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):

(1) a. *gan.jing* (de) *chenyi*
clean       SUB shirt
‘the clean shirt’ (directly attributive: ✓)

b. *chenyi* *gan.jing*
shirt       clean
‘The shirt is clean’ (directly predicative: ×)

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:

(2) a. {gan.gan.jing.jing /hen} *{de} chenyi*
clean-clean       SUB shirt
‘the {clean RED (very) clean} shirt’

b. *chenyi* {gan.gan.jing.jing /hen} *gan.jing*
clean-clean       /very clean
‘The shirt is {clean RED / (very) clean}’

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°) 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 ‘carelessRED’ (*da.lie); po.po.ma.ma ‘fussyRED’ (*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 up the Deg position.

(5) a. da.da.lie.lie *(de) nvhai*
careless       SUB girl
‘the carelessRED girl’

b. *zhei ge* nvhai da.da.lie.lie
this CL       girl    careless
‘The girl is carelessRED’

(6) a. *zhei ge* nvhai hen da.da.lie.lie
this CL       girl    very careless
‘This girl is (very) carelessRED’

b. *zhei ge* nvhai bi Lisi geng da.da.lie.lie
this CL       girl    than Lisi more careless
‘This girl is more carelessRED than Lisi’

Second, though (3) is impossible, it is possible to reduplicate a DegP, in which the Deg° 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):

(7) a. *zhei jian* chenyi hen gan.jing hen gan.jing
this CL       shirt  very clean       very clean
‘This shirt is very very clean’

b. *zhei jian* chenyi *xue.bai.xue.bai-de*
this CL       shirt  snow.white-snow.white-DE
‘This shirt is snow-whiteRED’

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 propose that there are at least two uses of reduplication, one as the adjectival categorizer a° (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 realilization’. 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.