



# Chinese *gèng* Expresses Implicit Comparison

Florence Zhang-Yukun (Yale) Linmin Zhang (NYU Shanghai)



## Overview

- Chinese does not make a morphological distinction between the positive and comparative use of a gradable adjective.
- In Chinese, the particle *gèng* often appears in constructions of comparison. What is its meaning contribution?
- We propose that:

- Gèng*-sentences express implicit comparison (not explicit comparison), involving a positive use (not comparative use) of gradable adjectives;
- Gèng* semantically introduces a new positive threshold between the items (target & standard) under comparison;
- For a *gèng*-sentence, the evaluative inference that the standard already reaches the regular positive threshold is an implicature, not entailed meaning (cf. the semantics of *even*).

## Data

- Chinese lacks an *er*-like morpheme. (1) is ambiguous between a positive and a comparative reading:

(1) John hé Mary, shéi gāo?  
and who tall(er)  
✓ Positive: 'Who is tall, John and Mary?'  
✓ Comparative: 'Who is taller, John and Mary?'

- Gèng* can optionally appear, guaranteeing a seemingly comparative meaning. This is actually an implicit comparison.

(2) John hé Mary, shéi *gèng* gāo?  
and who *GENG* tall(er)  
#Positive: 'Who is tall, John and Mary?'  
✓ Comparative: 'Who is taller, John and Mary?'

- Evidence 1:** Incompatible with numerical differentials.

(3) John bǐ Mary *gèng* gāo (\*wǔ límǐ).  
STDD *GENG* tall(er) 5 cm  
'Compared to Mary, John is (\*5 cm) tall.'

Abbreviations: 1 = first person, NEG = negative, PFV = perfective, PRT = particle, SG = singular, STDD = standard marker.  
Acknowledgements: We thank Simon Charlow, Yi-Hsun Chen, Zhuang Chen, Yanyan Cui, Dun Deng, Yael Greenberg, Yuyin He, Haoze Li, Mingming Liu, Yitong Luo, Osamu Sawada, Toshiko Oda, Yenan Sun, Carla Umbach, Jim Wood and Qingwen Zhang for discussions and feedback.  
Drawings © soco-st [CC Attribution License].

## Data (Cont'd)

- Evidence 2:** Incompatible with 'crisp judgment' context.
- (5)'s infelicity under (4) argues against the view that *gèng* works in the same way as *even* (pace LIU 2010, CHEN 2023). (6) is felicitous under this 'crisp judgment' context.

(4) Context: John is 6' tall; Mary is 5'11" tall. Both are tall.  
(5) John bǐ Mary *gèng* gāo.  
STDD *GENG* tall  
Compared to Mary, John is tall. [Infelicitous under (4)]  
(6) John is even taller than Mary. [Felicitous under (4)]

- Evidence 3:** Similar to implicit comparison (but not explicit comparison, see KENNEDY 2007, SAWADA 2009), a comparison with the use of *gèng* has evaluative inferences.

(7) Evaluative inference of (5)/(6): Mary is already tall.

- (8, 9) show that this kind of evaluative inference for a *gèng*-sentence can be suspended or cancelled, suggesting that it's an implicature (cf. for (6), this inference is a presupposition, see ZHANG 2022).

(8) Wǒ bù zhīdào Mary gāo-bù-gāo, dàn John kěndìng  
1SG NEG know tall-NEG-tall but John definitely  
bǐ Mary *gèng* gāo.  
STDD *GENG* tall  
'Though I don't know whether Mary is tall, compared to her, John is definitely tall.' ['Mary is tall' suspended]  
(9) Mary gàn-de bù hǎo, dàn yě méi rén gàn-de bǐ  
do-PRT not well but still NEG person do-PRT STDD  
Mary *gèng* hǎo-le.  
*GENG* well-PFV  
'Mary didn't do well, but still, compared to her, no one did well.' ['Mary did well' explicitly cancelled]



≪ link to this poster

link to the handout ≫  
(@ ELSJ18)



## Analysis

- Following Zhang & Zhang-Yukun (2024), we argue that gradable adjectives encode inequality *per se*.
- A gradable adjective takes two degree arguments & an individual argument, and returns an update function (10).
- E.g. variable  $i_{\text{tall}}$  maps to the positive threshold  $d_{\text{tall-pos}}$  (11).
- In comparatives, the reference is the measurement of the standard, and the difference can be accommodated (12) or numerically specified (13).

(10)  $\llbracket \text{gāo} \rrbracket = \lambda d_{\text{DIFF}}. \lambda d_{\text{STDD}}. \lambda x. \lambda C. [d_{\text{DIFF}} > 0].$   
 $\{\langle w, g \rangle \in C \mid \text{HEIGHT}_w(x) \geq d_{\text{STDD}} + d_{\text{DIFF}}\}.$   
(11)  $\llbracket \text{POS}^{i_{\text{tall}}} \text{gāo} \rrbracket = \lambda x. \lambda C. [d_{\text{DIFF}} > 0].$   
 $\{\langle w, g \rangle \in C \mid \text{HEIGHT}_w(x) \geq d_{\text{tall-pos}} + d_{\text{DIFF}}\}.$   
(12)  $\llbracket \text{bǐ Mary gāo} \rrbracket = \lambda x. \lambda C. [d_{\text{DIFF}} > 0].$   
 $\{\langle w, g \rangle \in C \mid \text{HEIGHT}_w(x) \geq \text{HEIGHT}_w(m) + d_{\text{DIFF}}\}.$   
(13)  $\llbracket \text{bǐ Mary gāo 5cm} \rrbracket = \lambda x. \lambda C.$   
 $\{\langle w, g \rangle \in C \mid \text{HEIGHT}_w(x) \geq \text{HEIGHT}_w(m) + 5\text{cm}\}.$

- A *gèng*-sentence is an implicit comparison, which involves the positive use of the adjective.
- Gèng* (i) introduces a degree *dref* which maps to a new threshold, and (ii) restricts it to a degree value above the standard.

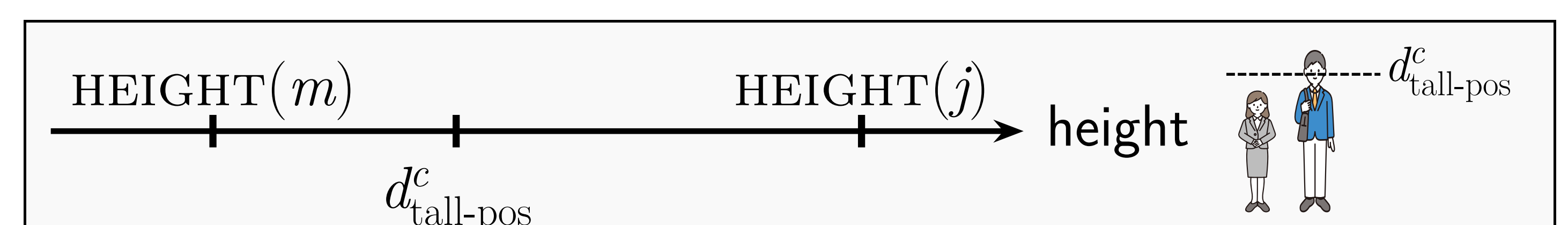


Figure:  $\llbracket \text{John bǐ Mary gèng gāo} \rrbracket$ : Compared to M., J. is tall.

(14)  $\llbracket \text{gèng}^{i_{\text{tall}}} \rrbracket = \lambda \mathcal{G}. \lambda d_{\text{STDD}}. \lambda x. \lambda C. \{\langle w, g \rangle \mid \langle w, g \rangle \in \mathcal{G}(d_{\text{DIFF}})(d_{\text{tall-pos}}^c)(x)(C), d_{\text{tall-pos}}^c > d_{\text{STDD}}, d_{\text{DIFF}} > 0\}.$   
(15)  $\llbracket \text{gèng}^{i_{\text{tall}}} \text{gāo} \rrbracket = \lambda d_{\text{STDD}}. \lambda x. \lambda C. \{\langle w, g \rangle \mid \langle w, g \rangle \in C, \text{HT}_w(x) \geq d_{\text{tall-pos}}^c + d_{\text{DIFF}}, d_{\text{tall-pos}}^c > d_{\text{STDD}}, d_{\text{DIFF}} > 0\}.$   
(16)  $\llbracket (\text{bǐ M.}) \text{gèng}^{i_{\text{tall}}} \text{gāo} \rrbracket = \lambda x. \lambda C. \{\langle w, g \rangle \mid \langle w, g \rangle \in C, \text{HT}_w(x) \geq d_{\text{tall-pos}}^c + d_{\text{DIFF}}, d_{\text{tall-pos}}^c > \text{HT}_w(m), d_{\text{DIFF}} > 0\}.$

- Note that using *gèng* does not change the regular threshold.

## Selected References

■ CHEN Z. 2023. In *TEAL*, vol. 13. ■ KENNEDY C. 2007. In *CLS*, vol. 43. ■ LIU C.-S. L. 2010. *Lingua* 120(6). ■ SAWADA O. 2009. *J. Pragmat.* 41(6). ■ ZHANG L. 2022. In *SALT*, vol. 32. ■ ZHANG L. & ZHANG-YUKUN F. 2024. *Lingbuzz* Ms.