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Adjectival Reduplication in Southern Min

A Study of Morpholexical Rules with Syntactic Effects

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ABSTRACT

This paper studies the reduplication of monosyllabic adjectives in Southern Min as morphological rules with syntactic consequences. Monosyllabic Southern-Min adjectives are reduplicated to form di-or tri-syllabic words. The traditional term of vivification suggests that these reduplicated forms offer a more vivid semantic description with no categorial change.

It is shown, however, that distribution and grammatical functions of the reduplicated forms are different from the monosyllabic forms. First, neither kind of reduplicated form can occur in attributive positions. Second, when occurring in predicative positions, the reduplicated forms do not allow the co-occurrence of degree adverbs.

Even more surprising is the fact that di-syllabic and tri-syllabic reduplicated forms have different syntactic distributions. First, di-syllabic reduplicated forms occur as preverbal adverbials while tri-syllabic reduplicated forms do not. Second, disyllabic reduplicated forms are more restricted in their occurrences as predicates.

Based on the above observations, this paper will first show that vivid reduplication is a lexical property. Secondly, it will be argued that double and triple reduplications involve two separate morpholexical rules. The distributional facts and co-occurrence restrictions will be accounted for in terms of the changes in syntax which are marked by these two forms of reduplication. The account supports the position that argument and categorial changes are often lexically encoded and morphologically marked.

I . INTRODUCTION

Vivid and reduplication (Chao 1986) occurs in many Chinese dialects.¹ Chao (1968) regards vivid reduplication as a morphological process in Mandarin Chinese and describes its syntax and semantics. Vivid reduplication in Southern Min is discussed in S. Cheng (1981), R.Cheng (1987 & 1988), and Yang (1991).

S. Cheng (1981:86) classifies three types of vivid reduplication for a monosyllabic Taiwanese adjective: 1) Moderate vivification: XX, 2) Intensified vivification: XXX, and 3) Particularized vivification: XSS. The following examples of the three types are taken from S. Cheng (1981):

- | | | | |
|--------|----------------------|-------------|-------------------|
| (1) a. | Moderate | | |
| | <i>âng- âng</i> | red-red | ‘rather red’ |
| b. | Intensified | | |
| | <i>âng-âng- âng</i> | red-red-red | ‘very very red’ |
| c. | Particularized | | |
| | <i>âng-kòng-kòng</i> | red-?-? | ‘red, deeper red’ |
- S. Chang observes that the XSS type is not productive. AS a matter of fact, it could be shown that the meaning of each three-syllable adjective of this type is different and that none of the ‘reduplicated’ disyllabic endings can ever be affixed to another stem. Hence they constitute a set of ‘cranberry morphemes’.
- | | | | |
|--------|-----------------------|------------|---------------------|
| (2) a. | <i>âng-kòng-kòng</i> | red-?-? | ‘red, deeper red’ |
| b. | <i>âng-kì-kì</i> | red-?-? | ‘red (face, cloth)’ |
| c. | <i>âng-phâ- phâ</i> | red-?-? | ‘cardinal red’ |
| (3) a. | <i>*cê-kòng-kòng</i> | green-?-? | |
| b. | <i>*ñg- kòng-kòng</i> | yellow-?-? | |
| c. | <i>*ô-kòng-kòng</i> | black-?-? | |

1 S. Cheng (1981) refers to the phenomenon in Taiwanese as ‘vivification’.

From (2), we see that each tri-syllabic XSS adjective differs from one another in its meaning. From (3), we see that the ‘reduplicated’ two-syllable endings of the XSS adjectives can only co-occur with one specific adjectival stem, in this case the color red. In other words, these ‘reduplicated’ syllables are totally unproductive. Following the line of S.Cheng’s (1981) claim that they have to be learned individually, I will simply treat all XSS type adjectives as lexical entries involving no morphological processes. In addition, since I follow Chao (1986) in treating vivid reduplication as a morphological rule, and since the XSS type adjectives involve no morphological rules, they will not be included in this study of reduplication as a morphological process.

This article will argue that the two types of Southern Min reduplications XX and XXX both involve morpholexical rules (Bresnan and Kanerva 1989, Bresnan 1989, and Huang 1991). It will be shown that the XX and XXX reduplication rules not only differ from each other in meaning, but also entail very different syntactic and semantic effects. As I am mainly concerned with the contrasts between XX and XXX reduplication, the scope of this study will be limited to monosyllabic adjectives.²

II. REDUPLICATION AS LEXICAL RULES

In this section, I will first show that reduplication is a lexical rule in the grammar of Southern Min and second, that there are indeed two distinct reduplication rules responsible for the XX and XXX reduplicated forms respectively.

First, as observed in R. Cheng (1987 and 1988), reduplication can occur either in syntax or in morphology with different effects. Since the reduplication in Southern Min that we are discussing here all involve monosyllabic Southern Min adjectives, it is important to demonstrate that the process does occur in morphology instead of syntax. We can prove that reduplication of monosyllabic adjectives in Southern Min is really governed by a lexical rule based on the fact that there are random gaps in the reduplicated forms and

² An interesting question which does not concern monosyllabic reduplication involves how the phonological rules realize the reduplicated forms of multi-syllabic adjectives.

that the XXX reduplicates require a separate tone sandhi rule (Yang 1991)

Former studies of reduplicated forms of adjectives in Southern Min and other Chinese dialects have observed that these forms are productive, without mentioning whether or not there are any random gaps of vivid reduplicates. However, morphological (or lexical) rules are expected to show random gaps, will syntactic rules, whose applicability is usually complete, should not. Thus the fact that there are random gaps needs to be established to prove that vivid reduplication involves lexical rules. Among S. Cheng's (1981) comprehensive list of 254 monosyllabic Southern Min adjectives, I observe that the following ones, listed in (4), can have neither types of reduplicated form.³

(4) Non-reduplicatable Southern Min Monosyllabic Adjectives

a.	<i>gâu</i>	'able'	* <i>gâu-gâu</i> ,	* <i>gâu-gâu-gâu</i>
b.	<i>tiôh</i>	'right, correct'	* <i>tiôh-tiôh</i> ,	* <i>tiôh-tiôh-tiôh</i>
c.	<i>tò</i>	'upside-down'	* <i>tò-tò</i>	* <i>tò-tò-tò</i>
d.	<i>thong</i>	'o.k.'	* <i>thong-thong</i>	* <i>thong-thong-thong</i>
(5) a.	<i>gâu</i>	'able'	* <i>gâu-gâu</i> ,	* <i>gâu-gâu-gâu</i>
b.	<i>khiau</i>	'able, smart'	<i>khiau-khiau</i> ,	<i>khiau-khiau-khiau</i>

The gaps of vivid reduplicates in (4) suggest that reduplication is a lexical process. Furthermore, with the pair of near synonyms in (5), it is shown that the gaps are random and can only be lexically encoded. The minimal pair of *gâu* 'able' and *khiau* 'able, smart' are given identical values on all four classifying features based on co-occurrence restrictions in S. Cheng (1981:148-159).⁴ In other words, they are not expected to have different grammatical behaviors since they are shown to belong to the same syntactic class and to have similar meanings. The contrast between (5a) and (5b) can only be attributed to lexical properties, not to either syntax or semantics. The above idiosyncracies can only be

³ This list contains only the most uncontroversial examples.

⁴ The four classifying features S. Cheng (1981) uses involve the acceptability of a Southern Min adjective when co-occurring with two negative adverbials and their intensified forms *bô*, *bê*, *chin hô*, and *chin bê* respectively.

individually encoded on lexical items.

A second argument for vivid reduplication's being governed by a morpholexical rule can be constructed based on tone sandhi phenomena. Yang (1991) describes the general rules for di-syllabic and tri-syllabic Southern Min phrases.⁵ She observes that XXX reduplicates, as a group, are exceptional to the proposed general sandhi rules. Take two phrases with identical three high-level tones for example;

- (6) a *tí* *gong sī* ㄊㄧˊ ㄍㄨㄥ ㄙㄧˊ ==> ㄍㄨㄥ ㄙㄧˊ ㄊㄧˊ
 heaven elder birth 'the birthday of God of Heaven'
- b. *kui kui kui* ㄎㄨㄟ ㄎㄨㄟ ㄎㄨㄟ ==> 1 ㄎㄨㄟ ㄎㄨㄟ
 open-open-open 'wide open'

(6a) represents the result of Southern Min tone sandhi rule applied to tri-syllabic phrase with three high-level tones. (6b), however, shows the idiosyncratic sandhi results involving XXX reduplicates. The above fact is captured by Yang (1991), in terms of the following descriptive sandhi rule for XXX reduplicates.⁶

(7) Tone sandhi rule for XXX reduplicates

- a. If the sandhi tone of the first syllable is predicted to be low-level by the general sandhi rule, then its real sandhi tone is high-rise.
- b. Otherwise, the sandhi tones follow from the general sandhi rule.

Recall that tone sandhi concerns only supra-segmental features. That is, a sandhi should not be sensitive to the internal syllabic structures of the segments involved. The fact that the XXX reduplicates have three phonemically identical syllables should not af-

5 By 'phrases', I am referring to the phonological domain of a tone sandhi rule, and not to syntactic phrases such as NP or VP.

6 The translation from the Chinese original is mine. Another sandhi variation reduces the first two syllables to one and assigns a rise-fall contour tone to that syllable. Since there is neither rise-fall lexical tones, nor any other rise-fall sandhi tones, one could reasonably assume that the resultant rise-fall tone represents two supra-segments. In other words, the tri-part supra-segmental structure is preserved to record the morpholexical rule of XXX reduplication (compare Yang's functional description of this fact). The fact that this 'contour' sandhi tone is restricted to the class of XXX reduplicates supports our claim that XXX reduplication involves an independent morpholexical rule. The phonological rule accounting for the sandhi facts, however, is beyond the scope of this article.

fect its sandhi behaviors. As far as sandhi rules are concerned, phrases in (6a) and (6b) should be the same. To account for the contrast, we must have either (1) two sets of sandhi rules, with one of them marked to apply to the XXX reduplicates only, or (2) one general sandhi rule, but with the sandhi tones of the XXX reduplicates exceptionally marked in the lexicon. In either case, a lexical operation on XXX reduplicates is required. Thus the sandhi facts involving XXX reduplicates suggest that they involve a lexical rule. This further supports our position that vivid reduplication should be accounted for in terms of morpholexical rules.

The natural issue that follows is whether there are one or two reduplication rules. In addition to the neutral representation of XX and XXX, S. Cheng (1981:28) also describes the formation of the tri-tri-syllabic reduplicates as syntactically and semantically composed of two elements: an adjectival head and a degree expression:

(8) Reduplication +A

example : *súi-súi-súi* 'very beautiful'

Even though S. Cheng (1981:27) regards a reduplicate as 'an adjectival phrase undividable by a potential phrase', the above formalization also allows two-step lexical rule interpretation. In other words, the intensified adjective of tri-syllabic reduplicates could be treated as a di-syllabic reduplicated to an identical adjective head.⁷ With this approach, there will be only one reduplication rule, that is, the tri-syllabic XXX will be derived from the disyllabic XX⁸ This will also predict that the meaning and syntactic functions of XXX reduplicates are derived from XX reduplicates. Such a derivational ap-

7 Since all three syllables are identical, the other two possible derivations are that a reduplicate is suffixed to a head or that the reduplicate wraps around a head. Since the tri-syllabic reduplicates are derived from the disyllabic reduplicates, they all have the same theoretical implications and will not be discussed separately. It is also interesting to observe that there are facts in Southern Min which seem to favor a suffixation account among the affixation accounts. A disyllabic vivid reduplicate is always suffixed to a non-identical head, as in *âng-kòng- kòng* red-?-? 'red, deeper red'. This is contrary to the generalization, pointed out to me by a BIHP reviewer, that reduplicates are observed to be prefixed rather than being suffixed to the stem in other languages, such as some Austronesian languages

8 A compatible approach is to treat XX reduplication as an identical X affixed to an adjectival head, based on S. Cheng's claim that reduplicates syntactically consist of both a degree expression and an adjective, and that the di-syllabic XX 'rather X' also forms a type of degree expression.

proach, despite its elegance, is counterexemplified by the following gap in Southern Min vivid reduplication.

- (9) a. *lêng* ‘spiritually powerful’
 b. **lêng-lêng*
 c. **lêng-lêng-lêng* ‘spiritually very powerful’

The intensified form of the adjective *lêng* does occur and its meaning is as predicted. But the XX reduplicated form shows an unexpected gap. We would wrongly predict that the XXX reduplicate does not exist if we consider it as derived from the XX reduplicate. Thus, the idiosyncratic gap of (7b) not only supports the position that reduplication involves lexical rules in Southern Min, but also suggests that XX and XXX reduplicates are derived through two separate morphological rules.⁹

This position is also supported by the tone sandhi facts discussed above. The XXX reduplicates are exceptional to the general sandhi rules while the XX reduplicates are not. The contrast suggests that they belong to two different lexical classes. The following discussion on the two morpho-lexical rules for XX and XXX reduplications respectively will also substantiate the above claim.¹⁰

9 Evidence from Fuzhou, a Northern Min dialect, offers an interesting comparison. Zheng (1988) observed that the XX reduplication forms dominate in the dialect. Ahrens (p.c.) pointed out to me that the XXX and XX reduplicates Zheng (1988) listed are in complementary distribution, with only one exception. A plausible explanation of this fact, parallel to my analysis of Southern Min, is that XXX and XX reduplications involve two distinct lexical rules with different application domains.

10 An IsCLL participant observed that one could also derive XXX reduplicates from the X- α -XX form, which consists of a monosyllabic adjective and its XX reduplicates connected by a filler - α -. The filler syllable would be dropped to derive the XXX form. This hypothesis could be supported by the observation that the X- α -XX form does occur in dialects of Southern Min and has similar intensified meaning of the XXX reduplicates. While this is a plausible diachronical account, it fails to explain several important facts as a synchronical account. First, as observed in this article, any account deriving XXX reduplicates from XX reduplicates cannot account for the fact that there is at least one XXX reduplicate without a corresponding XX reduplicate. Second, the most likely motivation for the insertion of a filler syllable is to maintain a favored syllabic structure. We can observe the tendency towards di-syllabic structures in modern Chinese. This can be partially supported by Yang’s (1991) observation that XXX reduplicates can be realized as di-syllabic words with two supra-segments (tones) carried by the first syllable.

Reduction from X- α -XX to XXX not only runs against the observed tendency but also excludes a possible explanation for the introduction of $-\alpha-$. Finally, such a hypothesis will force an abstract underlying form for dialects where the X- α -XX form never occurs. It seems to me that it is more likely that the X- α -XX form is derived from XXX reduplicates.

III. THE MORPHOSYNTAX OF XX REDUPLICATION

To account for the morpholexical rule of XX reduplication, it is crucial to identify its grammatical function. It is generally observed that XX reduplicates express the moderate degree meaning and XXX reduplicates express intensified meaning. The above description together with the X-XX-XXX paradigm as three possible forms of an adjective suggests a possible iconic system. In other word, a possible *a priori* assumption is that they correspond to the absolute-comparative-superlative paradigm of comparison. The adoption of the translations of ‘rather X’, and ‘very, very X’ for XX and XXX reduplicates respectively in both S. Cheng (1981) and R. Cheng (1987) is not incompatible with such an assumption. However, it can be shown that XX is not a comparative adjective and that the grammatical functions of XX and XXX reduplication are so different that they should not be considered part of the same inflectional paradigm.

Let first consider the contrast between a bare monosyllabic adjective and its corresponding XX reduplicate. Chao’s study (1968), as well as many subsequent studies on Chinese grammar have observed that adjectives can function as predicates in Chinese. Moreover, when occurring alone without modification, a predicative adjective in Chinese has the comparative rather than the absolute interpretation, as demonstrated by the following Mandarin Chinese example.

- (10) a. Q: *nayiben shu nan?*
 which-one-CLASS book difficult
 ‘(Of these books,) which one is (the most/more) difficult?’
 b. A: *zheyiben shu nan*
 this-one-CLASS book difficult
 ‘This book is the (most/more) difficult one.’

The pair of sentences in (10) show that a bare adjective predicate has the comparative reading. This also seems to hold for Southern Min, as in (11)

- (11) a. Q: (*zit-niá sã ga hit-niá sã*) *tó* *zit-niá khah sũĩ*?
 this-CLASS dress and that-CLASS dress which one-CLASS more beautiful
 ‘Which of the two dresses is more beautiful?’
 b. A: *zit-niá sã (khah) sũĩ*
 this-CLASS dress more beautiful
 ‘This dress is more beautiful.’
 c. *A: *zit-niá sã (khah) sũĩ-sũĩ*
 this-CLASS dress more beautiful

The fact that the non-reduplicated adjectives in Southern Min have the comparative meaning suggests that XX reduplicates do not necessarily mark comparison. That (9c) cannot be an acceptable answer to the comparison question of (9a) shows that a XX reduplicate does not have a comparative meaning. This can be further supported with another comparison construction involving *pi*.

- (12) a. *zit-niá sã pí hit-niá sã sũĩ*
 this-CLASS dress compare that-CLASS dress beautiful
 ‘This dress is more beautiful than that dress.’
 b. **zit-niá sã pí hit-niá sã sũĩ-sũĩ*
 this-CLASS dress compare that-CLASS dress beautiful

Another contrast between non-reduplicated adjectives and XX reduplicates is that non-reduplicated adjectives do not occur as predicates without predicative adverbs such as the degree adverbs *sũĩ* ‘excessively’, and *chin* ‘really, very’ etc., while XX reduplicates do occur alone as predicates (yang 1991).¹¹ This is another fact which cannot be explained if XX reduplication only marks comparison. Thus, based on its distribution, I conclude that XX reduplication does not represent a comparative comparison construction.¹²

11 S. Cheng (1981:54) observes that XX reduplicates cannot occur alone as a direct answer to a ‘how’ question. However, it is also observed that this co-occurrence restriction does not seem to affect the predicative function of the XX reduplicates.

12 S. Cheng (1981) regards Southern Min reduplicates as containing degree expressions and therefore cannot co-occur with other degree expressions. Similarly, Y. Sheu (p.c) suggests that reduplication and degree adverbs share the same semantic function of intensification.

An alternative account shows that XX reduplication is only the morphological mark of a morpholexical process which changes grammatical behaviors. As a matter of fact, there is a grammatical contrast between non-reduplicated adjectives and XX reduplicates in addition to the latter's predicative uses. There is a derivational suffix *-á* in Southern Min which marks the categorical change from an adjective to an adverb. It is observed that *-á* can only be affixed to a XX reduplicate but not to a non-reduplicated adjective.¹³

- (13) a. *koai-koai-á* 'obediently'
 b. **koai-á*
(14) a. *gòng-gòng-á* 'stupidly, unknowingly'
 b. **gòng-á*

Thus, it has been shown that XX reduplicates do not have the comparative comparison interpretation, and that they differ from non-reduplicated adjectives in being predicative and feeding the morphological adverb-formation rule of *-á* suffixation. Since there is no reason to doubt that the corresponding non-reduplicated adjectives and XX reduplicates differ in their semantic meanings, I assume that the two sets of adjectives are derivationally related. Since XX reduplication feeds an attested morpholexical rule, it has to be another morpholexical rule.¹⁴

The following morpholexical rule is based on the account that XX reduplicates form a subclass of adjectives derived from the non-reduplicated adjectives. The rule is posited in the spirit of the Lexical Mapping Theory of Lexical-Functional Grammar (LFG). It specifies both that the derived subclass is predicative and that its form is XX.

13 As expected, this derivational rule applies only to a subclass of reduplicated adjectives and exhibits random gaps such as **tàng- tàng-a* 'heavy-heavy-A', as opposed to *khin-khin-á* 'light-light-A' 'lightly'.

14 Another possibility, as observed by Sheu (p.c), is that both XX reduplication and *-á* affixation are morphological marks of an adverbialization rule from mono-syllabic adjectives, as in Mandarin. However, a one-step account is supported by the following two facts in Mandarin: first, both reduplicated adjectives with or without *-de* suffix can be used as adverbs; second, multi-syllabic adjectives can be turned into an adverb directly with *-de* suffixation without reduplication. Neither supporting evidence is available in Southern Min.

(15) XX reduplication morpholexical rule

condition	phonology	semantics
X [V +, N +,	/X-X/	moderately ‘X’
redupli 1,		[predicative +,
sy1 1]		redupli 2]

Rule (15) applies to non-reduplicated mono-syllabic adjectives, as stipulated by both the major features V and N, the feature ‘redupli’, and the feature ‘sy1’ I am leaving unspecified the syntactic and semantic features which define this subclass of adjectives. Instead, the mnemonic feature ‘redupli’, assigned the value 2 to describe the reduplication morphology of two concatenated identical syllables, is used to define the subclass. This feature-value pair will be used to ensure that only XX reduplicates will undergo the- *ǎ* attachment rule to form adverbs.

(16) –*ǎ* Adverbialization Rule

condition	phonology	semantics
X [V +, N +, redupli 2]	/X- <i>ǎ</i> /	in a ‘X’ manner

Rule (16) forms adverbs from adjectives. The domain of its application, however, is limited to XX reduplicates.

IV. XXX REDUPLICATION

The idiosyncratic gaps given in (5) show that the XXX reduplication belongs to the lexical domain. The fact that there are mono-syllabic adjectives with corresponding XXX reduplicates but no corresponding XX reduplicates, as in (9), suggests that XX and XXX reduplications should involve two independent rules.

To account for the morpholexical rule deriving XXX reduplicates, I first will clarify the semantic meaning of XXX reduplicates. Parallel to the above discussion on XX reduplicates, XXX reduplicates entail vivid description instead of superlative comparison, which is marked by *siǝng* ‘most’ in Southern Min.

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- (17) a. *i bɛ̃ ɛ̃ sã zit-niǎ siðng sũĩ*
 s/he buy REL dress this-CLASS most beautiful

‘Of the dresses s/he bought, this is the most beautiful one.’

- b. ? *bɛ̃ ɛ̃ sã zit-niǎ sũĩ-sũĩ-sũĩ*
 s/he buy REL this-CLASS beautiful

? ‘Of the dresses s/he bought, this is a very, very beautiful one.’

That (17b) is at best awkward with a discourse calling for a superlative comparison interpretation shows that XXX reduplicates do not have such an interpretation.

The semantic meaning of XXX reduplicates, as described in Yang (1991) and S. Cheng (1981), can be exemplified by the following sentences.

- (18) a. *zit-niǎ sã sũĩ-sũĩ-sũĩ*
 this-CLASS dress beautiful

‘This dress is very, very beautiful.’

- b. *zit-niǎ sã *siũ /chin sũĩ-sũĩ-sũĩ*
 this-CLASS dress excessively / very beautiful

The sentences in (18) demonstrate that XXX reduplicates are interpreted as an intensified level of description. (16) also shows that XXX predicates cannot co-occur with predicative adverbs such as degree adverbs in (18). Thus, XXX reduplicates belong to the same adjectival category as their non-reduplicated counterparts but have a different distribution, which is similar to that of XX reduplicates.

Next, it will be shown that XXX reduplicates differ from XX reduplicates. XX reduplicates undergo the adverb-formation rule of –ǎ suffixation, but XXX reduplicates do not.

- (19) a. *koai-koai-ǎ* ‘obediently’

- b. **koai-koai-koai-ǎ*

- (20) a. *gong- gðng-ǎ* ‘stupidly, unknowingly’

- b. **gong-gong- gðng-ǎ*

Thus, morphologically, XX reduplicates and XXX reduplicates belong to separate subclasses.

Based on the fact that XXX reduplicates and XX reduplicates form two different subclasses of adjectives, and that there are idiosyncratic gaps between both forms as in (9), two separate rules are proposed to account for them.

(21) XXX Reduplication Morpholexical' = Rule

condition	phonology	semantics
X [V +, N+, redupli 1 syl 1]	/X-X-X/	intensely 'X' [predicative +, redupli 3]

Rule (21) derives XXX reduplicates from a non-reduplicated mono-syllabic adjective.

V. CONCLUDING REMARKS

The current schematic study of reduplication of Southern Min monosyllabic adjectives has confirmed the intuitive description that it involves a morpholexical process with idiosyncratic gaps in the lexicon. As for the syntactic and semantic functions of XX and XXX reduplications, this study argues that they do not iconically correlate to the comparative and superlative inflections of comparison. Instead, it is suggested that the traditional description of 'vivification' (S. Cheng 1981, and R. Cheng 1987) seems to be an apt term. A XX reduplicate implies a moderate degree of the property denoted by the adjective X, and a XXX reduplicate implies a high degree of the property denoted by the adjective X. Syntactically, it is suggested that reduplication, just like the modification of degree adverbs, is a strategy to mark the predicative use of an adjective. This account, together with Sheu's (p.c) observation that mono-syllabic Southern Min adjectives do not occur freely in attributive positions, suggests that mono-syllabic adjectives be treated as a stem in Southern Min. As predicates, adjectival reduplicates cannot co-occur with most degree expressions (S Cheng 1981 and R. Chang 1987), and their occurrences as elliptical answers

without subjects are also restricted (S. Cheng 1981). Both facts suggest that reduplication is used to subclassify the category of adjectives. The exact nature of this classification, however, was not discussed in this short paper. Finally, based on the fact that XX reduplicates are the only adjectives allowed to undergo adverbialization with the suffix-*á* and the fact that not every lexical adjective has both XX and XXX reduplicates, I have suggested that XX and XXX reduplication rules are independent from each other. Preliminary versions of the morpholexical rules accounting for both XX and XXX reduplications, based on the Lexical Mapping Theory (Bresnan 1989, Bresnan and Kanerva 1989, and Huang 1991) have been proposed.

The preliminary results reported here suggest that reduplication in Southern Min is a morpholexical process marking grammatical subclassifications. The exact nature of these classifications, however, need to be defined by further in-depth studies. The phonological process involved in the morpholexical rule of reduplication also calls for further study. I will only mention two of the theoretically important issues here. First, is binary reduplication the only kind allowed in phonology or are multiple reduplications allowed as phonological rules? In this article, I have argued against deriving XXX reduplicates from XX reduplicates. The arguments are based on the fact that the grammatical functions of XXX reduplicates do not seem to be directly derivable from XX reduplicates and that there seem to be XXX reduplicates without corresponding XX reduplicates. It is still possible, however, that only binary reduplication is allowed in phonology. Second, Yang (1991) observes that a whole segment (syllable) can be dropped from XXX reduplicates with the supra-segmental information of tone retained. It would be interesting to examine how the morphological process of reduplication interacts with the phonological process of reduplication, especially when the reduplicated syllable is no longer present.

In conclusion, southern Min adjectival reduplications offer a good case study for how morpholexical rules affect syntactic and semantic classification and how phonological processes interact with morpholexical rules. This paper studies the first interface with

encouraging preliminary results. These results support Huang's (1991) position that argument and categorical changes are best represented as morphologically marked lexical rules, even in languages thought to have impoverished morphology. It is anticipated that future research on this topic will shed light on both interfaces of these linguistic modules.

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