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Abstract. This paper argues that there are two types of corrective words across languages, and both types are attested in Mandarin Chinese. One type (e.g. Mandarin you) manages the Common Ground, as Frana & Rawlins (2019) and Bhatt & Homer (2022) have claimed for Italian mica and Hindi thori:, but there is another type that had not been noticed before (e.g. Mandarin bing)—they mark contrast to a salient expectation. While bing and you have similar syntactic distribution, they have subtle differences in meaning: the use of you implies the speaker's impatience with the hearer, but bing does not have this inference. I argue that bing and you are located between C and T, and have presuppositions (or conventional implicatures): bing not p presupposes that there is a salient proposition that $\neg p$ contrasts with, while you not p presupposes that the speaker believes that $\neg p$ was already in the Common Ground.

Keywords: correction, disagreement, negation, pragmatics, Mandarin Chinese.

1. Introduction

Mandarin Chinese has two particles *bing* and *you* for correction and contradiction. In a dialogue, they may be used to correct the interlocutor, and thus require there to be a proposition to correct:

(1)Context: I tell you about my friend Zhangsan, who you don't know anything about. I say: #Zhangsan {bing/you} bu jianshen Zhangsan BING/YOU NEG work.out

Intended: 'Zhangsan doesn't work out.'

Bing and you have to co-occur with negation and be immediately followed by it:

(2)A: 'Zhangsan works out.'

B: Zhangsan {bing/you} *(bu) jianshen Zhangsan BING/YOU NEG work.out

'Zhangsan doesn't work out.'

When correcting a negative proposition, *bing* and *you* still require negation, leading to a sentence with double negation:

(3)a. A: 'Zhangsan doesn't work out.'

B: *Zhangsan {bing/you} jianshen Zhangsan BING/YOU work.out

Intended: 'Zhangsan does work out.'

¹ I would like to thank the audience at Sinn und Bedeutung 29 "Evidentials in non-canonical speech acts" workshop, Nanjing University Fifth Young Linguistics Scholars Forum, Peking University Linguistics Frontiers Seminar, UC Santa Cruz Syntax & Semantics Circle, and the University of Göttingen OS English Linguistics for helpful comments. All errors are my own.

b. A: 'Zhangsan doesn't work out.'

B: Zhangsan {bing/you} mei you bu jianshen Zhangsan BING/YOU NEG have NEG work.out 'It's not the case that Zhangsan doesn't work out.'

Bing and *you* can not only contradict at-issue content, but also presuppositions (4) and even non-linguistic statements (5):

(4)a. A: 'How is your dog?'

B: wo bing/you mei yang gou I BING/YOU NEG keep dog 'I don't have a dog.'

b. A: 'Zhangsan has stopped smoking.'

B: ta yiqian bing/you bu chouyan he before BING/YOU NEG smoke 'He didn't smoke before.'

(5)Context: A puppy approaches Zhangsan, who looks scared. I tell Zhangsan:

bie pa. ta {bing/you} bu hui yao ni don't afriad it BING/YOU NEG will bite you 'Don't be afraid. It won't bite you.'

You but not bing implies the speaker's impatience with the hearer. For example, the use of you in (5) implies the speaker's impatience with Zhangsan-perhaps they think Zhangsan is being too cowardly and not justified to be scared of a puppy. Bing does not have this implication.

Bing can contradict the expectation created in the same sentence, and the clause that creates the expectation may precede or follow the *bing*-clause. This contrasts with *you*, which cannot contradict a part in the same sentence:²

 2 (6) is actually possible with *you*, but I argue with two pieces of evidence that the possible *you* in (6) means 'at the same time', and is distinct from the *you* studied in this paper. First, while the *you* and *bing* studied in this paper require negation as we saw in (2), *you* 'at the same time' doesn't:

(i) Context: You ask me to tell you something about my friend Zhangsan, who you don't know anything about. I say:

Zhangsan meitian qu jianshenfang, danshi ta {#bing/you} hen ai chi laji shipin Zhangsan every.day go gym but he BING/YOU very love eat junk food 'Zhangsan goes to the gym every day, but at the same time he loves junk food.'

The second piece of evidence that the two *yous* are different is that *you* 'at the same time' does not have the obviousness / impatience implication that the *you* studied in this paper has. (6) and (i) do not imply that it is obvious that Zhangsan doesn't work out or it is obvious that he loves junk food.

Thus, I argue that *you* is polysemous. This paper focuses on its corrective use, which can only be used in a dialogue. In addition to correction and 'at the same time', *you* can also conjoin VPs (iia), and can mean 'again' (iib). In these other uses, *you* doesn't need a dialogue:

(ii) a. Zhangsan you changge you tiaowu

(6)Context: You ask me to tell you something about my friend Zhangsan, who you don't know anything about. I say:

Zhangsan meitian qu jianshenfang, danshi ta {bing/#you} bu jianshen Zhangsan every.day go gym but he BING/YOU NEG work.out 'Zhangsan goes to the gym every day, but he doesn't work out.'

(7)Context: You ask me to tell you something about my friend Zhangsan, who you don't know anything about. I say:

Zhangsan {bing/#you} bu jianshen, danshi que hen jiankang Zhangsan BING/YOU NEG work.out but PART very healthy 'Zhangsan doesn't work out, but he is very healthy.'

Bing can be embedded in finite clauses and negative polar questions, while *you* cannot be embedded at all. For example, *bing* but not *you* can be embedded in finite 'because'-clauses:

(8)yinwei Zhangsan {bing/#you} bu jianshen, suoyi ta rongyi pilao because Zhangsan BING/YOU NEG work.out so he easily tired 'Because Zhangsan doesn't work out, he gets tired easily.'

Section 2 will show that *bing* and *you* are located between C and T. Section 3 will then argue that they are identity functions $\langle st, st \rangle$ with the following presuppositions: *bing not p* presupposes that there is a salient proposition that $\neg p$ contrasts with (9), while *you not p* presupposes that the speaker believes that $\neg p$ was already in the Common Ground (CG) (10). Despite this belief of the speaker, they still repeat $\neg p$ to remind the hearer of it, deriving *you*'s impatience inference.

- (9) [bing not p]^c(w) = 1 iff p is false

 Defined only if ∃r: ∃q: q is salient ∧ q⇒r ∧ ¬p⇒¬r

 "There is a salient proposition q and a (explicit or implicit) proposition r such that q implies
 - r and ¬p implies ¬r."
- (10) [[you not p]]^c(w) = 1 iff p is false Defined only if \forall w' [w' is compatible with what the speaker_c knows in w $\rightarrow \neg$ p \in CG_{w'}] "The speaker_c believes that \neg p was in the CG."

b. Zhangsan you changge le Zhangsan YOU sing PERF 'Zhangsan danced again.'

Bing is also polysemous. It can conjoin predicates, in which case it does not need a dialogue, either:

(iii) Zhangsan tong bing kuaile-zhe Zhangsan painfulBING happy-IPFV 'Zhangsan is painful but happy.'

Zhangsan YOU sing YOU dance 'Zhangsan danced and sang.'

My analysis of *you* has two hallmark properties of evidential markers, making it both a CG manager and an evidential marker. First, *you* encodes the source of evidence a speaker has for a given proposition, and constrains the source to be direct evidence. Second, *you* is speaker-orientated in root assertions.

Negation is interpreted in-situ somewhere between C and T, while *bing* and *you*, despite their surface positions, are associated with the illocutionary force. I therefore suggest that the illocutionary force is introduced by a covert operator in C that *bing* and *you* agree with.

I call particles that require a proposition to correct *corrective particles*. There is a small but growing literature on corrective particles in different languages. Section 4 will compare *bing* and *you* with two corrective particles—*mica* in Italian and *thori*: in Hindi-Urdu. *Mica* and *thori*: appear to behave very similarly to *bing* and *you*: they must co-occur with negation, and also require a salient proposition to correct. The following examples demonstrate this requirement for Italian *mica*:

- (11) Context: S and A live in Amherst and want to go to a party in NYC.
 - A: How are we going to get there?
 - S: Mia sorella non ha (#mica) la macchina questo fine settimana my sister NEG has (#MICA) the car this weekend altrimenti ci avrebbe accompagnato volentieri otherwise us would.have accompanied gladly
 - 'My sister doesn't have (#mica) the car this weekend, otherwise she would have gladly given us a ride. (Frana and Rawlins 2019:6)
- (12) A: How are we going to get there? Can your sister give us a ride?
 - S: Mia sorella non ha (mica) la macchina. Ha 13 anni!

 My sister NEG has (MICA) the car. Has 13 years!

 'My sister DOESN'T have a car, she is 13!'

 (Frana and Rawlins 2019:6)

There have been two types of analyses for *mica*. One type analyzed *mica* as *a CG manager*. For example, Frana and Rawlins (2019) (henceforth F&R) argued that *mica* presupposes that the speaker is sure that *mica*'s prejacent should not be added to the CG. The other type analyzed *mica* as *a marker of mirativity or contrast*. For example, Mari (2024) argued that *mica* denies an inference drawn from the evidence based on stereotypes, norms or commonsense reasoning, and Cinque (1976) argued that *mica* denies a prior claim or a salient expectation.

F&R presented some evidence that challenges Cinque's contrast-marker analysis but supports theirs. I will show that my proposal for *bing* and *you* realizes Cinque and Mari's contrast-marker analysis and F&R's CG-manager analysis respectively: *bing* is a contrast marker because *bing* behaves exactly like what Cinque predicts *mica* would behave; *you* is a CG manager, parallel to F&R's analysis of *mica*, but *you*'s contribution to the discourse is slightly different from what they claimed *mica*'s contribution was.

My work enriches the typology of corrective markers by arguing that some of them are CG managers, while others are contrast markers, and both types are attested in Mandarin. While bing and you both require a proposition to correct, they have this requirement for different

reasons: this requirement is part of *bing*'s presupposition, whereas *you* has this requirement because unless someone has said p or evidence for p, it is redundant for the speaker to say $\neg p$, which they believe was already in the CG. Section 5 concludes.

2. Syntax of bing and you

This section argues that *bing* and *you* are located between C and T. Because *bing* and *you* immediately precede negation, subsection 2.1 will first discuss the possible positions for negation in Mandarin. I will show that there are three positions for negation on the clausal spine: what I call Neg₁ is located above C; Neg₂ is between C and T; and Neg₃ between T and V. Then subsection 2.2 will show that *bing* and *you* must appear immediately before Neg₂, but not before Neg₁ or Neg₃, putting *bing* and *you* between C and T.

2.1. Three positions for negation in Mandarin

Two pieces of evidence suggest that there are three positions for negation on the clausal spine: Neg₁, in the left-peripheral CP in negative polar questions; Neg₂, above the TP; and Neg₃, above the VP. First, these three positions for negation can occur at the same time:

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(13) wo bu mei you bu chi fan ma I NEG<sub>1</sub> NEG<sub>2</sub> have NEG<sub>3</sub> eat meal Q 'Isn't it the case that it's not that I don't eat?'
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Second, facts involving scope put Neg₂ between C and T, and Neg₃ between T and V. I discuss scope relative to two preverbal adverbs: the habitual adverb *zongshi* 'always' and the speaker-oriented adverb *dagai* 'probably'. Following Cinque's (1999) hierarchy, I assume that *dagai* 'probably' is located above T, while *zongshi* 'always' is between T and V.

Negation can appear before or after *zongshi* 'always', which corresponds to wide and narrow scope of negation respectively, putting Neg₂ above *zongshi*, and Neg₃ below it:

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(14) a. wo zongshi bu chi fan
I always NEG3 eat rice
'It's always the case that I don't eat rice.'
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b. wo bu zongshi chi fan I NEG2 always eat rice 'I don't always eat rice.'
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In declaratives, negation can only appear after *dagai* 'probably' but not before it, suggesting that Neg₂ is located below *dagai*:

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(15) a. ta dagai bu chi fan he probably NEG2 eat rice 'He probably doesn't eat rice.'
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b. *ta bu dagai chi fan he NEG1 probablyeat rice

In negative polar questions, negation can precede or follow *dagai* 'probably', corresponding to distinct readings (16a-b). (16a) is a biased question parallel to the English sentence *Didn't he probably eat rice*?: the speaker has a prior bias towards the positive answer 'Zhangsan probably ate rice', and wants to check the truth and falsity of this positive proposition. In contrast, (16b) is not necessarily biased, and the speaker just wants to know the truth and falsity of a negative proposition 'Zhangsan probably doesn't eat rice'.

- (16) a. ta bu dagai chi fan le ma he NEG₁ probably eat rice ASP Q 'Isn't it the case that he probably ate rice?'
 - b. ta dagai bu chi fan ma he probably NEG2 eat rice Q 'Is it the case that he probably doesn't eat rice?'

2.2. Syntactic positions of bing and you

Having argued for three positions for negation, I show with the following examples that *bing* and *you* always appear immediately before Neg₂ (17a), but not before Neg₁ (17b) or Neg₃ (17c):

- (17) a. wo {bing/you} mei you bu chi fan I BING/YOU NEG2 have NEG3 eat meal 'It's not the case that I don't eat.'
 - b. *wo {bing/you} bu chi fan le ma I BING/YOU NEG1 eat rice ASP Q
 - c. *wo mei you {bing/you} bu chi fan I NEG2 have BING/YOU NEG3 eat meal

There is debate in the literature about where Neg₂ is exactly: Huang (1988) claimed that it is a bound morpheme in Infl; Ernst (1995) claimed that it is an adverb in Spec, AuxP;³ Zhou (1999) argued that there is a Neg projection above AspP. But all these proposals located Neg₂ between C and T. I thus assume that *bing* and *you* are also located between C and T.

3. Semantics of bing and you

Having examined the syntax of *bing* and *you*, this section focuses on their semantics, dedicating the following two subsections to *bing* and *you* respectively. Then subsection 3.3 will compare my proposal with the literature.

 $^{^3}$ Ernst (1995) actually suggested that bu in Neg₂ is in Spec, AuxP or Spec, VP. But I think Spec, VP is too low for Neg₂, and more likely for Neg₃ instead.

3.1. *Bing*

Examples (1)–(2) showed that *bing not p* requires p to be salient. This requirement is not part of *bing*'s assertion because it projects out of environments with negation (18) and modal adverbs like 'probably' (19).

- (18) Context: I tell you about my friend Zhangsan, who you don't know anything about. I say:

 #Bu neng shuo Zhangsan bing bu jianshen

 NEG can say Zhangsan BING NEG work.out

 Intended: 'We can't say that Zhangsan doesn't work out.'
- (19) Context: I tell you about my friend Zhangsan, who you don't know anything about. I say:
 #Zhangsan dagai bing bu jianshen
 Zhangsan probably BING NEG work.out
 Intended: 'Zhangsan probably doesn't work out.'

Therefore, I assume that bing not p has the same assertion as not p; bing contributes a presupposition (or conventional implicature).

3.1.1. *Bing not p* is licensed if p is implied by a salient proposition

The examples so far involving *bing* seemed to suggest that *bing not p* requires p to be salient. For example, as we saw in (2), the sentence 'Zhangsan bing not works out' (bing not p) is infelicitous out of the blue, but can be saved if the interlocutor had said 'Zhangsan works out' (p) explicitly. This and the next subsection will show that *bing* can be licensed even if the interlocutor had not said p itself, but something weaker than p, suggesting that *bing*'s requirement is more relaxed than requiring p to be salient. Contrast (2) with the following dialogue, where *bing* can be licensed if the interlocutor had said 'Zhangsan looks fit' (q):

(20) A: 'Zhangsan looks fit.'
B: (danshi) Zhangsan bing bu jianshen but Zhangsan BING NEG work.out 'Zhangsan doesn't work out.'

Here q is not identical to p ('Zhangsan works out'), but q implies p $(q \Rightarrow p)$ in Toosarvandani's (2014) sense. We can consider q implies p to be roughly equal to q normally entails p. Following Toosarvandani, I formalize $q \Rightarrow p$ with a necessity modal expressing universal quantification over possible worlds, and this modal is relativized to an epistemic modal base and a stereotypical ordering source. In plain words, Zhangsan looks fit \Rightarrow Zhang works out is true iff in all the epistemically accessible worlds where Zhangsan looks fit that best correspond to the normal course of events, Zhangsan works out. Informally, Zhangsan looks fit normally entails that Zhangsan works out.

The felicity of (20) thus suggests that we need to relax *bing not p*'s presupposition a bit: rather than requiring p to be salient, *bing not p* only requires p to be *implied* by a salient proposition q. (2) was a special case where q is identical to p, and therefore q implies p.

3.1.2. Bing not p is licensed if not p implies not r, and a salient proposition q implies r

The dialogue in (21) suggests that even this already relaxed presupposition is too strict: 'I'm hungry' (q) doesn't normally entail that the restaurants are open (p) because the restaurants' opening hours do not normally depend on my hunger status, but *bing* is still fine here:

(21) A: 'I'm hungry.'

B: (danshi) fandian bing mei you kai but restaurant BING NEG have open 'The restaurants aren't open.'

I argue that (21) is fine because there is another proposition r (i.e. Speaker A will get to eat) that stands in an implicational relationship to p and q. Specifically, $q\Rightarrow r$ (i.e. Speaker A is hungry normally entails that Speaker A will get to eat), and $\neg p\Rightarrow \neg r$ (i.e. The restaurants aren't open normally entails that Speaker A will not get to eat).

Following Winter and Rimon (1994), I call any two propositions p and q that stand in this implicational relationship with a third proposition r *contrast*. Figure 1 illustrates a pair of contrasts ¬p and q:

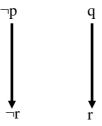


Figure 1: A pair of contrasts $\neg p$ and q.

The felicity of (21) thus suggests that rather than requiring p to be implied by a salient proposition, bing not p only requires $\neg p$ and a salient proposition q to be a pair of contrasts, which may be mediated by a third proposition r. (20) was a special case where q ('Zhangsan looks fit') is identical to r, and thus q naturally implies r and contrasts with $\neg p$, ('Zhangsan doesn't work out'), which implies $\neg q$ ('Zhangsan doesn't look fit'). (2) could be considered another special case where q ('Zhangsan works out') is identical to p and r, and p contrasts with $\neg p$.

Therefore, I propose the following meaning for bing not p, repeated from (9):

(9) $\llbracket \text{bing not p} \rrbracket^{c}(w) = 1 \text{ iff p is false}$

Defined only if $\exists r: \exists q: q \text{ is salient } \land q \Rightarrow r \land \neg p \Rightarrow \neg r$

"There is a salient proposition q and an (explicit or implicit) proposition r such that q implies r and ¬p implies ¬r."

3.2. You

Bing and you have subtle differences in meaning: unlike bing, the use of you in you not p implies that the speaker considers not p to be very obvious, and thus the speaker is impatient

with the hearer. Recall (5), repeated below, where the use of *you* implies the speaker thinks Zhangsan is too cowardly and should not fear a puppy. In contrast, *bing* does not have this implication.

(5)Context: A puppy approaches Zhangsan, who looks scared. I tell Zhangsan:

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bie pa. ta {bing/you} bu hui yao ni don't afriad it BING/YOU NEG will bite you 'Don't be afraid. It won't bite you.'
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I therefore propose that *you* presupposes that the speaker believes $\neg p$ was already in the CG, repeated below. Despite that, the speaker still repeats $\neg p$ to remind the hearer of it, creating the impatience implication.

(10) [[you not p]]^c(w) = 1 iff p is false
Defined only if \forall w' [w' is compatible with what the speaker_c knows in w $\rightarrow \neg$ p \in CG_{w'}]
"The speaker_c believes that \neg p was in the CG."

You is justified in (5) because normally a puppy doesn't bite. But if the animal in the situation is a hungry wild lion in a savannah, then the use of you is very odd because it is odd to presuppose that lions don't bite:

(22) Context: A hungry wild lion approaches Zhangsan in a savannah, who is alone and scared. I assure Zhangsan on the phone:

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bie pa. ta {bing/#you} bu hui yao ni don't afriad it BING/YOU NEG will bite you 'Don't be afraid. It won't bite you.'
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In contrast, *bing* is fine in both situations because Zhangsan's fear makes salient the proposition that the puppy / the lion will bite him.

Instead of following my proposal, one might instead attribute the contrast between *you not p*'s felicity in (5) and its infelicity in (22) to the plausibility of $\neg p$ (i.e. the puppy won't bite Zhangsan) in (5) but its implausibility (i.e. the lion won't bite Zhangsan) in (22). The following examples challenge this alternative proposal. *You*'s prejacent in (23) is the same as in (5) (i.e. the lion won't bite Zhangsan) and generally implausible. But the context of (23) makes it clear that the speaker believes that $\neg p$, a generally little-known fact, is nevertheless known to both the interlocutors. The use of *you* is much better in (23) than (5).

(23) Context: A hungry wild lion approaches Zhangsan in a savannah. Zhangsan and I both grew up in the savannah and are skilled at training lions. I think we both know that despite its scary appearance, the lion wouldn't actually bite Zhangsan. But Zhangsan is still scared and calls me on the phone. I tell him:

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bie pa. ta {bing/you} bu hui yao ni don't afriad it BING/YOU NEG will bite you 'Don't be afraid. It won't bite you.'
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Example (24) presents a situation in the reverse, where $\neg p$ is a well-known fact, but the hearer happens to not know it, and the speaker knows that. Here the speaker's use of *you* is very rude because the speaker should not think that $\neg p$ was in the CG for both the interlocutors.

(24) Context: I am teaching Xiaoming, a five-year-old, in his first arithmetic lesson. Xiaoming: 'One plus one is three.'

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A: yi jia yi {bing/#you} bu dengyu san. one plus one BING/YOU NEG equal three 'One plus one is not three.'
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But if the student in this situation is a college student, *you* is justified and signals the speaker's impatience. *Bing* is fine in (23) and (24) because Zhangsan's fear and Xiaoming's statement have made p salient (i.e. respectively, the lion will bite Zhangsan, and one plus one is three).

Therefore, I have argued that *bing* presupposes that its prejacent contrasts with a salient proposition, while *you* presupposes that the speaker believes that its prejacent was already in the CG.

3.3. Previous literature on bing and you

Bing and *you* have been discussed extensively in the Chinese literature, but the previous proposals do not capture the full range of data. This subsection discusses five main existing approaches, and raises counterexamples to each one of them.

First, Wang (2001), Yin (2011), Cheng (2016) and Wen & Li (2019) argued that *bing* is used for counterexpectation while *you* is used to express the reason, but *bing* can be embedded in 'because'-clauses (8), and *you* can be embedded in counterexpectational 'but'-clauses:

(25) A: 'I'm hungry.'

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B: danshi fandian you mei you kai
but restaurant YOU NEG have open
'But the restaurants aren't open.'
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Second, Shi (1990) and Li (2014) argued that *bing* marks a proposition that the speaker expects, while *you* marks a proposition that the hearer does not expect, but *bing* can mark a proposition that is surprising to the speaker (marked by *jingran* 'surprisingly' in (26)), and *you* can mark a proposition that the hearer expects as in (27), where the mother (speaker B) certainly knows that her child has hands.

(26) Zhangsan meitian qu jianshenfang,
Zhangsan every.day go gym
danshi ta jingran bing bu jianshen
but he surprisingly BING NEG work.out
'Zhangsan goes to the gym every day, but surprisingly, he doesn't work out.'

(27) A: 'Mom, I'm hungry.'

B: ni you bu shi mei you shou, ziji qu cheng fan! you YOU NEG COP NEG have hand self go get rice 'It's not like you don't have hands. Go get rice yourself!'

Third, (Chen 1987, 2019; Peng 1999; Shi 2005; Wen 2009; Wu 1999; Yang 2008) argued that *bing* expresses an objective fact, while *you* expresses a subjective opinion and correction, but *bing* can express a subjective opinion (28), and *you* can express an objective fact (25).

(28) meigeren dou xiang chengwei mayun, danshi wo bing bu xianmu ta. everyone all want become Jack.Ma but I BING NEG envy him 'Everyone wants to become Jack Ma, but I don't envy him.'

Fourth, (Chen 2021; Nie 2021) argued that *bing* denies a fact, while *you* denies how things should be, but *bing* can express how things should be (29), while *you* can deny a fact (25).

(29) ni bing bu yinggai zheme zuo. you BING NEG should so do 'You shouldn't do this.'

Finally, an influential view in the Chinese literature claimed that *bing* marks direct denial, while *you* marks indirect denial by denying the precondition of a proposition or speech act (Liu 2010; Ma 2001; Zhang & Liu 2010; Zhang & Yan 2015). But *bing* can mark indirect denial (20)–(21), and *you* can mark direct denial (2). While this literature would consider sentences like (2) with *you* to be ungrammatical, I think they are fine with strong prosodic focus on the subject:

(30) A: 'Zhangsan works out.'
B: Zhangsan you bu jianshen
Zhangsan you NEG work.out
'Zhangsan doesn't work out. (What are you thinking?)'

Yuan and Liu (2025) built on the direct vs. indirect denial approach, and proposed an analysis that is very similar to mine: bing not p presupposes that p is old information, while you not p has the conventional implicature that $\neg p$ is already in the CG. In addition, Yuan and Liu argued that bing also requires someone to believe that p is more than 50% likely, and you also presupposes that p is the precondition of some existing speech act. I don't think we need to propose these additional requirements for bing and you. The fact that you can be used in direct denial (30) suggests that you not p does not always require p to be a precondition. The following examples show that bing not p does not require anyone to believe p:

(31) suoyouren dou zhidao zhangsan bu jianshen, everyone all know Zhangsan NEG work.out shishiye shi ta bing bu jianshen fact also COP he BING NEG work.out

'Everyone knows that Zhangsan doesn't work out, and the fact is also that he doesn't work out.'

(32) A: 'No one thinks that Zhangsan works out.'
B: dui, ta bing bu jianshen
right he BING NEG work.out
'Correct, he doesn't work out.'

4. Comparison with Italian mica and Hindi-Urdu thoṛi:

Bing and you have apparently similar behaviors to mica in Italian and thoṛi: in Hindi-Urdu, which also require a salient proposition to correct. (11)–(12) demonstrated this requirement of mica, and the following examples demonstrate this requirement of thoṛi::

(33) Context: You ask me to tell you something about my friend Mayank, who you don't know anything about. I say:

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Mayank roz gym {nahĩ::/#thoṛi:} ja:-ta: hai
Mayank every.day gym NEG/THORI go-IPFV.MSG be.PRS.3SG
'Mayank doesn't go to the gym every day.' (Bhatt and Homer 2022:2)
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(34) A: 'Mayank goes to the gym every day.'

B: Mayank roz gym {nahî::/thoṛi:} ja:-ta: hai
Mayank every.day gym NEG/THORI go-IPFV.MSG be.PRS.3SG
'Mayank doesn't go to the gym every day.' (Bhatt and Homer 2022:2)

Mica and *thoṛi:* are negative in nature: they can co-occur with negation, but when they don't, the sentence has the same meaning as a sentence with negation. Frana and Rawlins (2019) (F&R) analyzed the sentences without negation as incorporation of negation into *mica*.

The proposals for *mica* and *thori*: bear similarities to my proposals for *bing* and *you*: for example, Cinque (1976) argued that *mica* requires a prior claim or a salient expectation to deny. Although he did not formalize what it means to deny a salient proposition, we could formalize it in terms of contrast like I did in section 3.1, and consider this analysis to be identical to my proposal for *bing*. F&R argued instead that *mica* presupposes that the speaker is sure that p should not be added to the CG, thus making *mica* a CG manager, in the same vein as my proposal for *you*. Bhatt and Homer (2022) built on F&R's analysis, and added focus sensitivity to it: *thori*: presupposes that the speaker is sure that p should not be added to the CG, but instead an alternative p' should be.

This section compares detailed behaviors of *bing* and *you* with those of *mica* and *thoṛi:*, with an empirical focus on two types of data: (a) key data that teased apart the contrast-marker analysis and the CG-manager analysis of *mica*, suggesting that *bing* is a contrast marker (subsection 4.1); and (b) key data that motivated the CG-manager analysis of *mica*, suggesting that *bing* is not a CG-manager but a contrast marker, and *you* is a contrast marker with different meanings from *mica* and *thoṛi:* (subsection 4.2).

4.1. Key data that teased apart the contrast-marker analysis and the CG-manager analysis of mica: The 'elevator' dialogues

F&R raised the following evidence against Cinque's contrast-marker analysis of mica: assuming that residential buildings normally have elevators but not escalators, in response to an IKEA delivery person A's question, it is rude to put *mica* in the elevator-answer (35a) but okay to put it in the escalator-answer (35b).

- (35) a. A: 'Does your building have an elevator?'
 - B: No, il mio palazzo non ha (#mica) un ascensore.
 - 'No, my building does not have (#mica) an elevator.'
 - b. A: 'Does your building have an escalator?'
 - B: No, il mio palazzo non ha (mica) una scalamobile.

'No, my building does not have (mica) an escalator.' (Frana and Rawlins 2019:47)

If *mica* presupposes its prejacent is a salient expectation as Cinque claimed, the delivery person's question should license this presupposition in both answers, contrary to fact. This fact can be captured by F&R's proposal that *mica* presupposes that the speaker is sure that *mica*'s prejacent should not be added to the CG: only in (35b) is the answerer justified to assume that the proposition that their building has an escalator should not be in the CG because this is not a common proposition to assume. In (35a) the proposition that their building has an elevator is more commonly assumed, and thus the answerer is not justified in assuming that this proposition should not be in the CG.

Bing is possible in both answers, precisely what Cinque would predict for Italian *mica*:

- (36) a. A: 'Does your building have an elevator?'
 - B: wode dalou {bing/#you} mei vou zhiti. my building BING/YOU
 - NEG have elevator
 - 'My building does not have an elevator.'
 - b. A: 'Does your building have an escalator?'
 - B: wode dalou {bing/#you} mei you futi.
 - my building BING/YOU NEG have escalator
 - 'My building does not have an escalator.'

This supports the current analysis that bing requires its prejacent to contrast with a salient proposition. This salient proposition is *Speaker B's building has an elevator / escalator*, which was made salient by the delivery person's question.

In contrast, you is odd in both answers, suggesting that its analysis should differ from F&R's analyses for mica. I argue that you is odd in both answers for the same reason that (24) is rude: it is rude to assume the delivery person should know whether Speaker B's building has an elevator / escalator. Even if buildings normally don't have escalators, it is rude to assume the delivery person knows this fact about Speaker B's building in particular.

4.2. Key data motivating the CG-manager analysis of *mica*: Negative polar questions (NPQs)

The key data that motivated F&R's analysis was NPQs, which normally require the speaker to have a prior bias for p. But when mica appears in NPQs, this bias is reversed to $\neg p$. The context in (37) requires the speaker's prior bias for p, and mica is not possible; the context in (38) requires prior bias for $\neg p$, and mica is required.

(37) Context (Speaker expected p, but sees evidence for ¬p): Clara invites Miles for drinks and tells him to come after dinner. When he gets there, Miles asks if she has any food. Clara asks:

a. Non hai già mangiato? (NPQ)
Neg have.2sg already eaten?
'Didn't you eat already?'

b. #Non hai mica già mangiato? (mica-NPQ) neg have.2sg mica already eaten? (Frana and Rawlins 2019:18)

(38) Context (Speaker expected ¬p, but sees evidence for p): Clara invites Miles for dinner and makes clear to him that she will prepare her best dishes. When he gets there, Miles barely touches any food. Clara asks:

a. #Non hai già mangiato?

b. Non hai mica già mangiato?

(mica-NPQ)

(NPO)

(Frana and Rawlins 2019:18)

Based on this contrast between (37) and (38), F&R proposed that *mica* presupposes that prior to their question, the speaker believed p should not be added to the CG. This is satisfied in (38), where the speaker believed ¬p to be in the CG, but not satisfied in (37).

I claim that *you* and *bing* have different meanings from *mica*, and thus predict NPQs containing *you* and *bing* to behave differently from those containing *mica*. This prediction is borne out, as the following subsections evaluate *you* and *bing* in NPQs respectively.

4.2.1. You in NPQs

You cannot be embedded in NPQs at all:

(39) #Zhangsan you bu jianshen ma Zhangsan YOU NEG work.out Q

I argue that this is because unlike mica, whose user thinks p should not be added to the CG but is open to negotiation, the user of you believes that this negotiation has already happened, and that $\neg p$ is already in the CG, and therefore cannot retract that negotiation by asking an NPQ.

4.2.2. Bing in NPQs

Bing can appear in NPQs, but before evaluating *bing* in NPQs, I first discuss the meaning of an NPQ without *bing*, and then show that an NPQ with *bing* has the same meaning, plus the additional presupposition by *bing*, which is expected under the current analysis.

NPQs and polar questions in general vary in three aspects: (a) what sort of prior bias was held by the speaker before asking the question; (b) what sort of contextual evidence was presented to the speaker before asking the question; and (c) what proposition the question checks or double-checks.

My proposal is that *bing* presupposes that its prejacent contrasts with some salient proposition in the context. This should not affect any of these key aspects of polar questions. Thus, I predict that NPQs containing *bing* should behave the same as those without *bing* in these three aspects, but in addition, NPQs containing *bing* require its prejacent to contrast with some salient proposition. This prediction is borne out. First, let us consider a context that does not involve any prior bias by the speaker (40), adapted from F&R.

- (40) Context: S interviews A on TV about Wu Guanzhong, a Chinese painter.
 - A: 'There were some times in Mr. Wu's career when he only painted landscapes, but not portraits.'
 - S: 'Please tell us more about those gaps. For example...'
 qishi niandai ta (#bing) mei you hua renhe renwuhua ma?
 seventy times he BING NEG2 have paint any portrait Q
 ruguomei you, na shi weishenme ne?
 if NEG have then COP why PRT
 'did he not paint any portrait in the 70s? And, if he didn't, why not?'
 (context without speaker's prior bias, adapted from Frana and Rawlins 2019:23)

An NPQ with Neg₂ is licensed in this context, suggesting that such an NPQ does not require the speaker's prior bias. Like its English translation *Did he not paint any portrait in the 70s?*, this Mandarin NPQ checks the truth and falsity of a negative proposition, and can license NPIs, suggesting that it involves Neg₂.

An NPQ with *bing* is not licensed in this context, which I argue is because *bing*'s presupposition is not satisfied: in this context *He painted portrait in the 70s* is not a salient proposition. We can fix this by changing the context slightly:

(41) Context: S interviews A on TV about Wu Guanzhong, a Chinese painter. S knows about his portrait gaps in the 70s, and says 'Because Mr. Wu is a versatile painter, some may expect him to paint landscapes and portraits throughout his career...' dan qishi qishi niandai ta (bing) mei you hua renhe renwuhua ma but actually seventy times he BING NEG2 have write any portrait Q 'but actually, did he not paint any portrait in the 70s?'

S's prior utterance makes salient the proposition that contrasts with *bing*'s prejacent, and thus licenses *bing* in (41). To summarize, I have shown that *bing* and *you* behave differently from *mica*: *bing* behaves like what Cinque predicts *mica* would behave, while *you*, like F&R's analysis of *mica*, is a CG manager, but makes a different contribution to the discourse from *mica*.

Besides the differences in their detailed semantics, there is a key syntactic difference between bing and you on the one hand and mica on the other: F&R put mica in the left-peripheral CP

because it is a meta-conversational operator. In their analysis, the negation associated with *mica* is also interpreted high because rather than asserting a negative proposition, the speaker *refuses* to add a proposition to the CG. In section 2 I have shown that *bing*, *you* and negation are located lower than *mica*, between C and T, and section 3 has argued that negation is interpreted in-situ-*bing* and *you* make meta-conversational moves based on a negated proposition. I therefore suggest that the illocutionary force associated with *bing* and *you* is actually introduced by a covert operator in the left-peripheral CP that agrees with *bing* and *you*, and *bing* and *you* are semantically inert.

5. Conclusion

I have argued that among the three negations on the clausal spine, *bing* and *you* require Neg₂, and are located between C and T. *Bing* presupposes that its prejacent contrasts with a salient proposition, while *you* presupposes that the speaker believes that its prajacent was already in the CG, making it similar to *mica* and *thori*: in being a CG manager. The differences in detailed meanings between *you* and *mica* and *thori*: (summarized in the following table) lead to their different distributions.

<u>Type</u>	Corrective particle	<u>Presupposition</u>
Contrast marker	Bing	Its prejacent should contrast with a salient proposition.
CG manager	You	The speaker believes that its prejacent is already in the CG.
	Mica	The speaker is sure that its prejacent should not be added to the CG.
	Thoṛi:	The speaker is sure that its prejacent should not be added to the CG, but instead an alternative proposition should be.

Table 2: Typology of corrective markers.

This paper began with the observation that *bing* and *you* require a proposition to correct (1)—(2), making them corrective markers like *mica* and *thori:*. But I have subsequently shown that *bing* and *you* have this requirement for different reasons: this requirement is part of *bing*'s presupposition, which requires contrast to a salient proposition; the *you*-sentence reiterates a proposition that the speaker thinks was already in the CG. Therefore, unless the hearer said evidence for the contrary proposition, *you* is not licensed. My findings enrich the typology of corrective markers by showing that some of them are CG managers, while others mark contrast, and both these types are attested in Mandarin.

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