

The Syntax of the Non-Referential *TA* 'it' in Mandarin Chinese*

Jo-wang Lin

National Chiao Tung University

Niina Ning Zhang

National Chung Cheng University

This paper discusses the syntax of the Chinese non-referential *ta* 'it' as it occurs after the verb in *haohao-de he ta liang-bei* 'Drink two cups' or *shui ta yi huir* 'Sleep for a while'. After presenting the problems of three previous analyses (the ditransitive, AgrOP, and VP proform analyses), we argue that the non-referential *ta* is an indefinite determiner clitic which is the head of DP and is adjoined to its preceding verb. Such an analysis not only better accounts for the Chinese data but also has an important implication with respect to Uriagereka's (1995) observation about the specificity of clitics in general and their relation to Diesing's (1992) Mapping Hypothesis.

Key words: non-referential *ta*, indefinite determiner, clitics

1. Introduction

The non-referential element *ta* 'it' as it occurs in the Chinese examples in (1) is a "lively element" (Chao 1968:320, Lü et al. 1980); and, aside from sporadic references, there are few systematic studies of its syntax, semantics, or function.

- (1) a. Zamen (haohao-de) he ta liang-bei pijiu ba!
 we to-one's-satisfaction drink it two cups beer PAR
 Lit.: 'Let's drink two cups of beer (to our satisfaction).'
- b. Xian shui ta yi huir, zai shuo.
 first sleep it a while then talk
 Lit.: 'I'll have some sleep first before doing anything.'

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In Zhu (1982:121) and Ma (1983), the non-referential *ta* was treated as the first object of a double object construction. In Iljic (1987), much attention was paid to the semantic contexts and the modal value of the non-referential *ta*, rather than its formal syntax. The most detailed formal analysis of this non-referential element that we know of is Lin (1994), in which *ta* was analyzed as the specifier of AgrOP. Yuan (2003), on the other hand, claimed that the non-referential *ta* is a VP proform. In this paper, we shall show that all these previous analyses are problematic. Instead, we shall argue that the non-referential *ta* is a non-specific determiner clitic.

This article is organized as follows. Section 2 presents major distributive properties of the non-referential *ta* and re-examines certain alleged constraints on the element. Section 3 reviews three main approaches to the syntax of the non-referential *ta*: the ditransitive, AgrOP, and VP proform approaches. In §4, we propose our non-specific determiner analysis. In §5, we further specify the morphological status of the non-referential *ta* as a determiner clitic. Section 6 discusses an implication of the proposed analysis. Section 7 concludes this article.

2. Properties of the non-referential *ta* constructions

2.1 The distribution properties of the non-referential *ta*

We list four distributive properties of the Chinese non-referential *ta* constructions. Some of them were noted in Ma (1983), Iljic (1987), and Lin (1994).

First, the non-referential *ta* is an optional constituent, in the sense that its absence does not affect the acceptability of the sentence. So (1a) and (1b) are still well-formed, when *ta* is absent. When the non-referential *ta* is present, it has its own idiosyncratic semantic contribution to the construction. It makes the sentence “more lively” (Chao 1968:320), or has a connotation of “no matter what” or “regardless of” (Iljic 1987). However, no syntactic significance of this connotation has been found.

Second, the non-referential *ta* always follows a verb. We have seen that it follows a transitive verb in (1a) and an intransitive verb in (1b). The following examples, adapted from Ma (1983), Iljic (1987), and Lü (1998), show that *ta* can follow various types of non-stative verbs.

- (2) a. Wo mashang he ta yi bei.
I immediately drink it one cup
'I'll just have a glass right away.'
- b. Da-si ta ji ge wangbadan!
hit-die it several CL bastard
'Hit several bastards to death!'

- (3) a. Zheli keyi zuo ta san ge ren.
 here can sit it three CL person
 'Here three persons can sit.'
- b. Wo zhen xiwang xia ta yi chang da yu.
 I really hope fall it one CL big rain
 'I really hope that it rains heavily.'
- c. Ni haishi xian qu shui ta yi jiao ba.
 you better first go sleep it one sleep PAR
 'You'd better go to have a sleep first.'

In (2a), the non-referential *ta* occurs between the transitive verb *he* 'drink' and the indefinite nominal *yi bei* 'one cup'. This is similar to (1a). In (2b), *ta* occurs between the resultative verb complex *da-si* 'hit-die' and *ji ge wangbadan* 'several bastards', which is both the internal argument of *da* 'hit' and the argument of the secondary predicate *si* 'die'. In (3a), *ta* occurs between the intransitive verb *zuo* 'sit' and its argument *san ge ren* 'three persons', and in (3b), *ta* occurs between the intransitive verb *xia* 'fall' and its argument *yi chang da yu* 'a heavy rain'. In (3c), *ta* occurs between the intransitive verb *shui* 'sleep' and its cognate object *yi jiao* 'one sleep.'

Some stative verbs can also precede the non-referential *ta*:

- (4) a. Wo xiang qu nanfang xiangshou ta ge tongkuai.
 I want go south enjoy it CL satisfaction
 'I want to go to the South to enjoy to a thorough satisfaction of it.'
- b. Wo rang ni dao huangye-li e ta san tian san ye.
 I make you arrive wilds-in hungry it three day three night
 'I'll make you be in the wilds to stay in hunger for three days and nights.'

However, the non-referential *ta* cannot occur in a preverbal position:

- (5) Wo xiang xiang (*ta) yi ge ren jie qian.
 I want from it one CL person borrow money
 'I want to borrow money from a person.'

Moreover, an intervening constituent between the verb and *ta*, as shown in (6b) and (6c), will also make the sentence ungrammatical.

- (6) a. Chi ta liang ci Peiping kao-ya.
 eat it two times Peiping roasted-duck
 'Eat Peiping roasted-duck twice.'

- b. *Chi liang ci ta Peiping kao-ya.
eat two times it Peiping roasted-duck
c. *Chi Peiping kao-ya ta liang ci.
eat Peiping roasted-ducks it two times

Note that in Chinese, when a verb is followed by a frequency phrase and a direct object, the frequency phrase and the object may permute with each other under certain conditions (Tang 1990), as is illustrated below.

- (7) a. Wo chi-guo liang ci Peiping kao-ya.
I eat-EXP two times Peiping roasted-duck
'I ate Peiping roasted ducks twice.'
b. Wo chi-guo Peiping kao-ya liang ci.
I eat-EXP Peiping roasted-duck two time
'I ate Peiping roasted ducks twice.'

The two possible word orders indicate that the acceptability contrast between (6a) and (6c) has nothing to do with the relative positions of the direct object and the frequency phrase. The contrast simply shows that the non-referential *ta* must immediately follow a verb.

Third, the non-referential *ta* always precedes a nominal (Ma 1983). Neither (8a) nor (8b) is acceptable, since *ta* precedes nothing in the former, and it precedes an adjective in the latter.

- (8) a. *Shui ta.
sleep it
b. *Shui ta (hen) tongkuai.
sleep it very satisfaction

The nominal to the right of the non-referential *ta* does not have to be an argument of the verb. It can be a non-argument nominal. For instance, it can be the temporal nominal *yi huir* 'a while', as in (1b), *ji fenzhong* 'several minutes', as in (9a), and *ji nian* 'several years', as in (9b). It can also be the frequency phrases *liang ci* 'two times' and *yi bian* 'one time', as in (10a) and (10b), respectively.

- (9) a. Zamen jiu zai zher xiuxi ta ji fenzhong ba.
we right at here rest it several minutes PAR
'We'll just rest here for a while.'

- b. Chen-zhe xian-zai nianqing liqiang, zai pinbo taji nian.
 grasp-PRG now age-young energy-strong more fight it several year
 'We should work-hard for several more years, while we are still young
 and full of energy.'
- (10) a. Chi ta liang ci Peiping kao-ya. (= (6a))
 eat it two times Peiping roasted-duck
 'Eat Peiping roasted ducks twice.'
- b. Wo hui zai haohao-de du ta yi bian.
 I will again good read it one CL
 'I will read it over again carefully.'

Furthermore, as seen in (11a), (11b), and (11c), *ta* can precede the nominal resultative *yi ge yi-qing-er-chu* 'clearness', the nominal manner (*yi ge tongkuai* 'satisfaction', and the nominal depictive *yi ge lengbufang* 'unawares' respectively.

- (11) a. Zhe jian shi yiding yao gao ta yi ge yi-qing-er-chu.
 this CL affair definitely want make it one CL very-clear
 'We have to clear up this affair at any cost.'
- b. Judou xiang wan ta (yi) ge tongkuai.
 Judou want play it one CL satisfaction
 'Judou wants to play to a thorough satisfaction of it.'
- c. Da ta yi ge lengbufang!
 hit it one CL unaware
 'Hit someone(s) off guard!'

The nominalization of the post-*ta* elements in (11) is seen in the occurrence of the classifier *ge*, as noted by Chao (1968:320). We have already shown in (8b) that *ta* cannot be followed by an adjective.

Fourth, the nominal to the right of the non-referential *ta* must begin with a numeral or the word *ji* 'several' (Lin 1994), or a classifier that allows a preceding numeral *yi* 'one'. We have seen that *ta* is followed by a numeral in data like (10) and (11), and that it is followed by *ji* 'several' in (9). In data like (11b) above, the numeral *yi* 'one' after *ta* is optional.

The following examples are not acceptable, however:

- (12) a. *Du ta Honglouloumeng.
read it red-house-dream
b. *Du ta na ben shu.
read it that CL book
c. *Kan ta ni-men.
look it you-PL
- (13) *He ta pijiu.
drink it beer
- (14) *Du ta {mei-yi-ben/dabufende/suoyoude} wuxia xiaoshuo
read it every-one-CL/most/all chivalry novel

In (12a), *ta* is followed by the proper name *Honglouloumeng*; in (12b), *ta* is followed by the demonstrative *na* ‘that’; and in (12c), *ta* is followed by the pronoun *ni-men* ‘you-plural’. In (13), the post-*ta* nominal is a bare noun *pijiu* ‘beer’, and in (14), *ta* is followed by *mei* ‘every’, or *dabufende* ‘most’, or *suoyoude* ‘all’.

We have shown in (9), (10), and (11) that the nominal that immediately follows the non-referential *ta* can be a non-argument nominal. In (10a), for instance, the internal argument of the verb, i.e., *Peiping kao-ya* ‘Peiping roasted-duck’, is a bare noun without numeral or classifier, so it must be the frequency phrase, which has the numeral *liang* ‘two’ and the classifier *ci* ‘time’, that licenses the non-referential *ta*.

Summarizing, we have shown that syntactically, the non-referential *ta* occurs between a verb and a nominal that starts with a numeral or the word *ji* ‘several’.

2.2 Comments on certain alleged constraints on *ta*

Iljic (1987) and Chan (1981) have listed the following contexts where the non-referential *ta* is claimed to be absent:

(A) Sentences containing a verb that has the aspect marker *-le*

- (15) *He-le ta yi bei.
drink-PRF it one CL

(B) Relative Clauses and Subordinate Clauses

- (16) *mai ta liang zhi niu de shangren
buy it two CL ox REL merchant
Intended: ‘the merchant who bought two oxen’

(C) Negative Sentences

- (17) *Wo/ni bie he ta yi bei ba!
 I/you don't drink it one CL PAR

(D) Yes-no Questions

- (18) *Ni he ta yi bei ma?
 you drink it one CL PAR

(E) Sentences with a time adverbial such as *zuotian* 'yesterday'

- (19) *Ni zuotian xie ta yi pian.
 you yesterday write it one CL

Of the above five contexts, we find that only (A) is the true context that excludes the non-referential *ta*. Let us examine each of the rest below.

Counter-examples such as (20) show that the alleged constraint that *ta* cannot appear in relative and subordinate clauses (B) is too strong. Data like (20) are acceptable.

- (20) a. Xiang qu haohao-(de) he ta liang bei de ren, gen wo lai.
 want go good-DE drink it two cup MOD person with us come
 'For those who want to comfortably drink two cups, follow me.'
 b. Ni rang ta xian wan ta yi tian ba.
 you let him first play it one day PAR
 'You let him first play a day/enjoy himself a day.' (Iljic 1987:17)

(C) and (D) have a special explanation. It has been pointed out that a noun phrase made up of a numeral-classifier-noun sequence is not allowed in negative sentences or *ma*-questions (Lin 1998). Thus, the following a-sentences are ill-formed.¹

- (21) a. *Wo bu du yi-ben shu.
 I not read one-CL book
 b. Wo bu du shu.
 I not read book
 'I don't read books.'

¹ If acceptable, the indefinite NPs in (21a) and (22a) can only be specific NPs but this specific interpretation is contradictory to the semantics of *ta*, as we shall explain later.

- (22) a. *Ni mai yi-ben shu ma?
you buy one-CL book PAR
b. Ni mai shu ma?
you buy book PAR
'Do you buy books?'

The grammatical status of (21) and (22) indicates that the ungrammaticality of (17) and (18) might not have anything to do with the distribution of *ta* per se but is due to the fact that an indefinite noun phrase consisting of a numeral-classifier-noun sequence is generally not allowed in negative sentences or *ma*-questions from the very start.

Moreover, the non-referential *ta* can occur in A-not-A questions, as shown in (23). The acceptability of (23) falsifies the constraint that the non-referential *ta* may not occur in questions.

- (23) Ni yao-bu-yao ye lai hua ta liang-zhi hehua?
you want-not-want also come draw it two-CL lotus
'Do you also want to draw two lotuses?'

As for the alleged constraint that *ta* cannot occur with a time adverbial such as *zuotian* 'yesterday' (E), Lü's (1998:195) following example shows that the constraint is, again, too strong:

- (24) Zuotian wo (benlai) xiang mai ta er jin yangrou
yesterday I originally want buy it two 1/2 kilograms mutton
chi shuanyangrou
eat dipped mutton
'Yesterday, I wanted to buy two 1/2 kilograms of mutton to eat dipped mutton.'

So far, all of our *ta* examples denote irrealis eventualities. Iljic (1987) has shown that the verbs *duo* 'more than the required number' and *shao* 'less than the required number' may also license the non-referential *ta*, as is shown by (25a) and (25b).

- (25) a. Duo ta wu liu ge ren you shenme guanxi?
more it five six CL person have what relation
'Five or six persons more than planned, what difference does that make?'
b. Shao ta qi ba fen qian, wenti bu da.
less it seven eight CL money problem not big
'Seven or eight cents less, that's not a problem.'

Significantly, both (25a) and (25b) can have a reading in which the whole proposition asserts a fact, and hence the denoted event is a realized event/situation (Of course, the two examples in (25) also have a reading in which the event is still not realized). Such data show that the non-referential *ta* can also occur in constructions that denote realis eventualities (contra Kojima 2006). The following examples also show that *ta* can appear in realized events ((26b) being cited from Lü 1998).

- (26) a. Yiqian meitian wanshang, wo dou yao kan ta ji ben zazhi.
 before every evening I all would read it several CL magazine
 'In the past, I read several magazines every evening.'
- b. Congqian mei dao chunjie wo zong yao mai ta er-jin
 before every arrive new-year I always want buy it two-CL
 yangrou chi shuanyangrou.
 mutton eat dipped-mutton
 'In the past, every time when the new year came, I would always buy
 two 1/2 kilograms of mutton to eat dipped mutton.'

Both (26a) and (26b) are claims about a number of similar events which have occurred in the past. It has been argued that such habitual sentences represent realis modality (Givón 1984).

Excluding (B), (C), (D), and (E), (A) seems to be the only context which disallows the non-referential *ta*. In fact, the non-referential *ta* seems to be in conflict with any aspect markers, including the progressive aspect marker *zhe* and the experiential aspect marker *guo*. We shall analyze this constraint in §5.2.

3. Previous analyses

In this section, we point out some problems of three previous analyses of the non-referential *ta*: the ditransitive construction analysis, the AgrOP analysis, and the VP proform analysis.

3.1 The ditransitive analysis

Chao (1968:320) calls the non-referential *ta* "dummy indirect object," without any analysis. Zhu (1982:121) and Ma (1983) treat the non-referential *ta* constructions as ditransitive constructions. Their argument is that the non-referential *ta* cannot occur in a ditransitive construction. Since a ditransitive construction allows only two objects, if *ta* itself is treated as an object, it cannot occur with two other objects (see Yuan 2003:45).

- (27) a. Shushu yao song (*ta) wo yi zhi shoubiao.
 uncle want give it I one CL watch
 b. Shushu yao song wo (*ta) yi zhi shoubiao.
 uncle want give I it one CL watch
 Both: ‘The uncle wants to give me a watch.’

However, the unacceptability of the occurrence of *ta* in (27) can be accounted for independently of the ditransitive construction. (27a) can be captured by the fourth property reported in §2.1; i.e., non-referential *ta* must be immediately followed by a numeral or classifier.² (27b) can be captured by the second property reported in §2.1, namely, non-referential *ta* must be immediately preceded by a verb.

Moreover, the ditransitive approach cannot explain the contrast that ditransitive constructions never require the second object to start with a numeral or classifier, whereas non-referential *ta* indeed requires its following nominal to start with a numeral or classifier. For instance, the second object of the ditransitive verb in (28a) and (28b) is a bare noun or a proper name, respectively. Both sentences are fully acceptable.

- (28) a. Wo song-le ta zhaopian. (cf. (12a))
 I send-PRF 3SG photo
 ‘I sent {him/her} {a photo/photos}.’
 b. Wo song-le ta Honglouloumeng. (cf. (12b))
 I send-PRF 3SG red-house-dream
 ‘I sent {him/her} the novel *Honglouloumeng*.’

Furthermore, ditransitive verbs allow aspect markers, as seen in the presence of the perfect aspect *le* in (28); however, the non-referential *ta* construction does not allow any aspect marker (see Constraint (A) in §2.2).

3.2 The AgrOP analysis

Instead of treating the non-referential *ta* as an indirect object, Lin (1994) treats it as the specifier of AgrOP. In Lin’s (1994) analysis, the non-referential *ta* is an NP and hence must be assigned a structural Case (Chomsky 1981). If the non-referential *ta* occupies the [SPEC, AgrOP] position, then it can be assigned a structural Case by the verb that has undergone head-to-head raising to Asp. For instance, the structure of (29a) is (29b), in this AgrOP analysis:

² Chinese does not allow a double object construction where the direct and indirect objects are both indefinites. So it does not help if the first object NP in (27a) is changed into an indefinite.

- (29) a. Chi ta liang ci Peiping kao-ya. (= (6a))
 eat it two times Peiping roasted-duck
 'Eat Peiping roasted ducks twice.'
- b. [_{AspP} *chi*_i [_{AgrOP} *ta* [_{VP} [_{V'} *liang ci* [_{V'} *t*_i [_{NP} *Peiping kao-ya*]]]]]]]]
- ↑

Since the non-referential *ta* must be assigned a structural Case by the verb, the former must be adjacent to the latter. As for the object NP, Lin suggests that it is assigned an inherent Case rather than structural Case. This seems to account for why the object NP in (8) need not be adjacent to the verb. He has also proposed that the non-referential *ta* has an inherent meaning of existential closure. Therefore, it must quantify over the variables introduced by its associate. This in turn requires that its associate be an indefinite NP with a numeral-classifier sequence, because only such NPs introduce novel variables that can be bound by a quantifier (Heim 1982, Diesing 1992). This analysis of the non-referential *ta* is essentially parallel to Milsark's (1974) treatment of the expletive *there* in existential *there*-insertion construction.

Lin's analysis referred to above, though interesting, has encountered some problems. To begin with, the idea that the object NP is assigned an inherent Case raises a number of difficulties. If object NPs can be assigned an inherent Case in Chinese, then we do not expect movement in passives. But object NPs in passives do move. Second, we also expect a close correspondence between theta-roles and inherent Case but there does not seem to exist such a correspondence. Third, the idea that the non-referential *ta* behaves as an existential closure operator is problematic. In this analysis, the non-referential *ta* should be able to take any indefinite NP as its associate. However, as we shall see later, *ta* cannot be associated with the determiner *henduo* 'many', which in its cardinal reading should count as an indefinite NP under any definition.

3.3 The VP proform analysis

Treating the non-referential *ta* as a pronoun, and realizing that the alleged pronoun does not have any nominal antecedent, Yuan (2003) proposes a VP proform analysis of the non-referential *ta*. He claims that the non-referential *ta* might be an anaphoric element, occurring between a verb and its object, and its antecedent is the whole VP in which *ta* occurs (p.53). Schematically, in this VP proform approach, the structure of (30a) is (30b):

- (30) a. Ming-nian wo yao mai ta yi liang Sangtana.
next-year I will buy it one CL Volkswagen
'Next year, I will buy a Volkswagen.'
b. Ming-nian wo yao [_{VP} mai ta_i yi liang Sangtana]_i
next-year I will buy it one CL Volkswagen

No independent evidence is given for this VP proform analysis.

Theoretically, this analysis violates the i-within-i condition, which states that *[_A ... B ...] where A and B bear the same index. This condition excludes cases such as (31), where *his* is co-referential with the containing phrase *his friend* (see Chomsky 1981:212, and 229 fn. 63).

- (31) *[_{his_i friend}]_i

Empirically, the analysis does not help to explain the observations listed in §2. For instance, it does not explain why the data in (12) through (14) are unacceptable.

In view of these problems of the previous analyses, we would like to explore another approach to the syntax of the non-referential *ta*.

4. *Ta* as a non-specific determiner

In §2, we have focused on the syntactic distributions of the non-referential *ta*. In this section, we would like to turn to the semantic interpretation of the nominal that follows the non-referential *ta*, in the hope of shedding new light on the distributional problem. We shall also examine the interactions between the non-referential *ta* and other D elements in the language. Based on our semantic and syntactic arguments, we shall claim that the syntactic status of the non-referential *ta* is a non-specific determiner.

4.1 *Ta* and non-specific indefinites

In the last property listed in §2.1, we showed that if *ta* cannot be followed by a proper name, as in (12a), or a demonstrative, as in (12b), or a personal pronoun, as in (12c). Proper names, nominals that start with a demonstrative, and personal pronouns are all definite nominals. We thus conclude that the nominal following the non-referential *ta* cannot be definite.

However, not all types of indefinite nominals can follow the non-referential *ta*. In all of the acceptable examples discussed so far, the nominals following the non-referential *ta* are all interpreted as non-specific nominals without exception. For instance, the

indefinite NP *wu liu ge ren* 'five or six people' and *qi ba fen qian* 'seven or eight cents' in (25a) and (25b) do not refer to specific individuals. Similarly, neither *ji ben zazhi* 'several magazines' in (26a), nor *er jin yangrou* 'two 1/2 kilograms of mutton' in (26b) refers to any specific magazine or mutton. We thus see that the indefinite nominals associated with the non-referring *ta* are non-specific.

A hitherto unmentioned constraint on the non-referential *ta* is that it cannot occur with a nominal that has the internal order of Modifier-Numeral-Classifier-N. For instance, the internal elements of the bracketed nominal in (32a) and (32b) are the same, however, in (32a), the bracketed nominal starts with a numeral *san* 'three', whereas in (32b), the bracketed nominal starts with the relative clause *bao xiaohai* 'carry a child'. The acceptability contrast shows that the modifier-initial nominal cannot license the non-referential *ta*.

- (32) a. Zheli keyi zuo ta [san-ge bao xiaohair de ren]
 here can sit it three-CL carry child MOD person
 'Here three persons who are carrying children can sit.'
- b. Zheli keyi zuo (*ta) [bao xiaohair de san-ge ren]
 here can sit it carry child MOD three-CL person
 'Here three persons who are carrying children can sit.'

In Zhang (2006), nominals initiated with a pre-numeral modifier are argued to be exclusively specific. The fact that such nominals do not license the non-referential *ta* indicates that the latter must be associated with non-specific indefinites.

In view of the above discussion, it seems quite safe to make the following generalization:

- (33) The non-referential *ta* must occur with a non-specific indefinite NP.³

4.2 *Ta* and determiners

Our next task is to explain why the generalization in (33) holds. We propose that the non-referential *ta* is a non-specific determiner, which heads a DP projection. Since the non-referential *ta* is inherently non-specific in its semantics (in the same way as the determiner *any* in English is inherently non-specific), the whole indefinite NP containing *ta* must be interpreted non-specifically.

³ Noun phrases headed by *henduo* 'many' can be non-specific indefinites. However, they are incompatible with the non-referential *ta*. This issue will be addressed in §4.2.

There are several arguments in support of treating the non-referential *ta* as a determiner.

First, although the non-referential *ta* has no thematic or modification relation with any nominal, it must be followed by a nominal. (See the third property listed in §2.1). The possible types of nominals to its right do not share any thematic property: the nominal can be an argument of the verb, as in (2) and (3), a durative nominal as in (9), a frequency nominal as in (10), or a nominalized state or property-denoting expression as in (11). It seems that the occurrence of the non-referential *ta* is licensed by its following nominal. Alternatively, one can assume that the non-referential *ta* syntactically selects a nominal, just like a determiner selects a nominal.

Second, although the non-referential *ta* is licensed by its following nominal, its absence does not affect the acceptability of the nominal. (See the first property listed in §2.1). This is parallel to the fact that in languages like Chinese, the absence of a D-element (a demonstrative, for instance) does not affect the acceptability of a nominal. Bare nominals and nominals initiated with a numeral are all well-formed in such languages. If the non-referential *ta* is a D-element, the fact that its occurrence does not affect the acceptability of its licensing nominal is captured.

Third, it has been argued that position D is a position where specificity or reference of a nominal is specified (Abney 1987). Since the non-referential *ta* marks a nominal as non-specific (non-referential), as shown in §4.1, it is quite reasonable to say that it is a determiner in the D position.

The fourth argument in favor of the determiner analysis of the non-referential *ta* has to do with the fact, as noted by Lin (1994), that the non-referential *ta* is constrained from taking a bare NP as its associate, as illustrated in (13). One more example is (34):

- (34) *zu ta wuxia xiaoshuo.
rent it chivalry novel

This constraint is easy to explain if the non-referential *ta* is treated as a D-element. Tang (1990) has observed that demonstratives such as *zhe* 'this' or *na* 'that' in Mandarin Chinese cannot directly modify a bare noun without the company of a numeral-classifier sequence. Hence, the acceptable (35b) is in contrast to the unacceptable (35a).⁴

⁴ This restriction has counterexamples under certain circumstances. For example, (i) below seems acceptable.

(i) Ni zhe haizi zhen wanpi.
You this child really naughty
'You this child is really naughty.'

- (35) a. **na/zhe* shu
 that/this book
 b. *na/zhe* san ben shu
 that/this three CL book
 'these/those three books'

If, like the D-elements *zhe* 'this' and *na* 'that', the non-referential *ta* is also a D-element, it is quite reasonable that the latter has the same kind of idiosyncratic selectional restriction as the former.

Fifth, the interactions of the non-referential *ta* with pronominal quantifiers also support our determiner analysis of the non-referential *ta*. Lin (1994) has discovered an interesting property concerning the co-occurrence restriction between the non-referential *ta* and pronominal quantifiers. According to him, those quantifiers which can and cannot occur with *ta* are those in (36) and (37), respectively.

- (36) a. Zu ta liang ben wuxia xiaoshuo.
 rent it two CL chivalry novel
 'Rent two chivalry novels.'
 b. Kan ta ji bu hao dianying.
 see it several CL good movies
 'See several good movies.'
 c. Chi ta yi-dian fan ba.
 eat it some rice PAR
 'Eat some rice.' (Iljic 1987:19)
- (37) a. *Kan ta {mei yi bu /suoyoude} dianying
 see it every one CL/all movie
 b. *Kan ta dabufende dianying
 see it most movie
 c. *Kan ta henduo bu dianying
 see it many CL movie

On the basis of the above data, Lin (1994) has concluded that those quantifiers which can occur with the non-referential *ta* are those which can be preceded by a demonstrative. For example, as shown in (38), *ji* 'several' may be preceded by *zhe* 'this' but *henduo* 'many' may not. So *ji* can occur with *ta* but *henduo* cannot, as seen in (36b) and (37c).

- (38) a. zhe ji ben shu
this several CL book
'these several books'
b. *zhe henduo ben shu
this many CL book
'these many books'

It is generally assumed that demonstratives are D-elements, which are base-generated at either the D position or SpecDP. Importantly, a determiner cannot occur with a demonstrative for the same NP. In other words, there is maximally only one D-element for each nominal. If we take the possibility for a quantifier to be preceded by a demonstrative as an indication that the quantifier is not a D element, then this means that quantifiers such as *liang ben* 'two CL', *ji bu* 'several CL' in (36) are not D-elements but are numeral modifiers adjoined to some projection of N, whereas those quantifiers such as *henduo* 'many', *dabufen-de* 'most', or *mei* 'every' are true D elements. We thus make the following conclusion:

- (39) The non-referential *ta* is incompatible or in complementary distribution with D elements.

But why does such a complementary distribution exist? A very simple and straightforward answer is this: The non-referential *ta* is itself a determiner which must occupy the D position. Since no two D-elements occur in a row for the same NP, it follows that all the examples in (37) are bad. The fact that the non-referential *ta* is in complementary distribution with D elements thus supports the position that *ta* is a determiner in the D position.

Our last argument in favor of the determiner analysis of the non-referential *ta* comes from the second property summarized in §2.1, namely, the non-referential *ta* is always associated with a post-verbal position but never with a pre-verbal position. This property can be derived from the treatment of *ta* as a non-specific determiner. It has been pointed out in many places that (indefinite) NPs in preverbal-positions are always interpreted specifically. For example, while the bare noun *bi* 'pen' in (40c) can be interpreted non-specifically, the same bare noun in (40a) and (40b) can only have a specific interpretation.

- (40) a. Bi diu-le.
pen loss-PRF
'The pen is lost.'

- b. Wo xiang ba bi song gei ta.
 I want BA pen give to him
 'I want to give the pen to him.'
- c. Wo yao bi.
 I want pen
 'I want a (non-specific) pen.'

Since preverbal NPs must be interpreted specifically in Chinese and the non-referential *ta* is non-specific by nature, it is natural that *ta* may not appear in a preverbal position.⁵ This accounts for the post-verbal position of the non-referential *ta*.

In §2.1, we listed four properties of the non-referential *ta*: the occurrence optionality, the post-verbal position, the licensing by a nominal, and the licensing by a nominal that starts with a numeral or *ji* 'several'. In this sub-section, we accounted for all four properties by our proposal that the non-referential *ta* is a nonspecific determiner. In contrast, none of the three previous analyses could provide such a straightforward account of the properties.

We leave to §5 the issue of the adjacency of the non-referential *ta* to a verb.

4.3 Form-sharing between pronouns and determiners

It is not strange at all for a determiner to have the same phonetic shape as a pronoun, because pronouns and determiners in many languages are of the same form or the latter are historically derived from the former. For instance, determiners and pronominal clitics have the same form in Galician (Uriagereka 1995). Similarly, in the following German example, the indefinite determiner *ein* shares its base-form with the pronoun *eins* 'one.'

- (41) Ich brauche *ein* Heft. Haben Sie *eins* bei sich?
 I need DET exercise-book have you one with you
 'I need an exercise book. Do you have one with you?'

It is possible that diachronically, the non-referential *ta* is derived from the third person pronoun *ta*. Synchronically, although the former takes the form of the latter, it

⁵ This can be derived from Diesing's (1992) mapping hypothesis. According to Diesing, materials outside VP must be mapped into the nuclear scope, whereas materials within IP must be mapped into the restrictive clause. By this analysis, indefinite NPs outside VP must be mapped into the restrictive clause and hence have a presuppositional (quantificational), i.e., specific meaning.

does not have the properties of the latter. First, the non-referential *ta* has no antecedent, and thus it is not a pro-form of any syntactic element. Second, the non-referential *ta* does not have any ϕ -features such as number features. It occurs with either singular or plural denoting associates.

The non-referential *ta* constructions are not the only constructions in which elements in the forms of personal pronouns do not behave like regular personal pronouns in Chinese or any other Sino-Tibetan language. For instance, in the Chinese examples in (42), *ni* ‘you’ and *wo* ‘I’ are interpreted as one and the other, respectively. The person features of the pronouns are bleached in the two sentences. The same fact is seen in the Qiang examples in (43) (Huang 2006).

- (42) a. Tamen liang, ni kankan wo, wo kankan ni.
 they two you see I I see you
 ‘They two, one looked at the other.’
- b. Zhe shi yi-chang ni si wo hou de douzheng.
 this be one-CL you die I live MOD fight
 ‘This is a fight in which one will die and the other will survive.’
- (43) a. Thaxa ŋa-i nop tsi, no-i ŋa tsi.
 3PL 1SG:TP-AGT 2SG:TP look.at 2SG:TP-AGT 1SG:TP look.at
 ‘They look at each other.’ (Lit.: They, you look at me, and I look at you.)
- b. Tha-tsho me ŋa-i no zdə, no ŋa zdə.
 that-CL people 1SG:TP-AGT 2SG:TP scold 2SG:TP-AGT 1SG:TP scold
 ‘They scold each other.’ (Lit.: Those people, you scold me, and I scold you.)

It is thus not surprising that the indefinite determiner *ta* is in the form of a pronoun.

5. The non-referential *ta* as a clitic

The treatment of the non-referential *ta* as a determiner has accounted for most properties of this “lively element” mentioned at the outset of this article. However, two puzzles are still left unexplained. One is why the non-referential *ta* must be adjacent to a verb, rather than any other post-verbal element. The relevant data have been presented in §2.1. The other puzzle is why the verb preceding the non-referential *ta* cannot have any aspect marker. This is the constraint A listed in §2.2. We shall propose a clitic analysis to account for these two puzzles.

5.1 The adjacency between *ta* and a verb

In order to account for the first puzzle, i.e., why the non-referential *ta* must be adjacent to the verb, we suggest that in addition to being a determiner, the non-referential *ta* is also a clitic. Hence, it must be cliticized onto a verb. The adjacency requirement of the non-referential *ta* is best illustrated by the word order of a postverbal frequency phrase and a direct object. Chinese postverbal frequency phrases may permute with a direct object, yielding an alternation as in (44).

- (44) a. Wo kan-guo nei bu dianying liang ci.
 I see-EXP that CL movie two times
 'I saw that movie twice.'
 b. Wo kan-guo liang ci nei bu dianying.
 I see-EXP two times that CL movie
 'I saw that movie twice.'

Interestingly, as Lin (1994) points out, only when the indefinite frequency phrase directly follows the verb as in (44b) can the non-referential *ta* be inserted before the frequency phrase. Compare (45a) with (45b).

- (45) a. *Kan nei bu dianying ta liang ci.
 see that CL movie it two times
 b. Kan ta liang ci nei bu dianying.
 see it two times that CL movie
 'See that movie twice'

Lin has also observed that the non-referential *ta* cannot be inserted when some constituent separates it from its associated indefinite NP even if it directly follows the verb. Thus, (46) is as ungrammatical as (45a), even if the associate nominal of *ta* is *liang ci* 'two times'.

- (46) *kan ta nei bu dianying liang ci
 see it that CL movie two times

The ungrammaticality of (45a) and (46) has a single unified explanation if the non-referential *ta* is a clitic, attaching to a verb. Under the assumption that all types of post-verbal nominals in Chinese are complements rather than adjuncts (see Huang 1982 and Li 1990, among others, for the assumption), the attachment can be the result of

head movement. Now if the non-referential *ta* heads the DP projection as we have proposed and it must raise to a verb, which is its morphophonological host or anchor, then the raising must obey van Riemsdijk's (1998:645) Head Adjacency Principle, which states that "two phonologically identified heads are joined, yielding an adjunction structure, in which case the two heads must be strictly linearly adjacent at the movement of application of the rule." This would then exclude (45a) and (46). (45a) is ill-formed because the non-referential *ta* is a clitic but does not cliticize to a verb. (46) is ruled out because the clitic *ta* is raised but the Adjacency Principle is violated. This account for (45a) and (46) is compatible with Dobrovie-Sorin's (1994:59) claim that the process of merging a clitic with its host-head is subject to an adjacency condition.

Incidentally, the head-movement analysis of the non-referential *ta* provides another alternative account for why *ta* is never associated with a subject or a preverbal object of a preposition (see the last argument in §4.2). When *ta* moves from within a subject or a preverbal object of a preposition, the movement is a downward movement. This violates the basic condition on movement that the landing site c-commands the launching site.

5.2 The absence of aspect markers

We now turn to the second puzzle mentioned above, namely, why the verb preceding the non-referential *ta* cannot have any aspect marker.

As we have shown, all legitimate uses of the non-referential *ta* are ascribed to a non-specific interpretation, which is the major motivation for treating *ta* as a non-specific determiner. However, it seems that not all contexts which allow an indefinite to have a non-specific interpretation permit the non-referential *ta*. For example, though a realis modality mostly makes an indefinite specific, a non-specific interpretation is actually possible when the same sentence contains a possibility operator. Compare (47a) with (47b).

- (47) a. Ta zu-le yi ben xiaoshuo.
he take-PRF one CL novel
'He rent a novel.'
- b. Ta keneng zu-le (*ta) yi ben xiaoshuo.
he possibly rent-PRF it one CL novel
'Possibly he rent a novel.'

In contrast with the indefinite NP *yi ben xiaoshuo* 'one novel' in (47a), the same indefinite NP in (47b) has a non-specific interpretation. It is even possible that the referent of the NP does not exist. However, the non-specific indefinite in (47b) does not

license the occurrence of the non-referential *ta*. More data similar to (47b) are seen in (48):

- (48) a. Jie-shang keneng lai-le (*ta) yi ge xiaohai.
 street-on may come-PRF it one CL child
 'On the street may come a child.'
- b. Shuichi-li yexu zhan-zhe (*ta) yi ge ren.
 pond-in perhaps stand-PRG it one CL person
 'In the pond might stand a person.'
- c. Judou dagai jiao-guo (*ta) yi ge xuesheng.
 Judou perhaps teach-EXP it one CL student
 'Judou perhaps taught a student.'

A common property of (47b) and (48) is that the verbs all contain an aspect marker. In (47b), the perfect marker *le* follows the verb *zu* 'rent'; similarly, in (48a), *le* follows the verb *lai* 'come'; in (48b), the progressive aspect marker *zhe* follows the verb *zhan* 'stand'; and in (48c), the experiential aspect marker *guo* follows the verb *jiao* 'teach'.

The following paired examples show that in the absence of the non-referential *ta* in (49b), the verb can be followed by the perfective aspect marker *le*.

- (49) a. Wan ta (yi) ge tongkuai.
 play it one CL satisfaction
 'Play to a thorough satisfaction of it.'
- b. Wan-le (yi) ge tongkuai.
 play-PRF one CL satisfaction
 'Pro has played to a thorough satisfaction of it.'

Note that searching by Google, one can find a lot of examples containing the string of "V-*le ta yi ge*", where *ta* is preceded by the aspect marker *le*. However, in all of the cases, the pronoun *ta* in the constructions is referential, and it is easy to find its antecedent in the context.

In order to account for the constraint that verbs that precede the non-referential *ta* cannot have an aspect marker, we claim that the host of the clitic *ta* must be a verb root, rather than any verb that contains an aspect suffix. In other words, the category of element to which the clitic *ta* is attached is specified as a lexical verbal element, rather than any element that has aspectual features (see Klavans 1985 for the categorial specification of the hosts of clitics).

A similar constraint is seen independently in the clitic *de*, which introduces a

secondary predicate:

- (50) Daiyu ku-(*le) de shoujuan dou shi le.
Daiyu cry-PRF DE handkerchief also wet PAR
'Daiyu cried so that the handkerchief also became wet.'
- (51) a. Baoyu ti-po-le na shuang xie.
Baoyu kick-broken-PRF that pair shoe
b. Baoyu ti-(*le) de na shuang xie dou po le.
Baoyu kick-PRF DE that pair shoe also broken PRT
Both: 'Baoyu kicked so that that pair of shoes became broken.'

In Chinese, the functional element *de* in secondary predicate constructions is a clitic. We can see in (50) and (51b) that when *de* occurs, the verb cannot have an aspect suffix. Note that (51a) and (51b) roughly mean the same (for syntactic parallelisms between the V-V and *de* resultative constructions, see Zhang 2001). In (51a), *de* does not occur, and the compound verb can take the aspect marker *le*, whereas in (51b), *de* occurs, and the postverbal *le* is not allowed. We can see that *de* attaches to verbs that do not contain any aspect affixes.

It is possible that the same constraint is applied to both the clitic *de* and the nonspecific determiner clitic *ta*.

5.3 Determiner cliticization from a cross-linguistic perspective

We have treated the non-referential *ta* as a determiner clitic. Determiner cliticization is not an uncommon phenomenon. In fact, it is attested across languages. For example, (52) is a Galician example from Uriagereka (1995).

- (52) Comemo-lo caldo.
ate.1PL-the soup
'We ate the soup.'

So, it seems that treatment of the non-referential *ta* as a determiner clitic is not peculiar, from a cross-linguistic perspective.

6. An implication

In an article about Romance clitics, Uriagereka (1995) has shown, in accordance with the traditional observation, that there seem to be no instances of unspecific clitics.

In fact, according to him, Romance (argument) clitics must be referential. He argues that it is the referentiality of the clitic that forces it to move out of VP. According to him, a specific clitic has to move out of VP or Diesing's Mapping Hypothesis will be violated. This analysis then predicts the impossibility of non-specific clitics, because a contradiction will result between the non-specific clitic outside VP and Diesing's Mapping Hypothesis.

Although it might be true that the Romance languages do not have non-specific clitics, there does not exist a necessary contradiction between a non-specific clitic and Diesing's Mapping Hypothesis. Suppose that a non-specific clitic does not move out of VP but stays within VP. Then Diesing's Mapping Hypothesis will not be violated. We would like to claim that the Chinese non-referential determiner clitic *ta* represents such a case. As mentioned, *ta* always immediately follows a verb. This suggests that if *ta* is a clitic, it must be an enclitic. Now given that Chinese verbs do not move to a higher position before the spell-out (Cheng 1991), this means that *ta* is encliticized to a verb in its base-position and hence is within VP. Since *ta* is within VP, the non-specificity requirement on this element is fully compatible with Diesing's Mapping Hypothesis. We can therefore conclude that non-specific determiner clitics do exist in natural languages in spite of Uriagereka's discussion of the Romance clitics.

7. Concluding remarks

Although the non-referential *ta* has not received much attention in the literature, it displays many interesting syntactic properties which need to be accounted for. We have shown that previous analyses have encountered some problems and proposed an alternative analysis. We have argued that the non-referential *ta* is a non-specific determiner which must be encliticized onto a lexical verb root. Such an analysis accounts for the distributional properties of *ta* in a natural way, and also avoids the problems of the ditransitive, AgrOP, and VP proform approaches.

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Jo-wang Lin
Department of Foreign Languages and Literatures
National Chiao Tung University
1001, Ta-Hsueh Road
Hsinchu 300, Taiwan
jowang@cc.nctu.edu.tw

Niina Ning Zhang
Graduate Institute of Linguistics
National Chung Cheng University
Minhsiung, Chiayi 621, Taiwan
lngnz@ccu.edu.tw