

Almost or almost not? The interaction between *cha(yi)dian* ‘almost’ and negation in Mandarin Chinese*

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1 Introduction

Mandarin *cha(yi)dian* is similar to English *almost* in expressing that a particular course of events described by its syntactic complement (its prejacent) came close to being realized. It is construed transparently as in 1b, where *yi* ‘a/one’ can be omitted without change in meaning.

- (1) a. *Zhangsan cha(yi)dian tongguo kaoshi*
Z. almost pass exam
‘Zhangsan almost passed the exam.’
b. *cha-yi-dian*
miss-a/one-little

Schematically, *almost*-like approximative adverbials can be described as in 2. The two meaning components are usually called **polar component** and **proximal component** (cf. Hitzeman 1992). Since *cha(yi)dian* only operates at the VP-level (propositional), we will focus on the use of *almost*-like adverbials with a propositional complement, its **prejacent** (*p* in 2).¹

- (2) ALMOST *p*
a. $\neg p$
b. things came close to *p* being the case

Approximative adverbs like *almost* thus look minimally different from those like *barely*, which can be schematized as in 3:

- (3) BARELY *p*
a. *p*
b. things came close to $\neg p$ being the case

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¹We use ‘prejacent’ both for the sentential object language material that constitutes the complement of a propositional approximative adverb at LF and for the proposition it denotes; similarly, variables *p, q, . . .* are used both for sentential strings of the object language and for the propositions they denote.

Returning to *cha(yi)dian*, we observe that, just like English *almost*, if combined with a prejacent of the form ‘NEGATION *q*’ as in 4 it expresses that *q* was the case but things came close to *q* not being the case.

- (4) *Zhangsian cha(yi)dian mei tongguo kaoshi*
Z. almost not pass exam
‘Zhangsian almost didn’t pass the exam.’

Interestingly, this is not the only interpretation that can be derived when *chayidian* combines with a negated prejacent. In contrast to 4, example 5 expresses that the prejacent *ta mei si* ‘he not die’ is true (that is, he did not die), but that things came close to the prejacent being false (cf. Zhu 1959, Li 1976).

- (5) *Zhangsian cha(yi)dian mei si*
Z. almost not die
‘Zhangsian almost died!’

On the assumption that *cha(yi)dian* means *almost* (as suggested by 1a and 4), sentences like 5 can be classified as instances of expletive negation - *mei* ‘not’ appears to be ignored. Throughout the paper, we stick to the distinction between ‘expletive’ and ‘canonical’ negation without adopting it as a theoretical commitment.

In this paper, we take a closer look at the constraints that govern the interpretation of *cha(yi)dian* with positive and negative prejacent, and we offer a formal compositional treatment of the Mandarin Chinese data. We argue that, contrary to appearance, negation is always interpreted, and that the different readings result from an instance of lexical ambiguity. Before presenting our analysis in Section 4, we present a discussion of the Mandarin Chinese data (Section 2) and consider similar findings cross-linguistically as well as previous analyses and assumptions from the literature (Section 3).

2 Data

2.1 Negation and desirability

With a positive prejacent, Mandarin *cha(yi)dian* behaves exactly like English *almost*, 6 and 7:

- (6) *Yuehan he Mali cha(yi)dian lihun.*
J. and M. almost divorce
‘John and Mary almost got divorced.’ (They got close to getting divorced, but they didn’t.)
- (7) *Zhangsan cha(yi)dian kao-shang daxue.*
Z. almost exam-up college
‘Zhangsan almost got into college.’ (He got close to passing the entrance exam, but he didn’t.)

However, with a negated preadjacent, the interpretation depends on the predicate. Zhu (1959) first observes that when the predicate following negation describes an event the speaker considers undesirable, negation is expletive 8. On the other hand, when the predicate following negation describes an event the speaker considers desirable, negation is interpreted canonically 9.

- (8) Context: Divorce is considered undesirable by all accounts. John and Mary fought every day and got close to getting divorced, but in the end they didn't get divorced.
- a. *Yuehan he Mali cha(yi)dian mei lihun.*
 J. and M. almost not divorce
 'John and Mary almost got divorced.'
- (9) Context: The goal is to get into college, and the passing grade is 60/100. Zhangsan got 61/100:
- a. *Zhangsan cha(yi)dian mei kao-shang daxue.*
 Z. almost not exam-up college.
 'Zhangsan barely got into college.' (= almost did not get into college)

Moreover, Zhu (1959) points out that desirability is context dependent. For a neutral event description, like *qiu she-jin men* 'the ball enter the goal', the interpretation of negation depends on which team the speaker belongs to (or associates with):

- (10) *Qiu cha(yi)dian mei she-jin men.*
 ball almost not shoot-enter gate.
 'The ball almost did(n't) go in.'

If this is about team A's gate and team B was trying to get the ball in, members (and fans) of team B can use 10 if team B barely managed to get the ball in: from B's point of view, the ball's going in is desirable and negation is interpreted canonically. In contrast, members (and fans) of team A can use 10 if team B failed to get the ball in: from A's point of view, the ball's going in is undesirable, hence negation can be expletive.

Elaborating on Zhu's observation, we observe that when the predicate following negation describes an event the speaker considers neutral, the interpretation of *cha(yi)dian mei* 'almost not' becomes unclear.²

- (11) Context: The speaker is trying to describe objectively what is happening on the screen during a presentation. He has no expectations or preferences regarding how the balls move. He sees two balls get close but ultimately miss each other. [The two balls did not touch.]
- a. *#Gangcai na liangge qiu cha(yi)dian mei peng-shang.*
 just.now that two-CL ball almost not touch-up.
 'Just now those two balls almost touched each other.'

²In our informal survey (6 speakers), some report that they do not know how to interpret sentences like 11 and 12, the judgments of others diverge, which suggests that they probably rely on coercion-strategies. In future research, the data on neutral predicates with negation should be tested under rigidly controlled experimental conditions.

- (12) Context: The speaker is trying to describe objectively what is happening on the screen during a presentation. He has no expectations or preferences regarding how the balls move. He sees that two balls could have avoided touching each other, if not for a third ball that hit one of them. [The two balls touched.]
- a. #*Gangcai na liangge qiu cha(yi)dian mei peng-shang.*
 just.now that two-CL ball almost not touch-up.
 ‘Just now those two balls almost touched each other.’

Eventually, while Zhu remains vague on this point, our observations suggest that ‘desireability’ means ‘desirability from the speaker’s point of view’ (rather than regarding mutually shared interests, for example). For example, 10 can be used felicitously between two friends who happen to cheer for Team A and Team B respectively and are aware of each other’s preferences. As far as we can tell from our informal survey, the interpretation of *cha(yi)dian mei* ‘almost not’ is determined simply by the preferences of the speaker.

To conclude, contextual desirability gives rise to the following pattern for the interpretation of *cha(yi)dian mei p* lit. ‘almost not p’:

Contextual status of <i>p</i>	Interpretation of <i>cha(yi)dian mei p</i> lit. ‘almost not <i>p</i> ’
undesirable	only expletive negation
desirable	only canonical negation
neutral	infelicitous

Table 1: Interpretation of negation under *cha(yi)dian* depending on contextual desirability

2.2 No influence of agentivity

The notion of desirability might suggest a link to the speaker’s goals, which might in turn suggest an impact of agentivity. For Mandarin Chinese *cha(yi)dian* agentivity seem to be orthogonal to how the negation is interpreted.³

In 8 and 9, we have already seen cases involving the negation of an undesirable and a desirable agentive predicate respectively. Examples 13 and 15 contain prejacents that involve the negation of non-agentive predicates like ‘forget’ and ‘win the lottery’. Here, too, when the speaker considers the predicate embedded under the negation (‘forget the key’) undesirable, negation has to be expletive: 13 is felicitous (and true) in Context A, but infelicitous⁴ in Context B.

³For otherwise similar data from Spanish, Pons Bordería & Schwenter (2005) suggest that expletive readings arise typically for non-agentive prejacents (see Section 3). While, at least for Mandarin, this does not seem to correlate with the interpretation of the negation, we note that here, too, even agentive predicates acquire a non-agentive flavor of ‘end up (not) doing’ when describing desirable outcomes that in the end are not realized.

⁴Depending on whether the polar component is entailed, asserted, presupposed, or implicated, the sentence may also be simply false. See Nouwen (2006) for detailed discussion.

- (13) *Wo cha(yi)dian mei ba yaoshi wang zai jia.*
 I almost not BA key forget at home
 ‘I almost forgot the key at home.’
- (14) Context: I do not want to forget the key at home, because I need the key to get into the office. . .
- a. A: This morning I would have forgotten it if my wife hadn’t reminded me of it at the very last moment. [So, I did not forget them.]
 - b. B: This morning, I’d already grabbed my key and put them into my pocket. But then I changed my pants at the very last minute before I left home, and so I forgot the key at home. [So, I did forget them.]

However, when the predicate embedded under negation describes an event the speaker considers desirable (‘win the lottery’), negation has to be interpreted canonically: 15 is infelicitous (or even false, see fn. 4) in Context A, and felicitous and true in Context B.

- (15) *wo cha(yi)dian mei zhong caipiao.*
 I almost not win lottery.
 ‘I almost didn’t win the lottery.’
- (16) Context: I want to win the lottery (who doesn’t!). One day I bought a ticket, which in the end, turned out to be only one digit different from the winning number. . .
- a. A: . . . So, I got very close, but my ticket didn’t win. [I did not win the lottery.]
 - b. B: . . . Since I had some extra money, I bought another one, and that ticket turned out to be the winning ticket. If I hadn’t bought that second ticket, I wouldn’t have won. [I did win the lottery.]

We conclude that the interpretation of negation under *cha(yi)dian* is independent of whether the predicate in the prejacent is agentive or not. The non-agentive cases also follow the pattern summarized in Table 2.1.

3 Inverted readings in other languages and previous accounts

In Section 2, we observed that, where it is felicitous, in nearly all cases, ‘*cha(yi)dian p*’ is interpreted just like English ‘*almost p*’. A difference arises only when *p* is of the form ‘NEGATION *q*’ for some *q* that denotes an undesirable course of events. In this case, ‘*chayidian p*’ is true if *p* is true and things came close to *p* not being true. A highly similar situation seems to obtain in Spanish for the approximative adverbial *por poco*, which is also normally translated as ‘almost’. Again, we observe that for a prejacent $p \equiv \neg q$, where *q* denotes an undesirable course of events like ‘get killed’, *por poco* can express that *p* is true and things came close to *p* not being true (Li 1976 and Horn 2002, who credit Dwight Bolinger). These data are discussed in detail by Pons Bordería & Schwenter (2005), compare their 17:⁵

⁵Pons Bordería & Schwenter (2005) note that judgments change if 17b is presented in a context where getting killed is a goal of the agent. They observe that nearly all examples of expletive

- (17) a. *Por poco (no) sale.*
 by little (not) left.
 ‘She almost (didn’t) leave’ their (3,4)
- b. *Por poco (no) se mata.*
 by little not herself killed
 ‘She was almost killed.’ their (5a,b)

Mandarin *cha(yi)dian* and Spanish *por poco* display these effects only in connection with negation, which gives rise to an apparent distinction between ‘expletive’ and ‘canonical’ negation. But some other approximative adverbs have been shown to display a similar divergence from their usual *almost* or *barely*-type interpretation also in the absence of negation. Consider for example Valencian Spanish *casi*, which is normally interpreted like English *almost*, but can in certain cases come to express something along the lines of English *barely*.

- (18) Context: The speaker is trying to get out of his car, parked on a narrow street, but many cars are passing by and he has to wait. When he is finally able to get out, he says:
- a. *¡Casi salgo!*
 almost get-out.PRES.1Sg
 ‘I almost didn’t get out!’ (Schwenter 2002, 166)

Schwenter (2002) introduces the term **inverted readings** for the cases in which approximative adverbs express a polar component other than what they would normally express. Horn (2002) argues that such readings can be captured naturally if we take into consideration the well-documented asymmetry between the approximative adverbs’ polar and proximal meaning component (Schwenter 2002, Horn 2002, Nouwen 2006, a.o.). For example, it is the proximal component that determines the ‘rhetorical impact’ of an utterance (cf. 19; Amaral 2007 for examples and references), and that is targeted by speaker evaluative adverbials like *fortunately* (cf. 20, from Nouwen 2006):

- (19) a. *John can almost swim. Therefore, he’ll enjoy a day at the pool with his friends.##Therefore, he’s afraid of drowning.*
 b. *John can barely swim. #Therefore, he’ll enjoy a day at the pool with his friends./Therefore, he’s afraid of drowning..*
- (20) a. *Fortunately, almost all my friends attended my wedding.*
 b. *#Fortunately, not quite all of my friends attended my wedding.*

In view of such findings, Horn (2002) concludes that ‘[I]f the polar component is more peripheral to the force of *almost* sentences than is the proximal component, it should not be too surprising to find such cases of inversion’ and points out that ‘what we never find is the reverse, when *almost P* retains the *not P* entailment while

negation are such that the proposition under the negation is undesirable for some salient human agent. Other pragmatic properties that they take to characterize the expletive interpretation are a lack of active control for the salient agent, and that the negation of the prejacent is already established in the previous discourse.

jettisoning is better (proximal) half' (p. 65). Pons Bordería & Schwenter (2005) adopt this idea for Spanish *por poco* and argue that there are two variants of *por poco* depending on the presence or absence of the polar component. The expletive negation reading is derived when only the proximal meaning component is at play, whereas for the canonical negation reading, both are at play. From a diachronic perspective, they argue that preverbal *por poco* in negative sentences started out as a negative concord item which, like any preverbal negative concord items at this stage, did not itself carry negative meaning (i.e., the polar meaning component). In the course of the change of the negation system, *por poco*, like the other preverbal negative concord items, acquires the ability to independently express negation, i.e. its polar component. This predicts correctly that the expletive readings is older than the canonical one. Synchronically, both possibilities persist for *por poco* and are disambiguated by pragmatic factors. But as Pons Bordería & Schwenter (2005) note themselves, their assumptions cannot avoid polysemy of *por poco* from its first occurrences on: in affirmative sentences, the adverbial had always carried its polar meaning component.

Amaral (2007) criticizes this type of account for the role it attributes to the proximal component: an account that aims to derive the inverted readings by omitting the polar component (under certain contextual constellations) while retaining the proximal component, has to assume the exact same proximal component for 'opposite' approximative adverbs like *almost* and *barely*. Rather than expressing 'close to p ' and 'close to $\neg p$ ', it has to rely on 'close to (the boundary between p and $\neg p$)'. At first glance, this seems to fall short of deriving the directedness that is generally associated with approximative adverbials. For example, 21 (from Nouwen 2006) can only be true if the number of guests was smaller than 200 (and not just close to 200), and the same notion of directedness has been held responsible for the patterns in 19 and 20.

(21) *Almost 200 guests attended my wedding.*

However, advocates of a non-directed proximal component may argue that the directedness of 21 can be derived from the interaction between the proximal and the polar component: in 21, *almost* combines with a scalar expression that gives rise to monotonicity inferences that, together with the polar component, can make up for the lack of directedness in the proximal component (if attendance of 200 guests entails the attendance of any smaller number of guest, conjoining 'not 200 guests' and 'close to 200 guests' entails 'close to but not quite 200'; cf. Penka 2006). But we cannot draw on this for the inverted readings, if they are derived from an 'almost' that lacks the polar component. Hence, instead of the inverted reading of *por poco no* in 17b, the analysis predicts the unattested, weak reading that 'she came close to killing herself or she killed herself by little'.⁶

Therefore, we agree with Amaral (2007) that inverted readings cannot be captured by leaving out the polar meaning component while retaining the proximal

⁶Independently of the specific problems for this analysis of inverted readings, an undirected proximal component together with a polar component fails for examples that do not depend on an entailment scale (cf. Nouwen 2006). Consider 1, which, depending on whether we are hoping for the lake to freeze or for the ice to melt, can mean that it is more or less than 0°C.

(1) *It is now almost 0°C.*

component. Yet, the analysis we propose in the following does at least partial justice to Horn’s intuition: the fixed polar component is abandoned in favor of one that is determined via desirability from a set of alternatives containing the prejacent and its negation.

4 Analysis

The data discussed in Section 2 reveal that the interpretation of *cha(yi)dian* depends both on a syntactic property (the presence or absence of negation) and a pragmatic property (the contextual desirability of the prejacent). But these two parameters are not independent from each other: contextual desirability plays a role only in the presence of syntactic negation. We take this to indicate that *cha(yi)dian* is ambiguous (or polysemous) along the following lines. There is (i) a positive polarity item *cha(yi)dian_{PPI}* that is interpreted just like English *almost* and is thus neutral regarding the desirability of its prejacent; and (ii) a negative polarity item *cha(yi)dian_{NPI}*, in which the interpretation of the component *cha* ‘miss/avoid by little’ is active, and which thus can only be predicated of something undesirable. Moreover, we take the meaning of *cha(yi)dian_{NPI}* to be different from *almost*: for *cha(yi)dian_{NPI}*, what is targeted by the polar and proximal component of the standard *almost*-meaning (cf. 2) need not be the prejacent *p* itself (which for *cha(yi)dian_{NPI}* is necessarily of the form ‘NEGATION *q*’ for some predicate *q*). Rather, depending on which of them counts as the undesirable outcome, the standard *almost*-meaning can target either the prejacent *p* or its negation $\neg p$ (equivalent to *q*, the proposition embedded under the negation). In this sense, while negation gets interpreted canonically throughout, its only real impact is to signal the sensitivity to contextual desirability, i.e. the presence of *cha(yi)dian_{NPI}*. In the following, we will first spell out in detail the lexical entries for *cha(yi)dian_{PPI}* and *cha(yi)dian_{NPI}* (cf. Section 4.1), and we will then discuss the notion of polarity sensitivity required (cf. Section 4.2).

4.1 Lexical ambiguity of *cha(yi)dian* ‘almost’

In Section 2, we have shown that in the presence of negation, no matter whether it appears to be interpreted expletively or canonically, *cha(yi)dian* can only combine with a proposition that denotes a contextually desirable or undesirable outcome. Neutral predicates are considered awkward, and speakers tend to coerce them into either something desirable or something undesirable, depending on the context. No such effect can be detected in the absence of negation.

To account for this difference in sensitivity to desirability, we assume that *chayid-ian* itself is ambiguous between what we call *cha(yi)dian_{PPI}* and *cha(yi)dian_{NPI}*.

cha(yi)dian_{PPI} is interpreted just like English *almost*: it imposes no restrictions regarding the desirability of its prejacent. Therefore, it can combine with desirable, undesirable, and neutral predicates alike. Moreover, we assume that *cha(yi)dian_{PPI}* is a positive polarity item that does not tolerate negation in its immediate scope. Note that this is different from the standard class of polarity items

Here, the directedness of *almost* cannot be derived from the interaction of polar component ‘not 0°C’ with a proximal ‘close to 0°C’; rather, *almost* appears to be sensitive to a contextually given directed scale (cf. Nouwen 2006, Amaral 2007).

that either cannot (PPIs), or have to (NPIs), appear in the scope of negation. For negative polarity items, a class of such ‘inversely licensed’ items has already been established; in 4.2 we will review the respective arguments and will adduce independent evidence that this type of licensing behavior should be extended to positive polarity items as well.

$cha(yi)dian_{PPI}$ is interpreted like *almost* when the latter takes propositional scope. For concreteness sake, we adopt the proposal from Rapp & von Stechow (1999) (their 11):⁷

$$(22) \quad \llbracket cha(yi)dian_{PPI} \rrbracket^c = \lambda p \lambda w. p(w) = 0 \wedge \text{there is a world } w' \text{ which is} \\ \text{almost not different from } w \text{ and } p(w') = 1.$$

$cha(yi)dian_{NPI}$ is a negative polarity item that is licensed by syntactic negation in its immediate scope (see 4.2). Therefore, its prejacent has to be an expression of the form ‘NEGATION q ’. $cha(yi)dian_{NPI}$ is interpreted differently from *almost/cha(yi)dian_{PPI}*. In particular, its polar component need not be the negation of its prejacent: instead, the polar component is determined by the prejacent together with contextual desirability, which we take to induce a partial order $<_{des^c}$ on the set of propositions:

$$(23) \quad p <_{des^c} q \text{ iff}_{def} \text{proposition } p \text{ is considered more desirable than proposition} \\ q \text{ in context } c \text{ by the speaker of } c.$$

We consider a proposition p undesirable in context, c (c-UNDESIRABLE), if $<_{des^c}$ prefers $\neg p$ to p .

$$(24) \quad \text{c-UNDESIRABLE}(p) \text{ iff}_{def} \neg p <_{des^c} p.$$

The semantics of $cha(yi)dian_{NPI}$ can now be spelled out as in 25:

$$(25) \quad \llbracket cha(yi)dian_{NPI} \rrbracket^c = \\ \lambda p : \text{there is a } q \in \{p, \neg p\} \text{ such that c-UNDESIRABLE}(q). \\ \lambda w. \iota q [q \in \{p, \neg p\} \wedge \text{c-UNDESIRABLE}(q)](w) = 0 \wedge \\ \text{there is a } w' \text{ which is almost not different from } w \\ \text{s.t. } \iota q [q \in \{p, \neg p\} \wedge \text{c-UNDESIRABLE}(q)](w') = 1.$$

On closer inspection, the meaning of $cha(yi)dian_{NPI}$ is entirely parallel to *almost/cha(yi)dian_{PPI}*, with one exception: in 25 either the prejacent p or its negation can play the role the prejacent p plays in 22.

With these two lexical entries, the relevant interpretations are derived as follows. In the absence of negation, we find $cha(yi)dian_{PPI}$, and we obtain exactly

⁷This account has been criticized repeatedly for stashing away crucial details in the metalanguage. While we agree that, ultimately, one would want an explicit account for what the relevant close worlds are (see in particular the proposals by Nouwen 2006 and Eckardt 2007), we consider this issue orthogonal to our concerns in this paper. In particular, desirability need not correlate with approximation to p . It is easy to come up with examples where desirability is of a purely binary nature, that is, even if p is desirable, any outcome that verifies $\neg p$, no matter how close it comes to p is equally undesirable. For example, the speaker might have a strong desire to pass an exam, but does not care in the least how close she came to passing if she does not pass. The behavior of $cha(yi)dian$ is not influenced by whether desirability is correlated with approximation to $(\neg)p$ or not.

the same interpretation as in the English translation. Things are more interesting in the presence of negation. In these cases, *cha(yi)dian*_{PPI} is excluded because of its particular PPI status. *cha(yi)dian* can thus only be an instance of *cha(yi)dian*_{NPI}. Consider first a case like 4 (repeated as 26), which involves the negation of a contextually desirable proposition ‘Zhangsan passed the exam’, hence c-UNDESIRABLE($\lambda w. \neg[\text{Zhangsan passed the exam in } w]$).

(26) *Zhangsan cha(yi)dian mei tongguo kaoshi*
 Z. almost not pass exam
 ‘Zhangsan almost didn’t pass the exam.’

(27) $\llbracket 26 \rrbracket^c = \llbracket \text{cha(yi)dian}_{\text{NPI}} \rrbracket^c(\lambda w. \neg[\text{Z. passed the exam in } w])$
 This is defined only if there is a $q \in \{\lambda w. \neg[\text{Z. passed the exam in } w], \lambda w. \neg\neg[\text{Z. passed the exam in } w]\}$, s.t. c-UNDESIRABLE(q).
 In context c , c-UNDESIRABLE($\lambda w. \neg[\text{Z. passed the exam in } w]$).
 Therefore, $\llbracket 26 \rrbracket^c = \lambda w. [\lambda w''. \neg[\text{Z. passed the exam in } w'']](w) = 0 \wedge$ there is a w' which is almost not different from w s.t. $[\lambda w''. \neg[\text{Z. passed the exam in } w'']](w') = 1.$
 $= \lambda w. \text{Zhangsan passed the exam in } w \wedge$ there is a w' which is almost not different from w s.t. Zhangsan didn’t pass the exam in w' .

In contrast, for a case like 5 (repeated as 28) which involves the negation of a contextually undesirable proposition ‘Zhangsan died’, we have c-UNDESIRABLE($\lambda w. \neg[\text{Zhangsan died in } w]$). The computation proceeds along the same lines, only that we now select as undesirable the negation of the negated prejacent, which by double negation is equivalent to the proposition embedded under the negation:

(28) *Zhangsan cha(yi)dian mei si*
 Z. almost not die
 ‘Zhangsan almost died!’

(29) $\llbracket 28 \rrbracket^c = \llbracket \text{cha(yi)dian}_{\text{NPI}} \rrbracket^c(\lambda w. \neg[\text{Z. died in } w])$
 This is defined only if there is a $q \in \{\lambda w. \neg[\text{Z. died in } w], \lambda w. [\text{Z. died in } w]\}$
 (= $\{\lambda w. \neg[\text{Z. died in } w], \lambda w. \neg\neg[\text{Z. died in } w]\}$), s.t. c-UNDESIRABLE(q).
 In context c , c-UNDESIRABLE($\lambda w. [\text{Z. died in } w]$).
 Therefore, $\llbracket 28 \rrbracket^c = \lambda w. [\lambda w''. [\text{Z. died in } w'']](w) = 0 \wedge$ there is a w' which is almost not different from w s.t. $[\lambda w''. [\text{Z. died in } w'']](w') = 1.$
 $= \lambda w. \text{Zhangsan didn't die in } w \wedge$ there is a w' which is almost not different from w s.t. Zhangsan died in w' .

For cases like 11 and 12, which involve neutral predicates, the presupposition of *cha(yi)dian*_{NPI} is not met: neither does the prejacent p outrank its negation nor the other way round, hence c-UNDESIRABLE is false of both. As a result, neutral predicates give rise to uncertainty or coercion towards (un)desirability.

In all cases, these predictions fit the pattern discussed in Section 2.

4.2 Inversely licensed polarity items

Standarly, polarity sensitive items are taken to impose restrictions on what operators can take scope over them (Giannakidou 2011 for an overview). This is particularly

true for positive polarity items, which Giannakidou (2011) describes as ‘expressions that are ‘repelled’ by negation and tend to escape its scope’ (p. 1665).

Nevertheless, appearing within the scope of negation (or another operator with suitable properties, e.g. non-veridicality, cf. Giannakidou (1997)) does not seem to be the only licensing constellation for polarity sensitive items.

The recent literature provides an increasing amount of evidence that at least NPIs in Japanese and Korean can require negation in their immediate scope, rather than imposing requirements on what operator they themselves are outscoped by (see in particular Sells 2001, Sells & Kim 2006, and Shimoyama 2011). Consider for example the arguments adduced by Sells & Kim (2006), who show that the Korean NPI *amwu-to* can occur in the subject position of a clause with a negated predicate (30a), even though in such constellations, negation cannot take scope over quantifiers in subject position (30b).

- (30) a. *amwu-to cip-ey eps-ess-ta*
 anyone house-at not.be-PAST-DECL
 ‘No one was at home.’
- b. *manhun salam-tul-i cip-ey eps-ess-ta*
 many people-PLU-NOM house-at not.be-PAST-DECL
 ‘Many people were not at home.’ (only: *many* > \neg)

Sells & Kim (2006) consider these and related data evidence that the NPI *amwu-to* is a universal quantifier that has to take scope over negation, rather than an existential quantifier that has to appear in the scope of negation (as assumed standardly for English *any*). Further evidence for this claim can be found in Shimoyama (2011).

The assumption that Mandarin Chinese *cha(yi)dian*_{NPI} is such an inversely licensed NPI looks even more plausible in view of the fact that other elements in the language seem to share these particular licensing conditions. For example, *conglai* ‘ever’ always co-occurs and precedes negation (cf. 31).

- (31) *ta conglai bu lai shang ke.*
 he ever not come take class.
 ‘He never came to class.’

Similarly to what was argued for Korean *amwuto*, an alternative analysis that interprets *conglai* as an existential quantifier in the scope of negation (possibly at LF) is implausible. Example 32 with the adverbial *zongshi* ‘always’ shows that the position occupied by the adverbial (arguably the position of *conglai* in 31 as well) cannot normally be interpreted as being within the scope of its clause-mate negation: 32 does not allow for a reading in which negation would take scope over the quantificational adverbial *zongshi* ‘always’.

- (32) *ta zongshi bu lai shang ke.*
 he always not come take class.
 ‘It is always the case that he didn’t come to class.’ (only: \forall > not)

While the data look pretty straightforward, a suitable analysis is much less so. Sells & Kim (2006) suggest that the presence of sentential negation marks the highest

projection of the clause as negative, independently of the actual scope of the negation. Another possibility would be to rely on agreement of negative features as carried by both the NPI and sentential negation, as proposed for Greek emphatic N-words by Giannakidou 2000.

Independently of the technical implementation, if these assumptions are on the right track for NPIs, it should not be surprising that PPIs can also display inverse licensing behavior. And in fact, *cha(yi)dian*_{PPI} as postulated on our account does not seem to be the only natural language element that does not tolerate (sentential) negation in its scope. Shin-Sook Kim (p.c.) points out that Korean *pelsse* ‘already’ behaves like an inverse polarity item: it is ungrammatical in a sentence with with lexical negation as in *molu-ta* ‘not.know’ (cf. 33), while this is exactly a position that would license the NPI *acik* ‘yet’ (cf. 34).⁸ Again, licensing of *acik* could not be derived by assigning wide scope to the lexical negation ‘not know’, as it cannot move to a position high enough to take scope over the adverbial (Loewen 2007).

(33) **Mina-nun pelsse ku sasil-ul moll-ass-ta*
 Mina-TOP already that fact-ACC not.know-PAST-DECL
 cannot mean: ‘Mina already didn’t know that fact.’

(34) *Mina-nun acik ku sasil-ul moll-ass-ta*
 Mina-TOP yet that fact-ACC not.know-PAST-DECL
 ‘Mina didn’t know that fact yet.’

Interestingly, similar facts have already been observed by Löbner (1999) for *schon* ‘already’ in German, as well as the other phase adverbials *nicht mehr* ‘not anymore’, *noch nicht* ‘not yet’, and *noch* ‘still’ that it forms a duality square with. Löbner (1999) points out that ‘none of them allows for negation within its scope’, even though he acknowledges that he ‘can’t offer an explanation for this phenomenon’ (p. 90). Note that the incompatibility arises only with syntactic negation, but not if *nicht da* is replaced by a lexically equivalent expression *weg* ‘gone/not here’.

(35) #*Sie ist schon nicht da*
 she is already not here
 infelicitous for: ‘She is not here anymore.’

Löbner (1999) mentions that similar restrictions seem to be imposed by English *since* and *until*. Moreover, while Amaral (2007) claims that European Portuguese *mal* and post-verbal *por pouco* are a PPI and an NPI respectively, her data suggest that they are also sensitive to the absence and presence of negation in their complement.⁹ While we, unfortunately, cannot currently add to the analysis of the phenomenon itself, we suggest to further investigate it in connection with the insights obtained on inversely licensed NPIs.

To conclude, while the assumption of the lexical split into an inversely licensed PPI and an inversely licensed NPI may seem costly at first glance, we consider it

⁸Note that *acik* is interpreted as ‘still’ in positive contexts (Shin-Sook Kim, p.c.).

⁹In contrast to *cha(yi)dian*, the approximative adverbials in European Portuguese seem to be (anti-)licensed by semantically negative contexts, too, e.g. negated implicative verbs, cf. Amaral (2007) for details.

well motivated in view of the pattern regarding desirability that we observed for Mandarin *cha(yi)dian*. Moreover, we think that the analysis gains significantly in plausibility in view of the existence of other inversely licensed elements and the findings on polarity sensitivity in approximative adverbs in general.

5 Towards a broader picture of approximative adverbials in Mandarin

Interestingly, *cha(yi)dian*_{NPI}, which we postulated as part of our analysis of Mandarin *cha(yi)dian*, is not the only approximative adverb in the language to be sensitive to the contextual desirability of its prejacent. Synchronically, there is another expression, *xianxie* (literally ‘dangerous some’), which is also translated as ‘almost’, and which, if it occurs with a positive prejacent, requires it to describe an undesirable course of events. In this, it contrasts with *cha(yi)dian*, which does not impose any restrictions when it occurs with a positive prejacent.¹⁰

- (36) a. #*xianxie tongguo kaoshi*
 almost pass exam
 infelicitous for ‘I almost passed the exam’
- b. *xianxie lihun*
 almost divorce
 ‘They almost got divorced.’
- c. #*Gangcai na liangge qiu xianxie peng-shang.*
 just.now that two-CL ball almost touch-up.
 Infelicitous for ‘Just now those two balls almost touched each other.’ if, without any expectations or preferences, the speaker tries to objectively describe the movement of objects on a screen.

Interestingly, *xianxie* behaves just like *cha(yi)dian* when it combines with a negative prejacent of the form ‘NEGATION *q*’. It gives rise to (apparently) expletive negation if *q* describes an undesirable course of events (cf. 37a), and negation is interpreted canonically if *q* describes a desirable course of events (cf. 37b). Again, neutral predicates give rise to uncertainty and/or coercion.

- (37) a. *Ta xianxie mei chu chehuo.*
 he almost not happen accident
 ‘He almost had an accident.’
- b. *Ta xianxie mei kao-shang daxue.*
 he almost not exam-up university.
 ‘He almost didn’t get into college.’

Our analysis extends straightforwardly to *xianxie* if we assume the same split into a PPI and an NPI, where the NPI version *xianxie*_{NPI} is interpreted exactly like *cha(yi)dian*_{NPI} (cf. 25). The PPI-version differs minimally from *cha(yi)dian*_{PPI} in that it presupposes that its prejacent describe an undesirable course of events:

¹⁰While judgments are clear for desirable prejacentes as in 36a, the contrast is less clear again for neutral predicates. Similarly to what we observed with *cha(yi)dian* (cf. Fn. 2) we suspect an influence of coercion, but have to leave a more thorough investigation for further research.

- (38) $\llbracket xianxie_{PPI} \rrbracket^c = \lambda p : c\text{-UNDESIRABLE}(p). \lambda w. p(w) = 0 \wedge \text{there is a world } w' \text{ which is almost not different from } w \text{ and } p(w') = 1.$

This difference between *xianxie* and *cha(yi)dian* and their interpretational possibilities for negated prejacent are particularly interesting in view of the historical development of *almost*-like approximative items in Mandarin. Early usages of *xianxie* (which first occurs during Yuan (1271-1368) or Ming Dynasty (1368-1644)) and *cha(yi)dian* (which did not appear until late Ming or early Qing Dynasty (1644–1912)) are similar: both elements could take a non-negated prejacent that had to describe an undesirable course of events, or a prejacent of the form ‘NEGATION *q*’, where *q* can either describe an undesirable or desirable course of events, giving rise to a reading of expletive or canonical negation, respectively. It is only later that *cha(yi)dian* starts to combine with positive prejacent that describe desirable or neutral outcomes (Zhang 2008). This suggests that the NPI variant reflects an older stage of the language and that *cha(yi)dian*_{PPI} develops through bleaching of the ‘avoid’-meaning component of the verbal component *cha*. In contrast, *xianxie* has not lost the notion of ‘danger’ as expressed by *xian*.

At the same time, the findings on *xianxie* in comparison with *cha(yi)dian* suggest a re-evaluation of the theoretical assumptions. As is, we posit different items in the context of positive and negated prejacent. But this is necessary only to allow that in the presence of negation, it is desirability that decides whether the standard meaning for *almost* applies to the prejacent itself or to its negation. Ideally, we could unify this to say that (i) negation itself raises the option for *cha(yi)dian*-like elements to target either the prejacent or its negation, and that (ii) if there is an option to choose, choice is determined by contextual desirability. Then, the only other stipulation would be that *xianxie* always presupposes undesirability. Unfortunately, as elegant as this may seem, both assumptions remain stipulative: why would negation give rise to this sort of Hamblin (1973)-style polar interrogative denotation?¹¹ And why does it have to be desirability that would decide which proposition to use for otherwise unrestricted *cha(yi)dian*? While this alternative account may be worth pursuing in future work, we conclude that, at least in its current version, it does not look more appealing than the analysis we propose in Section 4.

6 Conclusion

We have examined in detail how the presence of negation and contextual desirability determine the interpretation of *cha(yi)dian p* ‘almost *p*’ in Mandarin. Different restrictions on contextual desirability of *p* result from an ambiguity between *cha(yi)dian*_{PPI} and *cha(yi)dian*_{NPI}, both of which are sensitive to the presence of negation in their immediate scope. The interpretation of *cha(yi)dian*_{NPI} is further sensitive to contextual desirability. Even though negation is always interpreted, this gives rise to the appearance of expletive negation in one particular constellation.

¹¹Note that this differs from negative *wh*-interrogatives, which constitute biased questions. Moreover, we cannot relate it to a standard formation of alternative sets through focus: for the expletive reading to be available, the negation may not carry stress.

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