

At least two roles of reduplication in Chinese adjectival compounding

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Reduplication has a similar effect as the degree word *hen* ‘very’ on gradable adjectives, as noted in the literature (Zhu 1956, Paul 2006, Liu 2010, Grano 2012, Zhang 2015), A gradable adjective (e.g. *gan.jing* ‘clean’) can be directly attributive (subordinator *de* is optional) but cannot be directly predicative (the copular *shi* ‘be’ is obligatory):

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| <p>(1) a. <i>gan.jing</i> (de) <i>chenyi</i>
clean SUB shirt
‘the clean shirt’ (directly attributive: ✓)</p> | <p>b. *<i>chenyi gan.jing</i>
shirt clean
‘The shirt is clean’ (directly predicative: ×)</p> |
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In contrast, after reduplication or the degree word *hen* is added, the resulted form must co-occur with the subordinator *de* to be attributive (/cannot be directly attributive) but can be directly predicative:

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| <p>(2) a. {<i>gan.gan.jing.jing</i> /<i>hen gan.jing</i>} *(de) <i>chenyi</i>
clean-clean /very clean SUB shirt
‘the {clean_{RED} / (very) clean} shirt’</p> | <p>b. <i>chenyi</i> {<i>gan.gan.jing.jing</i> /<i>hen gan.jing</i>}
shirt clean-clean /very clean
‘The shirt is {clean_{RED} / (very) clean}’</p> |
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Furthermore, reduplication seems to be in complementary distribution with *hen*, as in (3):

- (3) *chenyi* (**hen gan.gan.jing.jing*)
shirt very clean-clean

The above facts lead to an attractive hypothesis in Zhang (2015) such that both reduplication and *hen* head the functional projection (DegP) over the adjectival phrase (AP) that is projected by the gradable adjective *gan.jing* ‘clean’. Based on Grano (2012), only functional projections like DegP have the [+V] feature, which makes them directly predicative (but not directly attributive).

This paper agrees that reduplication is some kind of functional head with [+V] feature, however more data shows that it does not take the same functional head (Deg^o) as *hen*. First, there is a class of ‘orphan’ reduplicated adjectives that do not have the counterpart of its base form (Liu 2013, Paul 2015):

- (4) *da.da.lie.lie* ‘careless_{RED}’ (**da.lie*); *po.po.ma.ma* ‘fussy_{RED}’ (**po.ma*)

Those ‘orphan’ reduplicated adjectives, just like the ‘non-orphan’ ones in that they can be directly predicative but not directly attributive, as in (5). However, unlike (3), they can be modified by *hen*, and can appear freely in comparatives (6), showing the reduplication cannot take the Deg position.

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| <p>(5) a. <i>da.da.lie.lie</i> *(de) <i>nvhai</i>
careless SUB girl
‘the careless_{RED} girl’</p> | <p>b. <i>zhei ge nvhai da.da.lie.lie</i>
this CL girl careless
‘The girl is careless_{RED}’</p> |
| <p>(6) a. <i>zhei ge nvhai hen da.da.lie.lie</i>
this CL girl very careless
‘This girl is (very) careless_{RED}’</p> | <p>b. <i>zhei ge nvhai bi Lisi geng da.da.lie.lie</i>
this CL girl than Lisi more careless
‘This girl is more careless_{RED} than Lisi’</p> |

Second, though (3) is impossible, it is possible to reduplicate a DegP, in which the Deg^o is taken up by a degree element like *hen* ‘very’ or a noun (e.g. *xue* ‘snow’) indicating the degree (Zhang 2015, Lee-Kim 2016):

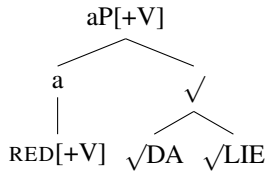
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| <p>(7) a. <i>zhei jian chenyi hen ganjing hen ganjing</i>
this CL shirt very clean very clean
‘This shirt is very very clean’</p> | <p>b. <i>zhei jian chenyi xue.bai.xue.bai-de</i>
this CL shirt snow.white-snow.white-DE
‘This shirt is snow-white_{RED}’</p> |
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The above two facts show that (i) reduplicated adjectives (both ‘orphan’ and ‘non-orphan’ ones) are directly predicative (2, 5), confirming reduplication is indeed some functional head carrying [+V] feature; and (ii) reduplication is not in complementary distribution with degree word *hen* (3, 6, 7).

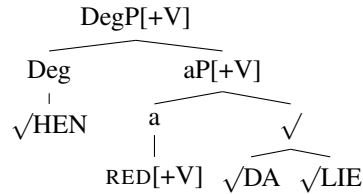
Proposal I I propose that there are at least two uses of reduplication, one as the adjectival categorizer a^o (with [+V] feature) taking a root compound (within the framework of Distributed Morphology, Marantz 1997, a.o.); another as the head of a functional projection that is structurally higher than the DegP (following a certain hierarchy of the left periphery of adjectives), which is what we call an ‘Emphatic phrase’ (EmpP).

Deriving (5, 6) For those ‘orphan’ reduplicated adjectives (RED ADJ) like *da.da.lie.lie* ‘careless’, reduplication is a (special) a° categorizer (with [+V] feature) that takes a root compound as in (8), thus the resulting form is directly predicative. Following Lee-Kim (2016), reduplication is sensitive to the structure of its base, thus when the base is a coordinate compound *AB* (e.g. *da.lie*), the resulting reduplicated adjective is in the form of *AABB* (e.g. *da.da.lie.lie*). Crucially the reduplication here is not a Deg° but an adjectival categorizer, thus it does not block other Degree words like *hen*, as in (9).

(8) ‘orphan’ RED ADJ: *da.da.lie.lie* ‘careless’

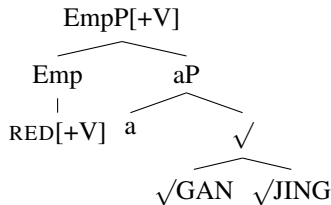


(9) *hen da.da.lie.lie* ‘very careless’

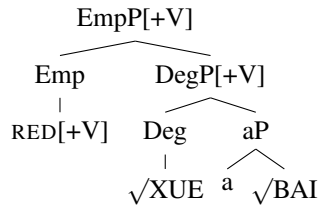


Deriving (2, 7) When the reduplication aims at an existing adjective (‘non-orphan’) like *gan.gan.jing.jing* (base: *gan.jing* ‘clean’), or *xue.bai.xue.bai* (base: *xue.bai* ‘snow.white’), the reduplication heads an EmpP. For gradable adjectives like *gan.jing* ‘clean’, reduplication projects a functional phrase which turns the resulting form to be directly predicative ([+V] feature), as in (10); for adjectives that already contain a degree element (*hen* ‘very’ or *xue* ‘snow’), reduplication based on them will not be blocked since reduplication heads a distinct functional projection EmpP, as in (11). When the reduplication targets a subordinate compound *AB* (e.g. *xue.bai*), the resulting form is *ABAB* (following Lee-Kim 2016), as in (11).

(10) ‘*gan.gan.jing.jing* ‘clean-clean’

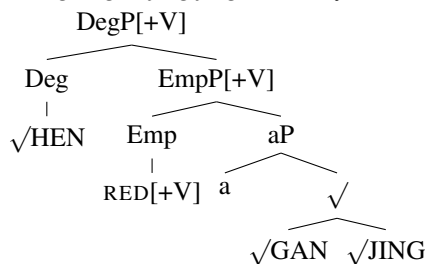


(11) *xue.bai.xue.bai* ‘snow.white-snow.white’

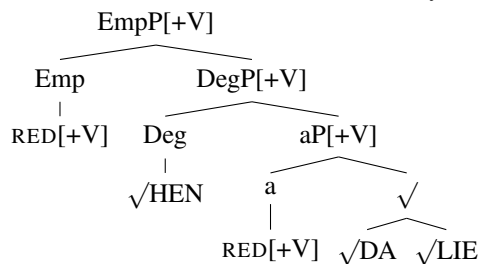


Blocking (3) This analysis further blocks the addition of a degree word like *hen* to ‘non-orphan’ reduplicated adjectives (3): since EmpP must be higher than DegP on the left periphery, projecting DegP above EmpP is banned, as in (12). Note (12) cannot be ruled out simply due to complexity: a similarly complex expression like (13), is predicted to be possible under our analysis – this prediction is born out, though (13) sounds a little clumsy for its abnormal length, it is indeed much better than (12).

(12) **hen gan.gan.jing.jing* Int: ‘very clean-clean’



(13) (?)*hen da.da.lie.lie hen da.da.lie.lie* ‘very very careless’



Extension Though reduplication can be used either as an adjectival categorizer or an Emp head, the reduplication of the ‘orphan’ reduplicated adjectives is still banned (e.g. **da.da.lie.lie.da.da.lie.lie*) because of the syntactic OCP (Hiraiwa 2010), as a parallel to morphological haplology (Stemberger 1981). This analysis also formalizes an intuition about reduplicated adjectives in Liu (2013) such that they denote ‘a life-like state’ and the positive degree conveyed is ‘the by-product of state realization’. The Emphatic phrase as a more functional projection than DegP on the left periphery of adjectives captures the intuition.

Conclusions This paper revisits the reduplication in Chinese adjectival compounding and argues there are at least two uses of it: reduplication as an adjectival categorizer and as the head of an emphatic phrase.

Selected reference Lee-Kim Sang-Im 2016 “Syntax-based phonological asymmetries” Zhang Niina Ning 2015 “Functional head properties of the degree word *hen* in Mandarin Chinese.” Liu Chen-Sheng Luther 2013 “Reduplication of adjectives in Chinese” Grano Thomas 2012 “Mandarin *hen* and universal markedness in gradable adjectives” Paul Waltraud 2006 “Zhu de xi’s two classes of adjectives revisited”