

Concessiveness and verum focus: the semantics of Mandarin concessive scalar particle *hai*

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1 Introduction

Scalar particles (e.g., English *still* and German *noch*) are recognized as polysemous (König 1977; Löbner 1989; Ippolito 2007; Beck 2016a, 2016b, 2020; among others). These particles encompass various readings, including both non-discourse-related readings (temporal, temporal subconstituent, further-to, marginal, comparative and additive) and discourse-related readings (order-of-mention, reaffirmative and concessive).¹ This paper focuses exclusively on one of the discourse-related readings—the concessive reading.

The majority of previous discussions concerning the concessive reading of scalar particles have revolved around the English scalar particle *still*, as exemplified in (1).² However, contrasting with English, I observe that the Mandarin concessive scalar particle *hai* invariably co-occurs with the morpheme *shi*, as exemplified in the corresponding Mandarin sentence in (2).

- (1) Mary's doctor asked her to rest, but she **still** ran the marathon.
- (2) Mali-de yisheng rang ta xiuxi, dan ta **hai**-(shi) qu pao le malasong
Mary's doctor ask her rest but she HAI-SHI go run ASP marathon
'Mary's doctor asked her to rest, but she still ran the marathon.'³

This *hai-shi* co-occurrence pattern presents an opportunity to explore the semantic nature of the Mandarin concessive scalar particle *hai*. I propose that Mandarin concessive *hai* presupposes a public biased opinion favoring the negative alternative to the proposition to which *hai* is attached, which consequently triggers the presence of the verum focus marker *shi*.

This paper is organized as follows. Section 2 introduces the basic facts of the concessive *hai* with a focus on its co-occurrence with *shi*. Section 3 argues that *shi*, when co-occurring with the concessive *hai*, functions as a verum focus marker. Section 4 proposes a semantic analysis for the Mandarin concessive *hai*, explaining why it always co-occurs with the verum focus marker *shi* and why the concessive *hai* doesn't appear when the verum focus marker *shi* is not licensed. The lessons for the analysis of concessive scalar particles of other languages are also discussed. Finally, Section 5 concludes the paper.

¹These terms are from Beck's works (2016a; 2020). Readers are encouraged to refer to Beck (2020) for detailed definitions and illustrative examples.

²In the literature, the *still* with the concessive reading is frequently referred to as "adversative *still*."

³Abbreviations used in this paper: ASP: aspect; CL: classifier; Q: question particle.

2 Facts: concessive *hai* + *(*shi*) and order-of-mention/reaffirmative *hai* + *(*shi*)

Among the three discourse-related readings of scalar particles, the concessive reading is the only one that requires the presence of the morpheme *shi* while the other two discourse-related readings, order-of-mention and reaffirmative, don't occur with *shi*.

According to Beck (2016a, 2016b, 2020), the discourse-related readings of scalar particles include the order-of-mention reading, the reaffirmative reading, and the concessive reading. These readings are differentiated from non-discourse-related readings as they pertain to the discourse (what has been said) rather than to eventualities (what has happened).

The order-of-mention reading indicates that the current proposition, the pre-jacent of scalar particles, is added to the discourse to provide more information. For example, in (3), the table and the window in the room have been previously introduced, and then the description of the door marked by the scalar particle *hai* is added to the discourse in order and provides further information about the room. For the order-of-mention *hai*, the presence of *shi* is not required and is even disallowed from appearing. When *shi* is added to the example, it can only take a temporal reading as in (4), indicating that there was a door on this side before, and the door is still on this side now.

- (3) **Context:** We are describing a room. I have described the table and the window in the room and then I utter the following sentence:

zhe-bian **hai**(*-shi) you yi-shan men
this-side HAI-SHI exist one-CL door
'Then, there is the door on this side.'

- (4) zhe-bian **hai**-shi you yi-shan men
this-side HAI-SHI exist one-CL door
'There is still a door on this side (now).' (temporal reading)/
'Then, there is the door on this side.' (order-of-mention reading)

The reaffirmative reading has the effect of restating a proposition that has already been stated or is salient in the discourse. For example, the reaffirmative *hai* in (5) serves as a reminder or reinforcement of the fact that he carried you in his arms before. Similarly, the reaffirmative *hai* cannot be used with the morpheme *shi*.

- (5) **Context:** It's known that he ever carried you in arms when you were a baby.

ni wang le, ta **hai**-(*shi*) bao guo ni
you forget Q, he HAI-SHI carry ASP you
'You forgot it? He carried you in arms (when you were a baby)!'

While some native speakers may marginally accept *shi* following *hai* in (5), an obligatory sentential-final particle *de* is required in this case, as shown in (6). It has been argued that *shi...de* functions as a marker for clefts in Mandarin, behaving differently from the single morpheme *shi* (Paul & Whitman 2008).

- (6) ni wang le? ta **hai**-shi bao guo ni *(de)
 you forget Q he HAI-SHI carry ASP you DE
 ‘You forgot it? He did carry you in arms (when you were a baby)!’

In contrast, as shown in (2), repeated here as (7), the concessive *hai* requires the occurrence of the morpheme *shi*; otherwise, the sentence is not acceptable.⁴

- (7) Mali-de yisheng rang ta xiuxi, dan ta **hai**-(shi) qu pao le malasong
 Mary’s doctor ask her rest but she HAI-SHI go run ASP marathon
 ‘Mary’s doctor asked her to rest, but she still ran the marathon.’

To sum up, among the discourse-related readings of scalar particles, the morpheme *shi* is obligatory to follow the concessive *hai*. *Shi* is disallowed to follow the order-of-mention *hai* and the reaffirmative *hai*, which either leads to another interpretation or requires additional morphemes.

Two questions concerning the concessive *hai* naturally arise from this observation: (i) Why does the concessive *hai* always need *shi*? (ii) Why doesn’t the concessive *hai* emerge when *shi* is absent? The first step to answer these two questions is to figure out the nature of *shi* which co-occurs with the concessive *hai*.

3 *shi* as a verum focus marker

Since Höhle (1992), semanticists (Richter 1993; Romero & Han 2004; Gutzmann & Castroviejo Miró 2011; Wilder 2013; Taniguchi 2017; Gutzmann et al. 2020; Goodhue 2022) have claimed that verum (or polarity) focus utterances give rise to the intuition that the speaker emphasizes the truth of their propositional content.⁵

The Mandarin sentence-medial *shi* has long been argued as a verum focus marker (Schaffar and Chen 2001; Yang 2017; among others). As shown in (8), the verum focus marker *shi*, similar to stress in English, invokes the effect of the speaker emphasizing the truth of the proposition that Zhangsan went to the restaurant.

- (8) Mei-cuo! Zhangsan **shi** qu le na jia xuexiao
 not-wrong Zhangsan SHI go ASP that CL restaurant
 ‘That’s right. Zhangsan did go to the restaurant.’

I argue that the *shi* co-occurring with the concessive *hai* also functions as a verum focus marker, supported by the evidence that the concessive *hai-shi* appear in the positions where verum focus is expected and is disallowed in where verum focus is not expected.

On one hand, the concessive *hai-shi* can appear in environments where the speaker can emphasize the truth of the proposition.

⁴For some native speakers, the concessive *hai* could occur without *shi*, but only when *hai* is heavily stressed, which I regard as one kind of instantiation of verum focus in Mandarin, as the morpheme *shi* does.

⁵I assume that verum focus and polarity focus are the same phenomenon in this paper. For convenience, I will use verum focus for the rest of the paper.

Firstly, sentences containing *concessive-hai+shi* can occur in contexts where the speaker asserts the prejacent, as shown in (9).

- (9) ta hai-shi hui qu pao malasong
she HAI-SHI will go run marathon
'She will still run the marathon.' [assertion]

Secondly, *concessive-hai+shi* sentences are felicitous in the consequents of unconditionals and concessive conditionals respectively, where the consequents in both kinds of conditionals are implied (König 1985; Rawlins 2013; among others) as shown in (10) and (11).

- (10) buguan tianqi hao bu hao, ta dou hai-shi hui qu pao malasong
no-matter weather good not good she DOU HAI-SHI will go run marathon
'Whether the weather is good or not, she will still run the marathon.'
[unconditional]

- (11) jiguan tianqi bu hao, dan ta hai-shi hui qu pao malasong
even-if weather not good but she HAI-SHI will go run marathon
'Even if the weather is not good, she will still run the marathon.'
[concessive conditional]

On the other hand, *concessive hai-shi* cannot appear in environments where the speaker cannot emphasize the truth of the proposition. Specifically, the *concessive hai-shi* cannot occur in environments where the speaker asserts the negative alternative of the prejacent, as illustrated in (12).

- (12) **Context:** We wondered if Mary was going to run the marathon.
ta hai-shi bu/mei qu pao malasong
she HAI-SHI not go run marathon
'She didn't still run the marathon.'⁶ [negation]

Furthermore, *concessive-hai+shi* cannot occur in contexts where the speaker is committed to neither the prejacent nor the negative alternative of the prejacent. An example of such an environment is disjunction, as shown in (13).

- (13) ?? ta hui xiuxi huozhe ta hai-shi hui qu pao malasong
she will rest or she HAI-SHI will go run marathon
'She will rest or she will still run the marathon.'
[disjunction]

Since the *concessive hai-shi* patterns with verum focus in terms of the environments where they appear, I posit that the morpheme *shi* co-occurring with the *concessive hai* functions as a verum focus marker.

4 Analysis

This section commences by introducing the licensing condition of verum focus, which provides insights into the semantics of the *concessive hai* which co-occurs with the verum focus marker *shi*.

⁶Note that (12) is felicitous if *hai* takes a temporal reading, which is irrelevant here.

4.1 The licensing condition of verum focus

Although the debate continues over whether verum focus represents a form of general focus or functions as a verum operator, there is relatively widespread agreement that verum/polarity focus is only felicitous in contexts where the negative alternative of the proposition in question is salient in the context (Wilder 2013; Gutzmann et al. 2020; Goodhue 2022; among others). This licensing condition can be formulated as shown in (14).

- (14) **PolF(Polarity Focus) licensing condition:** Polarity focus is only felicitous in the presence of a focal target with opposing polarity.⁷
(Goodhue 2022:124)

Here are two examples for verum focus being licensed with the presence of a salient alternative with contrasting polarity to the PolF utterance. In (15), a salient alternative to the PolF utterance with contrasting polarity (i.e., *he might not work hard*) is explicitly expressed in the preceding sentence spoken by A. Thus, the verum focus in B's reply is licensed.

- (15) A: I hear that he might not work hard. Does he work hard?
B: (Yes,) he does work hard. (Wilder 2013: 169)

Additionally, a salient alternative to the PolF utterance with contrasting polarity can be elicited through a question that conveys a bias for the negative answer (Romero & Han 2004), as exemplified by the *really*-biased question in (16).

- (16) A: Did Ivy really submit her paper yesterday?
B: (Yes,) she did submit her paper. (Gutzmann et al. 2020: 12)

The co-occurrence of the concessive *hai* and the verum focus marker *shi* indicates that the proposed meaning of the concessive *hai* must encompass certain aspects of the licensing condition of verum focus.

4.2 The semantics of the Mandarin concessive *hai*

Beck (2020) puts forward a unified analysis for various readings of scalar particles, whereby all readings are boiled down to a core meaning, and the only variable pertains to where the scalar particle attaches to the syntactic structure.

I concur with Beck (2016a; 2020) in postulating that scalar particles presuppose the state of a preceding alternative. Specifically, for discourse-related readings, different scalar particles presuppose different situations of the previous context. I propose that the concessive scalar particle *hai* presupposes the polar question concerning the prejacent proposition q being on the **Table** in an immediately precedent context, with a public bias towards $\neg q$ in that context. In its assertion part, it simply states that the prejacent proposition q is true. The concessive sense is captured by the contrast between the previous belief that $\neg q$ is most likely to be true, whereas it is, in fact, q is true.

The lexical entry of the concessive *hai* is provided below in (17).

⁷According to Goodhue(2022), focal targets might still be fruitfully thought of as antecedents to anaphoric focus marking.

$$(17) \quad \llbracket hai \rrbracket = \lambda q_{\langle s,t \rangle} \lambda w : \exists c^* c^* \propto c_t \wedge \langle S[I]; \{q, \neg q\} \rangle \in \mathbf{Table}_{c^*} \wedge \forall w' \in \mathbf{Bel}_x(w) [\mathbf{ANSWER}(\langle S[I]; \{q, \neg q\} \rangle)(\neg q)(c^*)(w')].q(c_t)(w)$$

The context c is defined as a context state, following the concept presented by Farkas & Bruce (2010). c_t denotes the current context, while \propto represents a temporally immediate precedence relation, indicating that c^* is an immediately preceding context at the temporal scale to c_t .

Table is also defined in the sense of Farkas & Bruce (2010) as a discourse component that records the questions under discussion (referred to as Ginzburg’s QUD). \mathbf{Table}_c represents the set of QUDs with respect to the context c . Each QUD in **Table** is represented as a pair comprising its syntactic object and its denotation ($\langle S[I]; \{q, \neg q\} \rangle$). In this representation, $S[I]$ stands for the syntactical object of polar interrogatives, where S is a syntactic declarative sentence, $[I]$ is a sentential marker for interrogatives, and its semantic denotation is $\{q, \neg q\}$.

The meaning that there is a public bias towards $\neg q$ is formalized as: for all possible worlds are compatible with the belief of the public x such that the answer to the QUD $\langle S[I]; \{q, \neg q\} \rangle$ is $\neg q$. $\mathbf{ANSWER}(Q)(p)$ denotes that p is offered as an answer to Q (Beck 2016a).

Here is an illustrative example of how the concessive reading is derived. The concessive reading of the *hai* in (18) is interpreted as whether Mary ran the marathon or not is the QUD on the **Table** and the public holds the belief that Mary will not run the marathon in the immediately preceding context, it is true that Mary will run the marathon in the current context, contrary to the prior public belief.

- (18) Mali-de yisheng rang ta xiuxi, dan ta **hai**-(shi) qu pao le malasong
 Mary’s doctor ask her rest but she HAI-SHI go run ASP marathon
 ‘Mary’s doctor asked her to rest, but she still ran the marathon.’

4.3 Capturing the (non-)co-occurrence patterns of the concessive *hai*

The distribution of the concessive scalar particle *hai* can be captured by the proposed analysis along with independent mechanisms such as *Maximize Presupposition!* (Heim 1991; Percus 2006; Sauerland 2008; Schlenker 2012).

4.3.1 Concessive *hai*+*(*shi*)

The concessive *hai* always requires *shi* because its felicitous contexts are those where verum/polarity focus is licensed. The concessive *hai* presupposes a polar question concerning q on the **Table**, and the public x believes that the answer to this polar question is $\neg q$. The public bias towards $\neg q$ results in the presence of a focal target with opposing polarity, as required by verum focus. In these contexts, verum/polarity focus is employed to emphasize the truth of the propositional content q .

One might question whether the given context is strong enough to obligatorily trigger the presence of verum focus. Indeed, the presence of a focal target with opposing polarity does not necessarily entail that verum focus appears. I suggest that verum focus arises due to *Maximize Presupposition!*. *Maximize Presupposition!* compels speakers to choose ψ over ϕ if ψ has stronger presuppositions than

ϕ , their presuppositions are satisfied in the context c , and ϕ and ψ add the same new information to c . Assuming that focus marking induces a presupposition (Goodhue 2022), *Maximize Presupposition!* favors focus-marked utterances with satisfied focus presuppositions over truth-conditionally equivalent but non-focus-marked utterances. In particular, the presupposition of the verum-focus-marked proposition is met since the set including the proposition $\neg q$ is a subset of its focus semantic value. In contrast, the non-focus marked proposition doesn't have this presupposition (thus presuppositionally weaker) and is outcompeted by its verum-focus-marked counterpart in the competition governed by *Maximize Presupposition!*.

4.3.2 If **shi*, then *concessive *hai*

When the verum focus marker *shi* is disallowed to appear, the concessive *hai* is also absent due to presupposition failures. Let's consider two types of contexts where the verum focus marker *shi* is infelicitous.

The first type of context is where $?q$ is the QUD, and $\neg q$ is not salient, such as polar questions or out-of-the-blue contexts, as shown in (19a) and (19b). In these non-verum-focus contexts, the presupposition of the concessive *hai* is not satisfied. The concessive *hai* presupposes a polar question concerning q to be on the **Table**, and the public x thinks that $\neg q$ is the answer to this polar question concerning q . However, in this type of non-verum-focus contexts, $\neg q$ (and q) is not salient, which contradicts the concessive *hai*'s presupposition that the public x thinks $\neg q$ is the answer to $?q$. As a result, the concessive *hai* is not felicitous in these contexts.

- (19) a. A: Is it raining?
 B: #It IS raining.
 b. (Out of the blue) A: #It IS raining.

The second type of context involves those where q is already in the Common Ground, as shown in (20). In these non-verum-focus contexts, the presupposition of the concessive *hai* is also not fulfilled. The concessive *hai* presupposes a polar question concerning q to be on the **Table**, and the public x thinks that $\neg q$ is the answer to this polar question concerning q . However, in non-verum-focus contexts where q is already in the Common Ground, the concessive *hai*'s presupposition that $\langle S [I]; q, \neg q \rangle \in \mathbf{Table}_{c^*}$ (where the concessive *hai* is possible) contradicts that q is already part of the Common Ground. As a result, the concessive *hai* is not licit in such contexts either.

- (20) **Context:** We all know that it is raining.
 A: #It IS raining.

In contrast, the other two uses of discourse-related uses of *hai*, order-of-mention and reaffirmative, are possible in these non-verum-focus contexts.

According to Beck (2016a), the meaning of the reaffirmative scalar particle could be basically formalized as presupposing the prejacent q is in the Common Ground (CG) at c^* . Thus, in the contexts where q is in Common Ground, *hai* can take a reaffirmative reading: it indicates a reminder, or a reinforcement of the relevance of the prejacent as in (21).

- (21) **Context:** It's known that he ever carried you in arms when you were a baby.
 ni wang le, ta **hai** bao guo ni
 you forget Q, he HAI carry ASP you
 'You forgot it? He ever carried you in arms (when you were a baby)!'

The order-of-mention *hai* in (22) is also felicitous in the non-verum-focus contexts. Beck (2016a) suggests that the order-of-mention scalar particles presupposes that another proposition q^* is offered as an answer to the QUD at c^* , which is not contradictory to any propositions concerning the prejacent q . Thus, the order-of-mention *hai* can appear in non-verum-focus contexts. One may wonder why *shi* cannot appear with the order-of-mention *hai*. One possible answer is that the concessive *hai* is stronger than the order-of-mention *hai*, which doesn't presuppose anything concerning the prejacent q . I will leave this issue for future work.

- (22) **Context:** We are describing a room. I have described the table and the window in the room and then I uttered the following sentence:
 zhe-bian **hai**(*-shi) you yi-shan men
 this-side HAI-SHI exist one-CL door
 'Then, there is the door on this side.'

4.4 Beyond Mandarin concessive *hai*

This study further sheds light on the semantic nature of concessive scalar particles and its cross-linguistic variations.

Diverging from the order-of-mention and reaffirmative uses, the concessive use encodes a prior epistemic background to the proposition in question, wherein the negative alternative is considered more likely to happen. The information regarding this "prior epistemic background" is usually hardcoded into the presupposition of the concessive scalar particles in previous works. Ippolito (2007) incorporates the $\neg q$ -inference into the presupposition of the concessive *still* using a likelihood-ordering, as depicted in (23). This ordering suggests that worlds maximally similar to w_c , where both p (the preceding conjunct) and q are true, are less likely than worlds maximally similar to w_c , where p is not true, but q is true.

- (23) $\llbracket still \rrbracket^{g,c,w} = \lambda p_{\langle s,t \rangle} . \lambda q_{\langle s,t \rangle} : \text{MAX}_{\leq, w_c} \{w : w \in p \wedge w \in q\} <_{\text{likely}} \text{MAX}_{\leq, w_c} \{w' : w' \in \neg p \wedge w' \in q\} . q(w) = 1$
 a. For any proposition p , any similarity relation \leq , and any world w :
 $\text{MAX}_{\leq, w}(p) = \{w' : p(w') = 1 \& \forall w'' : p(w'') = 1 \rightarrow w' \leq_w w''\}$
 (Ippolito 2007: 26)

This study delves into the concessive reading of scalar particles in Mandarin and elucidates the interactions between concessive scalar particles and verum focus. Through the investigation of Mandarin *hai*, we gain insights into the potential sources of the "prior epistemic background" in languages where concessive scalar particles don't co-occur with any verum focus markers. One natural hypothesis is that the verum focus marker, realized as *shi* in Mandarin, was lost in these languages due to diachronic changes over time. Further research concerning this hypothesis and the cross-linguistic variations of concessive scalar particles is worth exploring in the future.

5 Conclusion

This paper starts with the observation that Mandarin concessive *hai* always co-occurs with *shi*. Drawing the evidence that the concessive *hai-shi* can appear in environments where the speaker can emphasize the truth of the proposition and cannot in environments where the speaker cannot emphasize the truth of the proposition, I argue that the morpheme *shi* in concessive *hai-shi* is a verum focus marker.

I further propose that the concessive scalar particle *hai* presupposes the polar question concerning the prejacent proposition q to be on the *Table* in an immediately temporally preceding context, with a public bias towards $\neg q$ in that context. In its assertion part, the concessive *hai* simply states that the prejacent proposition q is true. The concessive sense arises from the contrast between the previous belief that $\neg q$ is the answer to the QUD in the immediately temporally preceding context and q holds in the current context. This study further provides insights into the semantic nature and cross-linguistic variations of concessive scalar particles.

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