

Maintaining Mandarin *hen* as a weak intensifier

Introduction. Grano & Davis (2018) (see also Grano 2012, Bobaljik 2012) establish a language universal that for a gradable adjective (GA), its comparative form is no more complex than its positive form – it is either derived from its positive form (i.e. French, English) or is identical to it (i.e. Japanese). Crucially, they argue that the positive semantics is achieved via $\overrightarrow{\text{POS}}$ (a syntactically invisible type-shifting) (see (1)), which is never realized with overt morphology in languages.

- (1) If G is a type $\langle d, et \rangle$ relation denoted by a GA, then $\overrightarrow{\text{POS}}(G) = \lambda x. \exists d [G(d)(x) \wedge d > d_c]$ (where d_c is a contextually determined threshold d_c)

This paper revisits a language that potentially poses a counterexample: in Mandarin, a bare gradable adjective can readily give rise to a comparative semantics, but at least in some cases requires an (unstressed) adverb *hen* ‘very’ for the positive reading, c.f. (2), (3), though not always (see (4)).

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| (2) Yuehan gao.
John tall
‘John is taller (than someone salient)’ | (3) Yuehan ^{??} (hen) gao
John very tall
Int: ‘John is tall’ | (4) jiu Yuehan gao
only John tall
‘Only JOHN is tall’ |
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While it is still under debate when *hen* is required for the positive reading and why (Grano 2012; Liu 2010, 2018; Zhang 2021, etc), the existing accounts more or less acknowledge that *hen* in (3) has a bleached meaning which is similar to the semantic effect of $\overrightarrow{\text{POS}}$. This suggests that the unstressed *hen* could be a candidate for the overt realization of $\overrightarrow{\text{POS}}$.

Main claims. This paper supports Grano & Davis’s universal with novel evidence from absolute GAs such as *wan* ‘curved’, *kong* ‘empty’ in Mandarin. I show that *hen* cannot be the overt counterpart of $\overrightarrow{\text{POS}}$ but is just a weak intensifier like English *very*. Its apparent bleached meaning in (3) is an illusion due to the vague nature of relative GAs (Leffel et al. 2019); when we turn to absolute GAs whose thresholds are not inherently vague (Kennedy & McNally 2005), the intensifying effect of *hen* is more visible and can be differentiated from the unintensified positive semantics of $\overrightarrow{\text{POS}}$.

Absolute GAs with *hen*. Mandarin *wan* ‘curved’ and *kong* ‘empty’ pass classical diagnostics for minimum GAs and maximum GAs respectively (Kennedy & McNally): the comparative in (5) entails that this road is curved since the threshold is the lower endpoint on the scale; and the comparative in (6) entails that room 101 is not empty since the threshold is the upper bound of the scale. In contrast, neither entailment pattern holds for relative GAs such as *gao* ‘tall’ (7).

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| (5) zhe-tiao lu bi na-tiao lu wan.
this-CL road than this-CL road curved
‘This road is more curved than that road’
\rightsquigarrow This road is curved. | (6) zhe-jian fang bi 101 fangjian kong.
this-CL room than 101 room empty
‘This room is emptier than Room 101’
\rightsquigarrow Room 101 is not empty. |
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- (7) Yuehan bi Lisi gao ‘John is taller than Lisi’ $\not\rightsquigarrow$ John is tall; $\not\rightsquigarrow$ Lisi is not tall.

Those absolute GAs exhibit similar constraints w.r.t using bare forms to express positive readings just like relative GAs: they sound degraded in a neutral declarative, but improve when focus (or other licensors like negation, interrogative operator, etc. see Liu 2018, Zhang 2021) are added:

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| (8) ^{??} zhe-tiao lu wan /kong
this-CL road curved empty
Int: ‘This road is curved/empty’ | (9) jiu zhe-tiao lu wan /kong
only this-CL road curved empty
‘Only THIS road is curved/empty’ |
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If the claim that *hen* is an overt counterpart of $\overrightarrow{\text{POS}}$ is correct (and *hen* is required to occur in (8) for independent reasons in Chinese grammar, see Grano 2012 and Liu 2018, which is not our main concern here), we predict that adding *hen* to (8) can result in a standard positive reading for absolute GAs, namely a minimal/maximal reading. However, this is not true: adding *hen* to (8) indeed makes it acceptable, but the resulted meaning is obligatorily intensified into ‘This room is very {curved/empty}’, which can be distinguished from the truly neutral positive reading expressed by the bare form in (9) as follows.

For a minimum GA like *wan* ‘curved’, if we set up a context in which this road possesses a non-zero but extremely small degree of curvedness as in (10), then (9) can be uttered but not (8) with the unstressed *hen*:

(10) Context: *This road is slightly curved; all the other roads are perfectly straight.*

- a. ✓ *jiu zhe-tiao lu wan.* ‘Only THIS road is curved’ (minimal reading)
b. # *zhe-tiao lu hen wan.* ‘This road is very curved’ (intensified reading)

Moreover, the denial of (9) entails that the relevant subject possesses a zero degree of curvedness, as shown by the infelicitous follow-up in (11a); by contrast, the denial of the form marked by *hen* is compatible with the road having some degree of curvedness (11b):

- (11) a. *zhiyou zhe-tiao lu bu wan, #suiran wo neng kanjian yi-dian qu-du*
only this-CL road not curved though I can see one-bit curvedness
‘Only this road is not curved, #though I can see some curvedness’
b. *zhe-tiao lu bu (shi) hen wan, suiran wo neng kanjian yi-dian qu-du*
this-CL road not be very curved though I can see one-bit curvedness
‘This road is not very curved, though I can see some curvedness’

The pattern in (10-11) would be fully expected if *hen* is a weak intensifier like English *very*, which increases the threshold from the lower bound of the scale to a higher degree.

For a maximum GA like *kong* ‘empty’, adding *hen* also fails to yield the canonical maximal reading. Kennedy & McNally points out that while *an empty restaurant* is typically used to describe a restaurant with no diners, *a very empty restaurant* strongly implies that the restaurant is not empty, but just with a few diners. This ‘anti-maximal reading’ effect is exactly observed when *hen* is added, as in (12).

(12) *This restaurant has no diners. All the others have a very low amount of diners from 2 to 5.*

- a. ✓ *jiu zhe-jia fandian kong.* ‘Only THIS restaurant is empty’ (maximal reading)
b. # *zhe-jia fandian hen kong.* ‘This restaurant is very empty’ (‘anti-maximal reading’ effect)

Proposal. I argue that *hen* is a consistent weak intensifier (13), which straightforwardly captures (10)-(12).

(13) $\llbracket hen \rrbracket = \lambda G_{(d,et)} \lambda x. \exists d [G(d)(x) \wedge d >_! d_c]$ where $>_!$ is a context-dependent relation ‘greater than by some amount’

Crucially, when *hen* is added to a relative GA like (3), the literal translation of the sentence should also be ‘John is very tall’ instead of ‘John is tall’ – and the existing literature fails to recognize the intensifying effect of *hen* there because the threshold involved in the positive semantics of relative GAs such as *tall* is inherently vague. That is, since the standard of ‘standing out’ in height is heavily context-dependent and can never be clear-cut even when one fixes the comparison class and imprecision issues (i.e. Sorites Paradox, see Kennedy 2007), increasing the threshold d_c by a small amount, which is what *hen* or English *very* does, fails to significantly strengthen its truth conditions. My proposal receives independent support from the discussion on English *very* in Leffel et al (2019): they observed that for an English sentence ‘John is not very *X*’, if *X* is a non-vague minimum GA such as ‘late’, it manner-implicates ‘John is *X*’ (the negation of the simpler alternative ‘John is not *X*’); while if *X* is a vague GA such as ‘tall’, it does not:

- (14) John was not very late. \rightsquigarrow John was late. (15) John is not very tall. $\not\rightsquigarrow$ John is tall.

Their explanation, supported by experimental data, is that increasing a vague threshold with *very* is too weak to be semantically meaningful: participants basically cannot identify individuals that are tall but not very tall under any context. In other words, (15) fails to obtain the manner implicature because the strengthened meaning ‘John is tall but not very tall’ is a ‘borderline contradiction’ (Ripley 2011). In contrast, an increase on a non-vague minimal standard is meaningful so that participants have no problem in identifying individuals that are late but not very late, which explains the availability of the manner implicature in (14).

Conclusions. This paper present novel evidence for maintaining Mandarin *hen* as a weak intensifier across the board instead of a likely candidate that overtly realizes of \overrightarrow{POS} . My proposal is independently supported by the interaction between the weak intensifier *very* and relative/absolute GAs in English. With more space, I will further discuss the implication of my proposal on the question why the bare GAs in Mandarin can give rise to positive readings in restricted contexts (c.f. (8), (9)).

Selected references. Grano & Davis. 2018. Universal markedness in gradable adjectives revisited. | Leffel et al. 2019. Vagueness in Implicature: The Case of Modified Adjectives. | Chen-Sheng Luther Liu. 2018. Projecting adjectives in Chinese. | Grano 2012. Mandarin *hen* and Universal Markedness in gradable adjectives.