we progress, it will become clear that the words in Table 2 are a natural class, in terms of their morpho-syntactic behaviour. Since Yueqing has most of the adjectival notions in Table 1 represented by a group of words that behave similarly, if Dixon is right about only languages with a large class of adjectives have adjectives expressing the later semantic types, we can surmise that Yueqing has a large class of “adjectives”, provided “adjectives” are a distinct class in Yueqing. These 85 “adjectives” in Table 2 will be the subject of investigation in this thesis. We will test their morpho-syntactic and lexical semantic properties in the rest of the thesis.

In this section, I have collated 85 potential “adjectives” for further investigation. We will now determine the properties of nouns and verbs in Yueqing before we position the “adjectives”.

## **Chapter 2: Diagnosing Nouns in Yueqing**

In order to determine the grammatical similarities and differences between adjectives, nouns and verbs, I first develop morpho-syntactic diagnostics for nouns and verbs. This chapter will focus on nouns, and the next chapter will focus on verbs.

Yueqing, like Mandarin, is an highly isolating variety. Inflectional features like Number, Case and Gender are absent in nouns in Yueqing. Therefore, I look for noun properties in their syntactic distribution. In this section, I examine the components of a determiner phrase in order to develop diagnostics for nouns. The three diagnostics I find are classifiers, relative clauses and copula predicates. Sections 2.1-2.3 describe the three diagnostics in detail, and illustrate their application. Section 2.4 is a summary of the noun diagnostics. Section 2.5 applies the noun diagnostics to “adjectives” to see if “adjectives” are similar or different compared to nouns.

### **2.1 Classifiers as a noun diagnostic**

In this section, I will demonstrate that classifiers are a good diagnostic for nouns in Yueqing. Classifiers have a special relationship to nouns in Yueqing. To understand classifiers’ relation with nouns, first we have to understand the hierarchy of nominal projection in Yueqing. We will start by looking at the components of a determiner phrase in Yueqing, then we will look at the types of classifiers and the kinds of nouns that different classifiers co-occur with, and last we will look at how we can use classifiers as a diagnostic for nouns.

#### ***2.1.1 The components of a Yueqing determiner phrase***

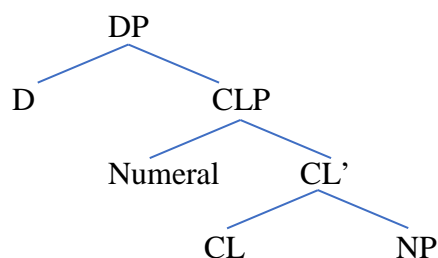
In this subsection, I will examine the syntactic structure of a determiner phrase—the extended projection of a noun, in the sense of Grimshaw (2005). This will lead us to understand the position classifiers occupy in a noun’s extended projection.

The structure of the determiner phrase in Yueqing is slightly different from the one in English. A complete determiner phrase is composed of a determiner, a numeral, a classifier and a noun. (1) is an example of a full determiner phrase. Yueqing has no articles, and the determiner is either the proximal or the distal demonstrative.

- (1)    kae        se        kae<sup>10</sup>    nang  
          DEM.PROX    three        CL.GEN    person  
          ‘these three persons’

For purposes of this discussion, I will not consider any possible covert functional projections, and simplify the extended projection of a noun, as in Figure 1. This representation was developed based on the methodology used by Huang et al. (2009) in developing the Mandarin nominal projection, although the Yueqing projection is slightly different from the Mandarin one.<sup>11</sup>

**Figure 1. Tree of a determiner phrase in Yueqing**



On the surface, bare nouns can function as an argument as illustrated in (2).

- (2)    Sy        zz        te.  
          book    be        here  
          ‘The book is here.’

<sup>10</sup> This sentence has two instances of *kae*, and they are different words. They have the same segments but different lexical tones. The demonstrative has a [dipping] tone and the generic classifier has a [falling] tone.

<sup>11</sup> Here Numeral is in the spec of CLP as adopted by Cheng & Sybesma (2014). The alternative is that Numeral selects CLP as its complement. For the purposes of the thesis, it does not matter which position the numeral occupies, because we are only concerned with the fact that the Numeral appears immediately to the left of CL.

When a numeral is present, a classifier has to be present as well, but an overt determiner is only present if the phrase is definite. (3a) illustrates an indefinite phrase with the numeral, classifier and noun, but no determiner; while (3b) illustrates a definite phrase with a demonstrative, numeral, classifier and noun.

- (3) a. Ng    jau    se    \*(pang) sy.  
           1SG    have    three    CL.BOOK book  
           ‘I have three books.’
- b. Ng    jau    kae                    se    \*(pang) sy.  
           1SG    have    DEM.PROX            three    CL.BOOK book  
           ‘I have these three books.’

Similarly, when a demonstrative is present, a classifier has to be present as well:

- (4) Kae    \*(pang)    sy    zz    te.  
           DEM.PROX CL.BOOK    book    be    here  
           ‘This book is here.’

The proximal demonstrative may be phonetically null in some contexts. For example, when there are no numerals, the proximal demonstrative is often null. Compare (5) with (4): *kae* is absent in (5) but present in (4). In (5), the proximal demonstrative is covert, leaving only a classifier and a noun on the surface. The interpretation of (5) is, however, as if the proximal demonstrative is still there.

- (5) Pang    sy    zz    te.  
           CL.BOOK book    be    here  
           ‘This book is here.’

When the demonstrative is distal, it cannot be null.

- (6) \*(Hei) pang sy zz te.  
 DEM.DIST CL.BOOK book be here  
 ‘That book is here.’

In other words, demonstratives in Yueqing cannot occur without a classifier, while a classifier can occur without an overt demonstrative. In fact, in Yueqing, the proximal demonstrative is normally null when there are no numerals. This means that, in Yueqing, the more common surface form of a proximal demonstrative determiner is a null element.

The classifier is the closest head to the noun, and, when present, it is always filled by an overt element. Therefore, the classifier can be a good diagnostic for nouns. The other heads in a determiner phrase, such as the demonstrative and the numeral, if used as a diagnostic, will involve classifiers anyway. Hence, I do not employ them as diagnostics. Having established that classifiers may be a good diagnostic for nouns, we need to find out if most nouns can be selected by classifiers, and ideally we need to find one classifier that is compatible with all nouns.

### ***2.1.2 Types of classifiers***

We know now that classifiers are closest to nouns and may be used as a noun diagnostic. The first issue to be addressed is: can most (or all) nouns be preceded by a classifier? If so, is there a classifier that can be used with most (or all) nouns? Such a classifier would provide us with an ideal test instrument for nouns. In this subsection, we will look at examples of various classifiers, define classifiers, and find the perfect classifier to be the noun diagnostic.

Let us first look at some more examples of classifiers and answer the question of whether most kinds of nouns can be preceded by classifiers. (7) shows that a broad variety of nouns can be selected by classifiers.

- (7) a. count<sup>12</sup> noun:  
 dieo           nji  
 CL.LONG       fish  
 ‘this fish’
- b. mass noun:  
 beo            siu  
 CL.WASHBASIN water  
 ‘this washbasin of water’
- c. abstract noun:  
 kae            sueo-fa  
 CL.GENERIC   idea  
 ‘this idea’
- d. collective noun:  
 kae            pe  
 CL.GENERIC   class  
 ‘this class’
- e. orientation noun:  
 kae            tong-gou  
 CL.GENERIC   east.side  
 ‘this east-side’

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<sup>12</sup> I can tell count nouns from mass nouns because it is mostly the case that count nouns are selected/counted by specific classifiers, while mass nouns are selected/counted by measure words. See discussion of classifiers and measure words in the following paragraph.

- f. kinship noun:  
       kae            nei  
       CL.GENERIC    daughter  
       ‘this daughter’

(7a-f) demonstrate that nouns of different semantic or morphological status<sup>13</sup> can all be selected by classifiers.

What are classifiers? Here I glossed both classifiers and measure words as classifiers because I consider that they both belong to the same morpho-syntactic category, which I call CL(assifier); CL selects as its complement the noun phrase (NP). According to del Gobbo (2014), classifiers precede count nouns to denote some inherent and permanent properties of an object, while measure words precede mass nouns to indicate temporary states, and give a quantifying description of an object. I agree that, semantically, classifiers and measure words are different. For example, *dio* ‘CL.LONG’, a classifier in (8a), can be used with nouns that denote things that have a long shape, such as *xgou* ‘river’, *ieo-te* ‘belt’, *zi* ‘snake’, *ziu-cci* ‘branch’, *zeng* ‘rope’, etc., while *beo* ‘CL.WATERBASIN’, a measure word in (8b), can be used with anything that can be held in a washbasin. However, I do not consider that classifiers are restricted to count nouns and measure words to mass nouns, because in Yueqing, we can combine classifiers with non-count nouns and measure words with count nouns. For example, we can combine the count classifier *dio* with the noncount noun *bi-qi* ‘temperament’ to create the phrase *dio bi-qi* meaning ‘this temperament’. Similarly, we can combine the measure word *beo* with the count noun *nji* ‘fish’ to create *beo nji*, meaning ‘this washbasin of fish’.

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<sup>13</sup> Yueqing nouns have no inflections, so morphological status here just refers to whether a noun is a compound or not. You can tell this by looking at the transcriptions. All Yueqing morphemes are monosyllabic, so if there is more than one syllable to a word, or there are hyphens between the syllables in the written form, it is a compound. For example, *xgou* ‘river’ is just one morpheme, but *ieo-te* ‘belt’ is a compound.

Further, syntactically, classifiers and measure words both occupy the CL head in the extended nominal projection. This claim can be supported by three facts. First, they both precede the noun. This has been illustrated in (7a-b). We can further test the structure by adding a numeral, as in (8). Both the classifier and the measure word appear in the position between the numeral and the noun, as illustrated in (8a) and (8b), respectively.

- (8) a.    se     dieo       nji  
           three CL.LONG     fish  
           ‘three fish’
- b.    se     beo       siu  
           three CL.WASHBASIN water  
           ‘three washbasins of water’

Second, there can be either a classifier or a measure word in a determiner phrase, but not both. In other words, classifiers and measure words are in complementary distribution. (9) illustrates this fact. Whether we put the classifier before or after the measure word, the sentence is ungrammatical.

- (9) a.    \*Kae       dieo       beo       nji  
           DEM.PROX   CL.LONG   CL.WASHBASIN fish  
           ‘this washbasin of fish’
- b.    \*Kae       beo       dieo       nji  
           DEM.PROX   CL.WASHBASIN CL.LONG   fish  
           ‘this washbasin of fish’

Third, both the classifier and the measure word can be replaced by the generic classifier *kae* ‘CL.GEN’ when there are no numerals, as in (10). Both (10a) and (10b) can be turned to (10c).



(10a-c) are slightly different in their meaning: (10a) denotes ‘this one single fish’; (10b) denotes ‘this washbasin of fish’; (10c) is vague in the exact shape or state of fish—it can be ‘this kind of fish’, ‘this one single fish’, ‘this bag of fish’, etc.

- (10) a. dieo           nji  
           CL.LONG       fish  
           ‘this fish’
- b. beo           nji  
           CL.WASHBASIN fish  
           ‘this washbasin of fish’
- c. kae           nji  
           CL.GENERIC   idea  
           ‘this fish’

I have provided three reasons why I think classifiers and measure words belong to the same category. From here on, I will not differentiate between them but call them both classifiers. We have also found that there is a generic classifier that can replace all specific classifiers in previous examples without affecting grammaticality. This generic classifier may be used to diagnose nouns.

This subsection revealed that the generic classifier *kae* can be used to diagnose nouns. In the next subsection, I will demonstrate how it can be used as a diagnostic and how to steer clear of possible distractions

### **2.1.3 Using the generic classifier *kae* as a noun diagnostic**

Let us try using *kae* ‘CL.GENERIC’ as a noun diagnostic. We have seen *kae* used with the words meaning ‘fish’, ‘idea’ and ‘class’ in the previous subsection; now let us try using *kae* with

the words expressing the meanings of ‘water’, ‘table’, ‘contest’, ‘time’ and ‘universe’.

- (11) a.    kae            sy  
                  CL.GENERIC    water  
                  ‘this water’
- a.    kae            ccou  
                  CL.GENERIC    table  
                  ‘this table’
- b.    kae            pi-se  
                  CL.GENERIC    contest  
                  ‘this contest’
- c.    kae            zz-ke  
                  CL.GENERIC    time  
                  ‘this time’<sup>14</sup>
- d.    kae            jy-jjiu  
                  CL.GENERIC    universe  
                  ‘this universe’

We can see that *kae* can be used with all these nouns. It is a very good diagnostic for nouns,<sup>15</sup> as long as we steer clear of one complication that has to do with the surface form of a classifier followed by a predicate.

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<sup>14</sup> This is not the countable noun meaning ‘instances’, which is expressed by another word *tsz* in Yueqing. *Tsz* can also take the generic *kae* as classifier.

<sup>15</sup> To demonstrate the usefulness of the classifier diagnostic, here we test it on pronouns and proper names. We can see that pronouns cannot be selected by classifiers, as illustrated by (i), while proper names can be selected by classifiers, as illustrated by (ii).

(i)        \*kae            jji  
                  CL.GENERIC    3SG  
                  Intended: ‘this him/her’

When the noun is already known to both speaker and addressee, it is frequently dropped. I assume that in this case it is represented in the structure by a null element. Hence on the surface, the determiner phrase can appear to only have a classifier. When the determiner phrase is used in a clause as a subject, on the surface, we will have a classifier followed directly by a predicate. This is illustrated in (12-13). In these examples, the verbal predicate *ccau* ‘go’ and the “adjectival” predicate *xeo* ‘red’ are preceded directly by classifiers. We must not mistake these predicates for nouns.

(12) [Kae]<sub>DP</sub>            [cciau]<sub>v</sub>.  
          CL.GENERIC        go  
          ‘This (child, etc.) will go.’

(13) [Kae]<sub>DP</sub>            [xgong]<sub>A</sub>.  
          CL.GENERIC        red  
          ‘This is red.’

(12-13) are clauses, not determiner phrases. We can prove that they are clauses by adding aspectual particles, negation particles, modal verbs and adverbs between the determiner phrase and the predicate. (14) shows that we can add an aspectual particle in this position. (15) shows that we can add a negation particle in this position. (16) shows that we can add a modal verb in this position. (17) shows that we can add an adverb in this position.

(14) [Kae]<sub>DP</sub>            [cciau -ga]<sub>v</sub>            bei.  
          CL.GENERIC        go            ASP.CMPL            ASP.PRF  
          ‘This (one) has left.’

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(ii)    kae                    Thomu  
          CL.GENERIC            Tom  
          ‘this Tom’

This indicates that pronouns are not nouns, while proper names are nouns.

- (15) [Kae]<sub>DP</sub>      fu      [cciau]<sub>V</sub>.  
 CL.GENERIC      NEG      go  
 ‘This (one) will not go.’
- (16) [Kae]<sub>DP</sub>      wae      [xgong]<sub>A</sub>.  
 CL.GENERIC      be.likely.to      red  
 ‘This (one) is likely to become red.’
- (17) [Kae]<sub>DP</sub>      me-me-nang      [xgong]<sub>A</sub>.  
 CL.GENERIC      slowly      red  
 ‘This (one) is slowly becoming red.’

To summarize, we can use the generic classifier *kae* as a diagnostic for nouns by trying to place it before the word that requires testing. If a word can be preceded by *kae*, we also need to eliminate the possibility that it is a bare predicate, by trying to insert a negation particle, aspectual particle, modal verb or adverb between the classifier and the word in question. If the result is acceptable, the word is a bare predicate; if not, it is a noun.

I have demonstrated the usage of the generic classifier as a noun diagnostic. We will precede to our next noun diagnostic—relative clauses.

## 2.2 *Gei* constructions as a noun diagnostic

Another salient characteristic of nouns is that they can be modified by *gei* constructions. *Gei* constructions are modifying adjuncts that contain the particle *gei*. There are two kinds of *gei* constructions: the relative clause and the possessive construction. In this section, I will explain how the two *gei* constructions work, and how they can be used as a noun diagnostic.

*Gei* constructions play a very important role in nominal phrases in Yueqing – they are the

only way nominal modification is achieved. In other words, bare nominal modification is not allowed in Yueqing. To better understand the function of *gei* constructions in Yueqing, we will start this subsection by going through how nominal modification works in Yueqing. We will then explore the structure of *gei* phrases and how they can be used as a noun diagnostic.

### 2.2.1 Yueqing nominal modification

In this subsection, I will demonstrate that, in Yueqing, bare nominal modification does not exist, and all nominal modification must be realized via the *gei* construction. I will demonstrate that the seemingly “bare modification” is in fact a case of compound formation and not a phrasal modifier. From here on, I will use the term BARE MODIFICATION CONSTRUCTION to refer to those “adjective”-noun constructions that are compound words, and not phrases.

Let us first look at an example of a bare modification construction:

- (18) cchong-ming nang  
       smart            person  
       ‘smart person’

In this example, the “adjective” directly precedes the noun. Now let us look at an example of relative-clause *gei* construction modification:

- (19) [cchong-ming *gei*]<sub>RC</sub> nang  
       smart            REL    person  
       ‘a person that is smart’

The examples differ in that only (19) has the relative clause marker *gei* between the “adjective” and the noun. I analyze constructions like (18) as compounds, and constructions like (19) as phrases consisting of a noun and modifying adjunct. This analysis is based on three arguments: (a) the bare modification construction is subject to compounding constraints, (b) the “adjective”

in the bare modification construction is not an independent syntactic unit, and (c) like all compounds in Yueqing, the bare modification construction is subject to tone sandhi.

### 2.2.1.1 Compounding constraints on bare modification constructions

In Yueqing, constructions like (19) are much more productive than constructions like (18), meaning that the forming of constructions like (18) is restricted. This is expected if examples like (18) are compounds, but not if they are phrases. Creating new compound nouns are subject to at least two constraints: (a) compounds expressing new concepts cannot be introduced without context that makes the meaning clear, and (b) for endocentric noun compounds, the non-head component normally contribute to the specification of the head. I will start with the first constraint.

We are free to compose a modification phrase that may never have been heard before, such as *green book*, whose meaning is compositionally determined by the meaning of the adjective *green*, and the noun *book*. However, the meaning of compounds is often not compositional in this sense. For example, it is unclear what meaning to assign to a new compound *green-book*, without any context or explanation. The meaning of a new compound must be established either by the context or by explicit definition. The same constraint is absent on modification phrases. The bare modification construction of Yueqing is subject to such a constraint. For example, in Yueqing, (20a), a well-accepted compound, can be used out of the blue, but not (20b), a nonce compound. In the same vein, we can say (21a), a well-accepted compound, out of the blue, but not (21b), another nonce compound. The reason why the (b) examples are hard to accept is that these are compounds, not phrases. If they were phrases, nothing would prevent a speaker from uttering ‘smart cat’ or ‘white hand’.

- (20) a. cchong-ming nang  
           smart            person  
           ‘smart-person’
- b. #cchong-ming mo  
           smart            cat  
           ‘smart-cat’
- (21) a. bei    cci  
           white paper  
           ‘white-paper’
- b. #bei    su  
           white hand  
           ‘white-hand’

Here I have the # signs instead of \*, because (20b) and (21b) are grammatically well-formed, but non-existent words. For example, if we are told that ‘Smart-Cat’ is the name of a new cartoon, then it would likely be judged as an acceptable compound. Similarly, if we are told that a secret spy agency’s nickname is ‘White-Hand’, then it is suddenly not hard to accept this compound.

Now, if we look at the relative clause modification constructions, new concepts can be expressed easily. (22-23) are very natural expressions.

- (22) [cchong-ming gei]<sub>RC</sub> mo  
           smart            REL    cat  
           ‘a cat that is smart’

- (23) [bei                    gei]<sub>RC</sub> su  
       white                REL    hand  
       ‘a hand that is white’

We have seen that the bare modification construction is subject to the same constraints as compounds: first, the “adjective” and noun must denote either a familiar concept, or one that is contextually accessible. The second constraint applies only to endocentric noun compounds: in this type of compound the non-head must contribute to the specification of the head. I will only discuss endocentric noun compounds here, because only these can be hard to tell from bare modification phrases. Exocentric compounds, in contrast, are easily distinguished from phrases.

Endocentric noun compounds are words that denote a hyponym of the head noun (Bauer 2008, p. 52). We can say that the compound is a kind of the head noun. For example, in English, ‘bluebird’ is a kind of ‘bird’. In an endocentric noun compound, if the non-head does not contribute to the specification of the head, the compound will be hard to accept. For example, (24a) is not acceptable. (This example is inspired by Paul 2010, p. 125.) It is not acceptable because this construction is a compound construction instead of a phrasal one. ‘Sweet’ needs to contribute to the specification of ‘honey’, or else this cannot be an endocentric compound noun. However, in this example, ‘sweet’ does not contribute to the specification of ‘honey’, since all honey is sweet. That is why it is not acceptable as an endocentric compound. In contrast, (24b) is very natural, because it is a phrase, and phrases are not subject to the same specification constraint as compounds.

- (24) a.    \*tie    fong-mi  
           sweet honey  
           Intended: ‘sweet-honey’



- b. [tie   gei]<sub>RC</sub> fong-mi  
       sweet REL   honey  
       ‘honey that is sweet’

Therefore, the BARE MODIFICATION CONSTRUCTIONS, such as (24a), are constrained constructions.

I have considered two semantic constraints on compound nouns, and found that they apply to the BARE MODIFICATION CONSTRUCTIONS in Yueqing, and I have concluded that those constructions are compounds. Next, I will test the syntactic flexibility of the components of such constructions. If the components are not separable syntactic units, they are more likely to be compound words, instead of phrases.

#### *2.2.1.2 Syntactic deficiencies of components of bare modification constructions*

In this subsection, I will provide additional evidence that BARE MODIFICATION CONSTRUCTIONS are compounds. Generally speaking, separate words can be modified, expanded and negated individually (Lieberman & Stekauer 2009, Scalise and Vogel 2010); words that are parts of compounds cannot. The non-head modifier and the head noun in the BARE MODIFICATION CONSTRUCTIONS are not separate syntactic units: they cannot be modified, expanded or negated individually. For example, (25a) is a bare modification construction that I claim is a compound; (25b) shows that the “modifier”, *cchong-ming* ‘smart’, cannot be further modified; (25c) shows that the “head noun”, *nang* ‘person’, cannot be expanded into a coordination construction; (25d) shows that the modifier cannot be negated. The reason why all these examples are impossible is that the construction in (25a) is a compound, not a phrase. The morphemes in a compound do not have the syntactic status of free words.

- (25) a. cchong-ming nang  
 smart person  
 ‘smart-person’
- b. \*[deo-bie cchong-ming] nang  
 especially smart person  
 ‘especially smart-person’
- c. \*cchong-ming [nang ta mo]  
 smart person CONJ cat  
 ‘smart-person and cat’
- d. \*[fu cchong-ming] nang  
 NEG smart person  
 ‘not smart-person’

Now let us consider the relative clause modification constructions. (26) demonstrates that all the added elements in (25) are possible in the relative clause construction. (26b-d) are grammatical, because the “adjective” and the noun are not trapped in a compound. This means that in the relative clause, the “modifier” and the noun are separate syntactic units.

- (26) a. [cchong-ming gei]<sub>RC</sub> nang  
 smart REL person  
 ‘a person that is smart’
- b. [deo-bie cchong-ming gei]<sub>RC</sub> nang  
 especially smart REL person  
 ‘a person that is especially smart’

- c. [cchong-ming gei]<sub>RC</sub> [nang ta mo]  
 smart REL person CONJ cat  
 ‘a person and a cat that are smart’
- d. [fu cchong-ming gei]<sub>RC</sub> nang  
 NEG smart REL person  
 ‘a person that is not smart’

(27) provides further evidence for the non-existence of bare modifiers in Yueqing. If bare modifiers did exist, we would expect (27a), where we try to conjoin two bare modifiers, to be acceptable, but it is not. To conjoin two “modifiers”, we either have to conjoin two relative clauses as in (27b), or conjoin two compounds as in (27c). This means that the “bare modifiers” in (27a) are not free morphemes.

- (27) a. \*sang ta jjau sy  
 new CONJ old book  
 Intended: ‘new and old books’
- b. [sang gei]<sub>RC</sub> ta [jjau gei]<sub>RC</sub> sy  
 new REL CONJ old REL book  
 ‘books that are new and books that are old’
- c. sang sy ta jjau sy  
 new book CONJ old book  
 ‘new books and old books’

We have shown that the BARE MODIFICATION CONSTRUCTIONS are subject to compounding constraints and are syntactically deficient. My last argumentation is based on the prosodic features of Yueqing compounds.

### 2.2.1.3 Tone sandhi—compound identifier

I have given semantic and morphosyntactic evidence to support the non-existence of bare modifiers in Yueqing. I now turn to my last argument for the compound status of the BARE MODIFICATION CONSTRUCTIONS, which is based on their phonological properties.

In Yueqing, it appears that all compounds are subject to tone sandhi,<sup>16</sup> but few phrases are. Before I present my evidence, I will introduce the tone system<sup>17</sup> of Yueqing and explain what tone sandhi is. Yueqing has four tone contours. The four tone contours are [even], [rising], [falling] and [dipping].<sup>18</sup> Tone sandhi refers to tone changes that happen when two tone-bearers are adjacent to one another. I will illustrate tone sandhi with examples.

(28) gives a simple example of disyllabic tone sandhi. *le* ‘blue’ and *thie* ‘sky’ bear their lexical tones in the relative clause construction in (28a), but undergo tone sandhi if *le* ‘blue’ directly precedes *thie* ‘sky’, as shown in (28b). This indicates that in the first instance, the construction is a phrase, and in the second instance, the construction is a compound, if we are right that only compounds are subject to tone sandhi. In this example, the first tone underwent tone changes while the second tone remain unchanged. This is not always the case. Yueqing disyllabic tone sandhi are mostly right-dominant, meaning that the second tone is preserved, but there are a few examples of tone sandhi where the second, or both tones change.

- (28) a.        [falling]        [even]  
                  [le     gei]<sub>RC</sub> thie  
                  blue    REL    sky  
                  ‘blue sky’

<sup>16</sup> For a general discussion of Chinese tone system and tone sandhi, see Zhang (2014).

<sup>17</sup> The Yueqing tone sandhi data and results are from my own research in this field.

<sup>18</sup> The [dipping tone] is a complex tone composed of a [falling] and a [rising] component. For the purpose of this thesis, I use the four simple features to represent Yueqing tones instead of using the more complicated [h], [l], and [H], [L] system. For the debate on TBU (tone bearing unit) and tone representations, see Bao (1999), Barrie (2006), Chen (2000), Chen (2010), Lin (2004) and Yip (1989).

- b. [dipping]-[even]  
 le thie  
 blue sky  
 ‘blue-sky’

Let us examine more examples. First, we look at the example where the modifier is a disyllabic word and the noun is a monosyllabic word. In the relative clause modification construction in (29a), the lexical words of *chong-meng* ‘smart’ and *nang* ‘person’ bear their lexical tones. When *chong-meng* ‘smart’ directly precedes *nang* ‘person’, in (29b), they undergo tone sandhi. In this second instance, both the “adjective” and the noun have lost their lexical tones.

- (29) a. [dipping]-[even]            [falling]  
           [cchong-ming    gei]<sub>RC</sub> nang  
           smart                    REL    person  
           ‘smart person’
- b. [rising]-[dipping]-[dipping]  
           cchong-ming    nang  
           smart                    person  
           ‘smart-person’

Let us look at two more examples with different syllable combinations. (30) has a monosyllabic “adjective” and a disyllabic noun, while (31) has a monosyllabic “adjective” and a monosyllabic noun. In the relative clause modification construction in (30a), the lexical words of *fei* ‘dirty’ and *i-zueo* ‘clothing’ bear their lexical tones. When *fei* ‘dirty’ directly precedes *i-zueo* ‘clothing’ in (30b), they undergo tone sandhi.

- (30) a. [even] [dipping-even]  
 [fei gei]<sub>RC</sub> i-zueo  
 dirty REL clothing  
 ‘dirty clothing’
- b. [rising]-[dipping]-[even]  
 fei i-zueo  
 dirty clothing  
 ‘dirty-clothing’

In the relative clause modification construction in (31a), the lexical words of *bei* ‘white’ and *cci* ‘paper’ bear their lexical tones. When *bei* ‘white’ directly precedes *cci* ‘paper’, in (31b), they undergo tone sandhi. The “adjective”’s [dipping] tone is retained in the phrasal relative clause, but is lost in the lexical compound.

- (31) a. [dipping] [rising]  
 [bei gei]<sub>RC</sub> cci  
 white REL paper  
 ‘white paper’
- b. [even]-[rising]  
 bei cci  
 white paper  
 ‘white-paper’

We have seen that tone sandhi only applies to the “bare modification” examples, which I have analyzed as compounds, but it does not apply to the relative clause examples, which I claim are phrases. The semantic and morpho-syntactic tests in the previous subsections indicate that the

“bare modification” constructions are very likely compounds. The prosodic behaviour we have observed in this subsection suggests that there is a match between the prosody and morpho-syntax, so that tone sandhi only applies to words but not phrases.

In addition to the arguments I have already presented, there is a functional explanation as to why tone sandhi is restricted to words. If the BARE MODIFICATION CONSTRUCTIONS were modification phrases that could be freely assembled, that is, if a speaker puts two morphemes together to communicate a novel idea, and if the string bears tone sandhi, the tone sandhi would probably render the component morphemes unrecognizable to the listener. This is because homophones are prevalent in Yueqing, and tone sandhi has a certain neutralizing effect, turning different input tones into the same output tones. For listeners to decipher a new compound they hear, they would need to imagine several input possibilities and each input tone possibility branches off again to several word possibilities due to homophones. Unless the listener is already familiar with the compound, confusion is very likely to arise as to what the original input morphemes are. This echoes our first argument that the “bare modification” constructions are restricted to familiar concepts. Therefore, tone sandhi makes it more challenging to determine the right interpretation. Table 3 illustrates the difficulty caused by a freely-assembled new compound. The output tone of [rising]-[dipping] can come from four input tones, and each input tone is associated with different input morphemes due to homophones. This situation can be avoided if such constructions are limited to compounds which are familiar to the listener.

**Table 3. Tone sandhi adds complexity to newly assembled compounds**

compound output tones		lexical item input tones		lexical item homophones	
tone 1	tone 2	tone 1	tone 2	tone 1	tone 2
[rising] - [dipping] cci - ccu		[even]	[dipping]	'chicken', 'machine', ...	'bamboo', 'congee', ...
		[rising]	[dipping]	'cook', 'paper', ...	'bamboo', 'congee', ...
		[falling]	[dipping]	'slant', 'odd', ...	'bamboo', 'congee', ...
		[dipping]	[dipping]	'borrow', 'record', ...	'bamboo', 'congee', ...

To say tone sandhi is only applicable within the word-level would be an oversimplification of the fact, however I will briefly explain why, but this will not affect the conclusion that we have reached. It is worthwhile to clarify that the differences between compounds and phrases with respect to tone sandhi are quite salient.

Word-level tone sandhi is compulsory and conforms to a strict tone sandhi pattern. For example, among the sixteen possible disyllabic tone combinations, fourteen trigger tone change into nine different output tone combinations, and the other two remain unchanged because they are already ideal output to the tone sandhi rules. The rules are strict. For example, when two [rising] tones are combined as input, they must change, and they must change into a [falling]-[rising] sequence. The output of word-level tone changes is completely predictable based on input tones, giving rise to a paradigm of tone sandhi patterns.

Phrasal tone sandhi is highly restricted and is structurally constrained. That is, only certain phrasal structures undergo tone sandhi, and the output is based on the syntactic structure, rather than the input tones. For example, when the proximal demonstrative *kae* [dipping] combines with classifiers, the tone of the proximate demonstrative-classifier sequence changes to [rising]-[dipping] no matter what the original tone of the classifier is. In other words, [rising]-[dipping] is the structural tone associated with this syntactic string. Word-level tone sandhi works



in a completely different way: it is calculated from the input tones. Consequently, we are able to tell word-level tone sandhi from phrase-level tone sandhi. What is more, so far I have only identified two kinds of phrasal tone sandhi, and they are both related to the projection of a single lexical category. For example, the structural tone sandhi of the sequence of functional elements [proximal demonstrative + classifier] involves two functional heads in a single determiner phrase. The other structural tone sandhi I have identified is the [classifier + noun] construction, but this only occurs when the proximal demonstrative is null. This involves one functional head and the adjacent lexical head in a single determiner phrase. I have not found any phrasal tone sandhi operation that applies to two words that are lexical categories, nouns, verbs or “adjectives”. Therefore, since phrasal tone sandhi is rare and restricted, phrasal modification constructions, in contrast to BARE MODIFICATION CONSTRUCTIONS, are arguably not subject to tone sandhi.

In summary, the behaviour of tone sandhi provides additional evidence that the BARE MODIFICATION CONSTRUCTIONS and relative clause modification constructions are distinct, with the former being compounds and the latter being phrases. This leads me to conclude that true nominal modification is not achieved through direct modification in Yueqing. In the next section, I will show that nominal modification is achieved through *gei* phrases in this language.

### ***2.2.2 Modification through the *gei* constructions***

In the previous subsection, we have seen some examples of relative clause *gei* modification. There is also the possessive *gei* modification. In this subsection, we will explore three things: what the two kinds of *gei* constructions are, what their syntactic position is, and how we can use them as a noun diagnostic.

### 2.2.2.1 Two *gei* constructions: relative clauses and possessive constructions

We mentioned that there are two kinds of *gei* constructions. This subsection focuses on the properties of the two *gei* constructions. First, we will look at relative clause *gei* constructions.

Song (2001) defines relative clause constructions as constructions consisting of a head noun and a restricting clause. The semantic function of the head noun is to establish a set of entities, and that of the restricting clause is to identify a subset of those entities (Song 2001, 211). From the examples of Yueqing relative clauses we have seen, we can see that the relative clauses are restricting constructions. There is a head noun which establishes a set of entities, and the relative clause which identifies a subset of those entities. But because all we have seen are “adjectives” followed by the relative clause marker *gei*, we have not seen evidence that the relative clauses are in fact clauses. The evidence will be provided now.

I will illustrate the clausal status of relative clauses with the following examples. First, (32) and (33) illustrate relative clauses that contain a verbal predicate. In (32) the head noun is identified with the subject in the relative clause, and in (33) the head noun is identified with the object in the relative clause. The relativized argument is null within the relative clause, but the structure of the clause is that of a clause in that it contains a predicate and its argument(s). The only difference between a main clause and a relative clause is that the relativized argument is obligatorily null in the relative clause.

(32) [∅ Ta ng gei]<sub>RC</sub> nang zz de.  
 ∅<sub>SUBJ</sub> hit ISG REL person be here

‘The person who hit me is here.’

- (33) [Ng ta Ø gei]<sub>RC</sub> nang zz de.  
 ISG hit Ø<sub>OBJ</sub> REL person be here  
 ‘The person whom I hit is here.’

Yueqing relative clauses are externally headed, prenominal relative clauses, as the relative clause precedes the head noun, and the relativized noun is overtly realized outside the relative clause, is coreferential with a null argument within the relative clause, and appears after the relative clause marker *gei*.

How do we know that the examples introduced above, where the predicates in the relative clauses are “adjectives”, have the same relative clause structure as (32-33)? We know this because the “adjectives” in relative clauses, like verbs, can co-occur with aspectual particles, can be negated, can follow modal verbs, and can have manner adverbs modifying them. Let us take (34), for example. (34a) is the example we have seen in Section 2.2.1.2-2.2.1.3; (34b) has the “adjective” inflected for aspect; (34c) has the “adjective” negated; (34d) has the “adjective” following a modal verb; (34e) has the “adjective” modified by a manner adverb. Taken together, these examples indicate that the “adjective” functions just like a verb when it appears in relative clauses. The “adjective” in (34a) is in the generic uninflected aspect, which is unmarked. Chapter 4-5 will have further discussion on aspectual inflection of verbs and “adjectives”.

- (34) a. [cchong-men gei]<sub>RC</sub> nang  
 smart REL person  
 ‘smart person’ (lit. the person who is smart)
- b. [cchong-men -jji gei]<sub>RC</sub> nang  
 smart ASP.INCP REL person  
 ‘the person who is getting smarter’

- c. [fu cchong-men gei]<sub>RC</sub> nang  
 NEG smart REL person  
 ‘the person who is not smart’
- d. [wae cchong-men gei]<sub>RC</sub> nang  
 be.likely.to smart REL person  
 ‘the person who will likely be smart’
- e. [me-me-nang cchong-men -jji gei]<sub>RC</sub> nang  
 slowly smart ASP.INCP REL person  
 ‘the person who is slowly getting smart’

We have seen that verbs and “adjectives” can modify a noun by forming a relative clause. We will now turn to the second *gei* construction, which is formed by determiner phrases. (35-37) are examples of DP *gei* constructions. These *gei* constructions differ from the ones we have been discussing in two ways. Firstly, the constituent preceding *gei* is not a clause. Secondly, semantically such constructions only express different kinds of possession relationships between the constituents that appear before and after *gei*. I will call this kind of *gei* construction the possessive *gei* construction. In (35), the possessor is a proper name; in (36) it is a full determiner phrase with a determiner, a numeral, a classifier and a common noun; in (37) it is just a common noun.

- (35) [Thomu]<sub>DP</sub> gei syu  
 Thomu POSS book  
 ‘Tom’s book’

(36) [hei            i        bang    siu]<sub>DP</sub>        gei    meng-zz  
 DEM.DIST        one    CL.BOOK book        POSS    title  
 ‘the title of that book’

(37) [zy]<sub>DP</sub> gei    je  
 tree    POSS    leaf  
 ‘leaf of a tree’

The determiner phrases preceding *gei* are not clauses because there is no subject-predicate relation. Moreover, these determiner phrases can do none of the things that verbs and “adjectives” can do. This will be explained and exemplified in later chapters.

Semantically, if we look at the two [A *gei* B] constructions, for the relative clause ones, B is an argument of predicate A, while for the possessive ones, A is the alienable or inalienable possessor of B.

We have seen the two different *gei* constructions. It is not clear if *gei* in the possessive constructions is the same *gei* as the relative clause marker, or whether the two *geis* are homophones. In a broad sense, both *gei* constructions serve to denote a subset of the entities that the head noun denotes. Therefore, they can both be referred to as *gei* modification constructions. But they can still be distinguished from each other syntactically and semantically.

We might ask: can not a noun modify a noun through the *gei* construction, expressing an associative modification meaning? The examples of N-N associative modification Giegerich (2015) gives, such as *toy factory* (a factory that manufactures toys), *music clock*, *apple cake*, can be expressed in Yueqing either through compounding or relative clauses that utilize predicates. (38a) is a compound; (38b) is a possessive *gei* construction, with ‘toy’ interpreted as the possessor; (38c) is a relative clause *gei* construction that utilizes the verb *sa-cche* ‘manufacture’,

and has essentially the same interpretation as (38a). This shows that the interpretation of a [DP *gei*] construction can only be possessive.<sup>19</sup>

- (38) a. we-jjy-cchieo  
toy-factory  
'toy factory' (a factory that manufactures toys)
- b. [we-jjy      gei]POSS      cchieo  
toy              POSS              factory  
'toy's factory' (a factory that is owned by a toy)
- c. [sa-cche              we-jjy      gei]RC cchieo  
manufacture              toy              REL      factory  
'factory that manufactures toys'

This subsection examined and identified two kinds of *gei* constructions: the relative clause as well as the possessive *gei* construction. To be able to use them as noun diagnostics, we need to know their structural relation with the head noun. In the next subsection, we explore the nodes where these constructions are adjoined to the determiner phrase.

#### 2.2.2.2 Adjunction of *gei* constructions

In this subsection, we will examine where the two *gei* constructions are adjoined in the determiner phrase.

First, we will look at the relative clause *gei* construction. Relative clauses are free to adjoin anywhere before the noun in a determiner phrase except between the numeral and the classifier. The relative clause may precede the determiner, as in (39a), it may appear between the

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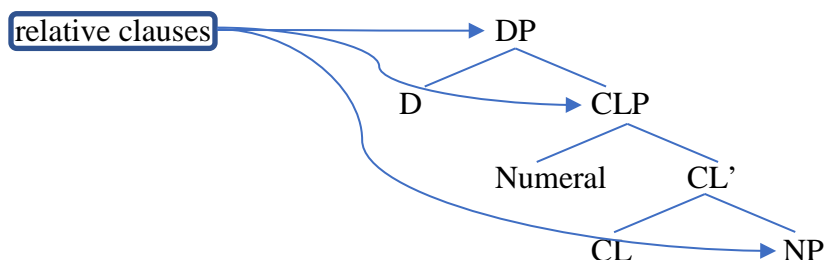
<sup>19</sup> The meaning of a factory that is a toy can be expressed in Yueqing by having a copula verb and *toy* in the relative clause—something equivalent to the English *a factory that is a toy*.

determiner and the numeral, as in (39b), or it may appear between the classifier and the noun, as in (39c); (39d) shows that it cannot appear between the numeral and the classifier.

- (39) a.  $\boxed{\text{RC}} - \text{D} - \text{Num} - \text{CL} - \text{N}$
- [xeu gei]<sub>RC</sub> kae se pang sy  
 good REL DEM.PROX three CL.BOOK book  
 ‘the three books that are good’
- b.  $\text{D} - \boxed{\text{RC}} - \text{Num} - \text{CL} - \text{N}$
- kae [xeu gei]<sub>RC</sub> se pang sy  
 DEM.PROX GOOD REL three CL.BOOK book  
 ‘the three books that are good’
- c.  $\text{D} - \text{Num} - \text{CL} - \boxed{\text{RC}} - \text{N}$
- kae se pang [xeu gei]<sub>RC</sub> sy  
 DEM.PROX three CL.BOOK GOOD REL book  
 ‘the three books that are good’
- d. \*  $\text{D} - \text{Num} - \boxed{\text{RC}} - \text{CL} - \text{N}$
- \* kae se [xeu gei]<sub>RC</sub> pang sy  
 DEM.PROX three GOOD REL CL.BOOK book  
 Intended: ‘the three books that are good’

In Section 2.1.1 I introduced the structure of a Yueqing determiner phrase. The places where relative clauses can adjoin in this structure are illustrated by the following tree:

**Figure 2. Adjunction of relative clauses**



The fact that relative clauses only adjoins at these three positions actually provides support to the structure of the DP. Since CL' is a bar-level node, and if we assume adjuncts only attach to any maximal projection in the extended projection of the noun instead of the bar level, we find reasons why relative clauses cannot occur between numerals and classifiers.

Next, we look at the possessive *gei* constructions. The possessive construction has a more restrictive distribution. It may only adjoin to the left edge of the determiner phrase. We can see in (40a) that it precedes the determiner. (40b-d) show that it cannot adjoin anywhere else.

- (40) a. POSS – D – Num – CL – N
- |        |      |      |          |       |         |      |
|--------|------|------|----------|-------|---------|------|
| [Thomu | gei] | POSS | kae      | se    | pang    | sy   |
| Tom    |      | POSS | DEM.PROX | three | CL.BOOK | book |
- ‘the three books of Tom’s’
- b. \*D – POSS – Num – CL – N
- |          |        |      |      |       |         |      |
|----------|--------|------|------|-------|---------|------|
| *kae     | [Thomu | gei] | POSS | se    | pang    | sy   |
| DEM.PROX | Tom    |      | POSS | three | CL.BOOK | book |
- Intended: ‘the three books of Tom’s’
- c. \*D – Num – POSS – CL – N
- |          |       |        |      |      |         |      |
|----------|-------|--------|------|------|---------|------|
| * kae    | se    | [Thomu | gei] | POSS | pang    | sy   |
| DEM.PROX | three | Tom    |      | POSS | CL.BOOK | book |
- Intended: ‘the three books of Tom’s’



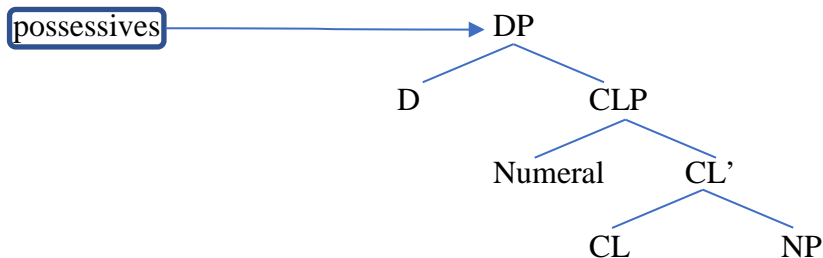
- d. \*D – Num – CL – POSS – N
- |          |       |         |        |      |      |      |
|----------|-------|---------|--------|------|------|------|
| *kae     | se    | pang    | [Thomu | gei] | POSS | sy   |
| DEM.PROX | three | CL.BOOK | Tom    |      | POSS | book |
- Intended: ‘the three books of Tom’s’

Of course, when a determiner phrase is just a bare noun, the possessive construction will appear to precede the bare noun directly, but that is only when the determiner is null.<sup>20</sup> This is illustrated in (41).

- (41) [Thomu      gei]POSS       $\emptyset$       sy
- Tom                  POSS                   $\emptyset_D$       book
- ‘Tom’s book’

Figure 3 illustrates where possessive constructions are adjoined to a determiner phrase:

### Figure 3. Adjunction of possessive constructions



We have shown that for a complete determiner phrase, relative clauses can adjoin anywhere before the noun except between the numeral and the classifier, but possessive phrases are only allowed to appear before the determiner. When a determiner phrase is just a bare noun on the surface, then both relative clauses and possessive constructions can appear to precede the noun directly. In the next subsection, we will utilize what we have learned about prenominal adjunction to create our second noun diagnostic.

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<sup>20</sup> I assume in this case that both the determiner and the classifier are null. But this issue is beyond the scope of my thesis.

### 2.2.2.3 Using *gei* constructions as a noun diagnostic

In this subsection, I explore the following questions: can most nouns can be preceded by the two *gei* constructions, and is there one *gei* construction that can be used with most nouns?

The examples in (42) demonstrate that nouns of different semantic classes can take *xeu* ‘that is good’ as a relative clause modifier, and they can take *ng gei* ‘my’ as a possessor.

- (42) a. count N:
- |   |  |
|---|--|
| <p>[xeu gei]<sub>RC</sub> nji</p> <p>good REL fish</p> <p>‘fish that is good’</p> | <p>[ng gei]<sub>POSS</sub> nji</p> <p>1SG POSS fish</p> <p>‘my fish’</p> |
|---|--|
- b. mass N:
- |   |  |
|---|--|
| <p>[xeu gei]<sub>RC</sub> syu</p> <p>good REL water</p> <p>‘water that is good’</p> | <p>[ng gei]<sub>POSS</sub> syu</p> <p>1SG POSS water</p> <p>‘my water’</p> |
|---|--|
- c. abstract N:
- |  |  |
|--|--|
| <p>[xeu gei]<sub>RC</sub> sueo-fa</p> <p>good REL idea</p> <p>‘an idea that is good’</p> | <p>[ng gei]<sub>POSS</sub> sueo-fa</p> <p>1SG POSS idea</p> <p>‘my idea’</p> |
|--|--|
- d. collective N:
- |  |   |
|--|---|
| <p>[xeu gei]<sub>RC</sub> pe</p> <p>good REL class</p> <p>‘a class that is good’</p> | <p>[ng gei]<sub>POSS</sub> pe</p> <p>1SG POSS class</p> <p>‘my class’</p> |
|--|---|

e. orientation N:

[ <i>xɛu</i>	<i>gei</i> ] <sub>RC</sub>	<i>tong-gou</i>	[ <i>ŋg</i>	<i>gei</i> ] <sub>POSS</sub>	<i>tong-gou</i>
good	REL	east.side	1SG	POSS	east.side
‘an east side that is good’			‘my east side’		

f. kinship N:

[ <i>xɛu</i>	<i>gei</i> ] <sub>RC</sub>	<i>nei</i>	[ <i>ŋg</i>	<i>gei</i> ] <sub>POSS</sub>	<i>nei</i>
good	REL	daughter	1SG	POSS	daughter
‘a daughter that is good’			‘my daughter’		

In addition to these nouns, I tested these two phrases on many other nouns, but I did not find a noun that is incompatible with both *xɛu* ‘good’ and *ŋg gei* ‘my’. The reason might be that most entities in the world can be valued in terms of ‘good’ or ‘bad’, and can be, in reality or imagination, related to a person.

The *gei* modification constructions cannot be used to modify verbs or “adjectives”. We can have a *gei* construction followed by a verb or an “adjective”, but that is a clause, whose subject DP has a *gei* modifier of a null noun. (43-44) give two examples. In (43-44), the *gei* constructions are not modifying the verb or the “adjective”. Instead, they are modifying a null head noun. The verb and the “adjective” are predicated of the subject, whose head noun is null here.

(43) [[*Xɛu gei*]<sub>RC</sub>  $\emptyset$ ]<sub>DP</sub> *cca*u.

good REL  $\emptyset$ <sub>N</sub> go

‘The ones/ones that is/are good goes/go.’

- (44) [[Ng gei]<sub>POSS</sub>       $\emptyset$ ]<sub>DP</sub> xgong.  
       1SG      POSS             $\emptyset$ <sub>N</sub>      red  
       ‘Mine is red.’

We know that the null noun is there, because we can conjoin, for example, the phrase in (43) with another determiner phrase, as illustrated in (45):

- (45) [[Xeu gei]<sub>RC</sub>  $\emptyset$ ]<sub>DP</sub> ta      [kae            se      kae      nang]<sub>DP</sub>      ccau.  
       good    REL       $\emptyset$ <sub>N</sub>      CONJ    DEM.PROX      three    CL.GEN    person      go  
       ‘The one(s) that is/are good and these three people go.’

Similar to the situation we discussed in Section 2.1.3, when the noun is null, it would seem that the *gei* construction directly modifies a verb or an “adjective”, but these are clauses instead of phrases, and can be distinguish using tests mentioned in Section 2.2.2.1, which are adding aspectual particles to the predicate, adding negation, modal verbs or manner adverbs between the *gei* construction and the predicate. I do not provide examples to prove the predicate status of the verb and “adjective” in (43-44), as they will be similar to examples (14-17).

To summarize, in this subsection, we have looked at how modification of nominal phrases is realized in Yueqing, and found the *gei* constructions to be a good noun diagnostic. Specifically, we have two noun diagnostics from the *gei* constructions: the relative clause *gei* construction as well as the possessive *gei* construction. In the next subsection, we will discuss the last noun diagnostic: copula clauses.

### 2.3 Copula clauses as a noun diagnostic

First, we will look at the components of copula clauses in Yueqing. Then, we will explore how to use copula clauses as a noun diagnostic.

### 2.3.1 The linear order of copula clauses

This subsection examines the linear order of copula clauses in Yueqing. I will use examples to demonstrate that the copula verb only combines with DP predicates.

The copula verb *zz* ‘be’ in Yueqing selects a DP complement. Verbs and “adjectives” are not allowed to serve as complements of *zz* ‘be’. This is illustrated in (46-47). In (46a), a verb phrase follows *zz* ‘be’ and is ungrammatical. For it to be acceptable, the verb phrase has to be turned into a relative clause modifying an overt or covert noun, as in (46b).

- (46) a. \*Ng           zz     ka     jang-vang.  
           1SG           be     teach English  
           Intended: ‘I am teaching English.’
- b. Ng           zz     [ka     jang-vang     gei]<sub>RC</sub> leo-sz/∅.  
           1SG           be     teach English     REL     (teacher)  
           ‘I am somebody that teaches English.’

Similarly, as demonstrated in (47), “adjectives” cannot follow *zz* by themselves, but they can appear in a relative clause that is part of a DP predicate with a null or overt head noun.

- (47) a. \*Kae           zz     sang.  
           CL.GENERIC     be     new  
           Intended: ‘This (one) is new.’
- b. Kae           zz     [sang     gei]<sub>RC</sub> mie-zz/∅.  
           CL.GENERIC     be     new     REL     (thing)  
           ‘This (one) is one that is new.’

If relative clauses with *gei* are allowed in nominal predicates, possessors with *gei* are expected to be allowed as well. This is indeed the case. In (48), the possessive construction can follow the

copula verb as a part of a nominal predicate with either a null or an overt head noun.

- (48) Kae            zz    [ng    gei]<sub>POSS</sub>        mie-zz/∅.  
          CL.GENERIC    be    1SG    POSS            (thing)  
          ‘This is mine/my thing.’

What kind of DPs are allowed after the copula verb? The examples in (49) demonstrate that they can be a full determiner phrase (49a), a determiner phrase with numerals but a null determiner (9b), overtly only a classifier followed by a noun (null proximal demonstrative) (49c), overtly a bare noun (49d) and overtly just a proper name (49e). In other words, any kind of DP can serve as a nominal predicate following the copula.

- (49) a.    [Thang gei]<sub>RC</sub> zz    kae            se    kae    nang.  
          bad    REL    be        DEM.PROX        three    CL.GEN    person  
          ‘The ones who are bad are these three persons.’
- b.    [Thang gei]<sub>RC</sub> zz    se    kae    nang.  
          bad    REL    be        three    CL.GEN    person  
          ‘The ones who are bad are three persons.’
- c.    [Thang gei]<sub>RC</sub> zz    kae    nang.  
          bad    REL    be        CL.GEN    person  
          ‘The one who is bad is this person.’
- d.    [Thang gei]<sub>RC</sub> zz    nang.  
          bad    REL    be        person  
          ‘The ones who are bad are people.’

- e. [Thang gei]<sub>RC</sub> zz Thomu.  
 bad REL be Thomu  
 ‘The one who is bad is Tom.’

In (50-51) the determiner phrases with seemingly only a bare noun can be conjoined with full determiner phrases. Assuming that we can only conjoin categories of the same type, we know that the nominal phrases in (49b-e) are all determiner phrases with null elements.

- (50) [Thang gei]<sub>RC</sub> zz [nang]<sub>DP</sub> ta [kae du mo]<sub>DP</sub>.  
 bad REL be person CONJ DEM.PROX CL.ANIMAL cat  
 ‘The ones who are bad are people and this cat.’
- (51) [Thang gei]<sub>RC</sub> zz [Thomu]<sub>DP</sub> ta [kae se kae nang]<sub>DP</sub>.  
 bad REL be Thomu CONJ DEM.PROX three CL.GEN person  
 ‘The ones who are bad are Tom and these three persons.’

We have established that the linear order of a copula clause consists of a subject, the copula and a nominal predicate. This is schematized in (52).

- (52) Subject be DP

How can we use it to create a noun diagnostic? I will explore this question in the next subsection.

### 2.3.2 Using nominal predicate as a noun diagnostic

In this subsection, I develop the last noun diagnostic. We need a copula clause template that takes all kinds of nouns as complement. Using the string *kae zz...* ‘this is...’ before the word that is being tested seems to be a simple and straightforward diagnostic. (53-55) illustrates how

the diagnostic can be used. The three words following *zz* ‘be’ in (53-55) all pass the test. They should all be nouns.<sup>21</sup>

(53) Kae            *zz*        *peo-gou*.  
          CL.GEN        *be*        *north.side*  
          ‘This is the north side.’

(54) Kae            *zz*        *ku-cchy*.  
          CL.GEN        *be*        *past*  
          ‘This is the past.’

(55) Kae            *zz*        *a-su*.  
          CL.GEN        *be*        *uncle*  
          ‘This is uncle.’

In summary, the copula complement test is a good and easy-to-use diagnostic for nouns in Yueqing. Now I have introduced all four noun diagnostics that I will employ. The next subsection will summarize Chapter 2 and introduce Chapter 3.

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<sup>21</sup> The result is further confirmed by the fact that these nouns also pass the noun tests in Sections 2.1 and 2.2:

- |       |    |   |  |  |  |
|-------|----|---|--|--|--|
| (i)   | a. | <i>kae</i> <i>peo-gou</i><br>CL.GEN <i>north.side</i><br>‘this north.side’                            |  |  |  |
|       | b. | <i>xeu</i> <i>gei</i> <i>peo-gou</i><br>good    REL <i>north.side</i><br>‘the northside that is good’ | <i>ng</i> <i>gei</i> <i>peo-gou</i><br>1SG    POSS <i>north.side</i><br>‘my northside’ |  |  |
| (ii)  | a. | <i>kae</i> <i>ku-cchy</i><br>CL.GEN <i>past</i><br>‘this past’  |  |  |  |
|       | b. | <i>xeu</i> <i>gei</i> <i>ku-cchy</i><br>good    REL <i>past</i><br>‘the past that is good’            | <i>ng</i> <i>gei</i> <i>ku-cchy</i><br>1SG    POSS <i>past</i><br>‘my past’            |  |  |
| (iii) | a. | <i>kae</i> <i>a-su</i><br>CL.GEN <i>uncle</i><br>‘this uncle’   |  |  |  |
|       | b. | <i>xeu</i> <i>gei</i> <i>a-su</i><br>good    REL <i>uncle</i><br>‘the uncle that is good’             | <i>ng</i> <i>gei</i> <i>a-su</i><br>1SG    POSS <i>uncle</i><br>‘my uncle’             |  |  |



## 2.4 Summarizing noun diagnostics

In this chapter, I have presented the structure of the determiner phrase, explored the properties of nominal modification, DP internal tone sandhi and copula clauses, and developed four reliable diagnostics for nouns. They are listed in Table 4.

**Table 4. Noun diagnostics**

noun diagnostic	example
generic classifier <i>kae</i>	<i>kae sueo-fa</i> ‘this idea’
relative <i>gei</i> modification	<i>[xeu gei] sueo-fa</i> ‘an idea that is good’
possessive <i>gei</i> modification	<i>[ng gei] sueo-fa</i> ‘my idea’
copula complement	<i>kae zz sueo-fa</i> ‘This is the idea.’

The first diagnostic echoes Baker (2003)’s two diagnostics for nouns: nouns can be preceded by quantifier/determiner, and nouns can be counted or measured. The second, third and fourth diagnostics are specific to Yueqing.<sup>22</sup>

Using the four noun diagnostics, we will now examine whether the 85 potential “adjectives” behave like nouns.

## 2.5 Testing noun diagnostics on “adjectives”

In this short section, I will discuss the result of using the three noun diagnostics on the 85 “adjectives” identified in chapter 1. We will see that “adjectives” are significantly different from nouns.

In the previous section, we have seen examples of “adjectives” that pattern with verbs but stand in contrast to nouns. I have applied the three noun diagnostics to all 85 “adjectives”, but for reasons of space will not present all results here. In this section, I will report and discuss the results and give representative examples.

---

<sup>22</sup> As for Baker’s other noun diagnostics, although in Yueqing nouns can be antecedents of pronouns / reflexives / traces and can be canonical arguments, no simple or easy diagnostics can be found to test them. This is due to the following reasons: pronouns and reflexives in Yueqing are only anaphoric to animate nouns, and hence cannot be used to test inanimate nouns; nouns as subjects and objects can be confused with clausal arguments with a predicate but have a null subject. It is also hard to find a verb that can select any noun as its complement.

All of the 85 “adjectives” failed the three noun tests.<sup>23</sup> Here are two examples testing the “adjectives” *du* ‘big’ and *jjuo* ‘heavy’:

- (56) a. \*kae du (classifier test)  
 CL.GEN big  
 ‘This big.’
- b. \*[xeu gei]<sub>RC</sub> du \*[ng gei]<sub>POSS</sub> du (*gei* test)  
 good REL big 1SG POSS big  
 ‘big that is good’ ‘my big’
- c. \*Kae zz du. (copular complement test)  
 CL.GEN be big  
 ‘This is big.’
- (57) a. \*kae jjuo (classifier test)  
 CL.GEN heavy  
 ‘This heavy.’

---

<sup>23</sup> All 85 “adjectives” failed the noun diagnostics on their “adjective” meaning. I found four “adjectives” that are homophonous with lexically related nouns. The four “adjectives” are *ko* ‘bright’, *xgong* ‘red’, *lou* ‘green’, and *peng* ‘cold’. When the four “adjectives” pass the tests, it is actually their homophonous noun counterpart that pass the tests. The tests on *xgong* ‘red’ are presented in (i).

- (i) a. kae xgong  
 CL.GEN red.colour  
 ‘this red colour’
- b. [xeu gei]<sub>RC</sub> xgong [ng gei]<sub>POSS</sub> xgong  
 good REL red.colour 1SG POSS red.colour  
 ‘good red colour’ ‘my red colour’
- c. Kae zz xgong.  
 CL.GEN be red.colour  
 ‘This is red colour.’

*Ko* means ‘bright’ when it is an “adjective” and ‘light’ when it is a noun. *Xgong* ‘red’ and *lou* ‘green’ also mean the colour of red and that of green. *Peng* means ‘cold’ when it is an “adjective” and ‘ice’ when it is a noun. The reason why the other two colour-words in our 85 “adjectives”, *xeu* ‘dark’ and *bei* ‘white’, do not pass the noun tests might be due to the fact that *xeu* ‘dark’ is not used to refer to a colour, and that the noun ‘white’ refers to a taboo colour in Yueqing culture and is not talked about.

- b.   \*[xeu gei]<sub>RC</sub> jjuo            \*[ng gei]<sub>POSS</sub>   jjuo   (*gei* test)  
       good   REL   heavy            1SG   POSS       heavy  
       ‘ heavy that is good’        ‘my heavy’
- c.   \*Kae                zz   jjuo.   (copular complement test)  
       CL.GEN            be   heavy  
       ‘This is heavy.’

The three noun diagnostics worked well to exclude the 85 “adjectives” from the category of nouns. In the next chapter, I will shift my focus from nouns to verbs.

### Chapter 3: Verb Diagnostics and Testing “Adjectives” in Yueqing

This chapter explores ways in which we can identify verbs in Yueqing. In Chapter 2, understanding the components of determiner phrases helped us find noun diagnostics. In this chapter, I will examine the components of the extended projection of the verb (henceforth verbal projection) in order to determine the unique properties of verbs. Once we know the components of the verbal projection, we will develop verb diagnostics and use them on “adjectives” to find out how similar or different “adjectives” are to verbs.

Section 3.1 explores the basic word order of Yueqing. In Sections 3.2 to 3.4, I will first explore morpho-syntactic properties of the verbal projection, which I will then use to develop verb diagnostics. More specifically, I will look at aspectual inflections, negation and modal verbs. Section 3.5 is a summary of the previous sections. Section 3.6 tests the verb diagnostics on “adjectives”. Section 3.7 explores more evidence for the category of “adjectives”, such as conjunction with verbs, appearance in imperatives, reduplication patterns, attributive modification, forming adverbs, degree modification, and comparatives and superlatives. Section 3.8 is the summary of Part I. I will start with word order.

#### **3.1 Yueqing word order**

In this section, we will establish where the verb is located in relation to the subject and the object. We will first look at intransitive clauses.

##### ***3.1.1 Intransitive clauses***

Let us look at the relative order of the verb and the subject in the two intransitive sentences in (1-2). In both (1a) and (2a), the subject precedes the verb, and the aspectual particles follow the verb. In both (1b) and (2b), I attempted to put the subject immediately after the verb; in both (1c) and (2c), I attempted to put the subject in the final position of the sentence,

following both the verb and the aspectual particle.

- (1) a. Jji [seo -jji bei]<sub>PRED</sub>.  
 3SG smile ASP.INCP ASP.PRF  
 ‘He/she has started smiling.’
- b. \*seo -jji jji bei.  
 smile ASP.INCP3SG ASP.PRF  
 ‘He/she has started smiling.’
- c. [seo -jji bei]<sub>PRED</sub> jji.  
 smile ASP.INCP ASP.PRF 3SG  
 ‘He/she has started smiling.’
- (2) a. Jji [lae -ga bei]<sub>PRED</sub>.  
 3SG fall ASP.CMPL ASP.PRF  
 ‘He/she fell.’
- b. \*lae -ga jji bei.  
 fall ASP.CMPL 3SG ASP.PRF  
 ‘He/she fell.’
- c. [lae -ga bei]<sub>PRED</sub> jji.  
 fall ASP.CMPL ASP.PRF 3SG  
 ‘He/she fell.’

(1b) and (2b) are not acceptable, indicating that the subject cannot immediately follow the verb.

(1c) and (2c) are acceptable. However, this is not a common word order in Yueqing, but likely a form of topicalization. Yueqing intransitives are most likely to have SV word order. Next, we will look at transitive clauses.

### 3.1.2 Transitive clauses

We have found that intransitive clauses are formed by the subject followed by the verb. With transitive clauses, the situation is a bit more complicated. The order depends on the aspect of the sentence.<sup>24</sup> With a clause that has no overt aspectual markers (3a), or just the perfective aspect particle (3b), or just the progressive aspect particle (3c), or the experiential aspect suffix (3d), the word order is SVO.<sup>25</sup>

- (3) a. Leo-fu [ccheo ty]PRED.  
 tiger eat rabbit  
 ‘Tigers eat rabbit.’
- b. Leo-fu [ccheo ty bei]PRED.  
 tiger eat rabbit ASP.PRF  
 ‘Tiger(s) has/have eaten rabbit.’
- c. Leo-fu [zz-ti ccheo ty]PRED.  
 tiger ASP.PROG eat rabbit  
 ‘Tiger(s) is/are eating rabbit.’
- d. Leo-fu [ccheo -ku ty]PRED.  
 tiger eat ASP.EXP rabbit  
 ‘The tiger ate rabbit before.’

However, if the verb has a completive or inceptive aspect suffix, then the object is preposed, and appears immediately after the particle *bei*, which marks the argument that immediately follows as the direct object. The Yueqing *bei* is similar to the Mandarin *ba*, which is treated as a function head above *vP* with the function of assigning “a disposal reading” to the “post-*ba* NP” by Huang

<sup>24</sup> Some of the particles are suffixes and some are independent words. This will be the topic of Section 3.2.

<sup>25</sup> This is a simplification of the situation, but suffices for our purposes in this thesis.

et al. (2009). Since it is not critically related to our verb diagnostics, I will simply treat *bei* as an object marker and gloss it as ‘OBJ’, without delving into the syntactic function of this word.

- (4) a. Leo-fu        [bei    ty        ccheo -ga                bei]PRED.  
          tiger            OBJ    rabbit eat        ASP.CMPL        ASP.PRF  
          ‘A tiger has / tigers have finished eating rabbit.’
- b. Leo-fu        [bei    ty        ccheo -jji    bei]PRED.  
          tiger            OBJ    rabbit eat        ASP.INCP ASP.PRF  
          ‘A tiger has / tigers have started eating rabbit.’

The examples indicate that, for transitive clauses, the normal word order is SVO, except when the aspect is completive or inceptive, in which case it has the derived order, SOV.

We have established the basic word order of Yueqing, which prepares us to investigate the extended verbal projection and the properties of verbs in Yueqing further.

### 3.2 Verb inflections

The previous section provided a glimpse of the three verbal suffixes in Yueqing. This section will discuss these suffixes, all of which denote different aspects - the completive, inceptive and experiential – with a view to developing a diagnostic for verbs. Chapter 4 will discuss the interpretation of Yueqing aspectual suffixes and particles in detail; in this section, we will just look at the aspectual suffixes for the purpose of developing a verb diagnostic.

First, in order to demonstrate that these are suffixes, and not particles, I tried adding adverbs and objects between the verb and the suffix. The examples in (5) show some of the results. In (5a) the object appears between the verb and the experiential suffix; in (5b) the object appears between the verb and the completive suffix; in (5c) the manner adverb *me-me-nang* ‘slowly’ is added between the verb and the inceptive suffix. These examples are all unacceptable.

Moreover, they are representative of the results I obtained with all attempts to add material between the verb and these three aspectual markers, indicating that the markers are indeed suffixes.

- (5) a. \*Leo-fu [ccheo ty -ku]PRED.  
 tiger eat rabbit ASP.EXP  
 Intended: ‘The tiger ate rabbit before.’
- b. \*Leo-fu [ccheo ty -ga bei]PRED.  
 tiger eat rabbit ASP.CMPL ASP.PRF  
 Intended: ‘Tiger(s) has/have finished eating rabbit.’
- c. \*Leo-fu [bei -ty ccheo me-me-nang -jji bei]PRED.  
 tiger ANTIPAS rabbit eat slowly ASP.INCPASP.PRF  
 Intended: ‘Tiger(s) has/have started eating rabbit slowly.’

Since the aspectual suffixes appear to be a type of verbal inflection<sup>26</sup>, can we use them as verb diagnostics? We can, if they are compatible with most verbs. The completive and the inceptive suffixes cannot combine with most verbs. (6) illustrates that there are verbs that are not compatible with the completive and the inceptive suffixes. In (6a) the verb *sz* ‘die’ cannot take the inceptive aspect; in (6b) *seo* ‘smile’ cannot take the completive aspect.

- (6) a. \*Leo-fu sz -jji bei.  
 tiger die ASP.INCPASP.PRF  
 ‘The tiger has started to die.’

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<sup>26</sup> I assume that these suffixes are inflectional suffixes because, if we use Haspelmath & Sims (2013)’s criteria, these Yueqing suffixes are unlike word-formation suffixes and like inflectional suffixes: they do not change word class, they are relevant to syntax, they are obligatory, they do not change the meaning of the base, and they have unlimited applicability on verbs as well as “adjectives” when the grammatical semantic aspect does not clash with the lexical aspect.



- b. \*Jji seo -ga bei.  
 3SG smile ASP.CMPL ASP.PRF  
 ‘He/she finished smiling.’

The experiential suffix, however, seems to be compatible with most verbs. The two verbs we just tested can take the experiential suffix, as illustrated in (7).

- (7) a. Leo-fu sz -ku bei.  
 tiger die ASP.EXP ASP.PRF  
 ‘The tiger once died.’
- b. Jji seo -ku bei.  
 3SG smile ASP.EXP ASP.PRF  
 ‘He/she once smiled.’

Chapter 4 will discuss the interpretation of the experiential aspect in combination with different types of main verbs in detail. Here we will just assume that most main verbs can bear the experiential aspect suffix. Modal verbs and the copula verb cannot be inflected for aspect, as illustrated in (8-9); that is why I used the term “main verbs” instead of simply “verbs” here. This means that this first verb diagnostic does not apply to modal verbs and the copula verb, but only applies to main verbs.

- (8) \*Leo-fu wae -ku ccau-li.  
 tiger be.likely.to ASP.EXP come  
 Intended: ‘Tigers were once likely to come.’
- (9) \*Ng zz -ku leo-sz.  
 1SG be ASP.EXP teacher  
 Intended: ‘I once was a teacher.’

If the experiential aspect *-ku* may be added to most main verbs, it should be a reasonable diagnostic for verbs. We also need to make sure that nouns cannot take this suffix. (10) shows that the suffix cannot be added to a noun.

(10) \*Ng    leo-sz            -ku            bei.  
           1SG    teacher            ASP.EXP        ASP.PRF

Intended: 'I once was a teacher.'

To express the intended content of (10), we need a verbal predicate, such as in (11). Here *to* 'act as' is a verb, and therefore can take the aspectual inflection. *Leo-sz* 'teacher' here is the complement of the verb.

(11) Ng    to    -ku    leo-sz    bei.  
           1SG    act.as    ASP.EXP    teacher    ASP.PRF

'I have once worked as a teacher.'

Based on examples (7-11), we have found that *-ku* is a good verb diagnostic. Next, we will look at verbal negation.

### 3.3 Clausal negation

In this section, I explore how verbs are negated, in order to determine if this can be used as a diagnostic for verbs.

In Yueqing, verbs can be negated using different negation particles, each with its own inherent aspect. (12) illustrates the aspects of the three negation particles. In (12a) the contemplative negation *mi* signals that an eventuality has not happened but is expected to happen. I use 'CON' to stand for the contemplative aspect. With the term 'contemplative' I refer to the aspect where an eventuality is expected to happen. *Mi* indicates that the event has not yet occurred. (12b) illustrates the negation particle *fu*, which has imperfective aspect. *Fu* indicates

that what is being negated is part of the event. (12c) illustrates the negation particle *mau*, which has the perfective aspect. *Mau* indicates that the entire event is being negated.

- (12) a. Leo-fu      mi            ccau-li.  
          tiger            NEG.CON        come  
          ‘The tiger has not yet (but is expected to) come.’
- b. Leo-fu      fu            ccau-li.  
          tiger            NEG.IMP        come  
          ‘The tiger is not coming.’
- c. Leo-fu      mau           ccau-li.  
          tiger            NEG.PRF        come  
          ‘The tiger did not come.’

The three negation particles are mutually exclusive: only one can be used in a single clause. For example, (13), where two negation markers co-occur, is not acceptable.

- (13) \*Leo-fu      mau           mi            ccau-li.  
          tiger            NEG.PRF        NEG.CON        come  
          Intended: ‘The tiger did not but is expected to come.’

The three negation particles all occur in the same position preceding the verb they are negating.

Next, we need to determine if the negation particles can negate nouns. In (14), we replace the verb in (13) with a noun. We can see the *mi* and *fu* cannot negate a noun, but *mau* can.<sup>27</sup>

- (14) a. \*Leo-fu      mi            le-sz.  
          tiger            NEG.CON        teacher  
          ‘The tiger has not but is expected teacher.’

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<sup>27</sup> My suspicion is that in (14c) there is a null verb *jau* ‘have’ between the *mau* and *le-sz*, which is phonetically merged into *mau* due to the same rhyme it has with *mau*.

- b. \*Leo-fu      fu              le-sz.  
          tiger              NEG.IMP          teacher  
          ‘The tiger not a teacher.’
- c. Leo-fu              mau              le-sz.  
          tiger              NEG.PRF          teacher  
          ‘The tiger does not have a teacher.’

This means that *mau* cannot be used as a verb diagnostic, but *mi* and *fu* may. Our next question is: can *mi* and *fu* negate most verbs? The negation particles have aspect, and all verbs have aspect too. It is possible that, due to the conflict between the aspect in the negation particle and the aspect in the verb, they might not be compatible. Let us look at the following examples. (15-16) show that stative verbs that express human psychological states cannot be negated by the contemplative negation marker.

- (15) \*Ng    mi              sueo-sang      jji.  
          1SG    NEG.CON          trust            3SG  
          ‘\*I have not yet but am expected to trust him.’
- (16) \*Ng    mi              ci-feo            ccha-peo.  
          1SG    NEG.CON          like              money  
          ‘\*I have not yet but am expected to like money.’

There might be more verbs that are incompatible with the contemplative negative particle, but at least we know there are some verbs that are incompatible with it. This leaves us with only the imperfective negative particle *fu*. I tested more verbs of different aspectual classes<sup>28</sup> with this particle, and (17-19) are some examples of the test.

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<sup>28</sup> See Appendix B for the complete list of verbs tested.

- (17) Cca-de          fu                  bo-cca.  
 bomb                  NEG.IMP          explode

‘The bomb is not exploding.’

- (18) Kae    nang    fu                  zeu-zei.  
 CL.GEN   person   NEG.IMP          exist

‘This person does not exist.’

- (19) Di-mie          fu                  dong.  
 ground                  NEG.IMP          move

‘The ground is not moving.’

So far, I have not found any verb that is not compatible with the imperfective negative particle. Modal verbs as well as the copula *zz* ‘be’ can all be negated by *fu*. If a clause has a modal verb, the negation marker will precede the modal verb. This is illustrated in (20).

- (20) Leo-fu          fu                  wae                  ccau-li.  
 tiger                  NEG.IMP          be.likely.to          come

‘The tiger is not likely to come.’

Therefore, *fu* will be another good diagnostic for all verbs. Next, we will look at modal verbs and see if they can diagnose main verbs.

### 3.4 Modal verbs

If Yueqing has modal verbs, and modal verbs only take a main verb as their complement, then we may use modal verbs to diagnose main verbs. I distinguish Yueqing modal verbs from main verbs because they are different from main verbs in two ways: modal verbs only take main verbs as their complement, and modal verbs cannot be inflected for aspect.

The following are some examples of modal verbs in Yueqing:

(21) a. epistemic modals:

*wae* 'be likely to'

*jang-kei* 'should (high probability)'

*khang-deng* 'must (certainty)'

b. deontic modals:

*wae* 'be able to'

*khang* 'be willing to'

*sueo* 'want to'

The deontic modals normally require verbs with an animate subject. The epistemic modals are less restrictive. *Wae* 'be likely to' is the least restrictive. I have not found a verb that is not compatible with *wae* 'be likely to'. (22-24) show examples of *wae* selecting different verbs.

(22) Kae            nei    wae            lou-jy.

CL.GENERIC    day    be.likely.to    rain

'Today it is likely to rain.'

(23) Sueo-fa        wae            bie.

idea            be.likely.to    change

'Ideas are likely to change.'

(24) Kae            pa    wae            zz    ga-nang        song-li?

CL.GENERIC    bag    be.likely.to    be    who            send.here

'Who is likely to have sent us this bag?'

For *wae* 'be likely to' to be useful as a verb diagnostic, we also need to be sure that it does not take a noun as its complement. This is supported by (25a) where *wae* 'be likely to' tries

to take a *leo-sz* ‘teacher’ as its complement. The clause is impossible, meaning that *wae* ‘be likely to’ does not take nouns as its complement. The correct form expressing the intended meaning of the sentence is shown in (25b).

- (25) a. \*Ng wae leo-sz.  
 1SG be.likely.to teacher  
 Intended: ‘I am likely to be a teacher.’
- b. Ng wae zz leo-sz.  
 1SG be.likely.to be teacher  
 ‘I am likely to be a teacher.’

Therefore, from what we have seen, the modal verb *wae* is likely to be compatible with a very broad range of non-modal verbs, but not nouns. We can use *wae* to diagnose non-modal verbs. We now have our last verb diagnostic. In the next section, I will summarize the verb diagnostics before applying them to “adjectives” in Section 3.6.

### 3.5 Summarizing verb diagnostics

We have now gone through the components of the verbal projection and found three good diagnostics for verbs. They are listed in Table 5.

**Table 5. Verb diagnostics**

verb diagnostic	example	exceptions
<i>-ku</i> (experiential)	<i>ccau -ku</i> ‘have been to ... before’	modal verbs, copula verb
<i>fu</i> (imperfective Neg)	<i>fu ccau</i> ‘not going’	none
<i>wae</i> ‘be likely to’	<i>wae ccau</i> ‘be likely to go’	modal verbs

According to Baker (2003), we should be able to single out verbs through their tense/aspect inflection, their ability to assign theta roles to their specifiers, and their inability to conjoin with non-verbs. Our first diagnostic is a type of aspectual inflection. For a verb’s ability to assign a theta role to its specifier and inability to conjoin with non-verbs, there are no easy

tests available. The four diagnostics in Table 5 appear to be the most effective diagnostics for verbs in Yueqing.

With the four verb diagnostics, we will examine how the 85 potential “adjectives” fare in terms of their similarity or difference to verbs.

### 3.6 Testing verb diagnostics on “adjectives”

This section will apply the four verb diagnostics developed in Sections 3.2-3.4 to our “adjectives”.

#### 3.6.1 *Experiential aspectual inflection -ku*

As mentioned in Section 3.2, the experiential aspect *-ku* is the least restrictive grammatical aspect and can co-occur with all kinds of verbs, except for modal verbs and the copula verb. We look at this diagnostic’s application to “adjectives” in this subsection. The 85 “adjectives” in Table 2 have been tested regarding their compatibility with *-ku*, and the result shows that all of them are compatible with the experiential aspectual suffix *-ku*. Examples (32-34) illustrate this finding.

(32) Tio            xgou   sang   -ku            bei.  
 CL.LONG        river   deep   ASP.EXP            ASP.PRF  
 ‘This river was once deep.’

(33) Jji        cchye   gei        di                    zuo-lei        mau   kete   -ku.  
 3SG        offer   REL        problem        never            NEG.PRF    easy   ASP.EXP  
 ‘The problems offered by him/her were never easy.’

(34) Ng        ccou-sae                    wae            -ku        bei.  
 1SG        during.childhood        hungry            ASP.EXP    ASP.PRF  
 ‘During my childhood, I experienced hunger.’



These examples demonstrate that “adjectives” can inflect for aspect, as verbs do. We will look at negation next.

### 3.6.2 Verbal imperfective negation *fu*

Can *fu* negate “adjectives”? Examples (35-37) show that it can.

(35) Ng fu leu.

1sg NEG.IMP old

‘I’m not old.’

(36) Teo fu ccie.

knife NEG.IMP sharp

‘The knife is not sharp.’

(37) Kae di-fo fu jye.

CL.GEN place NEG.IMP far

‘This place is not far away.’

All 85 “adjectives” in Table 2 can be negated by *fu*, including two “adjectives” that are compounds that already have the morpheme *fu* ‘not’. They are listed in (38-39). They are the antonyms of *zueo* ‘alike’ and *zi* ‘aligned’. We know that they are compounds because they have undergone tone sandhi as I have established in Section 2.2.1.3.

(38) [rising] [rising] [dipping]-[rising]

fu zueo → fu-zueo

not alike not-alike

‘not alike’ ‘unlike’

(39)	[rising]	[falling]	[dipping]-[falling]
	fu	zi →	fu-zi
	not	aligned	not-aligned
	‘not aligned’		‘unaligned’

Despite the existence of these compounds, *zueo* ‘alike’ can still be negated by *fu*, which will be a phrase and will not have tone sandhi, as shown in the left part of (38). And likewise, *zi* ‘aligned’ can still be negated by *fu* in a phrase, as shown in the left part of (39). Also, *fu-zueo* ‘unlike’ and *fu-zi* ‘unaligned’ can be further negated by *fu*.

We have seen in this subsection that “adjectives” can be negated by *fu*, just like verbs (and unlike nouns). We will turn to the modal verb diagnostic next.

### 3.6.3 Modal verb *wae* ‘be likely to’

In this subsection, we examine the possibility of “adjectives” being the complement of the modal verb *wae* ‘be likely to’. (40-42) are three examples of *wae* taking “adjectives” as complements.

(40)	Fueo	mueo-zueo	wae	xgong.
	flower	right.away	be.likely.to	red
	‘The flower will likely be turning red right away.’			

(41)	Ng	ku-la-nei	wae	jjuo	-jji.
	1SG	after.some.days	be.likely.to	heavy	ASP.INCP
	‘In a few days, I will likely start to put on weight.’				

(42)	Nang	wae	seo	-ga.
	person	be.likely.to	few	ASP.CMPL
	‘The number of people will likely decrease.’			

All but four of the 85 “adjectives”, can be selected as a complement of *wae*. The four “adjectives” are *sang* ‘new’, *ccang* ‘real’, *kou* ‘fake’ and *sa* ‘raw’. (43) shows the ungrammaticality of *wae* followed by *sa* ‘raw’.

- (43) \*Dieo           nji       wae           sa.  
           CL.LONG       fish    be.likely.to   raw  
           ‘\*The fish is likely to become rawer’

If we look at (40-42), the meaning of (40) is not ‘the flower is likely red’, but ‘the flower is likely to turn red’; the meaning of (41) is not ‘I am likely (to be) heavy’, but ‘I will become heavier’; the meaning of (42) is not ‘people are few’, but ‘people will get fewer’. What these examples indicate is *wae* ‘be likely to’ asserts the likeliness of a change in its complement instead of the complement itself. This allows us to account for the unacceptability of (43): a fish cannot become rawer. What about stative verbs? They can be selected by *wae* as well. Let us look at an example of *wae* selecting a stative verb. In (44), the meaning of the clause is ‘you are likely to enter into the state of liking this place.’ The change that *wae* looks for is not in the state itself, but rather from not being in the state to being in the state.

- (44) Nji       wae           ci-fueo       kae-de.  
       2<sub>SG</sub>   be.likely.to   like           this.place  
       ‘You will probably like it here.’

Now turning back to the four “adjectives” that cannot be selected by *wae* ‘be likely to’, they are ‘states’ of ‘being new’, ‘being real’, ‘being fake’ and ‘being raw’, all of which are states that cannot be entered into. This is possibly because something cannot become newer, more real, more fake or more raw. These four “adjectives” do not pass our modal verb test. Are they not

“adjectives”? They did pass the previous inflection and negation tests. We will leave this question aside for now. We will come back to it in Chapter 5.

This subsection has found that the majority of “adjectives” can be selected by the modal verb *wae* ‘be likely to’. The next subsection will look at our last verb diagnostic.

We have now reported the results of applying the verb diagnostics to the 85 “adjectives”. The result is that all of them passed the inflection and negation test, but four of them did not pass the modal verb tests. In the next section, we will discuss more evidence supporting the verb status of “adjectives”, which is not directly developed based on the components of Yueqing verbal projection, and may not apply to all kinds of verbs or “adjectives”.

### **3.7 Are “adjectives” verbs? Other evidence**

In this section, I will present other evidence supporting the verb status of “adjectives”. I will be looking at verb conjunction, imperatives, reduplication, attributive modification, forming adverbs, degree adverbs, and comparative and superlative constructions. First, can “adjectives” conjoin with verbs?

#### **3.7.1 Conjunction**

In Chapter 2, I stated my assumption that only constituents of the same category can be conjoined. In this subsection I explore the question of whether verbs only conjoin with other canonical verbs, or if “adjectives” can also conjoin with verbs.

First, we need to be sure that verbs conjoin with verbs, but not with non-verbs. (45-46) show the result of conjoining two verbs as well as a verb and a noun. We see from (45), that when two verbs are conjoined, there is no overt conjunction marker, but just the juxtaposition of

two verbs.<sup>29</sup> I attempted to conjoin a verb with a noun in (46). Whether or not the second aspect suffix is present, the sentence is not acceptable, showing that verbs cannot be conjoined with nouns.

- (45) a. Da-kou-nang [cchieo-jji]<sub>VP</sub> Ø [thieo -jji]<sub>VP</sub>.  
 everyone sing ASP.INCP CONJ dance ASP.INCP  
 ‘Everyone started to sing and dance.’
- b. Da-kou-nang [thieo -jji]<sub>VP</sub> Ø [cchieo -jji]<sub>VP</sub>.  
 everyone dance ASP.INCP CONJ sing ASP.INCP  
 ‘Everyone started to dance and sing.’
- (46) a. \*Da-kou-nang [cchieo-jji]<sub>VP</sub> Ø [mae (-jji)]<sub>DP</sub>.  
 everyone sing ASP.INCP CONJ child ASP.INCP  
 ‘Everyone started to sing and be like child.’
- b. \*Da-kou-nang [mae (-jji)]<sub>DP</sub> Ø [cchieo-jji]<sub>VP</sub>.  
 everyone child ASP.INCP CONJ sing ASP.INCP  
 ‘Everyone started to be like (a) child and sing.’

Now let us try to conjoin an “adjective” with a verb. In (47), *do* ‘silly’ is an “adjective” taking the inceptive aspectual suffix *-jji*, and is conjoined with the verb *zye* ‘spin’ taking the same aspectual suffix.

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<sup>29</sup> This is not a serial verb construction, as each has aspectual inflection, and there is no limit on the number of verbs that are conjoined here. For example, I can add *bi-jji* ‘started to run’, *zye-jji* ‘started to spin’, *fi-jji* ‘started to fly’, and *ccau-jji* ‘started to walk’ to the string, as illustrated in (i).

(i) Da-kou-nang [cchieo -jji]<sub>VP</sub> Ø [thieo -jji]<sub>VP</sub> Ø [bi -jji]<sub>VP</sub> Ø [zye -jji]<sub>VP</sub>.  
 everyone sing ASP.INCP CONJ dance ASP.INCP CONJ run ASP.INCP CONJ spin ASP.INCP  
 ‘Everyone started to sing, dance, run and spin.’

- (47) Kae            mae    i            [do    -jji]<sub>AP</sub>    Ø            [zye    -jji]<sub>VP</sub>.  
 CL.GENERIC    child    again    silly    ASP.INCP    CONJ    spin    ASP.INCP  
 ‘This child started to be silly and spin again.’

In (47), *do* ‘silly’ is an “adjective” taking the inceptive aspectual suffix *-jji*, and is conjoined with the verb *zye* taking the same aspectual suffix. In (48), three predicates are conjoined: the “adjectives” *fei* ‘dirty’ and *seo* ‘wet’, and the verb phrase *sueo ty* ‘want to vomit’.

- (48) Ng            nang-njeo    i            [fei]<sub>A</sub>    i            [seo]<sub>A</sub>    i            [sueo    ty]<sub>VP</sub>.  
 1SG            right.now    also    dirty    also    wet    also    WANT.TO    vomit.  
 ‘I’m dirty, wet, and want to vomit right now.’

(49) is an example of conjunction of an “adjective” with a transitive verb.

- (49) NG            a            [nje-cchang -ku]<sub>AP</sub>    Ø            [kei    -ku            mou-tou]<sub>VP</sub>    bei.  
 1SG            also    young            ASP.EXP    CONJ    drive    ASP.EXP    motorcycle    ASP.PRF  
 ‘I was once young and drove a motorcycle.’

These examples show that “adjectives” can conjoin with verbs. Although it is hard to find a suitable verb for each of the 85 “adjectives” to conjoin with, we have at least seen that it is not impossible to conjoin verbs and “adjectives”. It shows us that it is very probable that “adjectives” in Yueqing are true verbs. Our next subject of investigation is imperative clauses.

### 3.7.2 Imperatives

In this subsection, we investigate whether verbs, “adjectives” and nouns behave the same in imperative clauses. As in many other languages, imperative clauses in Yueqing have a null 2nd person subject. Since Yueqing is an SVO language, such sentences appear to be verb initial. See two examples below:

(50) Zou lou!  
 sit down  
 ‘Sit down!’

(51) Ccheo -jji!  
 eat ASP.INCP  
 ‘Start eating!’

It might not be surprising by now that “adjectives” can be used in imperatives. See two examples below:

(52) Dei-fo li!  
 generous more  
 ‘Be more generous!’

(53) Du -jji!  
 big ASP.INCP  
 ‘Start becoming bigger!’

Adjectives are used in prohibitives as well. Prohibitives are formed with adding *fae* ‘don’t’ to the beginning of sentences. (54) is an example of a transitive verb used in a prohibitive sentence.

(54) Fae ta jji!  
 don’t hit 3SG  
 ‘Don’t hit him/her!’

(55) is an example of an adjective used in a prohibitive sentence.

(55) Fae do!  
 don’t silly  
 ‘Don’t be silly!’

In Section 3.2, I showed that bare noun predicates are ill-formed, and need to be combined with the copula or a verb like ‘act as’. In (56a-b) I show that ‘act as’ + NP predicates can be used in imperative sentences, but bare NP predicates cannot.

- (56) a. \*Fae            mae-n!  
           don’t            baby  
           Intended: ‘Don’t be a baby!’
- b. Fae            to        mae-n!  
       don’t            act.as    baby  
       ‘Don’t be a baby!’

We have seen that “adjectives” can be used in imperatives and prohibitives just like verbs, but that nouns cannot. Reduplication is our next topic.

### 3.7.3 Reduplication

Reduplication is a morphological process by which all or part of a form is repeated (Matthews 2014). Dixon (2004) observes that in some languages that have reduplication, reduplicated adjectives and verbs are possible, but contrast in semantic implications. He cites a Mandarin example from Xu (1988): a verb when reduplicated carries the meaning ‘do a little bit’ (*dong* ‘to move’, *dong-dong* ‘to move a little’), and when an adjective is reduplicated, the semantic effect is ‘intensification of the quality’ (*hong* ‘red’, *hong-hong* ‘vividly red’) (Dixon 2004, 17). Paul (2010) also claims that in Mandarin disyllabic compound adjectives are reduplicated in an [AABB] pattern, while compound verbs are reduplicated in an [ABAB] manner. These two facts suggest that there is a possibility that, in Yueqing, “adjectives” may be reduplicated in a different pattern to that of verbs, and that they might have different meaning from verbs when reduplicated. We will show that this is not the case.



Firstly, let us look at monosyllabic Yueqing verbs and “adjectives”. *Dong* also means ‘to move’ in Yueqing, and *Dong-dong* also means ‘to move a little’. *Xgong* ‘red’, when reduplicated, however, does not mean ‘vividly red’; it means ‘to be red for a bit’. It can be used in a context where an actor changes colour frequently—sometimes being red, and sometimes being green, etc. Yueqing express ‘vividly red’ by *xgong cje xgong*, the pattern of which is also applicable to verbs with a scale property. We will discuss this in detail in Section 3.7.6.

Secondly, let us examine disyllabic compounds. There are, as in Mandarin, two patterns of reduplication: AABB and ABAB. Both patterns are attested with verbs and with “adjectives”. The semantic interpretation depends on the pattern of reduplication rather than on the kinds of words being reduplicated. Let us look at verbs first. (57-58) demonstrate that in Yueqing some disyllabic compound verbs of the form [AB] can have the [AABB] patterns of reduplication. (57a) and (58a) show us the original verb, and (57b) and (58b) are the corresponding reduplicated forms. This pattern of reduplication gives rise to an aspectual difference: turning the event into an ongoing process.

- (57) a.   ccau-deng  
           walk-stop  
           ‘walk and stop’
- b.   ccau-ccau-deng-deng  
           walk-walk-stop-stop  
           ‘be walking and stopping’
- (58) a.   ko-seo  
           talk-laugh  
           ‘talk and laugh’

- b. ko-ko-seo-seo  
 talk-talk-laugh-laugh  
 ‘be talking and laughing’

(59-60) demonstrate that in Yueqing some disyllabic verbs of the form [AB] can have the [ABAB] patterns of reduplication. The interpretation of this pattern of reduplication is similar to that of the monosyllabic reduplication above, which is ‘do a bit of  $\phi$ ing’.

- (59) a. ta-seo  
 dust-sweep  
 ‘clean’
- b. ta-seo-ta-seo  
 dust-sweep-dust-sweep  
 ‘do a bit of cleaning’
- (60) a. xei-cci  
 total-calculate  
 ‘discuss’
- b. xei-cci-xei-cci  
 total-calculate-total-calculate  
 ‘do a bit of a discussing’

Therefore, the two patterns ([AABB or ABAB]) of reduplication lead to different interpretation of the verb. The [AABB] pattern is interpreted as a description of the situation from a perspective within the situation, while the [ABAB] pattern is interpreted as ‘do a bit of  $\phi$ ing’. Now let us see what happens with “adjectives”. (61) is an example of an “adjective” reduplicated in a [AABB] pattern.

- (61) a. ke-te  
 simple-simplex  
 ‘simple’
- b. ke-ke-te-te  
 simple-simple-simplex-simplex  
 ‘being simple and simplex’

(62) is an example of an “adjective” reduplicated in the [ABAB] pattern.

- (62) a. kha-wa  
 fast-alive  
 ‘happy’
- b. kha-wa-kha-wa  
 fast-alive-fast-alive  
 ‘have some fun’ lit. ‘do a bit of being happy’

We have seen that, like verbs, “adjectives” allow both pattern of reduplication. And similar to the verbs, the reduplication pattern dictates the interpretation of the reduplicated form. In (61), the [AABB] reduplication of *ke-te* ‘simple’ is interpreted as a description of a subject being ‘simple and simplex’, while in (62) the [ABAB] reduplication of *kha-wa* ‘happy’ can be interpreted literally as ‘do a bit of being happy’. The meaning of the reduplicated form has more to do with the patterns of reduplication rather than the category of the input word. In other words, each reduplication pattern has the same meaning for verbs and “adjectives”.

Although not all “adjectives”, or all verbs, can be reduplicated, at least we have found that verbs and “adjectives” can both have the same two patterns of reduplication, and be interpreted the same way. In the next subsection, we will investigate whether there are

differences in attributive modification constructions formed by verbs and by “adjectives”.

### 3.7.4 *Attributive modification*

Baker (2003, p. 254-257) argues for the distinctiveness of the adjective class, saying that even in a language where adjectives are verb-like, it should be possible to distinguish them through the attributive modification constructions in which they appear. While the details vary, there are consistent differences between “adjective” modifiers and verb modifiers. For example, even if adjectives have to form a relative clause to modify a noun, they use different particles to those of verbs. And even if they use the same particles, when the relative clause formed by the adjective is conjoined with the relative clause formed by a verb, the one formed by an adjective must be closer to the head noun. This property is, for example, observed in the Oceanic language of Samoan. In this subsection we will determine whether there are any differences between the attributive modification constructions formed by verbs and by “adjectives”.

In Section 2.2.2 we discussed how verbs and “adjectives” need to form relative clauses in order to modify a noun. (63) is an example of a verb relative clause, and (64) is an example of an “adjective” relative clause. The two constructions are identical, in position and in relative clause marking.

- (63) [Ccou-sa-i    gei]<sub>RC</sub>            nang    ou    zz    de.  
do-business    REL            person all    be    here

‘Those people [who do business] are all here.’ (lit. do-business people...)

- (64) [Thang gei]<sub>RC</sub>            mae    ou    zz    de.  
bad        REL            kids    all    be    here

‘Those kids [who are bad] are all here.’ (lit. bad kids...)

According to Baker (2003), if they do not use different markers, when they are conjoined, the

relative clause formed by a “adjective” should be closer to the head noun. This generalization also does not apply to Yueqing. (65a) shows that the relative clause formed by the “adjective” can be farther away from the head noun than the relative clause formed by the verb, although (65b) shows that the other order is also acceptable. In fact, the order of the two relative clauses when conjoined is not prescribed. The relative clause formed by an “adjective” can precede or follow the one formed by a verb.

- (65) a. [Thang gei]<sub>RC</sub> ∅ [Ccou-sa-i gei]<sub>RC</sub> nang ou zz de.  
 bad REL CONJ do-business REL person all be here  
 ‘Those people [who are bad and who do business] are all here.’
- b. [Ccou-sa-i gei]<sub>RC</sub> ∅ [Thang gei]<sub>RC</sub> nang ou zz de.  
 do-business REL CONJ bad REL person all be here  
 ‘Those people [who do business and who are bad] are all here.’

In summary, attributive modification constructions headed by verbs and “adjectives” do not differ in Yueqing. We will look at their ability to form adverbs in the next subsection.

### 3.7.5 Forming adverbs

Dixon (2004) observes that in some languages, adjectives can form adverbs, while verbs cannot. Let us determine if this is also the case in Yueqing.

Manner adverbs are modifiers of verbs that describe how a situation happens. Yueqing has two ways to realize such notions. One is using the manner adverb compound *X-nang*, which denotes ‘in the manner specified by X’. *Nang* is also a free-standing word meaning ‘like this’. Notions like ‘lightly’, ‘heavily’, ‘quietly’, ‘slowly’, ‘secretly’, ‘calmly’, ‘from far away’, ‘in advance’ can be expressed using *X-nang*. (66) is an example of how *X-nang* is used.

- (66) Jji cchang-cchang -nang ccau-li.  
 3SG light.light ADV.MAN walk.toward.speaker  
 ‘He/she came light-footedly.’

The second way Yueqing expresses notions that English uses manner adverbs such as ‘well’, ‘quickly’, ‘badly’, ‘correctly’ to express is with verb-“adjective” compounds. (67) is an example of such a compound. The verb combines with the “adjective” into a compound.

- (67) Jji ve me [ccheo-kuei]<sub>V-“A”</sub>.  
 3SG meal quite eat-quick  
 ‘He/she eats quite fast.’

Evidence supporting the compound status of the verb-“adjective” constructions includes that they are inflected, modified and negated as a whole. I do not have space to provide all evidence here, but I will show that they are modified as a whole. In (67), we see that *me* ‘quite’ precedes the compound, because *me* is an intensifier that goes before the word it modifies. In Yueqing we also have *cje* ‘very’ which always follows the word it modifies. This *cje* can only follow the whole compound as illustrated in (68):

- (68) Jji ve [ccheo-kuei]<sub>V-“A”</sub> cje.  
 3SG meal eat-quick very  
 ‘He/she eats very fast.’

Neither *me* or *cje* can be inserted between the two elements of the compounds.

If we regard *nang* as a manner-adverb-forming morpheme, what category does *nang* form manner adverbs with? The formation of manner adverbs is highly variable. *Nang* selects reduplicated verbs, reduplicated “adjectives”, nouns and clauses. These pre-*nang* elements can have either compositional or noncompositional (idiomatic) meaning. Therefore, “adjectives” are

not the single category that can form a *X-nang* adverb. The *X-nang* construction can be a phrasal compound in the sense of how Wiese (1996) defines phrasal compounds as formed by a quoted phrase and a word.<sup>30</sup> In our case, the word would be *nang*, and the quotation would be the constituent that *-nang* selects. This helps to explain the range of constituents that can precede *-nang*. Here are a few examples of the *X-nang* construction:

- (69) Kae mae kao -nang teo ti. (noun-*nang*)  
 CL.GEN child dog ADV.MAN lie here  
 ‘This child is lying here like a dog.’
- (70) Kae mae siu kho tao ti -nang ccau-li. (clause-*nang*)  
 CL.GEN child hand place pocket inside ADV.MAN walk.toward.speaker  
 ‘This child came with their hands in the pockets.’
- (71) Kae mae fu-se-fu-si -nang ccieo ji-zueo. (idiom)  
 CL.GEN child NEG-three-NEG-four ADV.MAN dress clothing  
 ‘This child dresses himself/herself in a weird way.’

Now let us return to what is relevant to the question of whether “adjectives” are a subcategory of verbs. (72) is an example in which the manner adverb particle selects the reduplicated form of an “adjective”.

- (72) Jji jjuo-jjuo -nang ccau-li.  
 3SG heavy.heavy ADV.MAN walk.toward.speaker  
 ‘He/she walked here heavily.’

(73) is an example of the manner adverb particle selecting the reduplicated form of a verb.

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<sup>30</sup> Wiese (1996) asserts that phrasal compounds such as *a connect-the-dots puzzle* must be formed by a quotation mechanism where the phrasal non-head is a quotation. The non-head can be a phrase from a different language, a nonverbal gesture, or any sign.

- (73) Sueosueo      -nang            ccong            mau-kuae.  
           think.think      ADV.MAN            probably        be.alright  
           ‘By thinking, it would probably be alright.’

We have seen that *-nang* takes verbs as well as “adjectives”. We can understand this as demonstrating that verbs and “adjectives” both form adverbs.

The second way of forming adverbs is through verb-“adjective” compounds. I demonstrated in the beginning of this subsection that they are morphologically and syntactically different from the *X-nang* manner adverbs. First, they are not phrasal compounds, but are compounds formed by two morphemes. Second, *X-nang* manner adverbs precede the verb they modify, while the compounds head the predicate of the clause. This is exemplified in (74).

- (74) Jji        me        cchieo -xeu.  
           3SG        quite    sing     good  
           ‘She sings quite well.’

Syntactically, the manner adverb compounds are identical to the resultative compounds. First, they appear in the same position. Compare (75) and (76), where (75) translates into a manner clause where the “adjective” denotes the manner of the action, while (76) translates into a resultative clause, where the “adjective” denotes the result of action. The second element in the compounds can either express the manner of the first element or express the result of the first. Second, the resultative compounds exhibit the same morpho-syntactic properties as the verb-“adjective” manner compounds: they all inflect the same way with the aspect morpheme coming behind the compound, they are both right-headed,<sup>31</sup> they synthesize arguments the same way,<sup>32</sup>

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<sup>31</sup> The evidence of their right-headedness include: the aspectual inflection, modification and negation functions only on the second element instead of the first one, and the argument of the second element is always preserved in argument synthesis.



etc.

- (75) Ng [ko -tae] -ku bei.  
 1SG talk correct ASP.EXP ASP.PRF  
 ‘I spoke correctly before.’

- (76) Ng [ko -ve] -jji bei.  
 1SG talk annoyed ASP.INCP ASP.PRF  
 ‘I have started to get annoyed from talking.’

The two-predicate compounds are not restricted to verb-“adjective”. There are also verb-verb, “adjective”-verb and “adjective”-“adjective” compounds. In (77), the compound is a verb-verb one; in (78), it is an “adjective”-verb one; in (79), it is an “adjective”-“adjective” one.

<sup>32</sup> The argument of the second element in the compound is kept and mandatory in the output argument structure, and the argument of the first element that is not the same as the argument of the first element becomes optional in the output argument structure. Due to the limit of space I will only give one example of each type of compound here:

- (i) a. (Kae mae) njauccy khu-xgong -jji bei.  
 CL.GEN child eyes cry-red -asp.inch asp.perf  
 ‘(This child’s) eyes were cried red.’  
 b. \*Kae mae khu-xgong -jji bei.  
 CL.GEN child cry-red -asp.inch asp.perf  
 ‘This child cried red.’

The synthesis of the argument structure of the compound from that of the two morphemes is demonstrated as follows: ‘cry’ <child>; ‘red’ <eyes> → ‘cry-red’ <(child), eyes> (the argument in brackets is optional).

- (ii) a. (Jji) wu thieo-thang.  
 3SG dance<sub>N</sub> jump-bad  
 ‘(He) dances badly.’  
 b. ?Jji tthieo-thang.  
 3SG jump-bad  
 ‘He jumps badly.’

The synthesis of the argument structure of the compound from that of the two morphemes is demonstrated as follows: ‘jump’ <he, dance<sub>N</sub>>; ‘bad’ <dance<sub>N</sub>> → ‘jump-bad’ <(he), dance<sub>N</sub>>. Therefore, the second element determines which argument is essential. You may find that the examples in (71-72) have a different argument structure. Indeed, there are four possible argument synthesis patterns for these kinds of compounds, but what’s crucial here is the fact that among the four patterns it is always the second element that determines which argument is kept. My analysis of the argument structure of Yueqing V-V compounds uses the methodology of Fukushima (2005).

- (77) Xa-ccu [xa- sueo] cje.  
 drink-alcohol drink harm very  
 ‘Drinking alcohol is very harmful.’
- (78) Nang [la -tau] -jji.  
 person cold shake ASP.INCP  
 ‘It is so cold that a person starts shaking from it.’
- (79) Jji [wae -ze] -ga bei.  
 3SG hungry thin ASP.CMPL ASP.PRF  
 ‘He/she became thin from being hungry.’

(77-79) indicate that verbs and “adjectives” do not display a grammatical difference in the forming compounds.

In this subsection, we looked at verbs and “adjectives” role in forming adverb constructions. We found that “adjectives” are not differentiated from verbs in this respect. What else can possibly differentiate the two? We proceed to our last topic of the section next.

### ***3.7.6 Degree adverbs, comparatives and superlatives***

Dixon (2004) observes that, in some languages, adjectives allow different modifiers from verbs (e.g. adjectives are modified by intensifiers, but verbs are modified by manner adverbs), and adjectives allow comparative constructions, while verbs do not. We have seen that “adjectives” in Yueqing allow modifiers of manner (Section 2.1.3). Now we will investigate whether degree adverbs and comparative/superlative constructions are only compatible with “adjectives”, or whether they are also compatible with verbs.

We begin by addressing the question of which categories are modified by degree adverbs, comparatives and superlatives. Are these exclusively modifiers of “adjectives”? The evidence to

be presented below indicates that they are not restricted to “adjectives”, but may modify some semantically compatible nouns and verbs as well.

### 3.7.6.1 Degree adverbs

Yueqing has the following four commonly used degree adverbs:<sup>33</sup>

- (80)    *cje*    ‘very’  
           *nang*    ‘so’  
           *thou*   ‘too much’  
           *me*     ‘quite’

*Nang* ‘so’, *thou* ‘too much’ and *me* ‘quite’ precede the word they modify, while *cje* follows it. *cje* is also special in that it supports multiple replication of the word it modifies. (81-87) are examples of how the degree adverbs are used. (81-83) show how *nang*, *thou* and *me* are used. (84-87) show how *cje* ‘very’ can be used in different ways: in (84) *cje* simply follows the “adjective” it modifies, in (85) there is a copy of the “adjective” immediately after *cje*, deriving a phrase of the form [“A” *cje* “A”], which is interpreted as ‘very, very “A”’; in (86) there are multiple copies of the [“A” *cje* “A”] phrase, and in (87) the [“A” *cje* “A”] phrase is followed by multiple copies of the “A”. The examples in (84-87) all signal that the predicate is intensified. The degree of intensification in (84-87) increases as more copies of [“A” *cje* “A”] are added.

- (81)    *Pang*            *syu*    [*nang xeo*].  
           CL.BOOK        book    so        good  
           ‘This book is so good.’

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<sup>33</sup> The comparative and superlative adverbs will be discussed in the next subsection.

- (82) Pang syu [thou xeo].  
 CL.BOOK book too good  
 ‘This book is too good.’
- (83) Pang syu [me xeo].  
 CL.BOOK book quite good  
 ‘This book is quite good.’
- (84) pang syu [xeo cje].  
 CL.BOOK book good very  
 ‘This book is very good.’
- (85) Pang syu [xeo cje xeo].  
 CL.BOOK book good very good  
 ‘This book is very good.’
- (86) Pang syu [xeo cje xeo] [xeo cje xeo] [xeo cje xeo]  
 CL.BOOK book good very good good very good good very good  
 ‘This book is very, very, very good.’
- (87) Pang syu [xeo cje xeo] [xeo xeo xeo].  
 CL.BOOK book good very good good good good...  
 ‘This book is very, very, very, good.’

The degree adverbs are not exclusive to “adjectives”. There are nouns and verbs that can be modified by degree adverbs. Nouns that denotes orientations and stative verbs can take both degree adverbs See examples in (88).

- (88) se-dong      gei      ti-kou   cje      ti-kou  
 cave              POSS    inside   very    inside  
 “the very inside of the cave”

Words like ‘upside’, ‘north side’, ‘right side’, ‘outside’, etc.<sup>34</sup> (Also see Section 2.3.2) can all take degree adverbs. In (89), we see an example of stative verbs being modified by a degree adverb.

- (89) Jji      ci-fueo      cje      ci-fueo   khei-cchou   .  
 3SG    like              very    like      driving  
 ‘He/she likes driving very much.’

Since some nouns and some verbs can be modified by degree words, it might be more appropriate to characterize them as INTENSIFIERS, rather than adverbs in order to signal that they can modify words belonging to all lexical categories.

### 3.7.6.2 Comparatives and superlatives of “adjectives”

Comparatives are expressed by the particle *li* after the “adjective” they modify; superlatives are expressed by the particle *ccei* before the “adjective” it modifies. (90-91) are two examples.

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<sup>34</sup> These are nouns because they pass all noun tests and none of the verb test. For example:

- |      |   |                               |
|------|---|-------------------------------|
| (i)  | ccou    gei    ti-kou<br>table    POSS    inside<br>‘the inside of the table’ | (gei construction—noun test)  |
| (ii) | a.      *fu    ti-kou<br>NEG.IMP    inside<br>Intended: ‘not inside’          | (negation—verb test)          |
|      | b.      fu      zz      ti-kou<br>NEG.IMP    be      inside<br>‘not inside’   | (copula complement—noun test) |

- (90) Pang syu [xeo li].  
 CL.BOOK book good COMPAR

‘This book is better.’

- (91) Pang syu [ccei xeo].  
 CL.BOOK book SUPRL good

‘This book is best.’

The comparative and superlative constructions can be extended to some nouns and verbs as well. Again, nouns that denote orientations and most stative verbs can take the comparative and superlative particles. An example of noun in the superlative construction is shown in (92).

- (92) sy-pa gei ccei ccou-gou  
 backpack POSS SUPRL left.side

‘the most left side of the backpack’

In (93-94), we see that stative verbs, *sueo-sang* ‘believe’ and *cci-leo* ‘remember’ can appear in the comparative and superlative constructions.

- (93) Ng ccei sueo-sang nji.  
 1SG most believe 2SG

‘I believe you most.’

- (94) Leo-cceo gei zz-kueo ng cci-leo li.  
 old.time POSS things 1SG remember COM

‘I remember old time’s experience better.’

Therefore, the comparative and superlative constructions are also not a restricted to “adjectives”.

This subsection shows that intensifiers and comparative/superlative forms are not unique to “adjectives”. Moreover, not all “adjectives” can be modified by intensifiers or have

comparative/superlative forms. There are “adjectives” that are not gradable, such as the four “adjectives” that are incompatible with modals and manner adverbs, *sang* ‘new’, *ccang* ‘real’, *kou* ‘fake’ and *sa* ‘raw’. As expected, these “adjectives” can take neither intensifiers nor the comparative/superlative forms. Thus, gradability cannot differentiate “adjectives” from verbs.

### 3.8 Summary of Part I

In Part I of the thesis, I identified 85 common “adjectives” in Yueqing; I examined the projection of nouns and verbs in Yueqing and identified diagnostics for them. The three most reliable noun diagnostics I identified are: nouns can be preceded by the generic classifier *kae*, nouns can be modified by *gei* constructions, and nouns can be the complement of the copula. The three most reliable verb diagnostics are: verbs can have the experiential aspect suffix *-ku*, verbs can be negated by the imperfective negation particle *fu*, and verbs can follow the modal verb *wae* ‘be likely to’. I then applied these diagnostics to “adjectives”, and found that all of the 85 “adjectives” failed all of the noun tests, but all of the 85 “adjectives” pass the aspect suffix as well as the negation tests. Also, most of the “adjectives” pass the modal verb test, with the exception being four non-gradient “adjectives”, which cannot be the complement of the modal verb *wae*.

I also tried to find properties that were only characteristic of “adjectives”. In particular, I explored their conjunction possibilities, their behaviour in imperative clauses, their reduplication patterns and meanings, the relative clauses they form, the possibilities of them forming adverbs, and whether they can be modified by intensifiers and have comparative/superlative forms. Significantly, I did not find any significant feature that can differentiate “adjectives” from verbs. All the evidence suggests that the “adjectives” in Yueqing are true verbs. The strongest evidence that “adjectives” are verbs comes from the fact that “adjectives” can be conjoined with verbs

(but not nouns), and from the fact that “adjectives”—like verbs—cannot function as bare modifiers of nouns, but rather must be embedded as predicates of relative clauses.

Further, properties that distinguish adjectives from other morpho-syntactic categories in some languages, such as comparative and superlative formation, have a wider distribution in Yueqing, extending to some of the canonical verbs as well as some nouns. Therefore, there is no evidence that “adjectives” constitute a separate lexical category in this language. All the properties that characterize verbs also characterize “adjectives”, and all of the properties that characterize nouns, characterize neither verbs nor “adjectives”. The only conclusion I can draw from this study is that in Yueqing “adjectives” belong to the category of verbs.

The empirical findings of Part I challenges Baker (2003)’s theoretical position on the universality of a category of adjectives. The feature combination of [-N -V] that Baker assigns to adjectives does not apply to Yueqing, where the “adjectives” are more accurately characterized by the features [-N +V].

We can finally take the quotation marks off “adjectives,” and call them adjectival verbs from here on. By this term I mean that this class of words belongs to the lexical category of verbs, but has the semantic content of adjectives, following Dixon (2004).

Now that we have established that “adjectives” belong to the category of verbs in Yueqing, more questions arise: are adjectival verbs a separate subclass of verbs? Can we distinguish them from other non-adjectival verbs? One consequence of this finding is that adjectival verbs should be subject to the same lexical aspectual classification as canonical verbs. In Part II of this thesis I will investigate the lexical aspectual properties of non-adjectival verbs, and determine whether adjectival verbs pattern with some class(es) of non-adjectival verbs, or whether they constitute a distinct lexical aspectual class.



## **Chapter 4: Diagnosing Situation Types of Yueqing Verbs**

We have established in the previous chapters that in Yueqing, adjectival notions are expressed through a subclass of verbs which we can call adjectival verbs. In this chapter and the next I intend to find out more about adjectival verbs. The fundamental question that I am asking is: what aspectual (situation) type of verbs are adjectival verbs? I ask this question because, on one hand, lexical aspect is an important property of verbs, and on the other hand, Yueqing has a rich grammatical aspect system, which potentially can serve as good diagnostics for lexical aspect. I will find out if adjectival verbs form a natural aspectual class under verbs, and if so, what that natural class is.

This chapter will first go over how the situation types of verbs have been studied in the literature, and then develop language-specific diagnostics for all the canonical situation types in Yueqing. The next chapter will use these diagnostics to determine the situation type(s) of adjectival verbs.

Section 4.1 describes situation types, situation type shifts and common diagnostics for situation types; section 4.2 develops language-specific diagnostics for Yueqing and applies the diagnostics to the five canonical situation types to determine their distinctive aspectual properties.

### **4.1 Situation types and their diagnostics**

This section gives an overview of situation types as they have been studied in the literature, and lists their common diagnostics.

#### ***4.1.1 Situation type***

Vendler (1957) first presented the four-fold verb types that are still widely recognized today: activities (e.g. *run*), accomplishments (e.g. *write a letter*), achievements (e.g. *realize*) and

states (e.g. *believe*). In Vendler's characterization, states are stative, and activities, accomplishments and achievements are non-stative or eventive. States are qualities, activities remain true throughout the event, accomplishments have set terminal points, and achievement is instantaneous.

Lakoff (1966) produced eight tests to distinguish stative verbs and adjectives<sup>35</sup> from non-stative ones. According to Lakoff, only non-stative verbs and adjectives can occur in:

- (1) a. true imperatives
- b. progressives
- c. pseudo-clefts
- d. positions after *remind* or *persuade*
- e. positions modified by adverbs like *enthusiastically*, *carefully*, *reluctantly*
- f. positions followed by *for someone's sake*
- g. positions on either side of *instead of*
- h. positions that can be replaced by *do so*

These tests were refined by Dowty (1975): Dowty found that what some of the tests diagnose are certain criteria that are related to, but cannot be equated with non-stativity. These criteria are agentivity, movement/change, and temporariness.

Comrie (1976) picks out three sets of criteria that define lexical aspect: punctual versus durative, telic versus atelic, and stative versus dynamic. Punctual situations include semelfactives that occur once and once only, and achievements; telicity is defined based on whether or not a situation has a well-defined terminal point; stativity denotes no change, while dynamicity involves necessary change that is continually subject to new input of energy.

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<sup>35</sup> The examples Lakoff gave of non-stative adjectives are *be careful*, *be noisy*, *be polite*.

Dowty (1979) builds on the previous literature and presents a comprehensive list of tests for aspectual verb categories:

- (2)
- a. stativity tests (progressive, *force/persuade*, imperative, agentive adverbs, pseudo-cleft);
  - b. habitual interpretation in simple tense: non-statives have a habitual interpretation in simple present tense, while statives refer to the actual present in simple present tense;
  - c.  $\phi$  for an hour, spend an hour  $\phi$ ing: accomplishment, activities and states pass the test;
  - d.  $\phi$  in an hour, take an hour to  $\phi$ : only accomplishments and achievements pass the test;
  - e.  $\phi$  for an hour entails  $\phi$  at all times in the hour: only activities and states pass the test;
  - f. x is  $\phi$ ing entails x has  $\phi$ ed: n/a for states: only activities pass the test;
  - g. complement of *stop*: activities, accomplishments and states pass the test;
  - h. complement of *finish*: only accomplishment pass the test;
  - i. ambiguity with *almost*: yes for accomplishments, no for activities;
  - j. x  $\phi$ ed in an hour entails x was  $\phi$ ing during that hour: only for accomplishments;
  - k. occurs with *studiously, attentively, carefully*, etc: only for activities and accomplishments.

Smith (1991, p. 5-8) provides a systematic overview of situation type in relation to grammatical viewpoint. She classifies situation type as one kind of aspect, and states that the

concept of aspect is comprised of two parts: the temporal structure of a situation and how it is viewed. The first part is called situation type, and the second viewpoint. Temporal structure refers to whether a situation is telic, durative or dynamic, and viewpoint presents a situation with a particular extent and focus. Situation type is signaled by lexical morphemes (the verb and its arguments), viewpoint is signaled by grammatical (functional) morphemes.

Smith (1991) divides situations types into five types according to their dynamicity, durativity and telicity: states, activities, accomplishments, semelfactives and achievements. The types and their properties are summarized in Table 6:

**Table 6. Situation types (based on Smith 1991)**

	<b>dynamicity</b>	<b>durativity</b>	<b>telicity</b>	<b>example</b>
<b>activities</b>	dynamic	durative	atelic	stroll
<b>accomplishments</b>	dynamic	durative	telic	build a house
<b>semelfactives</b>	dynamic	instantaneous	atelic	knock
<b>achievements</b>	dynamic	instantaneous	telic	reach the top
<b>states</b>	stative	durative	N/A	know

The characteristic of the five situation types are as follows (Smith, 1991, p. 27-63):

- (3)
  - a. Activities are composed of homogeneous stages; they have no natural endpoint and have to be terminated.
  - b. Accomplishments have inherent endpoint (can be completed); they can involve an affected object (e.g. wrinkle a dress), a constructed object (e.g. write a letter), a consumed object (e.g. drink a cup of water), a path-goal (e.g. walk to the lake), or an affected experiencer (e.g. amuse Mary).
  - c. Semelfactives are instantaneous, atelic situations; they can be turned into activity if repeated.
  - d. Achievements are instantaneous, telic situations that result in a change of state; there might be a process leading to achievements, but it is not taken

as part of the situation; they can involve affected objects (e.g. tear a piece of paper), constructed objects (e.g. imagine a city), consumed objects (e.g. explode a bomb), or affected experiencers (e.g. recognize John).

- e. States consist of a period of undifferentiated moments; they do not change themselves, but require an external agency for the change into or out of the state.

Smith (1991)'s exposition of situation types is clear and comprehensive. Therefore, I will mostly rely on her definition of situation types.

Before we look at the diagnostics for the situation types, I want to briefly discuss the phenomenon of situation type shifts, which is very relevant to the behaviour of Yueqing situation types.

#### ***4.1.2 Situation type shifts***

Vendler (1957, p. 154) mentions the “stretched and borderline uses” of situation types. For example, *knowing* is a state in its dominant uses, but in *and then suddenly I knew!* it is like an achievement. Mourelatos (1978, p. 419) further states that some verbs can “function quite aptly...given the possibilities of semantic transposition provided by the aspectual system”. For Mourelatos, the aspectual classification of a verb does not simply lie in the semantics of the individual verb, but also takes into account the verb's argument, adverbials, aspect and tense, if any. Moens and Steedman (1988) also view situation types as complicated and flexible. They term situation type shift “aspectual type coercion”:

What linguistic devices like tenses, aspects, and temporal/aspectual adverbials appear to do is to transform entities of one type into these other contingently related entities, or to turn them into composites with those related entities... we shall talk of such modifiers as

functions which "coerce" their inputs to the appropriate type,...the felicity of any particular transition for a given proposition is conditional on support from knowledge and context.

(Moens & Steedman 1988, 17-18)

Moens and Steedman (1988, p. 18-19) provide an example of aspectual coercion of transforming an achievement situation into an activity: *Harry was reaching the top*. In this example, the coercion involves first adding a preparatory process and turning the punctual situation into an accomplishment, and then getting rid of the terminal point of the accomplishment, thereby turning it into an activity.

In the same vein, Smith (1991, p. 71) states that the linguistic unit which realizes situation type is the verb constellation. The verb is central to situation type, but the addition of complements, affixes, prepositions, adverbials, or other forms may produce a shifted or derived situation type. English perfect predicates are observed by some (Katz 2003, Michaelis 2011) to be stative; English progressive predicates are observed by some (Michaelis 2011) to be stative as well.

Rappaport-Hovav (2008) further observes that the Vendler classes are determined on the basis of diagnostics that are not diagnostics of lexical properties, but rather of uses of lexical items in particular contexts. For example, *scrub* can be used as an activity, while *scrub...clean* is used in a telic context as an accomplishment.

Another example of situation type shift is offered in Michaelis (2011). In the example *I started to like the idea*, the inchoative construction requires a verb whose temporal representation includes an onset transition. States lack onset and offset transitions. This is not because we do not infer states to have beginning and endpoints, but because a speaker who asserts a state says

nothing about those points (Michaelis 2011, 1371). The verb construction mismatch in this case is resolved in favor of the construction, by the addition of an onset transition to the state (Michaelis 2011, 1373).

To summarize, situation type is determined by a verb and, in a concerted manner by any argument(s), a secondary predicate, grammatical tense and aspect, adverbials, etc. Verbs do not always have a fixed situation type; rather, their type is flexible and is subject to situation type shift, or aspectual coercion.

#### ***4.1.3 Diagnostics for situation types***

In this subsection, I will review common tests for diagnosing different situation types. Following Smith (1991), to diagnose situation types is to diagnose the durativity, dynamicity and telicity of the situation types. We will look at durativity first.

##### *4.1.3.1 Diagnosing durativity: viewpoint aspect*

This subsection introduces viewpoint aspect and shows how it can be used to diagnose situation types.

Viewpoint aspect is how a situation is viewed, and because of the different properties of the five situation types, a given viewpoint aspect may not be compatible with all situation types. We use this to diagnose situation types. For example, if a viewpoint aspect is viewing a situation from inside, it would not be compatible with an instantaneous situation because it is impossible to view an instantaneous situation from inside.

Smith observes that there are three main viewpoint types: perfective, imperfective and neutral. Perfective viewpoint presents a situation as a single whole, with the span including the initial and final endpoints of the situation; imperfective viewpoints focus on part of a situation,

including neither initial nor final point. Neutral viewpoints are flexible, i.e. they can have perfective or imperfective readings depending on the context (Smith, 1991, p. 103-123).

Among the three main viewpoints, the neutral viewpoint, since it is flexible, cannot be used to diagnose the situation types. The perfective viewpoint describes a situation from the perspective of after the situation has passed, regardless of whether the situation is durative, dynamic, or telic. Consequently, it cannot be used to diagnose the situation types either. However, imperfective viewpoint focuses on part of a situation that is neither the initial nor the final point. Consequently it is only compatible with a durative situation. This means that, if we find that a situation type is not compatible with the imperfective viewpoint, it indicates that the situation is instantaneous. The only two instantaneous situations are semelfactives and achievements. Since semelfactives (e.g. *knock*) can often be coerced and reinterpreted in the iterative sense, they may be compatible with the imperfective viewpoint. Therefore, the imperfective viewpoint tests durativity and will likely help us to single out achievements.

Among the three main viewpoints, only the imperfective viewpoint is useful to test durativity. Apart from the three main viewpoints, there are many more viewpoints that exist in languages, such as the inceptive and completive viewpoints, which will become useful to us in Section 4.2.2. We will bear in mind that these other viewpoints can potentially help us diagnose situation types.

#### 4.1.3.2 Diagnosing durativity: other semantic tests

In Dowty (1979), there are two tests that set states, activities and accomplishments apart from achievements and semelfactives, they are the “spend an hour  $\phi$ ing”<sup>36</sup> and the “complement of stop” tests.

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<sup>36</sup> I pick this test instead of the “for an hour” test, because “spend an hour  $\phi$ ing” works better with accomplishments than “for an hour”, the latter Dowty (1979) comments on as “marginally” acceptable.



If we test the achievement verb *find* using the above three tests, we would find the following sentences infelicitous<sup>37</sup>:

- (4) a. \*I spend an hour finding my book.  
 b. \* I stopped finding my book.

The situation represented by *find* has no duration, therefore any expressions indicating that the situation has a measurable duration are incompatible with the verb. Again, semelfactives might turn out to be compatible with these expressions with an iterative sense, and these expressions may only pick out achievements for us.

We have found that imperfective viewpoint, “spend an hour  $\phi$ ing” and “stopped  $\phi$ ing” can be used to diagnose durativity. Next, we turn to dynamicity.

#### 4.1.3.3 Diagnosing dynamicity: progressive viewpoint

Dynamicity is the feature that distinguishes states from all other situation types which we call events. Xiao and McEnery (2004) regard the progressive viewpoint as the most reliable test for dynamicity for Mandarin Chinese. The progressive viewpoint is normally not compatible with states as it indicates successive stages, which states lack.

We would expect that the progressive test will help us draw a line between states and

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<sup>37</sup> Different from the ungrammatical examples in the previous chapters, which are due to morpho-syntactic reasons, most examples hereafter marked by \* are unacceptable due to semantic content, and in the case of this thesis, it is due to the specific semantic content of aspect. I will mark them \* rather than #, indicating that they are unacceptable on the intended reading. When it comes to semantic unacceptability, often it is the case that we can invent a context where the example can become acceptable. Here if we invent a context where finding a book becomes an activity—someone kept hiding it after you find it, then it becomes acceptable. Jumping to example (17), if we presume that in a fictional world, explosion is a durative process, then (17) is acceptable in that context. However, all the coercion of Yueqing verbs that I refer to hereafter are natural coercion, which are naturally used in daily conversations without the need of inventing an unusual context. These natural coercions are parallel to the ones between activities and accomplishments in English. For example, *run* is an activity, *run one lap* is an accomplishment; in this case we do not need to imagine an unusual context for the activity to be turned into an accomplishment. Just as I would not mark *run one lap* as unacceptable, I would also not mark the natural coercion in Yueqing unacceptable. “Natural” and “unusual”, of course, are vague terms that ideally can be quantified through empirical experiments on more Yueqing native speakers. Further empirical research on Yueqing aspectual coercion, if conducted in the future, would shed more light on this topic.

non-stative situations. However, the progressive viewpoint, as a kind of imperfective viewpoint, also requires a situation to be durative. Therefore, only situations that are both durative and dynamic will pass the progressive viewpoint test. Semelfactives, when paired with the progressive viewpoint, will be coerced into their iterative meaning. Besides states, achievements are also not compatible with the progressive viewpoint because of their punctuality.

Dowty's other stativity tests: *force/persuade*, imperative, agentive adverbs and pseudo-clefting all test agentivity instead of dynamicity, and therefore, cannot be used to diagnose non-agentive dynamic verbs. For example, *snow* is a non-agentive dynamic verb. The sentences in (5) is not acceptable, because these tests test agentivity.

- (5) a. \*I forced it to snow.  
 b. \*Snow!  
 c. \*It snowed carefully.  
 d. \*What it did was snow.

Another useful test for dynamicity may be the habitual interpretation in simple present tense developed by Dowty 1979. For this test, non-statives will have a habitual interpretation, while statives will refer to the actual present. For example, a non-stative verb *dance* has a habitual interpretation in the simple present tense in (6a); a stative verb like *exist* refers to the actual present in (6c). We can add "every week" to test the habituality of the two sentences. (6b) is acceptable, while (6d) is not.

- (6) a. She dances.  
 b. She dances every week.  
 c. She exists.  
 d. \* she exists every week.

Next, we will look at our last feature: telicity.

#### 4.1.3.4 Diagnosing telicity: “in an hour”

Telicity denotes a natural, inherent, and not arbitrary end to a situation. Only accomplishments and achievements are telic. Smith (1991) observes that telic events often involve arguments that consist of count nouns or proper names, Wilhelm (2007) further observes that telic events have either a quantized internal argument, a goal, or a resultative construction. The time-frame adverbial test, which uses expressions like “in an hour” is widely used in the literature to distinguish between telic and atelic events since Dowty (1979). It has been established that accomplishments and achievements are compatible with expressions like “in an hour”, but states, activities and semelfactives are not.

#### 4.1.3.5 Situation type diagnostic summary

In this subsection, I have reviewed diagnostics for the three situation features of durativity, dynamicity and telicity. They are summarized in Table 7.

**Table 7. Diagnostics for durativity, dynamicity and telicity**

feature diagnosed	diagnostics	examples (compatible vs. non-compatible)	
<b>durativity</b>	imperfective viewpoint	I am <u>running</u> <sup>38</sup> .	*I am <u>finding you</u> . (as viewed from within the situation)
	“spend an hour $\phi$ ing”	I spent an hour <u>running</u> .	*I spent an hour <u>finding you</u> .
	“stopped $\phi$ ing”	I stopped <u>running</u> .	*I stopped <u>finding you</u> .
<b>dynamicity</b>	progressive viewpoint (durative)	I am <u>running</u>	*I am <u>believing you</u> .
	“habitual interpretation in simple tense”	I <u>run</u> .	I <u>believe you</u> .
<b>telicity</b>	“in an hour”	I <u>built the Lego car</u> in an hour.	*I <u>ran</u> in an hour.

<sup>38</sup> English does not have an imperfective viewpoint so I used the progressive to illustrate this.

Mandarin Chinese has the five situation types (Smith 1991, Xiao and McEnery, 2004), and I assume that Yueqing also has the same set of situation types. In the next section, I will develop Yueqing counterparts of these tests and apply them to determine whether this assumption is a reasonable one.

## 4.2 Diagnostics for Yueqing situation types

Based on what we know about the situation type diagnostics, this section will develop language-specific diagnostics for Yueqing situation types. I will first check the applicability of the diagnostics from the last section, and then map out appropriate diagnostics for Yueqing situation types.

### 4.2.1 *Applicability of common diagnostics to situation types*

#### 4.2.1.1 *Durativity: imperfective viewpoint*

We will find out that Yueqing does not have an imperfective viewpoint when we discuss the viewpoints of Yueqing in section 4.2.2. Therefore, we cannot use the imperfective viewpoint to diagnose situation types in Yueqing.

#### 4.2.1.2 *Durativity: “spend an hour $\phi$ ing”*

In Yueqing, the equivalent of “spend an hour  $\phi$ ing” is  $\phi$  i kae cco-du bei, literally ‘have spent one hour on  $\phi$ ing’. Here the phrase representing the duration follows the verb directly to indicate the duration of the situation. We will see if it is compatible with the five situation types. Let us first look at an example of activities:

(7) Jji bi i kae cco-du bei.  
 3SG run one CL.GEN hour ASP.PRF

‘He/she has spent one hour running.’

If the verb has an object, it needs to be reduplicated, whether the verb and object form a

compound (8b) or are separate syntactic constituents (10-11). When the verb is reduplicated, the duration phrase will only follow the copy of the core verb. (8a) illustrates that the sentence is unacceptable without verb reduplication.

- (8) a. \***Jji** khei-cchou i kae cco-du bei.  
 3SG drive-car one CL.GEN hour ASP.PRF  
 Intended: ‘He/she has spent an hour driving.’

- b. **Jji** **khei**-cchou **khei** i kae cco-du bei.  
 3SG drive-car drive one CL.GEN hour ASP.PRF  
 ‘He/she has spent an hour driving.’

Semelfactives also take the duration phrase naturally, expressing the iterative meaning, as demonstrated in (9):

- (9) Tang sueo i kae cco-du bei.  
 light flash one CL.GEN hour ASP.PRF  
 ‘The light has been flashing for one hour.’ lit. ‘The light has spent an hour flashing.’

The duration phrase does not require a situation to be dynamic, hence states are also compatible with it:

- (10) Ng **jau** ccha-peo **jau** i kae cco-du bei.  
 1SG own money own one CL.GEN hour ASP.PRF  
 ‘I have been rich for one hour.’ lit. ‘I have spent an hour owning money.’

Accomplishments work well with the duration phrase, as illustrated by (11). The verb *si* ‘write’ is again reduplicated for the same reason as in (10).

- (11) Jji si i fong sang si i kae cco-du bei.  
 3SG write one CL.GEN letter write one CL.GEN hour ASP.PRF  
 ‘He/she has spent one hour writing a letter.’

Achievements should be the only situations that cannot take the time phrase, but unexpectedly, they are also compatible with the phrase, as demonstrated by (12).

- (12) Jji fa-ye kae wang-di i kae cco-du bei.  
 3SG realize CL.GEN problem one CL.GEN hour ASP.PRF  
 ‘It has been one hour since he realized the problem.’

However, the interpretation of achievement verbs with the time phrase is different from that of durative situations. For achievement situations, the time phrase refers to the duration following the achievement, instead of that of the achievement itself. Therefore, the duration phrase *phi kae cco-du bei*, ‘have spent one hour on phiing’ can still be used to diagnose achievements, we just have to ascertain whether the ‘one hour’ is during or after the situation.

#### 4.2.1.3 Durativity: “stopped phiing”

The equivalent of “stopped phiing” in Yueqing is *phi i-ou i fu phi* ‘stopped after a while of phiing’. We test its compatibility with the five situation types here. First, (13) is an example of an activity verb being tested.

- (13) Jji jau-jong jau i-ou i fu jau.  
 3SG swim swim a.while CONJ NEG.IMP swim  
 ‘He/she stopped swimming after a while.’

The activity verbs are compatible with ‘stopped after a while of phiing’.

Semelfactives and accomplishments turn out to pair well with ‘stopped after a while of phiing’ too. See examples in (14-15). (14) indicates the stopping of a repetition of the semelfactive

action *sau* ‘cough’. In (14), to simplify the clause, I have preposed the object and used a null subject, so that the phrase can follow the verb directly, and no reduplication is required. In (15) the accomplishment is interrupted, so does not reach its inherent endpoint.

(14) Jji    sau    i-ou    i    fu    sau.  
       3SG    cough a.while CONJ NEG.IMP cough  
       ‘He/she stopped coughing after a while.’

(15) Kae            zou            u-do    cchi    i-ou    i    fu    cchi.  
       DEM.PROX    CL.HOUSE    house build a.while CONJ NEG.IMP build  
       ‘They stopped building the house after a while.’

(16) shows that a stative verb works well with the phrase.

(16) Jji    sueo-sang    nji    sueo-sang    i-ou    i    fu    sueo-sang.  
       3SG    believe            2SG    believe    a.while CONJ NEG.IMP believe  
       ‘He/she stopped believing you after a while.’

(17) represents attempts to ‘stop doing’ achievements, and it is unacceptable.

(17) \*cca-de    beo-cca    i-ou    i    fu    beo-cca.  
       bomb            explode    a.while CONJ NEG.IMP explode  
       ‘The bomb stopped exploding after a while.’

(17) indicates that  $\varnothing$  *i-ou i fu*  $\varnothing$  ‘stopped after a while of  $\varnothing$ ing’ cannot be used with achievements. Achievements are the only situations in the five situation types that cannot be durative. Thus, this test is valid to diagnose durativity.

#### 4.2.1.4 Dynamicity: progressive viewpoint

Yueqing has the progressive viewpoint, and it is signified by the preverbal grammatical aspectual particle *zz-ti*. We will now review the progressive viewpoint’s applicability to the five

situation types. The progressive viewpoint is only supposed to be compatible with durative and dynamic situations, which means that it should be incompatible with only states and achievements, as semelfactives have the interpretation of activity when repeated. We will see if this is true in Yueqing. The examples in (18-20) represent attempts to use the progressive aspectual particle *zz-ti* with activities, semelfactives (if interpreted iteratively) and accomplishments. They demonstrate that these three situation types are compatible with the progressive viewpoint.

- (18) Jji      zz-ti    seo.  
       3SG    ASP.PROG      laugh  
       ‘He/she is laughing.’
- (19) Njau-ccy      zz-ti            ka.  
       eye            ASP.PROG          blink  
       ‘The eyes are blinking.’ (iterative)
- (20) U-do    zz-ti            cchi.  
       house ASP.PROG          build  
       ‘The house is being built.’

(21-22) represent attempts to use the progressive viewpoint with states and achievements. As expected, the progressive viewpoint is not allowed with states and achievements. This is because states are not dynamic, and achievements are non-durative.

- (21) \*Ng    zz-ti            ci-feo fueo.  
       1SG    ASP.PROG          like    flower  
       ‘\*I am liking flowers.’





- (24) Ng    bi    i       cchye.                                 (accomplishment)  
           1SG   run   one    lap

‘I run one lap (habitual sense)’ or ‘I’ll run one lap.’

- (25) Ng    tou.   (semelfactive)  
           1SG   tap

‘I tap (habitual sense).’ or ‘I’ll tap.’

- (26) Ng    ccye-deng.   (achievement)  
           1SG   decide

‘I decide (habitual sense).’ or ‘I’ll decide.’

- (27) Ng    cia-ti.   (state)  
           1SG   know

‘I know (present sense).’

This means that the “habitual interpretation in neutral aspect” test is effective in picking out states. We proceed to telicity next.

#### 4.2.1.6 Telicity: “in an hour”

Our last test adds the phrase “in an hour” to the predicate in order to test telicity. Only telic situations are expected to be able to take this phrase, so accomplishments and achievements should be compatible with it, while activities, semelfactives and states should be incompatible with it.

In (28-30), I present examples of the phrase *i kae ccuo-du tsz-nae* ‘in an hour’ with activities, semelfactives and states. None of them is possible on an interpretation where the

situation takes place over the course of an hour and is then finished.<sup>40</sup>

- (28) \*Zz-njeo [i kae ccuo-du tsz-nae] zueu.  
 1PL.INC one CL.GEN hour within spin  
 ‘\*We will spin in one hour.’

- (29) \*Zz-njeo [i kae ccuo-du tsz-nae] pheu.  
 1PL.INC one CL.GEN hour within clap  
 ‘\*We will clap in one hour.’

- (30) \*Zz-njeo [i kae ccuo-du tsz-nae] kei-kou.  
 1PL.INC one CL.GEN hour within feel  
 ‘\*We will feel in one hour.’

(31-32) test the phrase *i kae ccuo-du tsz-nae* ‘in an hour’ with an accomplishment and an achievement. They are both acceptable. For the accomplishment *in one hour* represents the duration of the event, but for the achievement *in one hour* represents a period of time that passes before the punctual event occurs.

- (31) Zz-njeo [i kae ccuo-du tsz-nae] bi i cchye.  
 1PL.INCL one CL.GEN hour within run one lap  
 ‘We will run one lap in one hour.’

- (32) Zz-njeo [i kae ccuo-du tsz-nae] cchye-fa.  
 1PL.INC one CL.GEN hour within depart  
 ‘We will depart in one hour.’

The phrase *i kae ccuo-du tsz-nae* ‘in an hour’ does successfully pick out telic situations. Therefore, we are able to distinguish accomplishments and achievements from the other

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<sup>40</sup> It is also not possible to interpret them as if after an hour we begin to spin, clap or feel. For that interpretation, we would need to add the phrase ‘start to’ or add the inceptive aspect.

situations using this phrase.

#### 4.2.1.7 Interim Summary

We have gone through the tests for situation types in Yueqing, and found that some work and some do not. We have identified five useful diagnostics. Taken together they help us to identify all situation types. I have summarized our useful diagnostics in Table 8, and how each situation type passes different diagnostics in Table 9.

**Table 8. Diagnostics for Yueqing situation types (to be expanded)**

<b>diagnostics</b>	<b>feature diagnosed</b>	<b>clashing situations</b>	<b>clashing examples</b>
‘have spent an hour ϕing’	durativity	achievements	<i>sz</i> ‘die’
‘stopped after a while of ϕing’	durativity	achievements	<i>beo-cca</i> ‘explode’
progressive viewpoint	durativity, dynamicity	states, achievements	<i>ci-feo</i> ‘like’ <i>dang</i> ‘lose’
habitual interpretation in neutral aspect	dynamicity	states	<i>cia-ti</i> ‘know’
‘in an hour’	telicity	activities, semelfactives, states	<i>zueu</i> ‘spin’, <i>phei</i> ‘clap’, <i>keikou</i> ‘feel’

**Table 9. Yueqing situation types tested (to be expanded)**

<b>feature</b>	<b>durativity</b>		<b>durativity, dynamicity</b>	<b>dynamicity</b>	<b>telicity</b>
<b>diagnostics</b>	‘have spent an hour ϕing’	‘stopped after a while of ϕing’	progressive viewpoint	habitual interpretation in neutral aspect	‘in an hour’
<b>activities</b>	√	√	√	√	*
<b>accomplishments</b>	√	√	√	√	√
<b>semelfactives</b>	√	√	√	√	*
<b>achievements</b>	*	*	*	√	√
<b>states</b>	√	√	*	*	*

Apart from the tests we have done, there is the possibility that Yueqing has some grammatical mechanism to identify the situation types. In the next subsection, I explore the grammatical aspectual system of Yueqing to find out if there are viewpoints other than the progressive that are useful to identify the situation types.

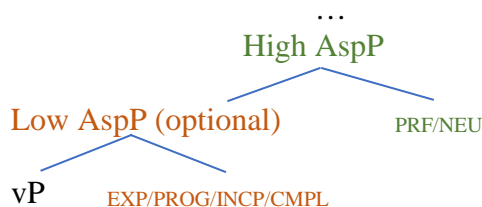
### 4.2.2 Yueqing viewpoint system

Yueqing has a rich viewpoint system. In this subsection, I will briefly map out the whole viewpoint system, and then focus on the viewpoints that are useful in diagnosing situation types. Viewpoint aspect is also called grammatical aspect, but I will use the term viewpoint aspect for consistency.

Figure 4 shows the syntactic structure of the aspectual system of Yueqing. Yueqing has two levels of viewpoint aspect: a higher aspectual phrase and a lower aspectual phrase. The higher aspect is obligatory and present in every clause, the lower level is optional, and the two may co-occur. The higher level hosts the perfective *bei* and the neutral viewpoint; the lower level hosts the experiential *-ku*, progressive *zz-ti*, inceptive *-jji* and completive *-ga* viewpoints.<sup>41</sup> The higher aspect phrase has only one overt aspect particle—*bei*, and when it is absent, I assume, following Smith (1991), that the situation has null neutral aspect.

The lower aspect phrase works to further specify the viewpoint of the higher aspect phrase. The lower aspect is realized as a verbal suffix or a preverbal particle, and a given verb can appear with at most one lower aspect marker. The lower aspect phrase has optionally the experiential aspect suffix *-ku*, the preverbal progressive aspect particle *zz-ti*, the inceptive aspect suffix *-jji*, the terminative aspect suffix *-ga*, or none of the above. The lower aspect phrase can have at most one marker. I will go through the viewpoint aspects one by one.

**Figure 4. Viewpoint aspect in Yueqing**



<sup>41</sup> The definitions of the specific viewpoint aspects will be introduced in the following subsections.

#### 4.2.2.1 The perfective viewpoint

In Section 4.1.3.1, I mentioned that Smith (1991) defines the perfective viewpoint as presenting a situation as a single whole, with the span including the initial and final endpoints of the situation. For telic events, perfective *bei* indicates that the event has been completed, as demonstrated in (33-34). For these situations, the Smith's definition is appropriate.

- (33) Ng ccheo i kae beng-ku bei. (accomplishment)  
 1SG eat one CL.GEN apple ASP.PRF  
 'I have eaten one apple.'

- (34) Ng jang bei. (achievement)  
 1SG win ASP.PRF  
 'I won.'

However, Smith's definition of perfective viewpoint is problematic for atelic situations in Yueqing. For activities and semelfactives, *bei* indicates the realization of the activity or semelfactive, but leaves it open as to the continuation of the activity or semelfactive. (35-36) illustrate this. The sentence in (35) can be uttered under a circumstances where the speaker is answering a phone call while carrying on the activity of dancing. The sentence in (36) can be uttered in the middle of a bumper-car game that the speaker has entered. In other words, when the perfective viewpoint is on atelic situations, it only confirms "some" part of the events and does not necessarily indicate a viewpoint from outside the event.

- (35) Ng thieo-wu bei. (activity)  
 1SG dance ASP.PRF  
 'I have been dancing.' or 'I danced.' (may or may not still be dancing)



completely outside of the situation of knowing. All this viewpoint requires is that it is past the initial point. We can regard this viewpoint as perfective only in terms of its relation to the point of transition into the state.

(37) Ng      cia-ti    bei.  
           1SG      know    ASP.PRF

‘I already know.’ or ‘I knew.’

Why would *bei* behave like this with states? We know that states have arbitrary initial and end points, but if there is a transition into the state, the initial point is certain and can be referred to. Of course, when the state ceases to hold, the end point will be certain and can also be referred to.

We have looked at the perfective aspect in Yueqing, and found that it can be more specifically defined as the *actual* perfective aspect. For telic events (accomplishments and achievements), it identifies the end point of the events; for atelic situations, it identifies the initial bound of the situations. The perfective aspect is compatible with all situation types.

#### 4.2.2.2 *The neutral viewpoint*

I referred to the absence of the perfective viewpoint as the neutral viewpoint. The exact viewpoint interpretation assigned to different situations is flexible and depends on the context. Examples were given in (23-27), and I will say no more here.

#### 4.2.2.3 *The experiential viewpoint*

The experiential viewpoint is easier to understand if we relate it to the perfect aspect in English. The perfect aspect usually signals that the situation still obtains; the experiential aspect says the situation no longer obtains. (38) demonstrate the contrast: (a) shows the English perfect, while (b) shows the Yueqing experiential.

(38) a.      He has arrived. (He is still here)



- b. Jji ccau-te -ku bei.  
 3SG arrive ASP.EXP ASP.PRF

‘He/she arrived before.’ lit. ‘He/she arrived, they are no longer here.’

I mentioned in the last subsection, that when the perfective aspect is used with activities, semelfactives and states, the situation may or may not still obtain. Now the experiential viewpoint will help us specify when it no longer obtains. Let us look at the same activity, semelfactive and stative sentences with the experiential suffix added. (39-41) show that, once the experiential suffix is added, the situations are regarded as not obtaining at the reference time.

- (39) Ng dau-sy -ku bei. (activity)  
 1SG study ASP.EXP ASP.PRF

‘I have gone to school before.’ (I am not going to school now.)

- (40) Ng jjuo -ku bei. (semelfactive)  
 1SG bump ASP.EXP ASP.PRF

‘I bumped before.’ (I am not bumping now.)

- (41) Ng cia-ti -ku bei. (state)  
 1SG know ASP.EX ASP.PRF

‘I knew before.’ (I do not know now.)

For telic events, the experiential aspect only reinforces the perfective aspect, indicating that the situation no longer obtains.

- (42) Ng ccheo i kae ben-ku -ku bei. (accomplishment)  
 1SG eat one CL.GEN apple ASP.EXP ASP.PRF

‘I ate an apple before.’

- (43) Ng jang -ku bei. (achievement)  
 1SG win ASP.EXP ASP.PRF  
 ‘I won before.’

The experiential aspect *-ku* thus is compatible with all five situation types. *-Ku* seems to always require that the perfective *bei* also be present.

#### 4.2.2.4 The progressive viewpoint

In section 4.2.1.4, we saw examples of the progressive viewpoint with the five situation types, and we know that the progressive viewpoint requires the situation to be both durative and dynamic. Because of this, the progressive viewpoint cannot be used with stative situations or instantaneous situations. Consequently, states and achievements are incompatible with the progressive viewpoint. Semelfactives, as they have the activity reading when repeated, are compatible with the progressive viewpoint.

#### 4.2.2.5 The completive viewpoint

The completive viewpoint expresses an action that has been carried out “thoroughly and to completion” (Bybee et al, 1994, 318). The completive viewpoint is signified by the suffix *-ga* in Yueqing. Because it is about completion and not termination, it is only possible with telic events. (44-45) are examples of the completive viewpoint on accomplishments and achievements. They are both acceptable.

- (44) Jji bi i cchye bi -ga, zz-ti ciau-si.  
 3SG run one lap run ASP.CMPL ASP.PROG rest  
 ‘He/she has run one complete lap and is resting.’

- (45) Cca-de          beo-cca          -ga          bei.  
 bomb          explode          ASP.CMPL          ASP.PRF

‘The bomb has completely exploded.’

(46-47) represents attempts to use the completive aspect on activities and semelfactives.

These sentences are only grammatical if the events have been quantized in the context. That is, if the listener already knows how many laps the speaker is going to run and how many times the hand is going to tap on the table, then they can be grammatical.

- (46) #Ng    bi          -ga          bei.  
 ISG    run          ASP.CMPL          ASP.PRF

‘#I have finished running.’

- (47) #Siu    kho    ccou    zueo    tou    -ga          bei.  
 hand    place    table    top    tap    ASP.CMPL          ASP.PRF

‘#The hand has finished tapping on the table.’

The completive aspect is also not compatible with states. (48) is an example of the unsuccessful attempt to use the completive aspect on a stative verb.

- (48) \*Jji    vei-nji          ng    -ga          bei.  
 3SG    doubt          1SG    ASP.CMPL          ASP.PRF

‘\*He/she has finished doubting me.’

Therefore, the completive aspect *-ga* is another effective diagnostic for telicity.

#### 4.2.2.6 *The inceptive viewpoint*

Inceptiveness means that a situation has started and will continue (Xiao and McEnery, 2004, p. 223). With this definition, the viewpoint is expected to be used with durative situations. The inceptive viewpoint is realized by the suffix *-jji*. In (49), the inceptive viewpoint is used with

an achievement verb, and it is ill-formed.

- (49) \*Kae mae cchye-sa -jji bei.  
 CL.GEN child be.born ASP.INCP ASP.PRF  
 ‘\*This child has started to be born.’

Semelfactives, because of their potential to turn into the iterative events, can take the inceptive *-jji*, like activities and accomplishments, as illustrated in (50-52).

- (50) Siu tau -jji bei. (iterative semelfactive)  
 hand shake ASP.INCP ASP.PRF  
 ‘The hand has started to shake.’

- (51) Jji jau -jji bei. (activity)  
 3SG swim ASP.INCP ASP.PRF  
 ‘He/she has started to swim.’

- (52) Jji wo-ke ta-seo -jji bei (accomplishment)  
 3SG room clean ASP.INCP ASP.PRF  
 ‘He/she has started to clean his/her room.’

(53) is an example of using the inceptive aspect with a stative verb. Although states are durative, the inceptive viewpoint cannot be used with states. This indicates that the inceptive viewpoint also diagnoses dynamicity. In other words, it requires a situation to be both durative and dynamic.

- (53) \*Si-kei zeo-zei -jji bei.  
 world exist ASP.INCP ASP.PRF  
 ‘\*The world has started to exist.’

Therefore, the inceptive viewpoint is only compatible with activities, accomplishments and semelfactives.

### 4.2.3 Summary

We have examined the grammatical aspectual system of Yueqing, and found that, in addition to the progressive *zz-ti*, the completive *-ga* and the inceptive *-jji* can also be used to diagnose situations. The situation type diagnostics we have found are summarized in Table 10.

**Table 10. Diagnostics for Yueqing situation types (complete)**

diagnostics		feature diagnosed	clashing situation	clashing example
A	'have spent an hour $\phi$ ing'	durativity	achievements	<i>sz</i> 'die'
B	'stopped after a while of $\phi$ ing'	durativity	achievements	<i>beo-cca</i> 'explode'
C	'in an hour'	telicity	activities, semelfactives, states	<i>zueu</i> 'spin', <i>phei</i> 'clap', <i>keikou</i> 'feel'
D	habitual interpretation in neutral aspect	dynamicity	states	<i>cia-ti</i> 'know'
E	progressive <i>zz-ti</i>	durativity, dynamicity	states, achievements	<i>ci-feo</i> 'like', <i>dang</i> 'lose'
F	completive <i>-ga</i>	telicity	activities, semelfactives, states	<i>wueo-wueo</i> 'draw', <i>tou</i> 'tap', <i>vei-nji</i> 'doubt'
G	inceptive <i>-jji</i>	durativity, dynamicity	states, achievements	<i>zeo-zei</i> 'exist', <i>cchye-sa</i> 'be.born'

Looking from the perspective of the situation types, they differ with respect to dynamicity, durativity and telicity, and as a result they each pass or fail different diagnostics. Their properties regarding aspect and the application of different diagnostics are summarized in Table 11.

**Table 11. Aspectual properties of the five canonical situation types**

	<b>dynamicity</b>	<b>durativity</b>	<b>telicity</b>	<b>example</b>	<b>pass diagnostics</b>
<b>activities</b>	dynamic	durative	atelic	stroll	A, B, D, E, G
<b>accomplishments</b>	dynamic	durative	telic	build a house	A, B, C, D E, F, G
<b>semelfactives</b>	dynamic	instantaneous	atelic	knock	A, B, D, E, G <sup>42</sup>
<b>achievements</b>	dynamic	instantaneous	telic	reach the top	C, D, F
<b>states</b>	stative	durative	N/A	know	A, B

Now we know the diagnostics for situation types specific to Yueqing, and the behaviour of each situation type, we are ready to take a look at the Yueqing adjectival verbs and determine what situation types they belong to.

### **Chapter 5: Diagnosing Situation Types of Yueqing Adjectival Verbs**

In Chapter 4, I explored language-specific diagnostics for situation types in Yueqing and aspectual properties of each of the five canonical verb situation types. Now I will apply what I learned about the situation types to adjectival verbs in order to find out what kind of situations the adjectival verbs denote.

Section 5.1 applies the diagnostics developed in Chapter 4 to the 85 adjectival verbs, and discusses the result of the tests, section 5.2 compares the canonical verb situations with the adjectival verb situations, and section 5.3 explores each of adjectival classes identified in section 5.2.

#### **5.1 Applying aspectual diagnostics on adjectival verbs**

Now that we have developed diagnostics for situation types specific to Yueqing, and have applied them to the five established situation types, we are ready to take a look at the Yueqing adjectival verbs and determine what situation type(s) they belong to. In this section, we will go through the situation type diagnostics one by one and see how adjectival verbs behave with them.

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<sup>42</sup> Semelfactives passed the four tests all in iterative meaning.

As adjectival verbs denote properties, we would expect them to pattern with stative verbs. We will find out if that is the case. For such purposes, I will deviate from the order of the diagnostics presented in Chapter 4. I will apply diagnostics of durativity and dynamicity to the adjectival verbs before I discuss the telicity test. For each test, if applicable, I will first give an example of an adjectival verb that passes the test and an example of an adjectival verb that does not pass the test. After that, I will discuss the interpretation of each test. If adjectival verbs are states, they should pass the durativity tests, and fail the dynamicity tests as well as the telicity tests. I will start with the durativity tests.

### 5.1.1 ‘have spent an hour $\phi$ ing’

‘Have spent an hour  $\phi$ ing’ is a test for the durativity of a situation. If a situation is durative, then regardless of its dynamicity, it will pass the ‘have spent an hour  $\phi$ ing’ test. After applying the diagnostic to the 85 adjectival verbs, I found that all of them pass this test. (1) is an example of an adjectival verb with  $\phi$  *i kae cco-du bei* ‘have spent an hour  $\phi$ ing’.

(1)    Jji    kha-wa    i    kae    cco-du    bei.  
          3SG    happy            one    CL.GEN    hour            ASP.PRF

‘He/she has spent an hour being happy.’

When the adjectival verbs are paired with duration phrases, they translate into ‘have such and such property for such and such period of time’. This means that adjectival verbs are all durative. They share the durativity of activities, accomplishments and states.

### 5.1.2 ‘stopped after a while of $\phi$ ing’

Like the ‘have spent an hour  $\phi$ ing’ test,  $\phi$  *i-ou i fu  $\phi$*  ‘stopped after a while of  $\phi$ ing’ tests the durativity of a situation. We may predict that whatever words that pass the first durative test

should also pass this test. (2) is an example of an adjectival verb that passes the test; it translates into ‘the sky had the property of being red for a while, but then it stopped having this property.’

(2) Thie xgong i-ou i fu xgong.

sky red a.while CONJ NEG.IMP red

‘The sky was red but stopped being red after a while.’<sup>43</sup>

As expected, all of the 85 adjectival verbs pass the test, again supporting the idea that all adjectival verbs are durative. Adjectival verbs are durative like states, but are they also non-dynamic like states?

### 5.1.3 Habitual interpretation in neutral aspect

The “habitual interpretation in neutral aspect” tests the dynamicity of a situation. All of the 85 adjectival verbs fail the test. (3a) is an example of the test. There is no habitual interpretation in this sentence. Rather, the adjectival verb behaves like canonical stative verbs in the test—it refers to the actual present. (3b) adds ‘every week’ to the sentence and results in unacceptability.

(3) a. Dieo xgou jjieo.

CL.LONG river long

‘This river is long.’

b. \*Dieo xgou mae kae seng-jji jjieo.

CL.LONG river every CL.GEN week long

‘\*This river is long every week.’

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<sup>43</sup> Whether ‘red’ passes this test depends on the subject. I can’t say *his blood was red, but stopped being red after a while*. It seems that only temporary states pass this test, permanent states do not. It is the same with many other adjectival verbs. Whether an adjectival verb can occur with a specific aspect depends on the subject they are predicated of. However, this does not change my conclusion here. For adjectival verbs that can take on a specific viewpoint aspect, we can always easily find subjects that can make this happen, and if an adjectival verb cannot take on a specific viewpoint aspect, no subjects can make it do so. In other words, the attribute of the subject does not affect an adjectival verb’s inherent compatibility with a certain viewpoint aspect.



The results for the durativity and dynamicity tests indicate that all of the adjectival verbs are stative.

#### 5.1.4 *Progressive zz-ti*

The progressive *zz-ti* tests the durativity and dynamicity of a situation. We already know that the adjectival verbs are durative. If they do not pass this dynamicity test, it provides further support to their stativity. As expected, all of the 85 adjectival verbs fail the progressive *zz-ti* test.

(4) is an example of the test.

- (4) \*We    *zz-ti*            *zu*.  
       rice    ASP.PROG        cooked.

‘\*The rice is in the process of being cooked.’

So far, the ‘have spent an hour *ɸing*’ and ‘stopped after a while of *ɸing*’ tests indicate that all adjectival verbs are durative, the “habitual interpretation in neutral aspect” and the progressive *zz-ti* tests indicate that all adjectival verbs are stative. There is only one canonical situation type that is both durative and stative, and that is a state. Therefore, we may conclude that the adjectival verbs are a subclass of stative verbs. I will now proceed to the telicity tests.

#### 5.1.5 ‘*In an hour*’

*I kae ccuo-du tsz-nae* ‘in an hour’ tests the telicity of a situation. Only situations that are telic can pass the test. The result of this test is complicated. Bare adjectival verbs all fail the test, and we may conclude that adjectival situations are not telic. However, when specified with the inceptive viewpoint aspect, or the completive viewpoint aspect, or both, most adjectival verbs pass the test. More specifically, 48 adjectival when paired with the inceptive viewpoint, 26 adjectival verbs when paired with the completive viewpoint, as well as four adjectival verbs

when paired with either the inceptive or completive viewpoint, pass the test. Only seven adjectival verbs fail the test: they cannot take ‘in an hour’ in combination with either the inceptive or the completive viewpoint.

(5a) is an example of an adjectival verb that passes the test with the help of the inceptive viewpoint, and (5b) illustrates that it cannot take the completive viewpoint; (6a) is an example of an adjectival verb that passes the test with the help of the completive viewpoint, and (6b) illustrates that it cannot take the inceptive viewpoint; (7) is an example of an adjectival verb that is compatible with both the inceptive and completive viewpoint; (8) is an example of an adjectival verb that is compatible with neither.

- (5) a. Wo-ke i kae ccuo-du tsz-nae lieo-jji -jji.  
 room one CL.GEN hour within clean ASP.INCP

‘The room is starting to become clean in an hour.’

(will continue becoming cleaner)

- b. \*Wo-ke i kae ccuo-du tsz-nae lieo-jji -ga.  
 room one CL.GEN hour within clean ASP.CMPL

‘The room got clean in an hour.’

- (6) a. Wo-ke i kae ccuo-du tsz-nae fei -ga  
 room one CL.GEN hour within dirty ASP.CMPL

‘The room got dirty in an hour.’

- b. \*Wo-ke i kae ccuo-du tsz-nae fei -jji  
 room one CL.GEN hour within dirty ASP.INCP

‘The room is starting to become dirty in an hour.’

(will continue becoming dirty)

- (7) a. We i kae ccuo-du tsz-nae la -ga.  
meal one CL.GEN hour within cold ASP.CMPL  
'The meal got cold in an hour.'
- b. Tie-cci i kae ccuo-du tsz-nae la -jji.  
Weather one CL.GEN hour within cold ASP.INCP  
'The meal is starting to become cold in an hour.'
- (8) \*Siu i kae ccuo-du tsz-nae sang -jji/-ga.  
book one CL.GEN hour within new ASP.INCP/ASP.CMPL  
'The book is starting to become/turned new in an hour.'

The results of applying the test to the 85 adjectival verbs are shown in Table 12. The adjectival verbs highlighted yellow are the ones that pass the 'in an hour' telicity test with the help of the inceptive viewpoint; the adjectival verbs highlighted blue are the ones that pass the 'in an hour' telicity test with the help of the completive viewpoint; The adjectival verbs highlighted green are the ones that pass the 'in an hour' telicity test with either the help of the inceptive or the completive viewpoint; the adjectival verbs that are not highlighted are the ones that fail the test no matter what.

**Table 12. Adjectival verbs that pass the 'in an hour' telicity test**

	Semantic types	Adjectival verbs	
Core	Dimension	+inceptive	<i>du</i> 'big', <i>jjieo</i> 'long/tall', <i>kua</i> 'wide', <i>sang</i> 'deep', <i>cchy</i> 'thick'
		+completive	<i>sae</i> 'small', <i>teu</i> 'short', <i>xga</i> 'narrow', <i>cchie</i> 'shallow', <i>si</i> 'thin'
	Age	+inceptive	<i>nie-ccang</i> 'young'
		+completive	<i>leo</i> 'old'
		*	<i>sang</i> 'new'
	Value	+inceptive	<i>xeo</i> 'good', <i>khou-ei</i> 'lovely', <i>ji-kuei</i> 'strange', <i>jjo-ieo</i> 'important', <i>jja</i> 'strong', <i>xeu-tsz</i> 'good-looking', <i>lieojji</i> 'clean', <i>die</i> 'sweet', <i>ko-ccau</i>

			'delicate'
		+completive	<i>thang</i> 'bad', <i>zueo</i> 'weak', <i>ne-tsz</i> 'bad-looking', <i>fei</i> 'dirty', <i>seu</i> 'sour',
	Colour	+inceptive	<i>ko</i> 'light', <i>bei</i> 'white', <i>xgong</i> 'red', <i>lou</i> 'green'
		+completive	<i>xeo</i> 'dark'
Non-core	Physical property	+inceptive	<i>jjuo</i> 'heavy', <i>tho</i> 'hot', <i>nang</i> 'warm', <i>lieo</i> 'cool', <i>ccie</i> 'sharp'
		+completive	<i>cchang</i> 'light', <i>nye</i> 'soft', <i>seo</i> 'wet', <i>deu</i> 'blunt', <i>phei</i> 'broken'
		+inceptive/completive	<i>nga</i> 'hard', <i>seo</i> 'dry', <i>peng</i> 'icy'
	Human propensity	+inceptive	<i>kha-va</i> 'happy', <i>chi</i> 'angry', <i>zie-lieo</i> 'kind', <i>cchong-meng</i> 'clever', <i>dei-fo</i> 'generous', <i>co</i> 'fierce', <i>cceo-ngeo</i> 'proud', <i>pa</i> 'full'
		+completive	<i>wae</i> 'hungry'
		+inceptive/completive	<i>do</i> 'silly'
	Speed	+inceptive	<i>khue</i> 'fast/quick'
		+completive	<i>me</i> 'slow'
	Difficulty	+inceptive	<i>ne</i> 'hard', <i>kete</i> 'simple', <i>jong-i</i> 'easy', <i>khuang-ne</i> 'difficult'
		+completive	<i>khu</i> 'tough'
	Similarity	+inceptive	<i>zueo</i> 'alike', <i>i-se</i> 'similar'
		+completive	<i>fu-zueo</i> 'not-alike', <i>la-ja</i> 'different'
	Qualification	+inceptive	<i>zu</i> 'mature/cooked', <i>cceng-zueo</i> 'normal', <i>phu-thong</i> 'common', <i>xei-si</i> 'appropriate', <i>li-zz</i> 'sensible'
		*	<i>ccang</i> 'real', <i>kou</i> 'fake', <i>sa</i> 'immature/raw', <i>tae</i> 'true/correct', <i>jjie</i> 'wrong'
	Quantification	+inceptive	<i>tou</i> 'many/much'
		+completive	<i>seo</i> 'few/little'
*		<i>kau</i> 'enough'	
Position	+inceptive	<i>ti</i> 'low', <i>jye</i> 'far', <i>fu-zi</i> 'not aligned'	
	+completive	<i>keo</i> 'high', <i>jjang</i> 'close-by', <i>zi</i> 'aligned'	

What does this test mean? Bare adjectival verbs denote durative situations with no inherent boundaries, and mean 'having such and such property'. The inceptive and completive viewpoints, focusing on the initial part of a situation and the final part of a situation, respectively, help turn the adjectival situations into telic situations. This indicates that the viewpoint aspect helps to coerce the adjectival situations into non-stative situations.

The test also reveals that both the initial bound and the final bound of a situation are compatible with the telicity test. In other words, the ‘in an hour’ test allows the significant point to be either the final or the initial point. Let us revisit the definition of telicity: telicity describes a situation with an inherent final point. Since the definition of telicity is too narrow to include the initial bound that we found the ‘in an hour’ test also diagnoses, hereafter I will use the term **BOUNDEDNESS** to denote the feature of a situation that is either an inherent initial point or an inherent final point. A situation with an initial bound can be illustrated in the English sentence: *we will start running in one minute*, where the significant point measured by the *in one minute* phrase is the initial bound of the activity.

We discovered that adjectival situations can be coerced into bounded situations to be defined. This raises the question of whether the five canonical verb situation types go through similar aspectual shifts under the influence of the inceptive and completive viewpoints. I have shown in Sections 4.2.2.5 and Section 4.2.2.6 that the completive viewpoint is only compatible with accomplishments and achievements, while the inceptive viewpoint is only compatible with activities and semelfactives in an iterative reading. Here I will briefly revisit this topic in comparison to the adjectival verbs. Since achievements and accomplishments already have final bounds, I will test again their compatibility with the initial bound. This is tested in (9-10). The result indicates that achievements cannot be coerced to have an initial bound, while accomplishments can.

- (9) \*Jji cchye-fa -jji bei. (achievement)  
 3SG depart ASP.INCP ASP.PRF  
 \*He/she has started to depart.

- (10) Jji si i-fong sang si -jji bei. (accomplishment)  
 3SG write a letter write ASP.INCP ASP.PRF

He/she has started to write a letter.

Now we test states, activities and semelfactives. (11-13) are attempts to add an initial bound and a final bound to these situations. (11) demonstrates that canonical states cannot be coerced into having either an initial or a final bound. (12) shows that activities can be coerced to have an initial bound, but not a final bound. (13) indicates that semelfactives can only be coerced into activities and then to have an initial bound.

- (11) a. \*Jji cy-jeo ccha-peo -jji bei. (state)  
 3SG need money ASP.INCP ASP.PRF

‘She/he has started to need money.’

- b. \*Jji cy-jeo ccha-peo -ga bei.  
 3SG need money ASP.CMPL ASP.PRF

‘She/he has finished needing money.’

- (12) a. Jji seo -jji bei. (activity)  
 3SG laugh ASP.INCP ASP.PRF

‘He/she has started to laugh.’

- b. \*Jji seo -ga bei.<sup>44</sup>  
 3SG laugh ASP.CMPL ASP.PRF

‘He/she has finished laughing.’

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<sup>44</sup> This sentence is only acceptable under the circumstances where the activity has shifted to an accomplishment. For example, it is acceptable if both speakers know exactly how much laughing the person was supposed to do. But since we are testing activities, as an activity the sentence is not acceptable.

- (13) a. Tang sueo -jji bei. (semelfactive)  
 light flash ASP.INCP ASP.PRF  
 ‘The light has started to flash.’ (iterative)
- b. \*Tang sueo -ga bei.<sup>45</sup>  
 light flash ASP.CMPL ASP.PRF  
 ‘The light has finished flashing.’

It is surprising that, as (11) shows, canonical states are incompatible with a viewpoint that focuses on the start of the situation. In order to understand this result, I decided to add *khei-sz* ‘start to’ to the same state verb (without the inceptive particle):

- (14) Jji khei-sz cy-jeo ccha-peo bei.<sup>46</sup> (state)  
 3SG start need money ASP.PRF  
 ‘She/he has started to need money.’

When the aspectual verb *khei-sz* is added to the stative verb, the result is acceptable, which means that there is a difference between ‘start to’ and the inceptive viewpoint. Canonical states are allowed to have an initial bound if it is expressed by an aspectual verb, but not if it is expressed by the inceptive viewpoint suffix. Recall from Section 4.2.2.6 that the inceptive viewpoint requires a situation to be both durative and dynamic. It requires a dynamic situation has started and will continue to unfold dynamically. With canonical states, the transition into the situation might be dynamic, but this change will not continue. With situations compatible with the inceptive viewpoint, however, the change occurring at the beginning of a situation is

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<sup>45</sup> Similarly, the semelfactives cannot be coerced into having a final telic point if they are not first coerced into accomplishments. If we know how much flashing the light is supposed to do, then the sentence is acceptable.

<sup>46</sup> All of the adjectival verbs, except for the seven that could not take the inceptive or completive viewpoints, can be paired with ‘start to’, too. This means that, most of the adjectival situations are like states in that they can have a initial bound.

expected to continue. That is, the inceptive viewpoint focuses on the initial process of a durative and dynamic situation. So far within the canonical situations, only activities, iterative semelfactives and accomplishments are compatible with the inceptive viewpoint.

Examples in (9-14) show us that activities, accomplishments, iterative semelfactives and canonical states can have initial bounds,<sup>47</sup> but achievements cannot<sup>48</sup>. The examples also indicate that accomplishments and achievements have final bounds, while activities, semelfactives and states do not. These results are presented in Table 13.

**Table 13. Bounds of situation types**

situation type	initial bound	final bound
activity	√ (coercion with inceptive) <sup>49</sup>	*
accomplishment	√ (coercion with inceptive)	√
achievement	*	√
semelfactive	√ (coercion with inceptive)	*
state	√ (coercion with ‘start to’)	*
adjectival	√ 78/85 (coercion with ‘start to’)	√ 50/85 (coercion with completive)

Coming back to the ‘in an hour’ test, with adjectival verbs, this test tells us that adjectival situations without inceptive or completive aspectual suffixes (or verbs) are not bounded, but some of them can be coerced into bounded situations when they are combined with these aspectual morphemes. 78 adjectival verbs can have an initial bound when combined with the aspectual verb, *khei-sz* ‘start to’; 52 adjectival verbs can be coerced into a dynamic process with an initial bound when combined with the inceptive viewpoint particle, *jji*;<sup>50</sup> 30 adjectival verbs

<sup>47</sup> The ‘start to’ example in (14) shows that states can have a initial bound. This is not contradictory with the inceptive viewpoint test exemplified in (11), because the inceptive viewpoint does not only entail an initial bound, but also a dynamic process after that bound.

<sup>48</sup> The fact that achievements have no initial bound is further supported by the fact that they cannot be combined with the aspectual verb *khei-sz*, either, as shown by following example:

(i) \*Jji khei-sz cbye-fa bei. (achievement)  
3SG start depart ASP.PRF  
 \*He/she has started to depart.

<sup>49</sup> I did not give examples of activities, accomplishments and semelfactives coerced into situations with initial bounds with the aspectual verb ‘start to’, but they all pass this coercion test, too.

<sup>50</sup> Here I am including those that can be either of the two large classes.



can be coerced into having a final bound when combined with the completive viewpoint particle, *ga*.

### 5.1.6 Completive *-ga*

In Chapter 4, we learned that the completive *-ga* test diagnoses telicity of situations. Only situations that are telic, that is, accomplishments and achievements, pass the test. The completive viewpoint can only be used with situations that have an inherent final bound.

In Section 5.1.5, we observed that some adjectival verbs were able to be used with ‘in an hour’ only if completive *-ga* was present. I tested the 85 adjectival verbs with *-ga* in the absence of ‘in an hour’, and unsurprisingly, only those adjectival verbs that were possible with *-ga* and ‘in an hour’ (see Table 12 for the ones highlighted blue) were possible with only *-ga*. (15)

illustrates an adjectival verb that can take the completive viewpoint; (16) illustrates an adjectival verb that cannot take the completive viewpoint.

- (15) Ng    leo    -ga            bei.  
       1SG    old    ASP.CMPL    ASP.PRF  
       ‘I have turned old.’

- (16) \*Nji    njie-cchang    -ga            bei.  
       2SG    young            ASP.CMPL    ASP.PRF  
       ‘You have turned young.’

Applying the completive viewpoint diagnostic to the 85 adjectival verbs results in 30 adjectival verbs passing the test and 55 adjectival verbs failing the test. Since the adjectival verbs by themselves are atelic like canonical stative verbs, applying the completive viewpoint must create aspectual coercion that enables the 30 adjectival verbs that pass the test to have a final bound.

### 5.1.7 Inceptive *-jji*

When I combined the inceptive aspectual suffix *-jji* is with verbs in the five canonical situation types, I found that it is compatible with situations that have an initial bound, durativity as well as dynamicity. It differs from the progressive test in that the inceptive test also diagnoses initial boundedness. Only situations that are durative, dynamic and can have a initial bound, that is, activities, accomplishment and iterative semelfactives, pass the test.

In Section 5.1.5 I showed that some adjectival verbs could be used with ‘in an hour’ only if inceptive *-jji* was also present. I tested the 85 adjectival verbs with *-jji* in the absence of ‘in an hour’, and unsurprisingly, only those adjectival verbs that were possible with *-jji* and ‘in an hour’ (see Table 12 for the ones highlighted yellow) were possible with only *-jji*. (17) illustrates an adjectival verb that can take the inceptive viewpoint; (18) illustrates an adjectival verb that cannot take the inceptive viewpoint.

(17) Nji    njie-cchang    -jji            bei.  
       2SG    young            ASP.INCP        ASP.PRF

‘You have started to become younger.’

(18) \*Ng    leo    -jji    bei.  
       1SG    old    ASP.INCP ASP.PRF

‘I have become older.’

Applying the inceptive viewpoint diagnostic to the 85 adjectival verbs results in 52 adjectival verbs passing the test and 33 adjectival verbs failing the test. Since the adjectival verbs by themselves are atelic like canonical stative verbs, applying the inceptive viewpoint must create aspectual coercion that enables the 52 adjectival verbs that pass the test to have a durative

and dynamic initial process. In other words, the coercion creates complex events composed of an initial process and then a state.

### ***5.1.8 Results of testing the situation type of adjectival verbs***

This subsection summarizes what we have learned after having all our adjectival verbs undergo the situation type diagnostics.

All the adjectival verbs passed both the ‘have spent an hour  $\phi$ ing’ and ‘stopped after a while of  $\phi$ ing’ tests, demonstrating their durativity. The “habitual interpretation in neutral aspect” and the progressive viewpoint tests indicate that none of the adjectival verbs are dynamic. These four tests show that the adjectival verbs are durative and stative like canonical stative verbs. Since uncoerced adjectival verbs belong to the same situation type as canonical stative verbs, hereafter I will call the adjectival verbs “adjectival states” and the canonical states “non-adjectival states”.

The two subtypes of stative verbs behave differently when an aspectual particle is added. We found that ‘start to’ tests indicate that 78 adjectival states can be coerced into having an initial bound if the aspectual verb *khei-sz*, ‘start to’ is added, that 30 adjectival states can be coerced into having a final bound if the completive viewpoint suffix is added, and that 52 adjectival states can be coerced into a dynamic initial process if the inceptive viewpoint suffix is added.

The adjectival states can be distinguished from non-adjectival states with respect to coercion possibilities. Table 14 summarizes the similarities and differences between the two subclasses of states.

**Table 14. Yueqing stative verbs**

situation type	bare situation	aspectual coercion		
		‘start to’ (initial boundary)	inceptive (initial process)	completive (final boundary)
<b>non-adjectival stative verbs</b>	stative	all	none	none
<b>adjectival stative verbs</b>	stative	78/85	52/85	30/85

As bare situations, non-adjectival and adjectival states are identical in being both durative and stative. With regard to possibilities under aspectual coercion, adjectival states seem to have more possibilities than non-adjectival states. The adjectival states fall into four classes with regard to their ability to undergo aspectual coercion. 48 adjectival verbs fall into class 1, which are only compatible with the inceptive viewpoint; 26 adjectival verbs fall into class 2, which are only compatible with the completive viewpoint; four adjectival verbs fall into class 3, which are compatible with either the inceptive or the completive viewpoint; seven adjectival verbs fall into class 4, which are compatible with neither the inceptive or the completive viewpoint. I will briefly go over the four classes here. They will be discussed further in Section 5.3. First I would like to explain what it means to have a initial process and a final bound.

Let us take a closer look at the inceptive and completive coercion. (19) is an example of an adjectival state taking the inceptive viewpoint suffix.

(19) Jji co -jii bei.  
 3SG fierce ASP.INCP ASP.PRF

‘He/she has started to become fierce.’

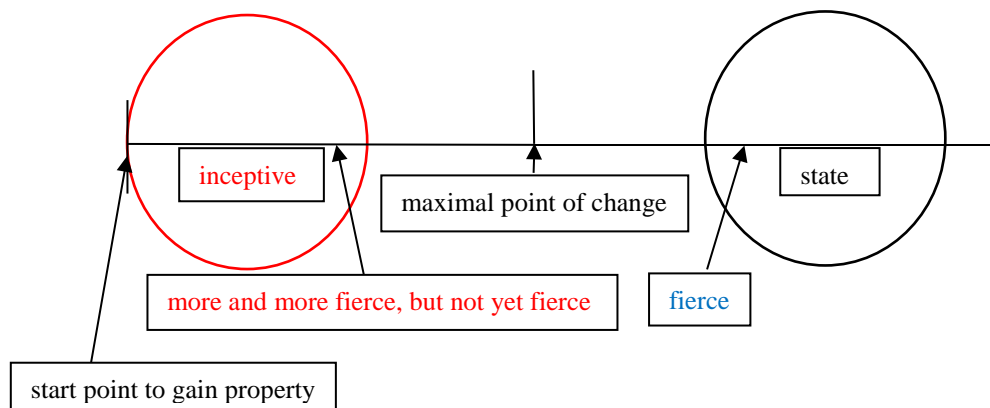
We now compare it with (20), which has the bare adjectival state but no viewpoint suffix.

(20) Jji co.  
 3SG fierce

‘He/she is fierce.’

What (20) describes is the state of ‘his/her being fierce’; what (19) describes is ‘his/her starting to become fierce’. What happens in (19) precedes what happens in (20). What (19) describes is a process of change. This process can be recast as a series of states of increasing fierceness. What is described in (20) is the state after the point of maximal change, beyond which no additional change is possible. The situation in (19) crucially does not include the maximally changed state. The threshold that introduces the state described in (20) is not included in the situation described in (19). This perspective is illustrated in Figure 5. Bare adjectival states represent situations as viewed in the black circle—it is a part of the state after the point of maximal change. Adjectival states paired with the inceptive viewpoint represent situations as viewed in the red circle—it is prior to the point of maximal change and it is a dynamic process where the subject has started and is obtaining more and more of the property that the adjectival state denotes. This coerced situation resembles activities—durative, dynamic, having an initial bound but not a final bound.

**Figure 5. Inceptive viewpoint on adjectival states**



Now let us compare (21) and (22). (21) is an adjectival stative verb with the completive viewpoint, and (22) is the same verb with no viewpoint.

- (21) I-zueo fei -ga bei.  
 clothes dirty ASP.CMPL ASP.PRF

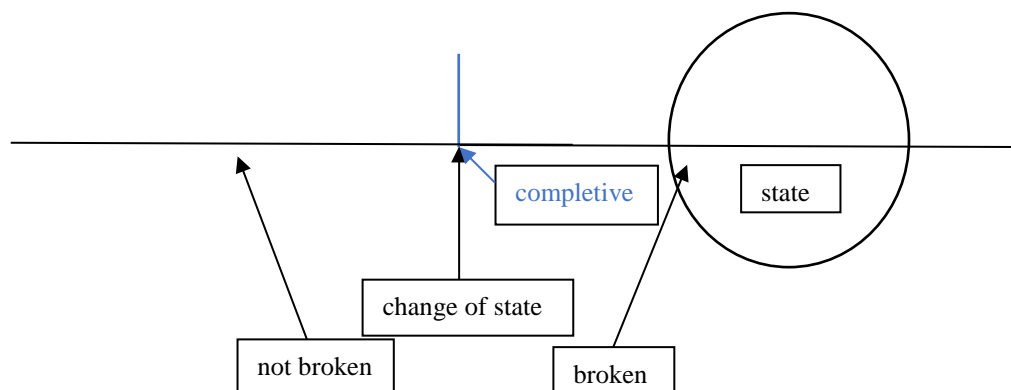
‘The clothes have turned dirty.’

- (22) I-zueo fei.  
 clothes dirty

‘The clothes are dirty.’

What (21) describes is a change into the state; what (22) describes is the state. What happens in (21) also precedes what happens in (22). The dynamic final bound is exactly the change of state and leads to the state. This reveals to us that the “final” here is not relative to the final bound of a state, but the final bound of changing into the state. The “final” here is the start of the new state. The completive viewpoint creates something that is similar to an achievement, with a final bound at the beginning of the situation, followed by a state. The completive viewpoint is illustrated in Figure 6. The black circle represents a situation denoted by a bare adjectival verb — it is a part of the state. The blue line represents a situation denoted by an adjectival states paired with the completive viewpoint — it signifies the change of state. This coerced situation, with an instantaneous event of change of state, resembles achievements.

**Figure 6. Completive viewpoint on adjectival states**



Comparing Figure 5 with Figure 6, we observe that for the adjectival state in Figure 6, the change of state signifies a sudden change from ‘not broken’ to ‘broken’, while for Figure 5, there is a process of gradual change that leads to the maximal point of change, and the degree of the property indicated by the adjectival state is in the process of building up and leading to the point of maximal change of state.

I have described the coerced properties of class 1 and 2 adjectival states. Class 3 adjectival states are those that can be coerced into either the situation in Figure 5 or one described in Figure 6. Class 4 adjectival states are non-gradable states that cannot have either an initial process, or a final bound, or a initial bound with the help of ‘start to’.

Before we further discuss the four adjectival classes, we will first situate them against the five canonical situation types, which will give us a better view of the four adjectival classes.

## **5.2 Situation types of Yueqing adjectival states**

In this section I compare Yueqing adjectival states against the five canonical situation types. We will first set out the four classes of adjectival states that behave differently in section 5.2.1. Section 5.2.2 will revisit the situation type diagnostics to add the updated information. Section 5.2.3 will map the adjectival situation states against the canonical verb situation types.

### ***5.2.1 Four classes of adjectival states***

In Section 5.1 we learned that adjectival states, according to their behaviour towards aspectual tests, fall into four classes, as depicted in Table 15. All of the four classes are durative and stative in their bare forms. Class 1 is the largest class with forty-eight members, and takes the inceptive viewpoint. Class 2 is the second largest class with twenty-six members, and takes the completive viewpoint. Class 3 only has four members, which can take either the inceptive or

the completive viewpoint. Class 4 has seven members, which cannot be coerced with either the inceptive or completive viewpoint..

**Table 15. Classification of adjectival states**

adjectival class	number /85	bare situation	aspectual coercion		
			‘start to’ (initial bound)	inceptive (initial process)	completive (final bound)
class 1	48	stative	✓	✓	*
class 2	26	stative	✓	*	✓
class 3	4	stative	✓	✓	✓
class 4	7	stative	*	*	*

I will now compare the four classes of the adjectival states with the canonical verb situation types.

### 5.2.2 Situation diagnostics revisited

With what we learned after applying the diagnostics to adjectival states, we will update the diagnostic table, as shown below. Diagnostics A, B and D stay the same, diagnostic C now tests both initial and final boundedness; diagnostic F tests final boundedness; diagnostic G tests durativity, dynamicity and initial boundedness; diagnostic H tests initial boundedness.

**Table 16. Diagnostics for Yueqing situation types (revised)**

diagnostics	feature diagnosed	clashing situation	clashing example	
A	‘have spent an hour $\phi$ ing’	durativity	achievements	<i>sz</i> ‘die’
B	‘stopped after a while of $\phi$ ing’	durativity	achievements	<i>beo-cca</i> ‘explode’
C	‘in an hour’	boundedness (initial or final)	activities, semelfactives, states, bare adjectival states	<i>zueu</i> ‘spin’, <i>phei</i> ‘clap’, <i>keikou</i> ‘feel’, <i>sang</i> ‘new’
D	habitual interpretation in neutral aspect	dynamicity	states, all adjectival states	<i>cia-ti</i> ‘know’, <i>jjieo</i> ‘long’
E	progressive <i>zz-ti</i>	durativity, dynamicity	states, achievements adjectival states	<i>ci-feo</i> ‘like’ <i>dang</i> ‘lose’, <i>zu</i> ‘mature/cooked’



F	completive <i>-ga</i>	final boundedness	activities, semelfactives, states, adjectival class 2, 3	<i>wueo-wueo</i> ‘draw’, <i>tou</i> ‘tap’, <i>vei-nji</i> ‘doubt’, <i>nje-cchang</i> ‘young’, <i>ccang</i> ‘real’
G	inceptive <i>-jji</i>	initial boundedness, durativity and dynamicity	states, achievements, adjectival class 1, 3	<i>zeo-zei</i> ‘exist’, <i>cchye-sa</i> ‘be.born’, <i>leo</i> ‘old’, <i>ccang</i> ‘real’
H	‘start to’	initial boundedness	achievement, adjectival class 4	<i>chyue-fa</i> ‘depart’, <i>ccang</i> ‘real’

### 5.2.3 Situation types of Yueqing verbs

Table 17 is an updated version of Table 11 in Section 4.2.3. I have added in the four classes of adjectival states.

**Table 17. Aspectual properties of the Yueqing situation types**

	<b>dynamicity</b>	<b>durativity</b>	<b>telicity</b>	<b>example</b>	<b>pass diagnostics</b>
<b>activities</b>	dynamic	durative	atelic	stroll	A, B, D, E, G, H
<b>accomplishments</b>	dynamic	durative	telic	build a house	A, B, C, D, E, F, G, H
<b>semelfactives</b>	dynamic	instantaneous	atelic	knock	A, B, D, E, G, H <sup>51</sup>
<b>achievements</b>	dynamic	instantaneous	telic	reach the top	C, D, F
<b>non-adjectival states</b>	stative	durative	N/A	know	<b>A, B, H</b>
<b>class 1 adjectival states</b>	stative	durative	N/A	big	A, B, H, (C <sup>52</sup> , G),
<b>class 2 adjectival states</b>	stative	durative	N/A	small	A, B, H, (C <sup>53</sup> , F),
<b>class 3 adjectival states</b>	stative	durative	N/A	cold	A, B, H, (C <sup>54</sup> , F, G),
<b>class 4 adjectival states</b>	stative	durative	N/A	new	<b>A, B</b>

From the table, we can see that the adjectival and non-adjectival states only differ in coercion possibilities. We also find that all and only eventive situation types pass the dynamicity

<sup>51</sup> Semelfactives pass all these tests with coercion into iteratives.

<sup>52</sup> Coercion with the help of *-jji*.

<sup>53</sup> Coercion with the help of *-ga*.

<sup>54</sup> Coercion with the help of *-jji* or *-ga*.

test D, that all states pass the durativity tests A and B, and all states pass the ‘start to’ test H, with the exception of class 4 adjectival states.

This section has added the adjectival states into the big picture of Yueqing situation types. In the next section, I will further analyze the situation types of adjectival states.

### **5.3 The situation types of adjectival states**

In this section, I will examine the four classes of adjectival states in detail. I will start with class 4.

#### **5.3.1 Class 4 adjectival states**

Only seven out of 85 adjectival verbs are immutable stative verbs. They are *sang* 'new', *ccang* 'real', *kou* 'fake', *sa* 'immature/raw', *tae* 'true/correct', *jjie* 'wrong' and *kau* 'enough'. These seven adjectival verbs are the only non-gradient ones among the 85 adjectival states. They are the only class that is incompatible with either the inceptive or the completive viewpoint. In other words, they are the only class that defies a transition into the states that they represent. We cannot say ‘start to be real’ or ‘start to be raw’ in Yueqing. The aspectual system does not care about how they transition out of the states, so even though ‘new’ can become ‘old’ over the time, this change cannot be expressed by ‘new’. The aspect can only focus on the transition into the situation. Therefore, the change into the ‘oldness’ is expressed by the transition into the situation represented by ‘old’, the antonym of ‘new’. The aspect may only focus on the transition into a state, which these seven adjectival verbs do not have. On a different note, being non-gradient, however, does not prevent these adjectival states from having degree modifiers or participating in the comparative and superlative constructions, because even though something cannot become “newer”, it can always be compared with other entities that possess different degrees of the

property of being new. (23a) illustrates ‘new’ being modified by a degree word, and (23b) illustrates ‘new’ participating in the comparative construction.

(23) a.   gae           pang   siu    me    sang.

DEM.PROX      CL.BOOK book   quite   new

‘This book is quite new.’

b.   Gae      pang   siu   pi            hei      pang   siu   sang   li.

DEM.PROX CL.BOOK book compare DEM.DIST CL.BOOK book new   COMPAR

‘This book is newer than that book.’

### 5.3.2 Class 1 and 2 adjectival states

I have illustrated class 1 and class 2 adjectives in Section 5.1.8. Class 1 adjectival states are adjectival states that can take the inceptive viewpoint. (24) is an example of class 1 adjectival state.

(24) Fong-je       xgong -jji    bei.

maple leaf    red      ASP.INCP ASP.PRF

‘The maple leaves have started to become red.’

In this viewpoint, the leaves have started to approach the threshold where they attain the property of being red. We expect the leaves to get closer and closer to the threshold, until we can call them red. The maximal point of change is expected, but not in view.

Class 2 adjectival states are adjectival states that can take the completive viewpoint. (25) is an example of class 2 adjectival.

(25) Xgei   phei   -ga            bei.

shoe   broken ASP.CMPL      ASP.PRF

‘The shoe(s) are broken.’

In this viewpoint, the shoe(s) attained the property of being broken. Although they can still become more and more broken, they have crossed the threshold from ‘not being broken’ to ‘being broken’. The change of state is complete.

If we look at Table 12, we find many pairs of antonyms, one of which is a class 1 adjectival verb and the other a class 2 adjectival verb. Some representative pairs are listed in Table 18 below.

**Table 18. Representative pairs of adjectival states**

Class 1 (inceptive)	Class 2 (completive)
<i>du</i> ‘big’	<i>sae</i> ‘small’
<i>jjieo</i> ‘long’	<i>teu</i> ‘short’
<i>xeu</i> ‘good’	<i>thang</i> ‘bad’
<i>jjja</i> ‘strong’	<i>zueo</i> ‘weak’
<i>jjjo</i> ‘heavy’	<i>cchang</i> ‘light’
<i>lieo-jji</i> ‘clean’	<i>fei</i> ‘dirty’
<i>khuei</i> ‘fast’	<i>me</i> ‘slow’

The first thing to notice from these pairs is that the class 1 adjectival states are usually the unmarked ones. Dixon (1982) discusses ways to identify the unmarked adjective among a pair of antonyms. First, we normally ask general question using the unmarked adjective. For example, we would ask about the size of something using *how big is it?*. When we ask: *how small is it?*, there is an implication that the thing we are asking about is small to some degree. Similarly, we would ask about the weight of something using *how heavy is it?*. When we ask: *how light is it?*, we imply that the thing we are asking about is light to some degree. Second, nominals that denote the property are sometimes derived from the unmarked adjective. For example, we have *length* and *strength* in English. In Yueqing, when we ask about the length of something we ask: *keli jjieo?* ‘how long?’; when we ask about the weight of something we ask: *keli jjjo?* ‘how heavy?’; when we ask about the size of something we ask: *keli du?* ‘how big?’. Yueqing also has nouns for properties that are derived from the unmarked adjectives, such as *jjieo-dy* ‘length’, *jjjo-*

*lieo* ‘weight’, *jja-dy* ‘strength’, etc.

The pairs of antonyms also indicate a relation with property scales. The scale property of adjectives and their relationship to telicity are discussed in Wechsler (2005). In his system, adjectives are categorized into gradable and non-gradable adjectives, with gradable adjectives further divided into open-scale and closed-scale adjectives, and closed-scale adjectives further divided into maximal and minimal adjectives. Gradability is easy to understand. Closed-scale adjectives are defined as adjectives that supply an inherent lexical standard. Maximal adjectival states are those that have maximal end-points, such as *empty* and *dry*, and minimal adjectives are those that have minimal end-points, such as *wet* and *dirty*. Open-scale adjectives are those that lack an inherent standard and hence must rely on context for their standards, such as *long* and *short*. Wechsler observes that only maximal adjectives, having inherent standards, can serve as telic bounds when acting as secondary predicates. Adjectives in English are not verbs, hence their telicity cannot be compared to that of adjectival verbs in Yueqing. Leaving telicity aside, the scale of adjectives, however, is in a way parallel to that of Yueqing. Many of our class 1 and class 2 adjectival states can be matched to English maximal and minimum adjectives. There is not a complete match, as some open-scale English adjectives (e.g. *long*) are class 1 adjectival states and some (e.g. *short*) are class 2 adjectival states in Yueqing, and *empty*, a maximal adjective in English is a class 2 adjectival state in Yueqing, while *dry*, a maximal adjective in English is a class 1 adjectival state in Yueqing. Nevertheless, I can borrow the concept of maximal and minimal bounds from Wechsler to describe class 1 and class 2 adjectival states, respectively.

According to Wechsler, the maximal adjectives, such as *dry*, have an upper boundary, and over that boundary the object cannot be any ‘cleaner’ or ‘drier’. The minimal adjectives,

such as *dirty* and *wet* have a lower boundary, and once above that boundary, the object can be called ‘*dirty*’ and ‘*wet*’. The maximal adjective concept can be used to describe our class 1 adjectival states: when we use the inceptive viewpoint on the class 1 adjectival states, we are saying that the object is approaching the maximal bound where it enters into the state of having the property. The minimal adjective concept can be used to describe our class 2 adjectival states: when we use the completive viewpoint on the class 2 adjectival states, we are saying that the object has crossed the minimal bound and entered into the state of having the property.

Therefore, the class 1 adjectival states depict a situation where the object has started to approach the maximal bound of the adjectival scale. The class 2 adjectival states depict a situation where the minimal bound of the adjectival scale is crossed, and the object has entered into a new state. The former is somewhat parallel to an activity, while the latter is somewhat parallel to an achievement.

### 5.3.3 Class 3 adjectival states

Among the 85 adjectival verbs, four take both the inceptive and the completive viewpoints: *nga* ‘hard’, *seo* ‘dry’, *la* ‘cold’ and *do* ‘silly’. Does each of them have two bounds, a maximal as well as a minimum one? Let us first look at some examples. (26a) shows *nga* ‘hard’ with the inceptive viewpoint, and (27a) shows the same adjectival verb with the completive viewpoint. Observe that the same adjectival verb is predicated of different subjects in the two examples, and each viewpoint is only acceptable with one of the subjects. When the subject is cement, the adjectival verb can combine with the inceptive, but not completive aspect, as demonstrated in (26). When the subject is cake the reverse is true, i.e., it can combine with the completive, but not the inceptive aspect, as demonstrated in (27).

- (26) a. Siu-ni nga -jji bei.  
 cement hard ASP.INCP ASP.PRF  
 ‘The cement has started to become hard.’
- b. \*Siu-ni nga -ga bei.  
 cement hard ASP.CMPL ASP.PRF  
 ‘The cement has turned hard.’
- (27) a. Lang-keo nga -ga bei.  
 cake hard ASP.CMPL ASP.PRF  
 ‘The cake has turned hard.’
- b. \*Lang-keo nga -jji bei.  
 cake hard ASP.INCP ASP.PRF  
 ‘The cake has started to become hard.’

Similarly, we can use the inceptive viewpoint (28a) but not the completive viewpoint (28b) with ‘cold’ when it is the property of the weather; we can use the completive viewpoint (29a) but not the inceptive viewpoint (29b) with ‘cold’ when it is the property of a meal.

- (28) a. Thie-cci la -jji bei.  
 weather cold ASP.INCP ASP.PRF  
 ‘The weather has started to become cold.’
- b. \*Thie-cci la -ga bei.  
 weather cold ASP.CMPL ASP.PRF  
 ‘The weather has turned cold.’

- (29) a. We la -ga bei.  
 meal cold ASP.CMPL ASP.PRF  
 ‘The meal has turned cold.’
- b. \*We la -jji bei.  
 meal cold ASP.INCP ASP.PRF  
 ‘The meal has started to become cold.’

Therefore, these class 3 adjectival verbs do not have two bounds. Instead, each of the class 3 adjectival states, when used to describe a certain type of argument, can only have either the maximal or the minimal bound. In other words, they are either class 1 or class 2 adjectival states when they are describing any given argument. For example, when ‘hard’ describes cement, it is expected to be a maximal adjectival, where it can approach the maximal point and enter into the state of ‘being hard’; when ‘hard’ describes cake, it is expected to be a minimal adjectival, where there is a minimal point, crossing which renders the cake “hard”. The property of the class 3 adjectival states depends on the property of the arguments (subjects) that they describe. They are essentially the same as class 1 and 2 adjectival states.

#### 5.4 Summary of Part II

In Part II of this thesis, I developed language specific diagnostics for the lexical semantic features of durativity, dynamicity and telicity, which characterize the different aspectual classes of verbs. I have applied these diagnostics to adjectival verbs. Not surprisingly, these diagnostics indicate that adjectival verbs are stative verbs.

What is perhaps unexpected is that the interaction of the lexical and viewpoint aspects serves to distinguish different subclasses of states, and that the majority of adjectival states belong to different subclasses from canonical verbal states. I identified four classes based on the



possibility of combining the stative verb with inceptive and completive viewpoint aspects. As summarized in Table 19, adjectival states occur in each of these classes, but canonical verbal states only occur in class 4.

**Table 19: Subclasses of stative verbs in Yueqing**

	<b>Compatible with inceptive vwpt</b>	<b>Compatible with completive vwpt</b>	<b>Adjectival States<sup>55</sup></b>	<b>Verbal States</b>
<b>Class 1</b>	YES	NO	48/85	None
<b>Class 2</b>	NO	YES	26/85	None
<b>Class 3</b>	YES	YES	4/85	None
<b>Class 4</b>	NO	NO	7/85	All

The four classes of adjectival states also differ in their gradability and scale properties: class 4 adjectival (and verbal) states are non-gradient; class 1 adjectival states have a maximal bound, class 2 adjectival states have a minimal bound, and class 3 adjectival states have either a maximal or minimal bound, depending on the nature of the subject they are predicated of. I also found that pairs of antonyms often differ in their classification, with one member of the pair falling into class 1 and the other into class 2. For example, ‘long’ is a class 1 adjectival state and ‘short’ is a class 2 adjectival state.

Although I found that the adjectival states can be divided into different subclasses based on their aspectual coercion possibilities, this does not undermine my claim that “adjectives” belong to the category of verbs. On the contrary, it reinforces the conclusion of Part I. The fact that adjectival verbs are states, and that they can undergo aspectual coercion is consistent with the conclusion that they are verbs (and problematic for the view that they are adjectives), for only verbs have situation types, and only verbs can undergo coercion from one aspectual class to another.

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<sup>55</sup> In my study I only concerned myself with 85 adjectival verbs, but there are other adjectival verbs in Yueqing. I did not exhaustively test all verbal states, but all the ones that I tested belong to class 4.

These findings raise a number of other questions. Among them are the following: Why are adjectival states more easily coerced than canonical verbal states? Why do states fall into four subclasses? Does this have to do with the difference of the concepts that they represent? Why do we often see a pattern of dichotomy in the adjectival states, where antonyms differ in their classification as shown in Table 18? Is there a specific semantic property that determines which member of an antonymic pair belongs to class 1 and which belongs to class 2? I leave these topics for future exploration.

## Chapter 6: Conclusion

This thesis has explored the grammatical properties of words expressing adjectival notions in Yueqing, and compared them to those of nouns and verbs. It investigated whether there is a separate syntactic category of adjectives in the language, and found that in fact words expressing adjectival notions are verbs. This result immediately raises the question of what lexical classification these adjectival verbs have. Since canonical verbs can be subcategorized by their aspectual properties into activities, accomplishments, semelfactives, achievements and states, the thesis subsequently investigated the lexical aspectual subcategorization of adjectival verbs in Yueqing. It found that adjectival verbs are stative verbs, but unlike canonical verbal stative verbs, most adjectival stative verbs can be coerced into activities and/or achievements.

The thesis started by examining the grammatical properties of nouns and verbs and developing diagnostics for classifying words into these two categories. The three most reliable noun diagnostics are: nouns can be preceded by the generic classifier *kae*, nouns can be modified by *gei* constructions, and nouns can be the complement of the copula. The three most reliable verb diagnostics are: verbs can have the experiential aspect suffix *-ku*, verbs can be negated by the imperfective negation particle *fu*, and verbs can follow the modal verb *wae* ‘be likely to’. These diagnostics were then applied to a set of 85 words that express semantic content of adjectives based on Dixon (2004)’s classification, in order to determine whether these words belong to the category of nouns, the category of verbs, or whether they belong to a separate category of adjectives. It was found that neither verbs or “adjectives” can be selected by the generic classifier *kae*, neither verbs or “adjectives” can be modified by the *gei* relative clause / possessive constructions, and that neither verbs or “adjectives” can serve as the complement of the copula ‘be’. It was also found that both verbs and “adjectives” can take the experiential

aspectual suffix *-ku*, both verbs and “adjectives” can be negated by the imperfective clausal negation particle *fu*, and both verbs and “adjectives” can be selected by the modal verb *wae*. All of these results indicate that the 85 “adjectives” belong to the category of verbs.

The thesis also attempted to differentiate “adjectives” from verbs by looking at their conjunction possibilities, at their behaviour in imperative clauses, at their reduplication patterns and meanings, at the relative clauses they form, at the possibilities of them forming adverbs, and at whether they can be modified by intensifiers and have comparative/superlative forms. None of these constructions can differentiate “adjectives” from verbs: “adjectives” can be conjoined with verbs, they can both appear in imperative clauses, they are reduplicated in the same way and with the same semantic interpretations, they can both form adverbs, and they can both be modified by intensifiers and have comparative/superlative forms. All the evidence suggests that the “adjectives” in Yueqing are true verbs.

Establishing that “adjectives” in Yueqing are verbs leads to the question of aspectual classification of adjectival verbs. There are five aspectual classes of states, activities, accomplishments, achievements and semelfactives, and they differ in durativity, dynamicity and telicity as shown in Table 20.

**Table 19. Five aspectual classes of verbs and their properties**

	<b>durative</b>	<b>dynamic</b>	<b>telic</b>
<b>state</b>	yes	no	no
<b>activity</b>	yes	yes	no
<b>accomplishment</b>	yes	yes	yes
<b>achievement</b>	no	yes	yes
<b>semelfactive</b>	no	yes	no

The thesis developed language specific diagnostics for these three properties, and applied them to adjectival verbs. The thesis found that adjectival verbs have the properties of states—they are durative, nondynamic and atelic.

The conclusion that adjectival verbs are states applies to the bare verb form. However, when viewpoint aspects are added into the picture, the issue becomes complicated. Viewpoint aspects are themselves good diagnostics for lexical aspect, and they also create aspectual coercion for situations that they are added to. Adjectival states exhibit different behaviour when they encounter the inceptive and completive viewpoint aspect; they are also differentiated from canonical states in this respect. Adjectival states differ from canonical verbal states in that most of them either shift to activities with the help of the inceptive viewpoint aspect, or to achievements with the help of the completive viewpoints, while canonical states are not able to be coerced into either of these classes. The adjectival states fall into four subclasses based on their coercion possibilities: Class 1 can be coerced into activities with the inceptive viewpoint; class 2 can be coerced into achievements with the completive viewpoint; class 3 can be coerced into either activities or achievements; class 4 can be coerced into neither situation.

The aspectual behaviour of adjectival states reinforces their status as true verbs, for only true verbs belong to one of the verbal aspectual classes—activities, accomplishments, achievements, semelfactives or states. Adjectival verbs in their bare forms are identical to canonical verbal states. When combined with the inceptive viewpoint marker some adjectival states can be coerced into activities; when combined with the completive viewpoint marker some can be coerced into achievements. In other words, adjectival verbs - like all verbs - denote kinds of situations. Therefore, they are true verbs.

Most adjectival verbs considered in this thesis ( $78/85 = 92\%$ ) can be coerced into activities and/or achievements—these are classes 1-3. The remaining adjectival verbs ( $7/85 = 8\%$ ) pattern with canonical stative verbs in that they cannot be coerced into any of the eventive aspectual classes. What sets these seven verbs apart is that they are non-gradable. It seems that

the ability to be coerced distinguishes gradable stative adjectival verbs from both non-gradable stative adjectival verbs and canonical stative verbs.

Going back to Baker (2003) and Dixon (2004), the conclusion of this thesis challenges Baker's view that universally, adjectives are a distinct syntactic category, and it largely confirms Dixon's view that the "adjectives" can always be distinguished from nouns and verbs, even though sometimes only very subtly. In the case of Yueqing, we are able to distinguish gradable adjectival states from the other verbs. For example, if we use the inceptive and completive viewpoint tests, we can separate Class 1, Class 2 and Class 3 adjectival states from the rest of states. This does not mean that we are distinguishing "adjectives" from verbs, we are actually distinguishing situation types among verbs. Using a similar combination of tests, we can also distinguish each of the other lexical aspectual classes of verbs from one another. Therefore, at least in Yueqing "adjectives" are not a separate morpho-syntactic category that is only subtly different from verbs. Rather, (most) "adjectives" are a separate subcategory of stative verbs that is only subtly different from other stative verbs—and a small minority of adjectival stative verbs seem to be indistinguishable from non-adjectival stative verbs.

Dixon is right in seeing properties that are specific to adjectives (perhaps due to their semantics) that give them special characteristics even when they are verbs. In the case of Yueqing, these characteristics are reflected in the lexical aspect of the adjectival verbs. Dixon does not look at the difference between adjectives and verbs from a categorical point of view, but I think his semantic characterization of adjectives is a very useful tool in finding the group of words that are adjectival, at least it is the case in Yueqing. Class 1, 2 and 3 adjectival states form a natural subclass of states in being coercible into dynamic situations (events). Dixon's diagnostics for distinguishing adjectives and verbs, as shown in Chapter 1, are also a very good

reference for a researcher trying to specify the properties of adjectives (or “adjectives”) in a language.

Baker’s noun, verb and adjective diagnostics are also a good reference for similar purposes. However, Baker’s conceptual characterization of adjectives is inconsistent with the findings of this thesis. Baker’s labelling of adjectives with the features [-V, -N] does not capture the properties of Yueqing “adjectives”. If we use the features as Baker defines them, it would be true that Yueqing “adjectives” are [-N] in lacking a referential index, but they are also [+V] because they license a subject, like (other) verbs, which are also [+V].

What Yueqing “adjectives” have revealed also denies the line of formalist claims starting from Chomsky (1970), as described by Croft (2017), that adjectives are [+V +N]. If we have to give a feature to Yueqing adjectives, it would be [+V -N]. In fact, any feature system which treats “adjectives” and verbs differently will be challenged by the facts of Yueqing. This empirical finding proves that there is at least one language where adjectives are not a distinct lexical category. For Yueqing, compounding and relative clauses are extensively used as means of noun modification, and therefore there seems not to be the need for an adjective category. The words that carry adjectival notions exhibit all kinds of verbal properties. As discussed in Section 3.7.4, Baker claims that a difference can always be found between verbs and adjectives. In languages where adjectives are verb-like and can only modify nouns through a relative clause like verbs, the relative clause formed by adjectives would either have a different suffix from that formed by verbs, or any relative clause formed by an adjective would be closer to the noun when it co-occurs with a relative clause formed by a verb. This kind of difference is not found in Yueqing. In Yueqing, the line between true verbs and “adjectives” is completely obliterated.

Given the differences between Yueqing “adjectives” and English adjectives, it is more

likely that words that denote adjectival notions cannot be characterized by the same set of features, or feature values in all languages. In other words, it is more likely that adjectives are not a universal lexical category. “Adjectives” do not have to be a syntactic category distinct from verbs (or nouns). If this is indeed the case, then nouns and verbs may be the only universal major class lexical categories.

Finally, I would like to envision some directions for future research based on the findings reported in this thesis. First, I would like to repeat some of the questions posed at the end of Chapter 5. Why are adjectival states more easily coerced than canonical verbal states? Why do states fall into four subclasses? Does this have to do with the difference of the concepts that they represent? Why do we often see a pattern of dichotomy in the adjectival states, where antonyms differ in their classification? Is there a specific semantic property that determines which member of an antonymic pair belongs to class 1 and which belongs to class 2? Addressing these questions would determine other semantic qualities of adjectival states in Yueqing.

It would also be valuable to apply the diagnostics developed in this thesis to other varieties of Chinese such as Mandarin and Cantonese, to see if the “adjectives” in these two varieties behave the same way as those in Yueqing. This would contribute to a longstanding debate on whether Mandarin has a separate category of adjectives, or whether “adjectives” are in fact verbs. For example, Paul (2010) claims that adjectives are a distinct category in Mandarin, and his strongest argument is that in Mandarin only adjectives can serve as bare modifiers of nouns, and thus, can be differentiated from verbs. On different grounds, Guo (2002) classifies adjectives as verbs, and his main argument is that adjectives can be negated like verbs. It is beyond the scope of this thesis to investigate adjectives in Mandarin, but now that we have learned about “adjectives” in Yueqing, we are better positioned to inquire into the status of



words that express adjectival notions in Mandarin, as well as other Chinese varieties.

A third research project would expand the set of “adjectives” studied. All of the “adjectives” examined in this thesis are based on Dixon (2004)’s list of semantics classes. Some of the non-intersective adjectival concepts have not been included in the list. Intersective adjectives describe an intersect of semantics of head noun, while non-intersective adjectives do not (Giegerich 2015). For example, “adjectives” expressing such non-intersective concepts as ‘past’, ‘former’ and ‘future’ have not been considered. These adjectives can be used as noun phrase internal modifiers, but not as predicates. For example, we can say *the former president*, but not *\*the president is former*. The Yueqing equivalents for ‘past’, ‘former’ and ‘future’ are *leo-cceo*, *tsz-zie* and *ccieo-lei*, respectively. They are nouns in Yueqing (due to space limitations, I am not providing the tests here). It is possible that in Yueqing there are other non-intersective “adjectives” that behave like their English counterparts in that they cannot function as predicates. This topic would need to be explored systematically. Guo (2002) proposes that in Mandarin there is a group of adjectives (such as *gong-gong* ‘public’) that can only be used as modifiers of nouns but not as predicates, and that these are adjectives in the making—they are evolving into true adjectives but have not gained the full status of “adjectives”. It is possible that Yueqing may also have such near adjectives. This is another issue to be further investigated.

Finally, in this thesis, I briefly discussed compound nouns to support my claim that nouns cannot be modified by bare “adjectives” in Yueqing. The topic of compounding in Yueqing, however, needs more systematic research to find answers to questions such as the following: What are the rules of Yueqing compounding? What kinds of compounds are there? How are compounds formed? Is tone sandhi applied the moment a compound forms, or is it only applied to frequently used compounds? These questions and many others are left for future research.

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**Appendix A. Yueqing nouns used in tests**

<b>noun</b>	<b>tone</b>	<b>translation</b>
nji	[dipping]	'fish'
siu	[rising]	'water'
sueo-fa	[rising]-[dipping]	'idea'
pe	[even]	'class'
tong-gou	[even]-[dipping]	'east.side'
nei	[falling]	'daughter'
ccou	[dipping]	'table'
pi-se	[falling]-[even]	'contest'
zz-ke	[dipping]-[even]	'time'
jy-jjiu	[rising]-[falling]	'universe'
peo-gou	[dipping]-[dipping]	'north.side'
ku-cchy	[falling]-[even]	'past'
a-su	[dipping]-[even]	'uncle'



### Appendix B. Yueqing verbs/verb phrases used in tests (by situation types)

#### Activity

verb	tone	translation
bi	[dipping]	'run'
khei-cchou	[dipping]-[even]	'drive'
se-bu	[falling]-[even]	'walk'
jau	[falling]	'swim'
dau-sy	[dipping]-[even]	'study'
bueo	[falling]	'climb'
wueo-wueo	[falling]-[even]	'draw'
seo	[falling]	'laugh'
thieo-wu	[falling]-[rising]	'dance'
zueu [even]	[even]	'spin'

#### Accomplishment

verb phrase	tone	translation
cci i-zou wu-do	[rising] [even]-[rising] [dipping]-[rising]	'build a house'
cchei i-mie zueo	[dipping] [falling]-[even] [falling]	'destroy a wall'
si i-fong sang	[rising] [dipping]-[even] [falling]	'write a letter'
cchieo i su kou	[falling] [rising]-[dipping] [even]	'sing a song'
ccheo i kae beng-ku	[dipping] [even] [falling] [falling]-[rising]	'eat an apple'
mo xei-pie ccau	[even] [falling]-[even] [rising]	'walk to the seaside'
bi i cchye	[dipping] [even] [even]	'run one lap'
khei i nei	[even] [even] [falling] [dipping]-[even]	'drive for one day'
ta-seo ng gei wo-ke	[falling]-[rising] [rising] [even] [dipping]-[even]	'clean my room'
zueo la cchye	[even] [rising] [even]	'spin for two times'

#### Semelfactives

verb	tone	translation
ta	[rising]	'hit'
ka	[dipping]	'blink'
kha	[even]	'knock'
sau	[falling]	'cough'
tou	[dipping]	'tap'
sueo	[dipping]	'flash'
thi	[dipping]	'kick'
tau	[rising]	'shake'
phei	[dipping]	'clap'
jjuo	[even]	'bump'

**Achievements**

<b>verb</b>	<b>tone</b>	<b>translation</b>
sz	[rising]	‘die’
dang	[even]	‘lose’
jang	[falling]	‘win’
fa-jie	[falling]-[even]	‘realize’
cchye-fa	[rising]-[dipping]	‘depart’
dzz-cci	[rising]-[dipping]	‘quit’
ccye-deng	[falling]-[even]	‘decide’
beo-cca	[rising]-[dipping]	‘explode’
ccye-sa	[dipping]-[even]	‘be born’
ku-siei	[even]-[falling]	‘cross the line’

**States**

<b>verb</b>	<b>tone</b>	<b>translation</b>
sueo-sang	[rising]-[falling]	‘believe’
ci-feo	[falling]-[even]	‘like’
theo-je	[falling]-[even]	‘dislike’
ke-kou	[rising]-[rising]	‘feel’
zeo-zei	[falling]-[rising]	‘exist’
cia-ti	[rising]-[even]	‘know’
vei-nji	[dipping]-[even]	‘doubt’
cy-jeo	[rising]-[falling]	‘need’
cchye-wa	[rising]-[dipping]	‘lack’
i-kheo	[rising]-[falling]	‘rely on’