Two paths to correction

Danfeng Wu (University of Oxford)

1. Introduction. 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 (CG), as Frana & Rawlins (2019) and Bhatt & Homer (2022) have claimed for Italian *mica* and Hindi *thoṛi:*, but there is another type that had not been noticed before (e.g. Mandarin *bing*)–they mark contrast to a salient expectation.

Bing and *you* are used 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. They also have to be immediately followed by negation:

(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.'

(2)a. A: 'Zhangsan works out.'
B: Zhangsan {bing/you} *(bu) jianshen
Zhangsan BING/YOU NEG work.out
'Zhangsan doesn't work out.'

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 but not *you* can also contradict the expectation previously created in the same sentence:

(3)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.'

Bing and *you* can contradict presuppositions and even non-linguistic statements:

(4)Context: A puppy approaches Zhangsan, who looks scared. I tell Zhangsan:
bie pa. ta {bing/you} bu hui yao ni
don't afraid it BING/YOU NEG will bite you
'Don't be afraid. It won't bite you.'

Bing can be embedded in finite clauses and negative polar questions, while *you* cannot be embedded at all. *You* but not *bing* implies the speaker's impatience with the hearer.

Proposal. *Bing* and *you* are located between C and T. They are identity functions <st, st> with presuppositions: *bing not p* presupposes that there is a salient proposition that *not p* contrasts with (5), while *you not p* presupposes that the speaker believes that ¬p is already in the CG (6). Despite this belief of the speaker, they still repeat ¬p to remind the hearer of it, deriving *you*'s impatience inference. Negation is interpreted in-situ, while *bing* and *you*, despite their surface positions, are associated with the illocutionary force. I suggest that the illocutionary force is actually introduced by a covert operator in C that *bing* and *you* agree with.

(5)$[\![\text{bing not p}]\!]^c(w) = 1$ iff p is false
Defined only if $\exists r: \exists q: q$ is salient $\wedge\ q \Rightarrow r \wedge \neg p \Rightarrow \neg r$
"There is a salient proposition q and a (explicit or implicit) proposition r such that q implies r and ¬p implies ¬r. I call q and p that stand in this implicational relationship *contrast*."

(6)$[\![\text{you not p}]\!]^c(w) = 1$ 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 ¬p is in the Common Ground."

2. Syntax. Syntactic-semantic tests involving word order, scope relative to adverbs, and NPI-licensing diagnose three different positions for negation in Mandarin: a) Neg_1, above C in negative polar questions, b) Neg_2, between C and T, and c) Neg_3, between T and V. For example, these negative positions have fixed scopes relative to high adverbs such as *dagai* 'probably' and low adverbs such as *zongshi* 'always' (following Cinque 1999). *Bing* and *you* must appear immediately before Neg_2, leading to the structure [$_{CP}$ Neg_1 *dagai* C [$_{TP}$ {*bing*/*you*} Neg_2 T *zongshi* Neg_3 VP]].

3. Semantics. *Bing*. Two pieces of evidence support (5). First, the sentence '(But) Zhangsan bing not works out' (bing not p) can correct 'Zhangsan works out' (p) as in (2), but can also correct 'Zhangsan looks fit' (q), which implies p. Following Toosarvandani (2014), I take *q implies p* (q⇒p) to be *q normally entails p* (formally, entailment with a necessity modal over possible worlds, and this modal is relativized to an epistemic modal base and a stereotypical ordering source). Here 'Zhangsan looks fit' (q) normally entails 'Zhangsan works out' (p), and satisfies (5) because q⇒p and ¬p⇒¬p. Second, (7)'s felicity suggests that there can be a third proposition r that stands in the implicational relationships to p and q as in (5): r is 'Speaker A will get to eat', and q⇒r, ¬p⇒¬r.

(7)A: 'I'm hungry.' (q)
B: (danshi) fandian bing mei you kai (¬p)
but restaurant BING NEG have open
'(But) the restaurants aren't open.'

You. *You* implies the speaker's impatience with the hearer, and is justified in (4) because normally a puppy doesn't bite. But if the animal in the situation is a hungry wild lion in a savannah, then *you* is very odd because it is odd to presuppose that lions don't bite. In contrast, *bing* is fine in both situations because Zhangsan's fear makes p (i.e. the puppy / the lion will bite Zhangsan) salient.

To license *you*, the speaker has to think that ¬p is in the CG for *the interlocutors*. If ¬p is a well-known fact, but the hearer happens to not know it, and the speaker knows that, then the speaker's use of *you* is very rude (8). But if the student in the situation is a college student, *you* is justified and signals impatience. *Bing* is fine in both cases because Xiaoming's utterance has made p salient.

(8)Context: I am teaching Xiaoming, a five-year-old, in his first arithmetic lesson:
Xiaoming: 'One plus one is three.'
A: yi jia yi {bing/#you} bu dengyu san.
one plus one BING/YOU NEG equal three
'One plus one is not three.'

4. Comparison with *mica*. *Bing* and *you* have apparently similar behaviors to Italian *mica*, also a corrective marker. There have been two different proposals for *mica*: Cinque (1976) argued that *mica* requires a salient expectation to deny (which can be considered identical to my analysis of *bing*), while Frana & Rawlins (2019) argued that *mica* presupposes that the speaker is sure that p should not be added to the CG (i.e. *mica* manages the CG, in the same vein as my analysis of *you*).

Frana & Rawlins raised the following evidence against Cinque's analysis: assuming that residential buildings normally have elevators but not escalators, there is a contrast in response to an IKEA delivery person's question 'Does your building have an {elevator / escalator}?': 'No, my building does not have {#mica elevator / mica escalator}.' If *mica* presupposes its prejacent is a salient expectation, the question should satisfy this presupposition in both answers.

This is precisely what we see with *bing*: *bing* is possible in both answers, supporting the current analysis. In contrast, *you* is odd in both answers for the same reason that (8) is rude: even if buildings normally don't have escalators, it is rude to assume the delivery person knows this fact about the speaker's building in particular.

Selected References: Cinque. 1976. 'mica'. **Frana and Rawlins**. 2019. Attitudes in discourse: Italian polar questions and the particle *mica*.