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A preliminary study of aspect markers in Meiba Bai: the case of perfective and resultative

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ABSTRACT: In the case of *xu55* and *tu44*, this paper conducts a preliminary investigation on the aspect markers of Meiba Bai. *xu55* is regarded as perfective, for it indicates that the situation is viewed as a whole; *tu44* is considered as resultative, since it emphasizes the occurrence of the result of action. The most significant distributional feature of *xu55* is to be used with bounded predicates. In Meiba Bai, a bounded event can be expressed in four ways: (i) by being a quantified event; (ii) by being inherently bounded because of the verb; (iii) by being the first event in a sequence; (iv) by being a definite or specific event that definite noun phrases or bare nouns precede the main verbs. *xu55* is frequently used with dynamic verbs to indicate the completion of action, and also used with stative verbs to denote present state. It is exclusively used with bounded predicates, but not all the bounded predicates can take *xu55* because some bounded predicates are uniquely used with *tu44*. *tu44* is regarded as resultative in this paper, which indicates the achievement of result of an action. Its distributional features are as follows: (i) being followed by an object; (ii) being exclusively used with verbs which lead to the results of ‘possession of something’. Similar to *xu55*, *tu44* is used with dynamic verbs to imply the completion of action, and used with stative verb to denote present state. *xu55* expresses present state because when the stative verbs take

perfective and adopt locations as objects, the interpretation of present state is more obvious than that of completion of action. *tu44* denotes present state because it superficially emphasizes the occurrence of the result, but essentially indicates some possessive relationship led by previous actions, and the concept of ‘existence’ indicated by stative verbs is also understood as possessive relationship in Meiba Bai.

KEY WORDS: Meiba Bai; perfective; *xu55*; resultative; *tu44*; completion of action; present state

1. Introduction

Bai‘白’ is the language spoken by the Bai people. Statistics from 2010 shows that the total population of the Bai people is 1,933,510,000, which is mainly distributed in provinces such as Yunnan, Guizhou, and Hunan of China. Among them, Yunnan Province has the largest Bai population, concentrating on the Dali Bai Autonomous Prefecture. It has been claimed that Bai has genetic relationship with Chinese (Starostin, 1994; Zhegnzhang, 1999), or with Tibeto-Burman (Zhao,1982; Matisoff,2001), but never demonstrated to general satisfaction, and controversy remains. Based on the data from nine dialects, Wang (2012, 2013) reconstructs a Proto-Bai system, and build the correspondences between Bai and other languages (i.e Old Chinese and Proto Yi); then he applies Inexplicability Principle to recognize the stratification of correspondence, i.e., to judge whether the correspondence is inherited from the same ancestor or borrowed from other Chinese or Yi; the Rank theory proposed by Chen (1996) is employed to identify the relation between Bai and other languages. Wang (2012, 2013) names the whole set of methods used in his study as the Distillation Method, and argues that Bai has genetic relationship with both Chinese and Yi, but it is genetically more closely related to Chinese than to Yi.

Bai is an analytic language without morphological paradigms. Hence, it marks aspectuality by adding preverbal or postverbal elements. In the early studies, the elements added to the main verbs are called auxiliaries, or simply preverbals and postverbals. According to Xu & Zhao (1984:32), various subcategories of aspectuality of Jinhua ‘金华’ Bai in Jianchuan‘剑川’ can be expressed by adding preverbals, postverbals (combined with reduplication form of verbs), and tense auxiliaries, or reduplicating roots. As the researches goes further, scholars adopt the ‘paradigm’ realized by adding preverbals, postverbals, and

auxiliaries into the investigation of aspectuality, and use the term ‘aspect markers’ to represent any grammatical morphemes that are added to verbs to express aspect meaning. Zhao (2009) and Zhao (2010) investigate the aspect systems of Zhaozhuang‘赵庄’ Bai and Jindun‘金墩’ Bai, in which verbs have nine types of aspect meaning illustrated by more than nine aspect markers.

Table 1.1: aspect systems of Zhaozhuang and Jindun Bai

aspect markers ¹	Zhaozhuang Bai (Zhao, 2009)	Jindun Bai (Zhao, 2010)
actualizative	V+xu55	V+xu55
resultative	V+tu44	V+tu <u>44</u> ²
progressive	V+teɛ33/nu55	(ts̃r42) kua55 +V
durative	V+teɔ33	V+k ^h u33
experiential	V+kuo44	V+k <u>u</u> 42
future	ŋo44+V	j <u>ā</u> u44+V
immediate future	V+ xo44	
inchoative	V+ k ^h u35(<k ^h u44yu35)	kæ35na33(nu33)
tentative	ka44+V	
interruptive		V +(nu33) ts _i 55 tɛ ^h _i 44 tɛ ^h _i 44 或 V +(nu33) ts _i 55 tɛ ^h _i 44 tɛ ^h _i 44 ts _i 55 +V
reduplicative		ku33/ka33 +V

From table 1.1, two aspect systems are highly parallel, and the resultative as well as actualizative are the same in two Bai dialects. In aspect system of Meiba‘美坝’ Bai discussed in this paper, there are also two markers, *tu44* and *xu55*, which are phonetically and functionally similar to resultative and actualizative in Zhaozhuang and Jindun Bai. Zhao (2009) and Zhao (2010) provide an introduction and some examples of aspect markers in Bai,

¹ The English names of aspect markers are translated by the author of this paper from their Chinese names in Zhao(2009) and Zhao (2010).

² The vowel with underline signals that it has a tense tone.

but fail to reveal their features of distribution and development of function. Therefore, the main goal of this paper is to give a comprehensive description of distributional characteristics of *tu44* and *xu55* in Meiba Bai, and preliminarily discuss the development of their functions.

2. Introduction of Meiba Bai

As shown in Figure 2.1, located in the west coast of Er'hai Lake ‘洱海’ in Dali city, Xizhou Town is about seventeen kilometers away from Dali Town ‘大理古城’, and about five kilometers away from Shangguan Town ‘上关镇’. On the west coast of Erhai Lake, people of Dali Town and Shangguan Town speak Southwestern Mandarin dialects, which are slightly different from each other. Located in between is Xizhou Town where all villagers (except for very few migrants) in Meiba speak Bai as their mother tongues. Meiba village belongs to Xizhou Town, and its villagers all speak Bai.



1:660000

Figure 2.1 Map of Dali Bai Autonomous Prefecture

Meiba Bai has twenty-three initials, twenty finals and eight tones. The most common syllable structure is ‘C+V’, i.e., made up by a simple consonant and a vowel without consonant final. Based on the ‘unique shared innovation’, Wang (2006; 2012) splits the Bai language into two branches: Western and Eastern Bai. Located near Zhoucheng Bai, Meiba Bai belongs to Eastern branch of Bai.

Meiba Bai has eight aspect markers, which are *tu44*, *xu55*, *tɕiɛ31*, *kuo42*, *kʰɔ42*, *ŋiou44*, *kʰu44* and *ka44*. Based on the distributional features of aspect markers, in this paper, we adopt the term ‘perfective’ rather than ‘actualizative’ used before to present *xu55* and still consider *tu44* as ‘resultative’ as Zhao (2009) and Zhao (2010) do. In the following section, we will further explain these two terms: perfective and resultative.

3. Definition of terms

The definition of perfective and distinguishing criteria of perfective from other similar aspects used in this paper are based on Bybee et al. (1994). Perfectives signal that the situation is viewed in its entirety or as a whole, and often used to refer to situations that occurred in the past. Conceptually, it is similar to perfect and past in that they all describe a situation that is completed prior to a temporal reference point. Their difference lies in the other implications they carry. Perfective differs from perfect in that it is used for narrating sequences of discrete events in which the situation is reported for its own sake while perfect is a past action with current relevance. The differences between perfective and simple past are as follows: (1) perfective contrasts with non-zero imperfective, while past either co-occurs with imperfective or is used alone to signal both perfective and imperfective past. (2) perfective is sometimes zero-marked, but past is not. (3) perfective is either not used with stative verbs or has the effect of signaling a present state with stative verbs. Past signals a past state. (4) perfective is sometimes used for future or with future, but past is not. In Meiba

Bai *xu55* contrasts with progressive *teiε31*, signaling a present state when used with stative verbs, but has no current relevance. *xu55* is more likely to be categorized as a perfective.³

Both Zhao (2009) and Zhao (2010) categorize *xu55* in their study as actualizative, which comes from the early study of Chinese aspectuality. Liu (1988) first mentions this term ‘actualizative’ (shixianti ‘实现体’ in Chinese), to explain the nature of verb final *-le* ‘了’ in Chinese.⁴ Before that, verb final *-le* of Mandarin Chinese was identified as a perfect marker. However, *-le* can be used without current relevance. Therefore, as soon as Liu (1988) proposes to use ‘actualizative’ instead of perfect to indicate the verb final *-le*, it is accepted by most scholars. In recent literature the verb final *-le* is considered as ‘actualizative’, or perfective from the perspective of typological study. *xu55* of Bai, in Zhaozhuang, Jindun, or Meiba, presents a past action without current relevance. It is an actualizative marker based on the the aspect study on Chinese and a perfective marker from the view of typological research. In order to do typological comparison, we use the term ‘perfective’ to indicate *xu55* in Meiba Bai.

The meaning of term ‘resultative’ is different between the Chinese study and cross-linguistic typology.

Gao (1948/1986) and Yahontov (1958) use the term ‘resultative’ in describing the aspect system of Mandarin Chinese. According to Gao (1986), resultative is used when the action or process has a result. That is, although neither already-finished action and process nor progressing ones necessarily imply a result, those used with resultative must signal a result. The resultatives in Mandarin Chinese are *zhe* 着 (or *zhao* 著), *zhu* 住, *de* 得, *dao* 到, *zhong* 中, etc., while in Old Chinese is *de* 得. Yahontov (1958) regards all resultative constructions consisting a verb plus another verb or an adjective to indicate the verb having a result as

³ The examples of distributional features of *xu55* are provided in §4.1.

⁴ The translation from ‘shixianti 实现体’ into actualizative is made in this paper.

resultatives. Resultatives express actions and their results, implying the completion of the action, while other simple or compound verbs only illustrate the actions.

Yahontov (1958) defines all the constructions indicating the result of verbs as resultatives, while in Gao (1948/1986)'s, only the grammaticalized complements after main verbs are resultatives. Although the scope of their definitions are different, they all agree that resultative notes an action with a result, implying the completion of the action.

In the typological study on aspect, the term resultative is applied to those verb forms that present a state implying a previous causal event (Nedjalkov and Jaxontov, 1988). For example, in English, the form of resultative is 'be + past participle form of verbs', such as 'the door is opened', which expresses a state and implies that there must be someone having opened the door. In the typological researches, such as Nedjalkov and Jaxontov (1988) and Bybee et al. (1994), the resultative is defined both narrowly and broadly. In the narrow sense, a resultative denotes a state that was brought by some action in the past; in the broad sense, a resultative expresses a state of a thing without any implication of its origin. Generally, resultative indicates a state in typological study. This is significantly different from the definition of resultative in Gao (1948/1986) and Yahontov (1958) which emphasizes the completion of the action and occurrence of a result.

When we use the term 'resultative' in the description of aspectuality in Bai, we need to specify which definition it meets. Both Zhao (2009) and Zhao (2010) use the definition of Gao (1948/1986), since they describe the resultative as indicating the occurrence or the duration of results of verbs. *tu44* in Meiba Bai also meets the definition of resultative in Gao (1948/1986), because *tu44* is frequently used with dynamic verbs to imply the completion of action rather than state. Thus, *tu44* does not fit the definition of resultative in Nedjalkov and

Jaxontov (1988) as well as other aspect categories mentioned in Bybee et al. (1994) neither.⁵ Therefore, in this paper we regard *tu44* as a resultative based on the definition given by Gao (1948/1986).

Though *xu55* and *tu44* in Meiba Bai belong to different aspect categories, they present similar grammatical meaning, and complementarily collocate with various predicates. Hence, they are discussed together in the remaining part of this paper. Section 4 provides a description of grammatical meaning and distribution features of *xu55* and *tu44*; section 5 discusses their distributional characteristics and development of function together; section 6 is a short conclusion.

4. The grammatical meaning and distribution of *xu55* and *tu44*

In this section, we will depict the grammatical meaning and distribution of *xu55* and *tu44*.

4.1 Perfective *xu55*

Perfective *xu55* combining with the main verb signals a past action without current relevance, and it can co-occur with temporal adverbs that indicate ‘present time’(e.g., (1) , (3)), ‘past time’(e.g., (2) , (5)), or ‘future time’(e.g., (4)). Perfective indicates that the event is viewed in its entirety or as a whole, and an event is viewed in its entirety only if it is bounded temporally, spatially, or conceptually. Li and Thompson (1989) mentioned four ways in which an event can be bounded in Mandarin Chinese: (i) by being a

⁵ *tu44* is not anterior (or “perfect”) neither, which indicates a past action with current relevance. Bybee et al. (1994) mentions that the anterior never occurs with temporal adverbs that indicate a specific time in the past. For example, the sentence “? I’ve gone to the bank at nine o’clock this morning” is ungrammatical. While in Meiba Bai, *tu44* can occur with temporal adverbs denoting a specific time in the past. For example:
ŋɔ55 kɛ55tsʰɛ33xu44 tɛiu31 tie31 tɛia44 tu44 ŋu55 mɔ33.
1sg this morning nine o’clock pick resultative 1sg:gen mother
I picked my mother at nine o’clock this morning.

quantified event; (ii) by being a definite or specific event; (iii) by being inherently bounded because of the meaning of the verb; (iv) by being the first event in a sequence. Similarly, in Meiba Bai, a bounded event can be: (i) a quantified event, usually a verb with an object indicating the quantity of time, objects, or the action, such as (1), (2), (3); (ii) an inherently bounded verb, such as (4), (5); (iii) the first event in a sequence, because an unbounded event. The occurrence of the second event means the termination of the first event, such as (6), (7).

(1) pɔ31 tsɿ55 xu55 a33ts^ha55iu44, lei55tsei44 tsɿ55 uo35 mou33⁶
 3sg do Perf a afternoon but do finish Neg
 He did it for an afternoon, but still didn't finish it.

(2) pa55 tsɿ21sɛ33ŋi44 ɕia44 xu55 tei53 kou33 tu21
 3pl yesterday kill Perf pig two CL
 Yesterday they killed two pigs.

(3) kɛ55ŋi44 tse21 xu31 ŋɔ31 pei44 xu55 kou33 xui35 lɔ42.
 today city LOC 1sg go Perf two CL particle
 Today I went to the city twice.

(4) o53la35 tu21 a33pu35tsɿ44 su44 ts^hɛ33-ŋi44 xu55 lɔ42
 baby CL a little while then fell asleep Perf particle
 After a little while, the baby fell asleep.

(5) tsɿ21sɛ33pei33kɛ42 tu35 tsa31 u44 xu55 lɔ42⁷
 last night light CL off Perf particle
 Last night, the light was off.

(6) k^hɛ44 xuo33 iu44 xu55 ŋia55 mu55 iu44.

⁶ The third person of Bai has no distinction of sex, thus, he or she is marked according to the context.

⁷ In the oral Bai, “xu55 lɔ42” is often merged into xɔ42.

guest PL eat Perf pl(in.) then eat
 We eat (meal) after the guests did it.

- (7) a33 xu55 nɔ31 mu55 sua44 ɛi31xua35 ŋi55 ɛi31xua35 mou33.
 see Perf 2sg then say like or like Neg
 After saw it, you express your like or dislike.

A definite or specific event in Meiba Bai is bounded and can be combined with *xu55* to express perfective meaning as well, but the construction of a definite or specific event is not a verb followed by a definite or specific noun phrase. In Meiba Bai, the elements preceding verb tends to be definite, while elements following the verb are more likely to be indefinite. As a result, the object position after the ‘V+ *xu55*’ can only be occupied by indefinite noun phrases, such as construction ‘(N)+Num+CL’, while the position preceding verb is available for both definite nouns and indefinite bare nouns in that this position can provide the nouns with the [+definite] feature. That is to say, the definite or specific noun phrases, such as proper name, genitive construction, demonstrative construction, and noun phrases with complex modifiers, can occur in the position before verbs to get a [+bounded] feature and then they are allowed to co-occur with perfective *xu55*, so it is with the bare nouns. Definite positions before verbs include subject position or topic position, such as (8), (11), and object position in a preverbal disposal construction, such as (9), (12).

- (8) na21tsɿ55sua44 nɔ44 la44kɛ21 pu33 tsie55 tsu33 iu44 xu55 lɔ42.
 Last year gen bacon dem CL early eat Perf particle
 The bacon made in last year was eaten in early time.

- (9) ŋa55 ka44 na21tsɿ55sua44 nɔ44 la44kɛ21 pu33 tsie55 tsu33 iu44
 1pl(ex.) disposal last year gen bacon dem CL early eat
 xu55 lɔ42.
 Perf particle
 We ate the bacon made in the last year in early time. (disposal meaning)

- (10) * ɲa55 tsu33 iu44 xu55 na21tsɿ55sua44 nɔ44 la44kɛ21 pu33 tsie55 lɔ42.
 1pl(ex.) early eat perf last year gen bacon dem CL particle
 * We ate the bacon made in the last year in early time.

- (11) i35pei42 sei33 xu55 lɔ42.
 cloth wash Perf particle
 The cloth was washed.

- (12) ɲɔ31 ka44 i35pei42 sei33 xu55 lɔ42.
 1sg disposal cloth wash Perf particle
 I washed the cloth. (disposal meaning)

- (13) *ɲɔ31 sei33 xu55 i35pei42 lɔ42.
 1sg wash Perf cloth particle
 *I washed cloth.

The above examples show that the sentences are grammatical only if the definite noun phrases or the bare nouns precede the main verb, otherwise, the sentences are ungrammatical.

xu55 is also used with stative verbs to express the perfective meaning, when verbs are temporally bounded by objects specifying the length of time this action occurs, such as,

(14) , (15) , (17) . Additionally, *xu55* appearing with stative verbs indicates present state. In this case, stative verbs denote the location of something and take place nouns as objects. The stative verbs denoting stance can be *kv42*'sit', *tsu42*'stand', *ts^hɛ33*'lie', etc., and the verbs denoting location can be *kua44*'hang', *ie42*'wear', *tɕia55*'put', etc. The examples are given in sentences (16) and (18) .

- (14) ɲɔ31 mi33 xu55 sa55 ɲi44 lei55 mi33 ɕi44 mou33.
 1sg think Perf three day still think out Neg

I thought it for three days, but still did not think out.

- (15) pɔ31 kv42 xu55 a33ts^ha55i^u44
3sg sit Perf an afternoon
She sat for an afternoon.

- (16) pɔ31 kw42 xu55 tsɔ42 fa35 xu31
3sg sit Perf kitchen Loc
She is sitting on the kitchen.

- (17) ie35 k^hou55 sou55 xu55 ua55 ŋi44 lɔ42.
cloth CL hung Perf several days particle
The cloth was hung for several days.

- (18) ie35 k^hou55 sou55 xu55 ɛie55 ŋi^u42 nɔ44
cloth CL hung Perf clothesline CL Loc
The cloth is hanging on the clothesline.

Perfective being used with stative verbs to express present state is mentioned in Bybee et al. (1994) since it exists in some other languages as well as in Meiba Bai (i.e. resultative *tu44*). We will discuss it in the next section after introducing *tu44*.

Moreover, similar to the adjective of Mandarin Chinese, the adjective of Meiba Bai alone is able to function as predicate of a sentence alone. Therefore, adjectives can take perfective marker *xu55*. When the adjective denotes a result of state change without object, *xu55* can be used to demonstrate the change of state, such as (19); when the adjective has an object indicating the number of time this state lasts, *xu55* is applied to illustrate the state which lasts for a certain time period, such as (20).

- (19) tsu31 tsu31 lv44 xu55 lɔ42.
tree CL gree Perf particle
The tree turns green.

- (20) tu33 ua33 xu31 o53 sui44, ku35 xu55 ua55 ŋi44 lɔ42.
 dem month loc fall snow cold Perf several days particle
 Since it snowed in this month, it has been cold for several days.

As a short conclusion, the core grammatical meaning of perfective *xu55* is to denote a past bounded event without current relevance, and the most significant distributional feature of *xu55* is used in with bounded event. In Meiba Bai, a bounded event can be expressed in four ways: (i) a quantified event; (ii) a inherently bounded verb; (iii) the first event in a sequence; (iv) a definite or specific event with definite noun phrases or bare nouns preceding the main verbs. *xu55* is frequently used with dynamic verbs to imply the completion of action, and sometimes with stative verbs. The construction ‘stative verb + *xu55* + time phase’ indicates the perfective meaning of stative verbs, while the construction ‘stative verb + *xu55* + location’ suggests present state.

Perfective *xu55* requires predicates to be bounded, but not all the bounded events can be used with it. Some bounded events, such as ‘buy a pig’, are exclusively expressed by resultative *tu44*. In §4.2, we will discuss the grammatical meaning and distributional features of *tu44*.

4.2 Resultative *tu44*

The resultative *tu44* is developed from the lexical verb *tu44*, which means ‘acquire’, functioning as a transitive verb. For example:

- (21) pɔ31 tu44 tu44 ti55ie35miu53 (the first *tu44* is a lexical verb,
 and the second one is an aspect marker.)
 3sg acquire resultative the first prize
 She was awarded the first prize.

The lexical meaning of *tu44* is also reflected on some lexicalized words, such as *tu44pɛ31* 'be ill', *tu44tɕia31* 'be awarded a prize'. In addition, the retention of lexical meaning of aspect marker *tu44* can be seen on the negation form of sentences with resultative. For example:

(22) pɔ31 tsv42 tu44 sua31, y55mɛ55 tsv42 tu44 mou33
 3sg plant resultative garlic corn plant resultative Neg

(23) pɔ31 tsv42 tu44 sua31, y55mɛ55 tsv42 pu33 tu44.
 3sg plant resultative garlic corn plant Neg resultative
 She planted garlic, but did not plant corn.

In most cases, the negation of construction 'V + *tu44* + O' is formed by adding a negator in the sentence final position of which the negation scope is the whole sentence, such as (22). However, adding a negator preceding *tu44* is also acceptable, which means that the aspect marker *tu44* still has the feature of predicate, so that it can be negated directly. For instance, the meaning of sentence (22) and (23) is almost the same.

Lexical meaning of verb *tu44* 'acquire' has influence on the subsequent grammatical meaning and the distribution of aspect marker *tu44*. To be specific, the resultative emphasizes the occurrence of a result following an action on grammatical meaning. In terms of grammatical distribution, resultative has two distinct features: (i) being followed by an object; (ii) being exclusively used with verbs which lead to the results of 'possession of something'. The first feature is due to the transitive nature of verb *tu44*, which signals a two-participant event and a object is obligatory. The second one is because the lexical meaning of *tu44* is 'acquire', which means something coming into one's possession. It is incompatible with the verbs denoting a contrary meaning to 'acquire', such as 'lose'.

(24) pɔ31 mɛ42 tu44 (*xu55) tei53 kou33 tu21.
 3sg buy resultative pig two CL

He bought two pigs.

(25) kɛ55ŋi44 suu35 tu44 (*xu55) sɛ31 ŋi55 mou44 ?
today collect resultative mushroom or Neg
Did you collect(get) mushroom today?

(26) *pɔ31 pei44 tu44 lɔ42.
3sg go resultative particle
*He went.

(27) *ŋɔ31 tsʰŋ55 tu44 tsʰei55 pɛ44.
1sg lost resultative money hundred
*I lost a hundred of RMB.

Resultative does not require the predicates to be bounded, thus it can be used in unbounded constructions, such as (25) . Nonetheless, as shown in sentences (26) and (27) , resultative is not used with intransitive verbs and transitive verbs denoting a contrary meaning to ‘acquire’.

It is worth noting that if the lexical meaning of a verb is compatible with the meaning of *tu44* ‘acquire’, the bounded constructions consisting this verb is uniquely used with resultative instead of perfective, such as (24) .

Resultative occurs with stative verbs to express present state as well. *tu44* is similar to the *xu55* in that both of them are only used with stative verbs which denote stance or location. However, what is different is that *tu44* is exclusively used with the stative verbs which take objects denoting people or things, while *xu55* occurs with the stative predicates which takes locations as objects. For example:

(28) mei21mu35 tsu31 tu44 ŋi21ke35 ŋi21.
Entrance of the gate stands resultative person CL
A man is standing on the entrance of the gate.

- (29) o33 p^hiε55 nɔ44 kua44 tu44 tsou42kui35 t^ha31.
 wall CL LOC hangs resultative key CL
 A key is hanging on the wall.
- (30) pɔ31 ie42 tu44 ts^hε44ie35 k^hou55.
 3sg wear resultative red cloth CL
 She is wearing a red cloth.
- (31) *pɔ31 ie42 tu44 ts^hε44ie35 k^hou55, tæi44 ie42 tu44
 3sg wear resultative red cloth CL again wear resultative
 pε42ie35 k^hou55
 white cloth CL
 *He is wearing a red cloth, and is wearing a white cloth.
- (32) pɔ31 mε42 tu44 tei42 kou33 tu21, tsei44 mε42 tu44
 3sg buy resultative pig two CL again buy resultative
 kei35 sa55 tu21.
 chicken three CL
 He bought two pigs, and bought three chickens.

Sentences (28) , (29) , and (30) all demonstrate present state. Through comparing sentence (31) with (32) , it is obvious that sentence (30) indicates present state rather than the occurrence of results. *tu44* is used with dynamic verbs to emphasize the occurrence of result, and more than one “V+ *tu44*+O” constructions can be used to denote several events of action having result, such as (32) . However, when *tu44* is used with stative verbs, for it denotes a present state and there is always only one present state at reference time, more than one “V+ *tu44*+O” denoting state in a sentence is ungrammatical, such as (31) .

As a short conclusion, resultative is developed from the verb *tu44* 'acquire', and its grammatical meaning and distribution are restricted by its the lexical meaning. The grammatical meaning of resultative is indicating the achievement of result of an action. Its distributional features are illustrated as follows: (i) being followed by an object; (ii) being exclusively used with verbs which lead to the results of 'possession of something'. *tu44* is often used with dynamic verbs to emphasize the occurrence of results and to imply the completion of action. It is also used with stative verbs to denote present state.

5. The similarities and differences between resultative and perfective

Based on above synchronic description above, this section, we will summarize the distributional features of resultative and perfective, and turn to a discussion of their interaction with stative predicates.

5.1 Grammatical meaning and distribution

To illustrate the similarities and differences clearly, here we simply repeat the grammatical meaning and distributional features of *xu55* and *tu44*. *xu55* signals that the situation is viewed as a whole, thus, the most salient distributional feature of it is to be used with bounded predicates. *xu55* is frequently used with dynamic verbs implying the completion of action, and also used with stative verbs to express present state. Resultative indicates the achievement of result of an action, and its distributional features are described as follows: (i) being followed by an object; (ii) being exclusively used with verbs lead to the results of 'possession of something'. *tu44* is often used with dynamic verbs to imply the completion of action, and used with stative verbs to denote present state.

When perfective and resultative are used with dynamic verbs, both of them describe a situation which terminates prior to a certain temporal reference point. However, the predicates which are used with perfective cannot co-occur with resultative, and vice versa. When applied to stative verbs denoting stance or location, both of them give a sense of present state. However, when the objects of stative verbs denote locations, perfective is chosen; when the objects denote people or things, resultative is employed. In a word, the perfective and resultative in Meiba Bai have similar grammatical meaning, which is appearing with dynamic verbs to imply completion of action and with stative verbs to express present state. However, they tend to be in complementary distribution when collocating with verbs or verb phrases. Some predicates can only express completion or state meaning by adding perfective, and the others by adding resultative.

5.2 The development from completion of action to present state

Several aspects, including completive, perfect, perfective, etc., can develop a usage for present state, of which Bybee et al. (1994) has summarized four related routes. The first three are possible developments routes for completive, perfect, and resultative (indicating a state) respectively, which are normal routes for some languages. The last one is more suitable in explaining the development route for present state in Meiba Bai.

d. a zero form, in languages in which the imperfective is overtly marked but does not occur on stative predicates, will indicate perfective for dynamic verbs, but present (state) for stative ones (e.g. Ngambai and Nakanai zeros).⁸ Bybee et al. (1994:77)

Specifically, the imperfective in Meiba Bai is an overtly marked form *tɕiɛ31*, and it only occurs with dynamic verbs rather than stative verbs. As described in the fourth path, in the

⁸ The word 'state' in brackets is added by the author.

case of Meiba Bai, the perfective and resultative indicate perfective meaning, (i.e. completion of action) for dynamic verbs, whereas present state for stative ones.

Although *xu55* and *tu44* have the same way to interact with stative verbs, their motivations for developing into state markers are different. That perfective can indicate present state is attributed to the nature of stative verbs, while the reason for resultative combining with stative verbs to produce a sense of present state is that the concepts of existence and possession can be encoded in the same form in Meiba Bai.

xu55 is exclusively used with bounded predicates for it views an event as a whole. It co-occurs with dynamic verbs more frequently since the dynamic verbs tend to have an end point. Sometimes it occurs with bounded stative verbs to indicate the completion of a state. However, as shown in sentences (16) and (18), perfective is also used with unbounded stative predicates to indicate present state. The reason is that the stative verbs that denoting stance or location, although are inclined to be interpreted as states, actually is able to demonstrate the dynamic process of situating people or things as well. When perfective is used with stative verbs, the interpretation of state is more evident than that of completion of action, for the latter is only prominent in certain contexts. For example, in sentence (33), the state meaning of state in the first clause is clarified by the second clause which obviously indicates the state by using an existence verb *tsu35*; in sentence (34), the answer sentence can be interpreted as a state, i.e., (She) is already sitting in the living room, or as the completion of action, i.e., (She) already sat down in the living room. Both of them are acceptable. It is assumed that stative verbs with *xu55* is to indicate the perfective meaning of stance or location verbs at first. However, since the dynamic processes of these verbs are extremely short, once the actions denoted by these verbs are done, the stances or positions they denoted occur and remain for some time. Therefore, when the stative verbs denoting

stance or location take perfective and have locations as objects, the interpretation of present state is more obvious than that of completion of action. In short, the construction ‘stative verbs of stance or location + *xu55* + place’ is easier to be interpreted as present state than completion of action.

(33) pə31 kv42 xu55 tsə42fa35 xu31, piɛ35tei44xuo33 i35sou31 tsu35 a55ta44.
 3sg sit Perf kitchen Loc others all be here
 He is sitting in the kitchen, and all others are here.

(34) a: pu55 tɔ31su33pu33 pei44 iu35 lə42 mou44?
 3sg-gen mother-in-law go come particle interrogative
 Did her mother-in-law come?
 b: i31tɛiu44 kv42 xu55 tʰa55u42 xu31 lə42.
 already sit Perf living room Loc particle
 (She) is already sitting in the living room.
 (She) already sat down in the living room.

The lexical meaning of resultative *tu44* is ‘acquire’, which is non-agentive. For example, *tu44* is used in the lexicalized compound verb *tu44 pɛ31* ‘be ill’. The literal meaning of *tu44 pɛ31* is ‘acquire illness’. Since, people basically can’t control the happening of ‘getting ill’, *tu44* here used indicates ‘come to have’ without agentive or controlled meaning. As an aspect marker, *tu44* is restricted to collocate with verbs leading to possession of something and followed by an object. It appears that the core meaning of *tu44* in Meiba Bai is the same as that of verb ‘acquire’ depicted in Enfield (2003). In East and mainland Southeast Asian languages, the verb ‘acquire’ denote ‘come to have’, which involves two important components, namely an *event* of something coming into one’s sphere of possession, and a subsequent and consequent *state* of possessing that thing (Enfield,

2003:38-39). Taken together, in Meiba Bai, resultative indicates something coming into one's sphere of possession, which may appear as an event or a state.

Resultative in Meiba Bai emphasizes the result of the action, which is possession of something. It is natural that people possess something by some dynamic action, for example, *John possesses a computer after he bought it*, while it is controversial whether happening of stative verbs will indicate a possessive relationship, for example, *? classroom possesses a man after the man sits or stands in it*. In fact, 'something or somebody is in somewhere' conveyed by stative verbs indicates existence, and whether the concept of 'existence' is understood as a kind of possessive relationship is inconsistent over different languages. There is cross linguistic variation concerning what kind of relationship can be expressed by possessive construction. In English, 'a man is in the classroom' is not equal to the '*the classroom has a man', of which the latter is ungrammatical. However, in Meiba Bai, 'a man is in the classroom' is expressed by possessive construction, see the sentence (35), which uses the same verb *tsu33* 'have' as that used to denote ownership in sentence (36).

(35) tɕiɔ55sɪ35 xu31 tsu33 ŋi21kɛ35 ŋi21
Classroom loc have person CL

A person is in the classroom. (literal meaning: the classroom has a person)

(36) ŋu55 nɔ44 tsu33 ɕi35 ta44ts^hɛ44 tɕia44.
1sg-gen gen have new bicycle CL

I have a new bicycle.

Sentences (35) and (36) show that in Meiba Bai, the concept of 'existence' is interpreted as one type of possessive relationship. Resultative superficially emphasizes the occurrence of the result of the action, but essentially indicates the possession of something led by previous actions. When used with dynamic verbs, resultative indicates the occurrence

of ownership, a typical possessive relationship; when applied with stative verbs, resultative indicates the occurrence of existence, a possessive relationship in a broad sense. As mentioned above, ‘possession of something’ can appear as an event or a state. When applied to dynamic verbs, resultative implies the completion of the previous action, while used with stative verbs, it indicates the present state.

Many languages employ the same form to express the concept of existence and possession, such as *you* ‘有’ in Mandarin Chinese, and *aru* in Japanese, *ay* in Jacaltec, and *wata-* in Jarawara mentioned by (Dixon, 2009:34), and *avoir* in French, *haber* in Spanish discussed in Heine (1997:94-96), so it is with Bai. Furthermore, in Meiba Bai, the same encoding of the notions of ‘existence’ and ‘possession’ is also reflected on the resultative *tu44*, which indicates possession when used with dynamic verbs and indicates existence when used with stative verbs.

6. Conclusion

The aspect systems of different languages vary significantly, and the aspect categories of analytic languages, such as Bai, are largely different from that of inflectional languages. In the case of *xu55* and *tu44*, this paper conducts a preliminary study on the aspect markers of Meiba Bai. On the one hand, aspect category of Meiba Bai can be discussed under the framework of typological research. *xu55* meets the definition of perfective in Bybee et al. (1994), and shows distributional features of a typical perfective. On the other hand, although *tu44* is regarded as a resultative in this paper, it is not the resultative defined by Nedjalkov and Jaxontov (1988) or Bybee et al. (1994). It indicates possessive relationship led by previous action, rather than purely a state referring to the resultative defined by Nedjalkov and Jaxontov (1988). Moreover, *tu44* does not meet the definitions of other aspect markers

mentioned by Bybee et al. (1994), so it is not incorporated into existing typological framework of aspect. Both *xu55* and *tu44* imply completion of action, and express present state as well, but their development route from completion of action to present state is different. It indicates that aspect markers of Meiba Bai show both language universality and specific features, which needs further exploration.

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