A multidimensional semantic analysis of Chinese chadian-mei
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Background: There is a curious but widespread use of negation that seems pleonastic in co-occurrence with an approximation marker in e.g. Polish (Przepiórkowski and Kupś 1998), Russian (Brown and Franks 1995) and Spanish (Bordería and Schwenter 2005). The current paper focuses on the Mandarin Chinese construction chadian mei ‘almost NEG’ that is ambiguous between a ‘normal’ negation reading (NN) or a ‘pleonastic’ (PN) interpretation (1).

(1) Hannah chadian mei jiehun.  
Hannah almost NN/PN marry  
(‘Hannah almost didn’t marry.’ or ‘Hanna almost married.’)

Distribution of CDM: Existing observations on the PN reading of chadian mei (henceforth, CDM) in contrast to the NN reading include 1) the PN mei is optional (2-a); 2) the PN mei can co-occur with the perfect aspect marker le (2-a); 3) The PN mei has an affinity to verbs with negative connotations (e.g. die, fail, fall), which it lacks to verbs with positive connotations (e.g. survive, succeed) (2-b) (a.o. Horn 2002, Liu 2011, Yuan 2013, Kaufmann and Xu 2013). In addition, we make the following novel observations regarding the PN mei: 1) it needs to be adjacent to chadian (3-a); 2) it can co-occur with the NN mei (3-b); 3) it does not license NPIs (3-c); 4) it does not anti-license PPIs, e.g. the additive particle ye ‘too’ (3-d), 5) Not only can it occur after but also before chadian, preserving the truth conditions of the sentence (3-e), whereas normal negation is negative after chadian and metalinguistic before it.

(2) a. Hannah chadian (mei) jie-hun.  
Hannah almost (PN) marry  
(‘Hannah almost married.’)

b. Hannah chadian mei zou-le.  
Hannah almost *NN/PN leave-ASP  
(‘Hannah almost left.’)

c. Hannah chadian mei shibai/#chenggong.  
Hannah chadian PN fail/succeed  
(‘Hannah almost failed.’)

(3) a. Hannah chadian zoutian mei lei.  
Hannah almost yesterday NN/*PN come  
(‘Hannah almost didn’t come yesterday.’)

b. Hannah chadian mei shenme dou mei shuo.  
Hannah almost *NN/PN what ever NN/*PN say  
(‘Hannah almost didn’t say anything.’)

Hannah almost NN/*PN earn-ASP a-CL cent  
(‘Hannah almost didn’t get a red cent.’)

d. Hannah chadian mei ye hun-guoqu.  
Hannah almost *NN/PN too pass-out  
(‘Hannah almost passed out too.’)

e. wo [mei chadian / chadian mei] xiao-si!  
I [PN almost / almost PN] laugh-die  
(‘I almost died laughing.’)

The current analysis of CDM: There are several approaches to CDM, depending on properties ascribed to mei and its interaction with chadian, namely, 1) to treat mei as semantically vacuous (e.g. Liu 2011); 2) to treat mei as NN and CDM as an NPI; or 3) to treat mei as an n-word with CDM as a negative concord phenomenon. Kaufmann and Xu (2013) take the second route and attribute the ambiguity of (1) to the lexical ambiguity of almost, which is an inversely licensed NPI in the case of CDM, and a PPI otherwise. However, this is not compatible with a.o. the (anti-)collocational behaviour of CDM w.r.t. polarity items, which suggests that the involved mei lacks negative force. A negative concord approach is also not tenable due to the optionality of mei, as in negative concord languages n-words need to be present for a sentence to be grammatical. Moreover, we would need to assume that chadian has an interpretable negative feature to license mei; however, chadian does not license NPIs, i.e. even though chadian has
a negative meaning component, this component is only an inert assertion, whereas NPIs need ‘assertoric licensing’ (Horn 2002). We propose that the PN mei is a conventional implicature (CI) and a conventional presupposition (CP) trigger (4) (the superscript v indicates a CP type).

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\lambda p. \text{unexpected}(p) :< t', t^v > \\
\lambda p. \neg p :< t^v, t^v >
\]

This analysis can account for CDM’s distribution, e.g. its optionality and its lack of assertoric negative force (details to be presented). We assume a negative CP for mei in order to capture (5), i.e. CDM is anti-embedding in entailment-cancelling contexts, as its CP would fail there.

(5) a. zhangsan meiyou *chadian-mei xunzhi.  
Zhangsan NN CDM die at work  
b. yexu zhangsan *chadian-mei xunzhi le.  
Maybe Zhangsan CDM die at work ASP  
c. zhangsan *chadian-mei xunzhi le ma?  
Zhangsan CDM die at work ASP Q  
d. *ruguo zhangsan chadian-mei xunzhi, ta keyi tousu gongsi.  
if Zhangsan CDM die at work, he can sue company

This analysis is also compatible with the diachronic analysis of CDM as evolving from a co-ordinated structure chadian VP, mei VP (Jiang 2008). The apparent redundancy of ‘inert’ and ‘assertoric’ negation here can be seen as a pragmatic strategy to guarantee the negative proposition (where p is undesirable) to be inferred in case of hearer failure. The undesirability of the relevant p was a contextual factor, which became conventionalized into the meaning of the PN mei. The switch from pure undesirability to unexpectedness can be viewed as a case of semantic widening to include cases where unlikelihood e.g. of dying laughing (3-e) is involved. While it is sometimes claimed that CDM involves speaker-based undesirability (e.g. Kaufmann and Xu 2013), Yuan (2013) argues that the undesirability constraint is imposed through social deontic conventions independent of speaker attitudes. Instead, we argue that the undesirability or unlikelihood constraint on CDM is hearer-based (6), which can be understood as a kind of pragmatic pressure the speaker undergoes depending on his/her estimate of the hearer’s epistemic/bouletic (dis)preferences. This means that the speaker, with the unexpectedness CI by use of CDM, does not add the unexpectedness proposition per se to the common ground, but as his/her committed attitude (aka the speaker-orientedness of CI) in order to show his/her social integrity.

(6) A proposition p is **hearer-basedly unexpected** iff the speaker takes p either to be undesirable or unlikely from the intended hearer’s bouletic/epistemic point of view.
   a. A proposition p is undesirable for a bouletic subject x iff x does not desire p to be the case.
   b. A proposition p is unlikely for an epistemic subject x iff x does not take p as likely.

To conclude, the proposed multidimensional semantic analysis for CDM based on existing and novel observations is not only superior to previous analyses but also provides empirical support that we need a three-dimensional semantic framework adding presuppositions as a third dimension orthogonally to Potts’ (2005) at-issue and the CI dimensions.