Comparison in Chinese

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Introduction

This study is an attempt to identify the primary source of the cross-linguistic variation in the semantics of comparatives (see (Beck et al., 2004) and (Kennedy, 2005)) by focusing on Chinese. We show that Chinese, similarly to Japanese investigated by Beck et al., presents a challenge to the standard theory of comparatives (Stechow, 1984) and propose an analysis that captures the facts drawing on the idea that variation stems from the differences in the semantics of gradable predicates.

Data

Like Japanese, Chinese bans subcomparatives, cf. (1), and does not display the (N)egative (I)sland effect (Rullmann, 1995), cf. (2). More generally, Chinese does not allow clausal comparatives resorting to nominalisations in prototypical clausal contexts, cf. (3).

(1) *Zhe   ge   zhuozi [bi   na   ge   men kuan] gao.
     this CL   table [than that CL door wide] tall
     Intended: 'This table is higher than the door is wide.'

(2) Lisi mai de   shu [bi   Zhangsan *mei* mai de]   gui.
     Lisi buy rel.pro book than Zhangsan neg buy rel.pro expensive
     'Lisi bought a book that is more expensive than the book that Zhangsan didn't buy.'

(3) Lisi [bi   wo xiangxiang de]   fu.
     Lisi [than I   imagine   rel.pro] rich
     'Lisi is richer than I thought.'

Existing Proposals

The NI effect in English is standardly accounted for as a failure to define the maximum of the set of degrees expressed by the comparative clause, cf. (4a). English subcomparatives are analysed as involving abstraction over the degree argument of the comparative clause, cf. (4b). The absence of these configurations in Japanese lead (Beck et al., 2004) to the conclusion that Japanese comparatives do not employ binding of degree variables.

(4) a.   max(λd. Zhangsan didn't buy a d-expensive book)
     b.   max(λd. the table is d-high) > max(λd. the door is d-wide)

Beck et al. pursue a contextual approach to comparatives in Japanese making the comparative operator dependent on the contextual variable that provides the standard of comparison, (5a). Kennedy's proposal for Japanese is also based on a new semantics for the comparative that envolves the standard of the individual type, in contrast to English that makes use of the degree type standards as well, cf. (5b). Both strategies derive LFs at which the adjective does not project the degree argument and thus account for the problematic data.

(5) a.   Beck et al: $[\![ER_C]\!]^g = \lambda A_{d(et)}.\lambda x_e.$ max($\lambda d.A(d)(x)$) > $g(C)$

     b.   Kennedy: $[\![ER]\!] = \lambda A_{ed}.\lambda y_e.\lambda x_e.A(x) > A(y)$

     $A_{d(et)}$ is the relational adjective meaning, A_{ed} is the measure function adjective meaning.

Beck et al. suggest that this kind of variation is due the negative setting of the Degree Abstraction Parameter according to which languages differ w.r.t. to the possibility to have degree abstraction at LF.

Lexical Approach

We exploit the idea that Japanese-like languages involve degree predicates with inherently comparative meaning. Thus, the lexical entry for the Chinese adjective *gao*/'tall' is a comparative relation between the standard I and the subject of comparison x facilitated by the differential argument D:

(6) a. $[\![\mathbf{gao}_S]\!]^g = \lambda D_{(dt)t}.\lambda I_{dt} \subseteq S.\lambda x_e.$ D(Height(x) -* max(I)),
          where S is an appropriate scale and -* is defined as below:
     b. $\forall d,d': (d$ -* $d') = \{d''| d > d'' > d'\}$

Thus, we offer a semantics for Chinese degree constructions that does not employ adjective-external degree operators but crucially relies on the appropriate choice of the standard interval argument to capture comparative, positive, superlative, equative, etc. interpretations. This choice is argued to be contextually determined. Since the degree argument is bound inside the adjective the same set of predictions is derived as in the previous approaches.

Applications

The basic case is the <u>positive</u> with the obligatory *hen*/'very' in non-negated sentences, cf. (7). The standard interval corresponds to the neutral ("neither tall nor short") region on the height scale (Stechow, 2006). *Hen* is analyzed as a modifier of the standard interval capable of extending it and thus keeping its boundaries vague. Hence the impossibility of overt differentials.

(7) a. Lisi *(hen) gao.
'Lisi is (very) tall'

 b. $[[\mathbf{gao_S}\ \text{SOME}]]^g)\ ([[\mathbf{hen}]](g(\text{I}))\ ([[\mathbf{Lisi}]]^g =$
$\exists n: \text{Length}(\text{Height}(\text{Lisi})\ \text{-*}\ \max(\{d \mid d \in g(\text{C})\ \&\ \forall d' \in g(\text{I}): d \geq d'\})) = n$
= there is a positive difference between Lisi's height and the average height.

 c. $[[\mathbf{hen_C}]]^g = \lambda \text{I}.\lambda d \in g(\text{C}). \forall d' \in \text{I}: d \geq d'$

 d. $[[\text{SOME}]]^g = \lambda \text{I}_{dt}. \exists n: \text{Length}(\text{I}) = n$ (Schwarzschild, 2005)

Hen appears to be optional in negated sentences, which we take to be the result of its non-trivial contribution to the meaning under negation: the extension of the standard interval under negation results in a weaker claim.

In the <u>comparative</u> case the *bi*-phrase provides the adjective with a proper standard interval corresponding to the object of comparison, cf. (8).

(8) a. Lisi bi Zhangsan gao 5 li mi.
Lisi bi Zhangsan tall 5 cm
'Lisi is 5 cm taller than Zhangsan.'

 b. $[[\mathbf{gao\ 5\ li\ mi}]]^g ([[\mathbf{bi\ Zhangsan}]]^g)([[\mathbf{Lisi}]]^g =$
$\text{Length}(\text{Height}(\text{Lisi})\ \text{-*}\ \text{Height}(\text{Zhangsan})) = 5\ \&\ \text{I} \subseteq \text{S}_{cm}$

 c. $[[\mathbf{bi\ Zhangsan}]]^g = (g(f_{e(dt)}))(\text{Zhangsan}) = \{d \mid \text{Height}(\text{Zhangsan}) \geq d\}$

The <u>superlative</u> interpretation is derived by restricting the standard interval to include the heights of all contextually salient individuals, cf. (9).

(9) a. Lisi shi zui gao de xuesheng.
Lisi be most tall DE student
'Lisi is the tallest student'

 b. $[[\mathbf{zui_{C,\ M}}]]^g = \lambda \text{I}.\lambda d. \text{I}(d)\ \&\ \forall x \in g(\text{C}): d \geq g(\text{M})(x),$
where C_{et} and M_{ed} are contextual variables ranging over a contextually prominent set of individuals and a measure function respectively.

Finally, Chinese features the <u>equative</u> and the <u>measure phrase construction</u> employing gradable adjectives. We propose that in this case the standard interval variable is assigned the initial interval on the corresponding scale and the measure phrase/the object of the equative play the role of the differential, cf (10b). Thus, the "at least" interpretation is derived, which makes right predictions for the negated sentences.

(10) a. Zhe ge xiangzi you 5 kg/zhe ge bao name zhong
this CL suitcase have 5 kg/this CL bag that heavy
'This suitcase weighs 5 kg/This suitcase is as heavy as this bag is.'

 b. $[[\mathbf{gao\ 5\ kg}]]^g (g(\text{I}))([[\mathbf{zhe\ ge\ xiangzi}]]^g =$
$\text{Length}(\text{Weight}(\text{this suitcase})\ \text{-*}\ \max(g(\text{I}))) = 5\ \&\ \text{I} \subseteq \text{S}_{kg},$
where $g(\text{I}) = \{d \mid d \in \text{S}_{kg},\ \&\ d \geq 0\}$

Conclusion

We analyze Chinese degree constructions as involving adjectives that express comparison per se and thus we derive the facts predicted by the DAP by locating the source of the cross-linguistic variation in the lexicon.

Literature

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