Mapping to a scale: Mandarin *even*-like *dou* with hyperbolic comparatives[1]

Zhuang CHEN — *Bar-Ilan University*
Yael GREENBERG — *Bar-Ilan University*

Abstract. Hyperbole is a common figure of speech widely used cross-linguistically. This paper delves into a hyperbole-related puzzle in Mandarin comparatives observed by Yin (1995): Mandarin *bi* (than) comparatives intended for a hyperbolic interpretation are degraded in the sense that they sound as if the speaker is making a literal comparison, but they are significantly improved in the presence of *dou*. We note that *dou* in such uses is most naturally glossed as English *even*. This paper aims to address, in particular, why *dou* helps to improve such uses significantly; to this end, it draws on updated insights from three independent fields, i.e., hyperbole, the semantics of *dou*, and *even*-like particles in general. More concretely, it integrates three independently motivated assumptions: (i) hyperboles involve mapping from a factual scale to an evaluative / affective scale (Nouwen, 2024), (ii) *dou* is an *even*-like particle (Liao, 2011; Liu, 2017; Chen and Greenberg, 2022), and (iii) *even*-like particles necessarily map their prejacent and its alternatives to a contextually salient scale (Greenberg, 2018; Zhang, 2022). In light of such assumptions, we propose that *dou* improves hyperbolic *bi* comparatives in Mandarin because it encodes scale mapping that is required by but lacking in hyperbolic *bi* comparatives, and we formally implement this idea via Chen and Greenberg's (2022) degree-based semantics of *dou*. Beyond addressing this puzzle, this work is of potential interest to the study of hyperbole in general, a phenomenon that has 'historically resisted formal analysis' in Feinmann's (2023) words.

Keywords: hyperbole, comparatives, hyperbolic comparatives, Mandarin *dou*, *even*, factual scale, affective / evaluative scale, scale-mapping, degree QUD, focus-sensitivity.

1. Introduction

Consider (1a), a regular English comparative. Intuitively, the speaker is comparing the blue box and the red box w.r.t. the size, and claims that the size of the blue box literally exceeds that of the red box. Now consider (1b). Suppose this scenario: A man got his face seriously stung by a wasp, and it became swollen. Someone saw his face and uttered (1b).

(1) a. The blue box is bigger than the red box.
b. His face is bigger than a [washbasin]$_F$.

Clearly, (1b) is truth-conditionally false because no matter how big his face became after the sting, it is impossible that his face is literally bigger than a washbasin. Most likely, the speaker is overstating or exaggerating about, say, the medical severity of his face. In the following, we call comparatives intended to overstate or exaggerate hyperbolic comparatives. (See e.g., Claridge, 2010 for hyperbole in general.)

Although (1a) and (1b) are syntactically identical (*X be Adj.-er than Y*), English interlocutors

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easily distinguish and accept them: (1a) is automatically interpreted and accepted as a literal comparison while (1b) is automatically interpreted and accepted as a hyperbolic comparison. Interestingly, the case seems different in Mandarin. Consider first (2) from Yin, 1995:[2]

(2) Kangyuncai bi Zhuxiaoyun xixin.
Kangyuncai than Zhuxiaoyun careful
Kangyuncai is more careful than Zhuxiaoyun. (Yin, 1995, ex.23b)

(2) is a regular *bi* (than)-based comparative in Mandarin (*bi* comparatives henceforth), and its interpretation is straightforward: The speaker compares the degree of carefulness of Kangyuncai and that of Zhuaxiaoyun, and claims that the former literally exceeds the latter. This is nothing special. Now consider the minimal pair (3)[3] and (4) (See Yin, 1995 for similar observations):

(3) Context: A post on Red Notebook, a Chinese social media platform, complains that the food provided by the poster's university cafeteria was prefabricated and not fresh. One user replied to this with the following comment, referring to some chicken food there:
na-ge ji si de shijian bi [women xuexiao jian-xiao de shijian]$_F$
that-CLF chicken die DE time than 1PL university found-university DE time
dou chang.
even long
The length of the time for which that chicken has been dead is even longer [the length of time for which our university has existed since its founding]$_F$.

(4) #na-ge ji si de shijian bi [women xuexiao jian-xiao de shijian]$_F$
that-CLF chicken die DE time than 1PL university found-university DE time
chang.
long
The length of the time for which that chicken has been dead is longer [the length of time for which our university has existed since its founding]$_F$.

(3) is clearly truth-conditionally false. However long that chicken has been dead, its dying time cannot precede the founding time of that university. Most plausibly, the respondent was exaggerating, and via this exaggeration, the respondent was complaining about the unfresh-ness of the food. What is noteworthy about (3) is the presence of the particle *dou*. The semantics of *dou* is highly debated in the literature. It has e.g., an *each*-like distributive use and an *even*-like scalar use. (see Sect. 2.3) We note that *dou*, intuitively, is most naturally glossed as English *even* in (3).[4] Importantly, if (3) is stripped of *dou*, as in (4), the sentence is degraded. It feels like the respondent was literally comparing how long the chicken has been dead and how long the university has existed since its founding, and claiming that the former literally exceeds the

[2]Yin, 1995 was written in Chinese, and there is no English gloss or translation at all therein. The glosses and translations for examples quoted from Yin, 1995, as well as those for all other Chinese examples in this paper are provided by us.

[3]This is a naturally occurring example retrieved from `https://www.xiaohongshu.com/explore/66ee95af000000001e01802d?xsec_token=AB7BSV-0I1f--pAenO06lMdiQIdF9C_VoAxaRuhhkN9cg=&xsec_source=pc_search&source=web_explore_feed`. The name of the university mentioned in this example is intentionally replaced with 'our university' by us.

[4]This intuition is verified by all of our consultants who speak Mandarin as a mother tongue and use English as a working language.

latter. We also note that translating the above two English examples (1a)-(1b) into Mandarin (5)-(6) triggers the same felicity contrast:

(5) lan hezi bi hong hezi da.
blue box than red box big
The blue box is bigger than the red box.

(6) Context: The same as (1b)
ta de lian bi [lian-pen]$_F$ #(**dou**) da.
3SG DE face than face-bowl even big
a. ***dou*-marked**: His face is (even) bigger than [a washbasin]$_F$.
$\rightsquigarrow$ automatically accepted as a hyperbolic comparative.
b. ***dou*-less**: Degraded, feels like the speaker is comparing 'his face' and washbasins literally w.r.t. the size, and claiming that 'his face' is literally bigger.

The interpretation of (5) is identical to its English equivalent (1a). But in (6), the *dou*-less version (6b) is degraded and it sounds as if the speaker is making a literal comparison; in contrast, the *dou*-marked version (6a) is automatically accepted as a hyperbolic comparison. [5]

To the best of our knowledge, Yin (1995) is the first to simultaneously observe that (**i**) Mandarin *bi* comparatives are degraded with a hyperbolic interpretation (Yin, 1995: p.106), and (**ii**) *bi* comparatives with *dou* are compatible with a hyperbolic interpretation (Yin, 1995: p.105).[6] (See also Deng, 2018; Guo, 2022 for the observation that *bi* comparatives with *dou* are good with a hyperbolic interpretation, and see e.g., Shi, 1997; Donazzan, 2008; Xu, 2024 for the observation that *bi* comparatives *per se* are degraded with a non-literal interpretation.)

When Yin (1995) makes the above two observations, his interest lies in his so-called two 'functions' associated with the construction *X bi Y dou W*. Look at (7):

(7) a. Kangwencai bi Zhuxiaoyun **dou** xixin.
Kangwencai than Zhuxiaoyun even careful
Kangwencai is even more careful than Zhuxiaoyun. (cf. Yin, 1995, ex.23a)
b. zhe-gen huochai bi zhen-jian **dou** xi, yi cha jiu duan.
this-CLF matchstick than needle-tip even thin once strike then snap
This matchstick is (even) thinner than needle tips; it snaps easily. (cf.Yin, 1995, ex.11b)

[5]Some of our Mandarin native-speaker consultants find the felicity contrast between (6a) and (6b) to be sharp; some report that although (6a) is perfect, (6b) is not totally unacceptable. We leave the investigation into the cross-speaker variation for future research. But crucially, (6b) is judged as less good than (6a) across all consultants.

[6]Two clarifications. First, Yin (1995) notes that *bi* comparatives with either *dou* or the particle *hai* (literally, *still*) are compatible with a hyperbolic interpretation. We share this intuition; readers can simply replace *dou* in (3) / (6a) with *hai* and get the same effect. Yin (1995) explicitly clarifies that he uniformly uses *hai* throughout the examples in his paper, but means that it represents either of the two particles (*hai* / *dou*) (Yin, 1995: p.105). This paper is dedicated to *dou* in such cases; we simply replace *hai* with *dou* in examples cited from him.

Second, we remain agnostic whether *dou* and *hai* play exactly the same role in improving *bi* comparatives intended for a hyperbolic interpretation. (See Miashkur and Greenberg (2019) who compares the effects of *even*-like particles vs. incremental particles, like *daze* vs. *esche* in Russian, when combining with comparatives. See also Chen (2024) for *even* with comparatives.) See Fn.12 for a case where *dou* still helps making the improvement but *hai* does not. In this work, we are only concerned with Yin's observation that *bi* comparatives are degraded with a hyperbolic interpretation and that *bi* comparatives with *dou* are good with a hyperbolic interpretation. We leave *hai* in such uses for future research.

The two comparatives (7b)-(7a) are syntactically the same. (7a) is understood literally, i.e., Kagnwencai's degree of carefulness literally exceeds Zhuxiaoyun's degree of carefulness. In contrast, (7b) is understood non-literally: The degree of thinness of this matchstick cannot literally exceed that of needle tips. Yin 's (1995) original interest consists in how to tell apart the literal vs. non-literal interpretations associated with this construction.[7] Like Yin (1995), subsequent scholars (e.g., Yu and Xia, 2008; Xu, 2024) are also mainly interested in how these two interpretations differ.

One question which is not discussed is what makes the *dou*-less hyperbolic *bi* comparatives in Mandarin necessarily interpreted 'literally' (despite the speaker's intentions to use them in a hyperbolic way), and consequently - degraded.[8] The question is pressing especially since in other languages (like English) comparatives which seem completely parallel are immediately understood hyperbolically, and are felicitous. Answering this question requires further research (perhaps including a cross-linguistic one), which is beyond the scope of this paper. In this paper we will simply take this as an empirical fact. Instead, **our goal in this paper is to try and explain the mechanism by which the presence of *dou* helps improving the status of comparatives like (3)/(6a)/(7b)**.[9]

Before proceeding to the specific plan of this paper, we make a novel observation that lends further support to *dou*'s ability to improve the status of *bi* comparatives intended for a hyperbolic interpretation. The existing literature which has reported that *dou*-hosting *bi* comparatives are compatible with a hyperbolic interpretation (see e.g., Deng, 2018; Guo, 2022) seems to have only paid attention to cases where the hyperbolically used phrase occupies the position of the comparison standard, i.e., *Y* in *X bi Y dou W*. This might be due to the fact that scholars are mainly interested in the two interpretations associated with *X bi Y dou W* just mentioned above. *Dou* is a well-known focus-sensitive particle (e.g., Liao, 2011; Liu, 2017; Xiang, 2020), and on its *even*-like use, it associates backwards. We note that in *X bi Y dou W*, *dou* associates with the comparison standard *Y* by default and cannot associate with the comparison target *X*. Here we make a novel, though perhaps less surprising, observation that a similar felicity contrast arises if the hyperbolically used phrase occupies the position of the comparison target.

We first illustrate this observation with (6) above where the hyperbolically used phrase occupies the position of the comparison standard. Let's reverse the order between the comparison standard 'lian-pen' (washbasin) and the comparison target 'ta de lian' (his face) in (6) by turning the former into the comparison target and the latter into the comparison standard; given that the order has been reversed, we also replace the adjective 'da' (big) with its antonym 'xiao'

[7] In Yin 1995, the literal interpretation associated with this construction is called *bi-jiao* (literally, *compare-compare*) while the non-literal interpretation is called *bi-kuang* (literally, *compare-circumstance*).

[8] Yin (1995) himself does not address this observation. Shi (1997), when discussing the construction *X bi Y hai W*, remarks that *bi* comparatives *per se* are a pure objective statement (Shi, 1997: p.25), and likewise, gives no explanation. See also Xu (2024) who simply takes *bi* comparatives to be incompatible with a non-literal interpretation, though, again, no explanation is offered.

[9] There are other comparative forms in Mandarin (see Liu, 2014 for various comparative forms). This paper exclusively deals with *bi* comparatives. As for how other forms of comparatives fare with hyperbolic interpretations and whether they need the assistance of *dou* or *hai* or other similar particles, we leave such issues for future research.

(small), as we do in (8): [10] [11]

(8) Context: The same as (6) / (1b)
[lian-pen]$_F$ #(**dou**) bi tade lian xiao.
face-bowl even than his face small
a. ***dou*-marked**: Even [washbasins]$_F$ are smaller than his face.
b. ***dou*-less**: ?? [Washbasins]$_F$ are smaller than his face.

Similarly to what is observed above with (6), the *dou*-less version (8b) sounds as if the speaker is comparing washbasins and 'his face' w.r.t. the size literally, and claiming that 'washbasins' are literally smaller. Again, this is inconsistent with our world knowledge, which in Mandarin we saw leads to a degraded status here. But with *dou* (8a), it feels much more natural and listeners automatically recognize and accept its hyperbolic effect.[12] This felicity contrast is also seen in (9) and (10), respectively constructed from (3) and (7b). Our novel observation and Yin's (1995) observation combined demonstrate that the puzzle is attested regardless of the position the hyperbolically used phrase occupies in *bi* comparatives.

(9) [women xuexiao jian-xiao de shijian]$_F$ #(**dou**) bi na-ge ji si
1PL university found-university DE time even than that-CLF chicken die
de shijian duan.
DE time short
a. ***dou*-marked**: Even [the length of time for which our university has existed since its founding]$_F$ is shorter the length of the time for which that chicken has been dead .
b. ***dou*-less**: ??[The length of time for which our university has existed since its founding]$_F$ is shorter the length of the time for which that chicken has been dead.

(10) [zhen-jian]$_F$ #(**dou**) bi zhe-gen huochai cu.
needle-tip even than this-CLF matchstick thick
a. ***dou*-marked**: Even [needle tips]$_F$ are thicker than this matchstick.
b. ***dou*-less**: ?? [Needle tips]$_F$ are thicker than this matchstick.

As aforementioned, our goal is in this paper is to explain the mechanism by which the presence of *dou* helps improving the status of *bi* comparatives intended for a hyperbolic interpretation.

[10] In (8), to associate with the comparison target (the subject), *dou*, for syntactic reasons, has to be pre-posed to the position before *bi* (than). See e.g., Shyu, 2004 for a detailed syntactic profile of *dou*.

[11] Some of our English native-speaker consultants report that for (8), they find the *even*-marked version (8a) to be much more preferable than the *even*-less version (8b), and that the *even*-less version (8b) feels as if the speaker is making a 'realistic rather than hyperbolic statement'. If this observation is robust, then our puzzle is (partly) attested in English as well. One question is why the presence of *even* is preferred only when the comparison target is focused. We leave this for future research.

[12] Two observations. First, those Mandarin native-speaker consultants who find the felicity contrast between (6a) and (6b) to be somewhat subtle (recall Fn. 5) find the felicity contrast between (8a) and (8b) to be much sharper. We leave for future the question why the same hyperbolically used phrase staying in different syntactic positions (the comparison target position vs. the comparison standard position) leads to the judgmental variation on the part of the same consultants.

Second, we note that *hai* does not help in cases like (8) where the hyperbolically used phrase occupies the position of the comparison target. Like *dou*, *hai* can also appear in the position immediately following the comparison target as in *X hai bi Y W* (see e.g., Yang, 2017; Chen, 2018 for *hai* with comparatives), but replacing *dou* with *hai* in (8) still gives rise to a literal flavor.

To achieve this goal, we first need to understand hyperbole in general, given that hyperbolic comparatives are, after all, a kind of hyperbole. Then, we need to understand the particle *dou*, given that *ceteris paribus*, its presence alone makes the improvement as shown in above examples. Lastly, since the most natural English equivalent of *dou* in such expressions is *even* and the line of analysis of *dou* to be adopted is heavily inspired by existing literature on the semantics of *even*, we need to understand what potential properties of *even* or *even*-like particles are of relevance here.[13] To foresee, we will integrate insights from these three independent fields. (i) hyperboles involve scale mapping (Nouwen, 2024), (ii) *dou* is essentially an *even*-like scalar particle (Mok and Rose, 1997; Liao, 2011; Liu, 2017; Chen and Greenberg, 2022), and (iii) *even*-like particles map the prejacent and its alternatives to a contextually salient scale (Greenberg, 2018; Zhang, 2022). Our major claim is as follows. Hyperbolic comparatives, like hyperboles in general, necessarily map to a contextually salient evaluative / affective scale, but Mandarin *bi* comparatives, for reasons unknown yet, have difficulty in achieving this mapping; *dou*, which encodes scale mapping, helps overcoming this problem and therefore significantly improves them.

The remainder of this paper is structured as follows. Sect. 2 introduces the assumptions which our proposal will build on. Sect. 3 presents our proposal in detail and illustrates how it accounts for our puzzle. Sect. 4 concludes and points out some open issues.

2. Existing insights from the research on hyperboles, on *even* and on *dou*

As introduced above, our proposed solution is built on insights from three fields, i.e., hyperboles, the semantics of *dou* and the semantics of *even*. This section first presents the relevant insights into hyperboles. Then, for ease of exposition, we move to the semantics of English *even* and its cross-linguistic counterparts before finally proceeding to Mandarin *dou*.

2.1. Hyperbole involves two scales

Hyperbole is a common figure of speech that, very intuitively, expresses more than what one says without the intention of deceiving the addressee. (See e.g., Sperber and Wilson, 1985; Wilson and Carston, 2007; Carston and Wearing, 2015.) One recent line of formal modeling of hyperbole, which we will follow in this paper, comes from Nouwen 2024. Nouwen (2024) argues that hyperboles simultaneously involve the real state of affairs and the speaker's attitude to this state of affairs, and formalizes them as two scales associated with two order-inducing questions under discussion (QUD). Specifically, Nouwen (2024) argues that hyperboles involve a factual scale associated with a factual order-inducing QUD, which is about the state of the world, and an evaluative / affective scale associated with an evaluative / affective order-inducing QUD, which addresses the speaker's subjective evaluation of the world via this (untrue) exaggerated utterance. The QUDs are contextually decided, implicitly or explicitly. Take (11) as an example.

(11) I've got a hundred things to do today. (Nouwen, 2024, ex.19)

Following Nouwen (2024), the factual order-inducing QUD could be '*how busy is the speaker?*' or '*how many things does the speaker has got to do?*', and a plausible evaluative / affective

[13] Recall a similar observation in English in Fn 11.

order-inducing QUD could be '*how bad are things?*'. By uttering (11), the speaker is not realistically addressing the factual QUD; instead, via this hyperbolic utterance, the speaker is actually addressing the evaluative QUD. Crucially, Nouwen (2024) argues that the two scales are aligned: A higher value on the factual scale leads to a higher value on the evaluative / affective scale, or in his descriptive terms, "the bigger the 'hyperbole', the more pronounced the evaluative effect" (Nouwen, 2024: p.714). This is illustrated in the contrast (11) vs. (12).

(12) I've got millions of things to do today. (Nouwen, 2024, ex.20)

Though (11) and (12) answer the same evaluative / affective QUD ('*how bad are things?*'), (12) expresses a much stronger degree to which the speaker deems things to be bad than does (11).

In this work, we will adopt Nouwen's (2024) proposal that hyperboles involve a two-scale structure mapping from the factual scale to the evaluative / affective scale. And we will give more details on this account in Sect. 3. (See also Kao et al., 2014, built within the framework of Rational Speech Act, for a similar idea that hyperboles involve both the factual and affective aspects.)

2.2. The degree-based analysis of *even* and its cross-linguistic siblings: Map to a salient scale

Traditionally, *even* has been argued to assert that prejacent p is true in the world of evaluation, and to presuppose that p is less likely than its alternatives q in the contextually supplied set of alternatives, C (e.g., Karttunen and Peters, 1979; Rooth, 1985; Guerzoni, 2004; Chierchia, 2013). This has been oftentimes formulated more or less like (13).[14]

(13) $\|even\| = \lambda C.\lambda p. : \forall q \in Cq \neq p \rightarrow p <_{likely} q.\lambda w.p(w)$.
where $C \subseteq \|p\|^F \wedge \|p\|^O \in C \wedge \exists qq \neq p \wedge q \in C$

Despite its proven fruitfulness, this analysis has been challenged on various grounds, and the challenge that is of particular interest to us concerns the nature of the scale. It has been argued by various theories (e.g., Kay, 1990; Rullmann, 1997; Gast and Van der Auwera, 2011) that the scale *even* operates on is not necessarily associated with (un)likelihood. More specifically, Greenberg (2016; 2018) illustrates that p being less likely than q is neither a necessary condition (14) nor a sufficient condition (15) for the felicity of *even p*. In (14), given our world knowledge regarding what materials tools are often made of, the prejacent is more likely than its salient alternative but *even* is felicitous; thus, the comparative likelihood presupposition is not necessary for the felicity of *even p*. In (15), giving birth to a boy and giving birth to a girl are equally less likely than giving birth but *even* is felicitous only with giving birth to a boy; thus, nor is that sufficient for the felicity of *even p*.

(14) Seller to client: Both tools are strong. The one on the right is made of strong aluminum, and the one on the left is **even** made of [steel]$_F$. (Greenberg, 2016, ex.15)

(15) Context: Any princess who gives birth can stay in the palace. If she gives birth to a boy, she becomes a queen (with the result that on average 50% of those who have given birth become queens). (Greenberg, 2018, ex.10)
Princess Jane gave birth. She (**even**) gave birth to [a boy]$_F$/#[a girl]$_F$.

[14] Debates exist about whether *even* has an existential presupposition. See e.g., Rullmann, 1997; Greenberg, 2016.

Instead, Greenberg (2018) argues that the nature of the scale is context-dependent. Reconsider (15). Suppose that the context is modified in such a way that if Princess Jane gives birth to a girl, with other things being equal, she becomes a queen. With this contextual manipulation, the felicity status would be reversed in (15): *even* becomes felicitous with 'she gave birth to a girl' but gets infelicitous with 'she gave birth to a boy'. As suggested by Greenberg (2018), the scale for (15) could, plausibly, be a scale of happiness or importance of Princess Jane. Similarly, in (14) the scale is not based on unlikelihood but on physical strength, or usefulness of the working tool.

The idea that the nature of the scale *even* operates on is context-dependent is also proposed by Zhang (2022). Zhang (2022) argues that the use of *even* is always QUD-sensitive in the sense that it necessarily addresses a contextually salient degree-related QUD. For space limits, we refer readers to Zhang (2022) for the specific motivating observations and arguments. In this work, we follow the spirit of Greenberg (2018) and Zhang (2022), and assume that *even* is associated with a scale whose nature is determined by a contextually salient degree question; and for convenience, we call this line the degree-based analysis of *even*. Crucially, besides English *even*, *even*-like particles in other languages have also been shown to associate with a scale whose nature is not necessarily likelihood but is context-dependent, e.g., Hebrew *afilu* and *BIXLAL* (Greenberg, 2020), Russian *daze* (Miashkur, 2017), and Mandarin *shenzhi* and, most relevantly, Mandarin *even*-like *dou* (Chen and Greenberg, 2022; see also Xiang, 2008 for a predecessor suggestion that the scale for Mandarin *even*-like *dou* is context-dependent).

Another component of the degree-based semantics of *even* is its inherent sensitivity to contextual standards. Greenberg (2018) observes that *even* requires both the prejacent *p* and its salient alternative(s) *q* to indicate a degree above the standard on this contextually determined scale. This is illustrated in (16): *even* is felicitous only in Seller (a), where the focused item steel and its alternative iron both exceed the standard on the strength scale. The standard-sensitivity element is also incorporated into Zhang's proposal for *even*, and has been reported to hold for the cross-linguistic *even*-like particles mentioned above, including *even*-like *dou*, although they differ in whether the standard-sensitivity requirement applies to both the prejacent *p* and its alternatives *q* (Greenberg, 2018) or just *p* (Zhang, 2022).

(16) Context: Both iron and steel are strong, but steel is stronger, and both plastic and aluminum are weak, but aluminum is stronger. (Greenberg, 2018, ex.16)
Client: I need a strong tool. What about the red and blue tools over there?
Seller (a): The red one is made of iron and the blue one is (even) made of $[\text{steel}]_F$.
Seller (b): The red one is made of plastic and the blue one is (#even) made of $[\text{aluminum}]_F$.
Seller (c): The red one is made of plastic and the blue one is (??even) made of $[\text{steel}]_F$.

2.3. The Mandarin particle *dou*: An *even*-like particle

The Mandarin particle *dou* has various uses, e.g., an *each*-like distributive use, an *even*-like scalar use, a free-choice licenser use and an *already*-like aspectual use (e.g., Xiang, 2020). In the rich body of literature on Mandarin *dou*, one of the debates is whether its various uses or at least some of them can be reduced to a single semantic core or they should be treated separately. For instance, some (e.g., Zhang, 1997; Hole, 2004; Chen, 2008) argue that the distributive use and the *even*-like scalar use should receive different treatments, while some claim that *dou* has

a unified semantics from which (some of) its uses can be derived. Scholars who argue that *dou* has a (partly) unified semantic core also differ on what the semantic core is. (See e.g., Xiang, 2008; Tsai, 2015; Xiang, 2020 for different suggestions.)

Particularly relevant to us, there has recently emerged a thread of analysis that takes *dou* to be uniformly an *even*-like scalar particle, although different proposals differ on the details. Liu (2017), a.o. proposes that *dou* is essentially *even*-like in the spirit of Karttunen and Peters (1979) (cf. entry (13)), by hypothesizing that its different uses can be derived by assuming that it can operate on different types of alternatives. (see Liu, 2017, 2019 for details.) Developing from Liu (2017), Chen and Greenberg (2022) observe that *dou* is standard-sensitive on its *even*-like scalar use and, crucially, on its distributive use as well. Given that English *even* and its cross-linguistic siblings have been reported to be standard-sensitive as mentioned above, they take this observation to further support the analysis of *dou* as *even*-like scalar at its core. In addition, they observe that like English *even* and its cross-linguistic counterparts, the comparative likelihood is neither necessary nor sufficient to license *dou* on its *even*-like scalar use; rather, the scale is context-dependent. Motivated by such observations, they, integrating insights from Liu 2017 and Greenberg 2018, propose a degree-based semantics of *dou* a la Greenberg' semantics for *even* as well. See also e.g., Mok and Rose (1997); Liao (2011) for the suggestion *dou* is essentially *even*-like scalar.

In this paper, we adopt the general line of analysis that *dou* is essentially *even*-like. Our main motivation to adopt this position is quite straightforward: We aim to explain why *dou* helps improve otherwise degraded *bi* comparatives intended for a hyperbolic interpretation, and importantly, in such cases *dou* is most naturally glossed as *even*. Moreover, as we will argue below, taking *dou* to have an *even*-like semantics (at least in these sentences) can be derived from the degree-based semantics of *even*-like particles and the analysis of hyperbole as involving two scales (cf. Nouwen, 2024).[15]

3. The proposal: *dou* facilitates the scale mapping

3.1. The proposal in a nutshell

Recall our research question: Why does the particle *dou* significantly improve the degraded, *bi* comparatives intended for a hyperbolic interpretation in Mandarin? The reason for this degraded status is that the intended hyperbolic interpretation is somehow blocked, and consequently we only get the literal meaning, which is clearly false. We assume that hyperbolic comparatives necessarily involve scale mapping from the factual scale to the evaluative / affective scale. This also resonates with e.g., Yin's (1995) initial intuition that the hyperbolic comparatives are not intended to realistically characterize the ordering between the compared items but to express the speaker's positive or negative emotion. (Yin, 1995: p.106) Given the empirical observation that *bi* comparatives intended for a hyperbolic interpretation give rise to a literal flavor as presented above, they boil down to getting trapped at the factual scale and having difficulty in mapping to the affective scale in light of this assumption (see details below). Based on this reasoning, we make the following proposal (17):

(17) **The proposal:** As an *even*-like particle that encodes mapping to a contextually salient

[15] In principle, our work is also compatible with the stance that takes the *even*-like scalar use of *dou* to be distinguished from other uses (e.g., Chen, 2008).

scale, *dou* helps Mandarin *bi* (than) comparatives intended for a hyperbolic interpretation achieve mapping to an evaluative / affective scale and thus improves them.

3.2. Developing this proposal

Nouwen's (2024) formalization of hyperboles as a two-scale structure Recall that in Nouwen's (2024) framework, hyperboles involve mapping from a factual scale to an evaluative / affective scale. The factual scale is associated with a factual order-inducing QUD that is about the real state of affairs; the evaluative / affective scale is associated with an evaluative / affective order-inducing QUD that addresses the speaker's subjective evaluation of this state of affairs. The two scales are contextually determined, implicitly assumed or explicitly specified. Crucially, the factual scale is mapped to and aligned with the evaluative / affective scale. Let's look at the two scales in more detail.

Nouwen (2024), inspired by Walton (2017), suggests that hyperboles involve a comparison among three points on the factual scale, roughly, (a) the expected value which he terms as 'contextual norm', (b) the value that is realistically true, and (c) the value that is asserted. To see this, consider (18). Suppose that Timid organized a housewarming party; he invited 60 guests and expected around 30 to arrive, but 58 showed up. One guest, expressing how successful she thought the party was, uttered (18) to Timid.

(18) There were a hundred people in your living room. (Nouwen, 2024, ex.1)

Suppose that the factual QUD is '*how many people attended the party?*'. The three points / values are three cardinalities of the party participants: (a) the expected cardinality of the participants, i.e., *30*, (b) the cardinality of the participants that really showed up, i.e., *58*, and (c) the asserted cardinality of the participants in the utterance, i.e., *100*. Following Nouwen 2024, for (18) to count as a hyperbole, (i) the expected value (*30*) must be smaller than the real value (*58*) and (ii) the asserted value (*100*) must significantly exceed the real value (*58*); (18) satisfies both conditions.

Nouwen (2024) formalizes this idea within the framework of partition semantics of questions. In his formalization, a QUD determines a partition over a set of possible worlds $\mathscr{W}$. Two worlds w and w' stand in equivalence relation $\mathscr{R}$ if and only if they provide the same answer to the question, and a cell is a set of worlds that agree on the answer to this QUD. Hyperboles involve order-inducing QUDs. A QUD is order-inducing if $\mathscr{R}$ is based on an ordering over worlds. Specifically, Nouwen (2024) assumes a measure function ε associated with an order-inducing QUD; ε takes a w and returns the value that answers this QUD in this w. Take (18) as an example. For the order-inducing QUD '*how many people attended the party?*', ε is a measure function that takes a world w and returns the cardinality of party participants in that w. Via this, worlds are ordered w.r.t. ε: For two worlds w and w', $w \leq w'$ if $\varepsilon(w) \leq \varepsilon(w')$. Given that a proposition is a set of worlds, two propositions p and p' can be ordered by applying ε to the worlds in which they are respectively true. Based on this framework, Nouwen (2024) proposes a formal definition of hyperbole. Assuming a factual order-inducing QUD and a context as a triple (Q, n, h), a hyperbole is defined as (19):

(19) An utterance of a sentence M in context (Q, n, h) counts as hyperbole if and only if $n \prec h$ and $\forall c \in \tau_Q : h \prec c$ and the scalar distance between h and c is large.

In this definition, Q is a question under discussion; n, h, c are three cells (cells in the sense of partition semantics on questions): n is the cell which is EXPECTED to contain the real world; h is the cell which DOES contain the real world; c is the cell which contains the world that holds for the exaggerated utterance $\mathscr{M}$. The informally presented party example above (18) can be straightforwardly formalized within this framework.

Nouwen (2024) plugs in an evaluative / affective scale to have a two-scale setup. Suppose that for (18), this contextually salient evaluative / affective QUD is '*how successful was the party?*'. The factual scale, i.e., the scale of participant cardinality, is mapped to and aligned with the evaluative / affective scale, i.e., the scale of party success. To paraphrase this alignment in descriptive terms in the style of Nouwen (2024): A party with more participants was more successful than a party with fewer participants. Likewise, for the evaluative / affective order-inducing QUD, Nouwen (2024) assumes a measure function ε associated with it. For instance, for the evaluative / affective QUD '*how successful was the party?*', ε measures the degree of successful-ness of the party. ε takes a proposition as its input and returns the degree on the corresponding scale.

Identifying what goes wrong with *bi* comparatives intended for a hyperbolic interpretation in light of this assumption Nouwen's (2024) analysis can be understood as having **three requirements**: (**i**) a factual order-inducing QUD, with three relevant points / values at play, (**ii**) an evaluative / affective order-inducing QUD, and (**iii**) mapping from the factual scale to the evaluative / affective scale. Bearing this in mind, reconsider (6) (= (20)) to see what goes wrong for the *dou*-less version (20b) to be recognized and accepted as hyperbole. Recall the scenario: A guy's face was stung by a wasp and got swollen; someone saw this, and uttered it:

(20) tade lian bi [lian-pen]$_F$ #(**dou**) da.
his face than face-bowl even big
a. ***dou*-marked**: His face is bigger than a [washbasin]$_F$.
b. ***dou*-less**: Odd, feels like a literal comparison.

For (20b), a factual order-inducing QUD can be easily constructed. Suppose the factual QUD for (20b) is '*how big is his face?*' / '*what is the size of his face?*', and let's assume the following three relevant values: (a) the expected value is the size we expected his face to be after a sting, which is slightly bigger than a regular face; (b) the real value is the real size of his face after the sting, which is noticeably bigger than a regular face but clearly not bigger than a washbasin; (c) the asserted value is the (untrue) exaggerated size of his face, i.e., bigger than a washbasin. This assumed scenario is in keeping with our intuition: If his face is not noticeably but merely slightly bigger than a regular face, the speaker would not make so exaggerated an utterance. In this scenario, the first requirement for hyperbole, i.e., a factual order-inducing QUD with three relevant values, is met.

Now let's turn to the second requirement. Given the scenario as well as the world knowledge, the listener can easily tell that the literal meaning of (20b) is false. And in principle, given the context, it is not difficult for the listener to speculate that the speaker does not literally mean that, but intends to convey something else, such as the medical severity of 'his' face. Thus, an evaluative / affective scale is also easily available, meeting the second requirement.

But still, (20b) gives rise to a literal flavor. This contrasts with (20a) which minimally differs from (20b) in that (20a) hosts *dou*. For (20a), the factual QUD and the evaluative / affec-

tive QUD can be plausibly assumed to be the same as those for (20b), but listeners immediately recognize and accept the intended hyperbolic interpretation. Assuming that that the first two requirements are equally met for (20a) and (20b), then their felicity contrast can only be attributed to their different behaviors w.r.t. the last requirement, i.e., the scale mapping: Mapping from the factual scale to the evaluative / affective scale crashes with (20b) but succeeds with (20a). Since (20a) and (20b) differ only in the presence / absence of *dou*, the successful scale mapping in (20a), which is required but, for reasons unknown, lacking in (20b), must be ascribed to *dou*.

How *even*-like *dou* helps with scale mapping We assume a degree-based semantics of *dou* suggested by Chen and Greenberg (2022), which models *dou* on Greenberg's (2018) degree-based semantics of English *even*. Chen and Greenberg's entry, like Greenberg's (2018) entry for English *even*, can be reanalyzed as being made up of four components.

(21) Four components of Chen and Greenberg's (2022) degree-based semantics for *dou*
   a. **Mapping to a salient scale**
      (i) **A scale**: *Dou* is a scalar particle; it necessarily maps the prejacent p and its alternative(s) q to a scale.
      (ii) **A contextually determined gradable property *G***: This property determines the nature of the scale.
   b. **A comparative presupposition**: The degree of some non-focused item x in the prejacent ranks higher on this G scale in accessible w_1 worlds where the prejacent p holds, than in accessible w_2 worlds where the alternative(s) q holds but the prejacent p does not hold (i.e., accessible $[q \wedge \neg p]$ worlds);
   c. **A norm presupposition**: The degree of this non-focused item x is above the standard / norm on this G scale in accessible w_2 worlds. Given that the degree of x is higher on the G scale in w_1 worlds, the degree of x is also above the standard / norm on the G scale in w_1 worlds. This is intended to account for the standard-sensitivity of *dou*;
   d. **Assertion**: $p(w)$

Let's zero in on the the first component (21a), i.e., mapping to a scale whose nature is decided by the context. We argue that this is the exact component that helps achieve scale mapping which *bi* comparatives intended for a hyperbolic interpretation need but have difficulty in realizing. (21a-i) ensures that *even* lexically encodes mapping to a scale; (21a-ii) specifies that the scale is context-dependent, thus making it naturally fit with the evaluative / affective nature of the scale for hyperbole. Moreover, the contextually determined gradable G that determines the nature of the scale in Greenberg 2018 and in Chen and Greenberg 2022 is also technically compatible with the evaluative / affective scale in Nouwen 2024. Nouwen (2024) conceptualizes the evaluative / affective scale as being associated with an order-inducing QUD. We can also associate the contextually supplied gradable property G (21a-ii) with a contextually salient degree QUD, which is exactly the way Zhang (2022) models *even*.

Before proceeding to formally apply the semantics to our data, let's look at another key property of *even*-like *dou*, i.e., focus-sensitivity, to highlight how this semantics of *dou* naturally incorporates the various parts in Nouwen (2024)'s proposal of hyperbole.

The focus-sensitivity of *even*-like *dou* figures prominently in the remaining components: the last component (21d) concerns the prejacent p, and (21b) and (21c) involve alternatives q to the

prejacent p. We argue that there is a natural affinity between *dou*'s focus-sensitivity property and hyperbole. First, recall that in Nouwen's (2024) framework, three relevant points / values on the factual scale are at play for an utterance to count as hyperbole, as informally illustrated above with the party scenario (18). These values / points are obtained by applying the measure function ε whose nature is decided by the factual QUD to the respective worlds. We can assume them as representing three alternative propositions that answer the factual QUD, like (22) for the party scenario.

(22) Factual QUD: How many people attended the party?

Alternative answers to the factual QUD:
a. There were 30 people in your living room. $\rightsquigarrow$ expected value
b. There were 58 people in your living room. $\rightsquigarrow$ real value
c. There were 100 people in your living room. $\rightsquigarrow$ asserted value

Such a move is also compatible with a proposal by Feinmann (2023) who argues that the existence of alternatives is necessary, though insufficient, for an utterance to be properly interpreted as hyperbolic.[16]

Another noteworthy feature about hyperbole in Nouwen 2024 is that the interpretation of the hyperbolic utterance heavily depends on the alternatives on the factual scale, in the sense that the higher the value on the factual scale, the higher the value on the affective / evaluative scale. For the party scenario, the more people at the party, the more successful the party.

The above features of hyperbole naturally mesh with the focus-sensitivity property of *even*-like *dou*: As a focus-sensitive particle, *dou* mandatorily operates over alternatives, and crucially, its semantic interpretation heavily depends on such alternatives. Let's illustrate this similarity with (23) (borrowed from Kay 1990) (the *even*-hosting proposition in (23) can be straightforwardly translated with Mandarin *dou*).

(23) A: It looks as if Mary is doing well at Consolidated Wiget. George [the second vice president] likes her work.
B: That's nothing. Even $[\text{Bill}]_F$ [the president] likes her work.

(24) a. Alt. Set: {<u>Bill likes her work</u>, George likes her work.} (prejacent underlined)
b. Salient degree QUD: How successful is Mary's work at Consolidated Wiget?

With *even* associating with 'Bill', an alternative set (24) is triggered. Note that Bill and George here are pragmatically ranked in terms of their position (president vs. second vice president). Following Kay's (1990) original suggestion that 'Bill's liking Mary's work is construable as evidencing a higher level of success at Consolidated Wiget than merely George's liking her work' (Kay, 1990: p.84), we take the salient degree QUD to be (24b). With this in mind, then the *even*-hosting proposition in (23) would be interpreted as this following the degree-based semantics: Mary's work is more successful in the accessible p worlds where Bill [the president] likes her work than in accessible $[q \wedge \neg p]$ worlds where George [the second vice president] likes her work but Bill does not like her work; in the accessible $[q \wedge \neg p]$ worlds,

[16]Treating the three answers in (22) as alternatives is also consistent with the common prosodic pattern that focused items are often, though not necessarily, stressed. Carston and Wearing (2015) observe that hyperbole tends to be delivered in such a prosodic pattern that the hyperbolically used word or phrase is stressed. In (c) / (18), the stress most naturally falls on the hyperbolically used expression, i.e., the numeral *100*.

Mary's work is positively successful. Since Mary's work is more successful in accessible p worlds, her work is also positively successful in the accessible p worlds. As can be seen, the alternatives play a pivotal role in the interpretation of the utterance in that the successful-ness of Mary's work is heavily dependent on and directly aligned with who likes her work, information provided by alternatives.

Such an affinity enables the degree-based analysis of *dou* to naturally incorporate the above features of hyperbole, adding further weight to our proposal.

3.3. Formalization & Illustration

Based on the above discussion, we adopt Chen and Greenberg's (2022) degree-based semantics of *dou* (25), which is the formalization of the descriptive version in (21) (see the prose there):

(25) **Chen and Greenberg's (2022) degree-based semantics of *dou***

$\|dou\|^{g,c} = \lambda C.\lambda p.\lambda w.: \forall w_1, w_2[w_1 R w \wedge w_2 R w \wedge w_1 \in p \wedge w_2 \in [q \wedge \neg p]] \rightarrow$

a. $\underbrace{\max(\lambda d_1.G(d_1)(x)(w_1)) > \max(\lambda d_2.G(d_2)(x)(w_2))}_{\textbf{comparative presupposition}} \wedge$

b. $\underbrace{\max(\lambda d_2.G(d_2)(x)(w_2)) > Stand_G}_{\textbf{norm presupposition}}$

c. $\underbrace{p(w) = 1}_{\textbf{assertion}}$

Let's apply entry (25) to (20a). Assuming (i) that the non-focused item x is 'his face' (26a), (ii) one relevant alternative to the focused item is 'plate' (26b), and (iii) the salient evaluative / affective degree QUD is about medical severity (26c), applying (25) to (20a) returns (27).

(26) a. The non-focused item x = his face

b. Alt. Set. $=\{$His face is bigger than a washbasin, his face is bigger than a plate$\}$

c. The salient degree QUD: How medically serious is the status of his face?

(27) Interpretation of (20a) via entry (25)

$\|(20a)\|^{g,c} = \lambda C.\lambda p.\lambda w.: \forall w_1, w_2[w_1 R w \wedge w_2 R w \wedge w_1 \in [\max(\lambda d.\text{size}(d)(\text{his face})) > \max(\lambda d.\text{size}(d)(\text{washbasin}))] \wedge w_2 \in [\max(\lambda d.\text{size}(d)(\text{his face})) > \max(\lambda d.\text{size}(\text{plate})(d) \wedge \neg[\max(\lambda d.\text{size}(d)(\text{his face})) > \max(\lambda d.\text{size}(d)(\text{his face}))]]] \rightarrow$

a. $\underbrace{\max(\lambda d_1.\text{severity}(d_1)(\text{his face})(w_1)) > \max(\lambda d_2.\text{severity}(d_2)(\text{his face})(w_2))}_{\textbf{comparative presupposition}} \wedge$

b. $\underbrace{\max(\lambda d_2.\text{severity}(d_2)(\text{his face})(w_2)) > Stand_{\text{severity}}}_{\textbf{norm presupposition}}$

c. $\underbrace{\text{His face is bigger than a washbasin in } w}_{\textbf{assertion}}$

In prose, the comparative presupposition says that the degree of the medical severity of his face is higher in the accessible w_1 worlds, i.e., accessible p worlds where his face is bigger than a washbasin, than in accessible w_2 worlds, i.e., accessible $[q \wedge \neg p]$ worlds where his face is bigger than a plate but not bigger than a washbasin. The norm presupposition says that the degree of medical severity of his face is above the standard on the scale of medical severity in w_2 worlds. Since the degree of medical severity of his face is higher in w_1 than in w_2, the

degree of medical severity of his face is also above the standard in w_1. It asserts that his face is bigger than a washbasin.

As can be seen, *dou* helps map the interpretation of this *bi* comparative to a scale about the medical severity of 'his face' from the factual scale, which is about the size of 'his face'. Crucially, the medical severity scale is aligned with the size scale in that the extent of medical severity is directly decided by the extent of the size.

This entry also straightforwardly accounts for cases where the comparison target is focused. Take (10a) for instance. Assuming (28), applying entry (25) to (10a) returns (29).

(28) a. Non-focused item $x =$ this matchstick (m.s. for short in (29))
b. Alt. Set.: {needle tips are thicker than this matchstick, pins are thicker than this matchstick}
c. Salient evaluative / affective QUD: How poor-quality is this matchstick?

(29) Interpretation of (10a) via entry (25)
$\|(10a)\|^{g,c} = \lambda C.\lambda p.\lambda w.: \forall w_1, w_2[w_1 R w \wedge w_2 R w \wedge w_1 \in [\max(\lambda d.\text{size}(d)(\text{needle tips})) > \max(\lambda d.\text{size}(d)(\text{m.s.}))] \wedge w_2 \in [\max(\lambda d.\text{size}(d)(\text{pin})) > \max(\lambda d.\text{size}(\text{m.s.})(d) \wedge \neg[\max(\lambda d.\text{size}(d)(\text{needle tips})) > \max(\lambda d.\text{size}(d)(\text{m.s.}))]]] \rightarrow$
a. $\underbrace{\max(\lambda d_1.\text{poor-quality}(d_1)(\text{m.s.})(w_1)) > \max(\lambda d_2.\text{poor-quality}(d_2)(\text{m.s.})(w_2))}_{\textbf{comparative presupposition}} \wedge$
b. $\underbrace{\max(\lambda d_2.\text{poor-quality}(d_2)(\text{m.s.})(w_2)) > \mathit{Stand}_{\text{poor-quality}}}_{\textbf{norm presupposition}}$
c. $\underbrace{\text{Needle tips are thicker than this matchstick in } w}_{\textbf{assertion}}$

In prose, the comparative presupposition says that this matchstick is of worse quality in w_1 worlds, i.e., accessible p worlds where needle tips are thicker than this matchstick, than in w_2 worlds, i.e., accessible $[q \wedge \neg p]$ worlds where pins are thicker than this matchstick but needle tips are not thicker than this matchstick. The norm presupposition says that this matchstick is of poor quality in w_2 worlds; given that this matchstick is of worse quality in w_1 worlds, it is of poor quality in w_1 worlds as well. It asserts that needle tips are thicker than this matchstick. Again, the factual scale that is about the size is successfully mapped to the evaluative / affective scale that concerns the quality of this matchstick.

4. Conclusion & Open questions

In this work, we examined a hyperbole-related puzzle initially observed by Yin (1995), i.e., Mandarin *bi* comparatives intended for a hyperbolic interpretation are degraded but get improved with the particle *dou*. By integrating insights from the research on hyperboles, on *even*, and on *dou*, we proposed an account to explain how *dou* helps improving their status.

There are many open issues. First and foremost, what makes the *dou*-less *bi* comparatives in Mandarin necessarily interpreted literally despite the speakers' intention to use them in a hyperbolic way? To fully address this question may require a cross-linguistic research. We observe that languages differ in whether they require an *even*-like particle in parallel hyperbolic comparatives. Specifically, we are informed that an *even*-like particle is similarly preferred in

parallel hyperbolic comparatives in e.g., Polish[17], but it is not required in e.g., English (1b). To complicate this issue, recall our observation in Fn. 11 that English *even* is reported to be preferred by our informants if the hyperbolically used phrase occupies the position of the comparison target ((8a) vs.(8b)), and another observation that Mandarin native-speaker informants find the felicity contrast in (8), where the hyperbolically used phrase occupies the position of the comparison target, is much sharper than in (6), where it occupies the position of the comparison standard (Fn. 12). Does this indicate that syntactic patterns have a role to play?

The second issue concerns a more fine-grained characterization of the scale. Consider (20a). For (20a), we can imagine a scenario where the speaker, by uttering (20a), is emphasizing the large extent to which 'his' face got swollen after the sting, that is, emphasizing that it is BIG in size. If so, there seems to be no scale mapping. We speculate that there is perhaps still scale mapping but in a more subtle way. Consider (30). We observe that (20a) is not a felicitous answer to (30a) which purely inquires about the maximum size 'his' face reaches, but a felicitous answer to (30b) which inquires about whether 'his' face is big or whether its maximum size exceeds the standard on the face size scale. Though both concern SIZE, there seems to be some nuanced difference. We hope to understand this better in future.

(30) a. How big is his face now? / What is the size of his face now?
b. Is his face big?

Third, our proposal is restricted to Mandarin hyperbolic *bi* comparatives, but what about Mandarin non-comparative hyperboles? Is *even*-like *dou* similarly required? If not, why not?[18] The answer seems mixed. We can find *dou*-less hyperbolic utterances in non-comparative forms in Mandarin, but cases also exist where the presence of *dou* is strongly preferred, e.g., (31):[19]

(31) Context: A hairdresser, Maharaja, at a small hair salon (that serve human customers rather than pets) always wears an unwelcoming face; the hair salon owner, unsatisfied with Maharaja for a long time, attributed the bad business partly to this by uttering:
ni zheng-tian chou-mei-ku-lian de yangzi, [gou]$_F$ #(**dou**)
you whole-day worrying-eyebrow-bitter-face DE appearance dog even
bu yuanyi lai women dian!
NEG willing come our salon
(i) ***dou*-marked**: You wear a frowning face every day; even [dogs]$_F$ aren't willing to visit our salon! ⇝ Automatically accepted as a hyperbole
(ii) ***dou*-less**: ??? You wear a frowning face every day; [dogs]$_F$ aren't willing to visit our salon! ⇝Degraded, feels like a literal statement.

The *dou*-marked version (31-i) is automatically accepted as a hyperbolic utterance, and listeners easily recognize that the speaker is not literally talking about which customers would visit the salon but about how unpopular the salon is. In contrast, the *dou*-less counterpart (31-ii) is degraded; it feels like a literal statement, i.e., as if the speaker is literally talking about dogs' unwillingness to visit the salon. This felicity contrast pattern parallels that in hyperbolic *bi* comparatives discussed in the paper.

[17]Thanks to an ESSLLI 35 reviewer for sharing this observation.
[18]Thanks for a Sinn und Bedeutung 29 reviewer for bringing up this issue.
[19]This is the Mandarin subtitle of a line from the Tamil language movie *Maharaja*. (timestamp: 00:04:02)

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