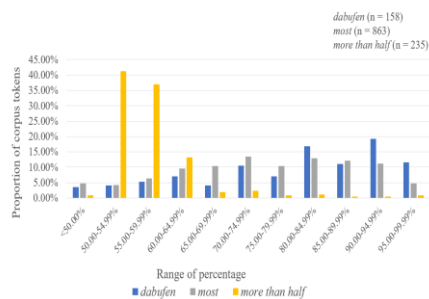


On the Interpretational Flexibility of Mandarin Chinese *Dabufen*

This paper probes into the interpretational mechanism of Mandarin Chinese proportional quantifier *dabufen*. The existing studies on *dabufen* (e.g., Lin 1998) treat the expression as an equivalent of the English *most* and assign it a conventional GQT definition which ensures its proportional interpretation of ‘above 50%’. However, *dabufen* differs from *most* in terms of its syntactic distribution, semantic interpretation and internal morphological makeup, which prompts us to propose that it encodes a weaker adjectival semantics, meaning sufficiently large parts as compared to a contextually determined neutral range. After pinning down the semantics of *dabufen*, we also conduct a truth value judgement experiment and perform a clustering analysis to uncover the manifestation of the weaker interpretational mechanism among native speakers.

Syntactic difference between *dabufen* and *most*: Syntactically, *dabufen* can be preceded by demonstrative determiners and free choice *renhe*, both of which are typical positions hosting predicates. Also, it can occur after adjectival modifiers, after the predicative copula *shi*, or in the scope of the existential *you*. To a large extent, the distribution of *dabufen*-N patterns like typical weak quantifiers, and forms a sharp contrast with that of strong quantifiers like English *most* Chinese universal quantifiers headed by *mei* and *suoyou*.

Semantic difference between *dabufen* and *most*: Our corpus search results in Fig 1. shows the parallel between *dabufen* and *most*, both of which mainly represent percentages between 50% and nearly 100%. However, a close look at the cases where *dabufen* and *most* express proportions below 50% uncovers the subtle difference: Both *most* and *dabufen* allow the NP-external relative superlative reading, which explicitly requires that the portion they associate with be the largest as compared to other alternatives (Hackl 2009), as in (2); however, in still other cases, the use of *dabufen* does not exert such a strict requirement and can simply mean a sufficiently high proportion, as in (2).



- (1) As to the size of the institutions, most developmental students in the sample were enrolled at small-size (28.7%), followed by medium-size (26.6%), large size (25.0%), and extra-large colleges (19.6%). (COCA)
- (2) Context: 42% of the interviewee choose to improve their health through diet and exercise.
 Zhe shuoming dabufen-ren-de-guannian shi zhengque de. (BCC)
 this indicate DABUFEN-person-DE-idea BE correct DE
 'This indicates that DABUFEN people's ideas of health are right.'

Fig 1 Proportional ranges of *dabufen* and *most*

Furthermore, *dabufen*, but not *most*, can be modified by indefinite *yi* ‘one’ which marks indefiniteness and variability, and in such cases, it is more common for *dabufen* to express proportions below 50%; *dabufen* is also more susceptible to the influence of contextual regulators like *xiangduieryan* ‘relatively speaking’ and can diverge from its default interpretation of ‘above 50%’ to refer to lower percentages.

Internal semantic composition of *dabufen*: In terms of morphological makeup, *Dabufen* can be dissected into *da* ‘large’, a gradable adjective, and *bufen* ‘part’, and it can be further modified by degree modifiers like *geng* ‘more’, *zui* ‘most’ and *ji* ‘extremely’. In this light, we opt for an

adjectival semantic analysis in the spirit of Solt (2009, 2016) to characterize the meaning of *dabufen*. Essentially, *da* is a gradable adjective encoding proportions as its dimension of measurement, as in (3a), and the degree argument can be bound by operators like POS and -est. When bound by POS, the degree interval expressed picked out by *da* is compared with a contextually-determined neutral range, which is normally set to the mid-point of the proportional scale and derives the meaning of 50%. Yet, with appropriate contextual support, the neutral range can be scaled down to lower points which derives the reading of ‘a high yet below 50% proportion’. For instance, when modified by indefinite ‘one’ which indicates variability, or the possible existence of more than one large portion, the neutral range of comparison tends to be set lower. When bound by an implicit -est operator, *dabufen* can express a relative superlative reading, meaning ‘the largest part’. (3b) shows the derivation of ‘dabufen people came’, where *bufen* is formalized as an abstract partition of a collection of entities.

(3) a. $\llbracket da \rrbracket = \lambda N \lambda d \lambda x [N(x) \wedge \mu(x) / \mu \oplus N \geq d]$

b. $\llbracket da\text{-}bufen\text{-}person\text{-}came \rrbracket = \lambda d \lambda x [x \leq \oplus person \wedge \mu(x) / \mu \oplus person \geq d \wedge *came(x)]$

Existential closure: $\lambda d \exists x [x \leq \oplus person \wedge \mu(x) / \mu \oplus person \geq d \wedge *came(x)]$

$\llbracket POS \rrbracket = \lambda I \forall d \in Ns [I(d)]$

$\llbracket POS\ da\text{-}bufen\text{-}person\text{-}came \rrbracket = \forall d \in Ns \exists x [x \leq \oplus person \wedge \mu(x) / \mu \oplus person \geq d \wedge came(x)]$

Truth value judgement experiment: An experiment was conducted to investigate the availability of the ‘relative superlative’, ‘sufficiently large’ and ‘more than half’ readings of *dabufen* by carefully controlling the proportional information in the context, and we conclude that there are two populations of native speakers of systematic patterns of interpretation by performing a clustering analysis: One (n=62) hardly accepts the superlative interpretation or the sufficiently large interpretation, and one (n=71) endorses these weaker readings. We conjecture that this population split might reflect individual differences in terms of mental calculation strategies.

References

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