INNER MODAL IN MAMDARIN EXCESSIVE CONSTRUCTIONS*

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INTRODUCTION

In this paper, I argue that modal elements can be merged inside the vP domain, and an Agree relation is established between the high and low modal projections to fulfill the requirement of Full Interpretation (Chomsky 2000). I present evidence from Mandarin Chinese to support this Inner Modal proposal; I examine the excessive *tā* construction, which contains the 3rd person singular pronoun *tā* that seems to lack referentiality and instead to possess a modality meaning. I propose a vP-internal modal projection that hosts *tā*, and I claim that this projection must be licensed by a higher modal via Agree, and the meaning of excessiveness can be derived compositionally from the structure.

1. EXCESSIVE *tā* CONSTRUCTION: GRAMMATICAL PROPERTIES OF THE NON-REFERENTIAL PRONOUN *tā*

In this section, I examine the grammatical properties of the non-referential pronoun *tā*. I begin with the semantics of the *tā* sentences, followed by a discussion of distributional facts with respect to mood and modality.

1.1. SEMANTIC PROPERTIES AND THE FUNCTION OF *tā*
1.1.1. EXCESSIVE *tā*

Mandarin Chinese exhibits a construction in which a pronoun *tā*, related to modality but lacking referentiality, surfaces low in the structure. A sentence with non-referential *tā* is provided below:

(1)　　hē　　　tā　　　ge　　　bú-zuì-bù-guē!
　　　　drink　　it　　　CL　　　not-drunk-not-return
　　　　'Let's drink such that we won't go home until we are drunk!'

In (1), the 3rd person singular person *t̄a* appears post-verbally, and is followed by the classifier *ge* and the adverbial complement *bú-zuǐ-bù-gue* 'not-drunk-not-return'. It has been noticed that the absence of *t̄a* does not affect the grammaticality of the sentence, although the "lively" flavour disappears with the absence of *t̄a*. Recently, more work has been done on what exactly the meaning of "liveliness" is, and also what function the non-referential pronoun *t̄a* plays in the sentence. From a discourse point of view, F.-C. Wu (2003) considers non-referential *t̄a* to be a metalinguistic expression in the sense that the speaker tries to claim a role of a third person remote from his/her normal state of self. Yeh (2006) follows up F.-C. Wu's view and suggests that the detachment created by the use of *t̄a* mentioned above may be triggered by the "extreme" situation described by the sentence, for instance, *bú-zuǐ-bù-gūe* 'not go home until drunk' in (1), which in turn explains why the complement of *t̄a* is typically associated with quantity that is excessive. Following this line of reasoning, Biq (2004) and Yeh (2006) further claim that the utterance containing *t̄a* expresses excessive quantities and the sense of 'above an implicit norm' is implied in the construction (Yeh 2006: 92).

　　To show that *t̄a* sentences possess the meaning of excessiveness, Yeh (2006) utilizes two evaluative verbs, *cái* and *jiù*. These two evaluative adverbs are both translated as 'only', but they differ from each other in that while the adverb *jiù* implies that the preceding action requires <u>little effort</u>, *cái*, on the other hand, implies the preceding action is perceived as <u>necessary</u> and is associated with a more demanding situation (Shu 2007). If *t̄a* sentences denote excessiveness, we would expect *cái* but not *jiù* to co-occur with *t̄a*. This prediction is borne out as shown in (2).

(2)　　a.　　zài　　　h̄e　　　t̄a　　lǐang-b̄ei　　píjiǔ　　hǎo
　　　　　　　again　　drink　　it　　two-glass　　beer　　good
　　　　　　　le!
　　　　　　　PAR
　　　　　　　'Drinking two more glasses of beer is good=
　　　　　　　please drink two more glasses of beer!'

　　　　b.　　*zài　　　h̄e　　　t̄a　　lǐang-b̄ei　　píjiǔ　　jiù
　　　　　　　 again　　drink　　it　　two-glass　　beer　　only
　　　　　　　hǎo　　le!
　　　　　　　good　　PAR
　　　　　　　'Drinking two more glasses of beer is good enough!'

　　　　c.　　zhè　　shū　　yào　　mǎi　　t̄a　　yì-b̄ai-b̌en
　　　　　　　this　　book　　want　　buy　　it　　one-hundred-CL
　　　　　　　*jiù/cái　　gòu.
　　　　　　　 only　　　enough
　　　　　　　'(We) have to have one hundred copies of this book.'

While (2a) and (2b) clearly show that the adverb *jiù* cannot co-occur with the excessive pronoun *tā*, the contrast in (2c) can be explained if we assume that *cái* requires a more demanding situation described in the antecedent clause, and is thus compatible with the excessive reading contributed by *tā*, whereas *jiù* is associated with a less-demanding interpretation and thus is strongly dis-preferred in the *tā* sentence.

1.1.2. LICENSING THE EXCESSIVE *tā*

A property that has gone unnoticed in the literature is that the appearance of the excessive *tā* is restricted to the context of imperative and root modals, such as *kéyǐ* 'can', *xiǎng(yào)* 'want', and *yīnggāi* 'should'. The point is demonstrated by the following sentences[1].

(3) a. *wǒ   mǎi   <u>tā</u>   jǐ-bǎi-běn   shū
         I   buy   it   several-hundred-CL   book
         guò.
         EXP
         'I bought several hundreds of books.'

     b. mǎi   <u>tā</u>   jǐ-bǎi-běn   shū   ba!
         buy   it   several-hundred-CL   book   PAR
         'Let's buy several hundreds of books!'

     c. wǒ   <u>xiǎng/yīnggāi/kéyǐ</u>   mǎi   <u>tā</u>
         I   <u>want/should/can</u>   buy   it
         jǐ-bǎi-běn   shū.
         several-hundred-CL   book
         'I want to/should/can buy several hundreds of books.'

tā is not allowed in an indicative declarative sentence like (3a), and to render this sentence acceptable, an imperative mood indicated by the sentential particle *ba* in (3b) or a root modal such as those in (3c) is required.

In her work on imperatives, Han (1999) argues that imperative mood has the semantics of deontic modality. This claim is made based on the observation that imperative sentences and deontic modal sentences both contribute as an essential part of their meanings that an obligation or a permission is issued by the speaker; these two construals only differ in that the existence of an obligation or a permission is part of the assertion for deontic modal sentences, but it is part of the presupposition that cannot be contradicted or canceled for

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[1] The existence of a modal/imperative mood in the excessive *tā* construction echoes the long observed semantic characteristics that the excessive construction typically appears in irrealis contexts (Kojima 2006).

imperatives (Han 1999: 479). Adopting Han's proposal, I suggest that the crucial element to license the presence of the excessive *tā* is the root modal and the relation between *tā* and the imperative mood is mediated by the deontic modal contained in the imperative sentence, and thus is indirect.

To sum up, in this section, I probed into the semantics of the non-referential *tā*, and showed that first of all, non-referential *tā* carries the meaning of excessiveness, and second, this marked construction is only possible with a root modal. In the next section, I shift the focus to the syntactic properties of excessive *tā*, so as to gain a full understanding of the construction in question.

1.2. SYNTACTIC PROPERTIES OF tā
1.2.1. WHAT CAN FOLLOW tā?

The most salient and most discussed grammatical feature of the excessive *tā* construction is that *tā* must take a quantity-denoting nominal complement. The sentences in (4a, b) illustrate the fact that the object following *tā* must be quantity-denoting, and hence it cannot be bare, nor can it be definite. The object can be headed by words like *jǐ* 'several, a few' and numerals such as *liǎng* 'two'. An interesting phenomenon is that while the quantifier *jǐ* 'several, a few' can appear in an excessive *tā* sentence, other quantifiers such as *měi* 'every', *suǒyǒude* 'all', *dàbùfèn* 'most' and *hěndōu* 'many' cannot co-occur with *tā*. This is shown in (4c).

(4)   a.   hē   tā   (ge)   jǐ/liǎng/*nà   -bēi   píjiǔ
             drink   it   CL   several/two/*that -glass   beer
             ba!
             PAR
             'Let's drink several/two/that glass of beer!'

        b.   *hē   tā   píjiǔ   ba!
             drink   it   beer   PAR
             'Let's drink beer!'

        c.   *dú   tā   měi-běn /suǒyǒude/dàbùfènde/hěnduo
             read   it   every-CL/all/most/many
             xiǎoshūo   ba!
             novel   PAR
             'Let's read every/most/all/many the novels!'
                                                        (J.-W. Lin and Zhang 2006: 804)

Moreover, the nominal that follows *tā* needs not be an argument of the verb. Oblique constituents are allowed with *tā*, such as temporal expressions (*liǎng tiān* 'two days'), frequentative phrases (*liǎng cì* 'twice'), and nominalized

resultative complements (*ge tònkkuài* 'CL thorough.satisfication'). (5) involves a frequency expression *liǎng cì* 'twice', and (6) a resultative phrase *tòngkuài* 'heartily', which is nominalized by the preceding general classifier *ge*[2].

(5)   chī   tā   <u>liǎng   cì</u>   kǎo-yā
         eat   it   <u>two   times</u> roasted-duck
         'Let's eat roasted duck twice!'

                                             (J.-W. Lin and Zhang 2006: 802)

(6)   jīnwǎn wán   tā   <u>ge</u>   tòngkuài   ba!
         tonight play   it   <u>CL</u>   heartily   PAR
         'Let's play heartily'

Lastly, it has been observed that *tā* cannot appear in a ditransitive construction, as shown in (7); this restriction has led Zhu (1982) and Ma (1983) to treat the excessive *tā* constructions on par with ditransitive constructions.

(7)   a.   shúshú yào   sòng   (*tā)   wǒ   yì-zhī
                Uncle   want   give   it   I   one-CL
                shǒubiǎo.
                watch

        b.   shúshú yào   sòng   wǒ   (*tā)   yì-zhī
                Uncle   want   give   I   it   one- CL
                shǒubiǎo.
                watch
                Both 'The uncle wants to give me a watch.'

Instead of attributing the ungrammaticality of (7) to *tā* being an "extra" thus unlicensed argument in the ditransitive sentence, J.-W. Lin and Zhang (2006) propose that the unacceptability of *tā* in (7) can be explained as follows. In (7a), *tā* is not followed by a quantity-denoting nominal, and in (7b) *tā* is not adjacent to the verb. However, while their explanation is sufficient to account for the ungrammaticality in (7), it does not tell us much about the contrast between (8a) and (8b):

(8)   a.   wǒ   yào   sòng   (*tā)   sān-ge háizǐ   sān-běn
                I   want   give   it   three-CL child three-CL
                shū.
                book
                'I want to give three children (a quantity of) three books.'

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[2] Please see Wu (2002) for the nominalizer analysis of the general classifier *ge*.

b.　wǒ　　yào　sòng　tā　　sān-běn　shū
　　I　　want　give　it　　three-CL book
??(gěi　sān-ge　háizǐ).
　　to　 three-CL child
'I want to give three books (to three children).'

(8a) shows again that the non-referential *tā* cannot appear in a ditransitive sentence, even though the adjacency problem that could potentially cause unacceptability is removed. On the contrary, in a prepositional dative construction like (8b), it is possible to have the non-referential *tā* in the sentence, although it is best without the presence of the indirect object.

However, if we accept the analysis of *tā* as an argument of the verb as proposed in Zhu (1982) and Ma (1983), we will be forced to conclude that the transitive verbs in the excessive *tā* sentences are in fact ditransitive. Moreover, this analysis also predicts that intransitive verbs shouldn't co-occur with *tā*, and it should be possible to question excessive *tā,* contrary to the facts demonstrated below:

(9)　pǎo/kū　tā　　ge　　tòngquài ba!
　　run/cry　it　　CL　　heartily　PAR
　　'Run/Cry heartily!'

(10)　*nǐ　　xiǎng　mǎi　shēi/shéme　　ge
　　you　want　buy　who/what　　 CL
　　jǐ-bǎi-běn　　　shū?
　　several-hundred-CL　book
　　'Who/What do you want to buy several hundreds of books for?'

(9) involves two unergative verbs, *pǎo* 'run' and *kū* 'cry', and the acceptability of (9) strongly suggests that excessive *tā* can't be analyzed as the argument of the verb. (10) shows that excessive *tā* cannot be replaced by the question words *shēi* 'who' and *shéme* 'what', and this again doesn't support the argument analysis of *tā*. As will be argued later, the contrast we have seen in (8) is better understood as an incompatibility problem between *tā* and an indirect object.

1.2.2. WHAT MUST PRECEDE *tā*?

Many linguists have noticed that not only does the excessive *tā* have to follow a verb, but it also has to be adjacent to the verb without any intervening constituent, including aspect particles *le*, *zhe*, and *gùo* in (11).

(11) *Zhāngsān   hē-le/gùo/zhe   tā   yì-bēi
      Zhangsan   drink-PRF/EXP/PROG   it   one-glass
      jǐu.
      wine
      'Zhangsan drank/has an experience of drinking/is drinking one glass
      of wine.'

Based on the distribution shown above, J.-W. Lin and Zhang (2006) conclude that *tā* is an enclitic and must be cliticized onto the preceding verb without any intervening morpheme. However, as we see in (12), it is unexpected under the clitic account that the aspect marker *zài*, which doesn't block the cliticization of pronominal *tā*, is also incompatible with the excessive *tā*.

(12) tā   zài   chī   (*tā)   liǎng   ge   hànbǎo.
      He   PROG   eat   it   two   CL   burger
      'He is eating two burgers.'

I propose that the contraint on the co-occurrence of *tā* with the aspect markers *le/gùo/zhe/zài* is better understood as a constraint on the co-occurrence of a modal with those aspectual markers. It is well-known that in English, modals take a bare infinitive complement (He must *took/take a pen from you.). T(ense) in Mandarin, the complement of a modal, cannot carry an aspectual marker. For example, the modal *yào* 'want' in (13a,b), which licenses the excessive *tā*, does not appear with *le/gùo/zhe/zài*. On the other hand, in (14a), the sentence-final inchoative marker *le*, which scopes over the modal, is licit with the modal *yào*[3]. It is, therefore, to be expected that the sentence-final inchoative marker *le* is accepted in an excessive sentence, as shown in (14b).

(13) a.   Wǒ   yào   hē-*le/*gùo/*zhe   yì-bēi
            I   want   drink-PRF/EXP/PROG   one-glass
            jǐu.
            wine

      b.   Wǒ   yào   (*zài)   hē   yì-bēi   jǐu.
            I   want   PROG   drink   one-glass   wine
            'I want to drink one glass of wine.'

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[3] The issues are still unsettled as to whether sentence-final *le* (sentential *le*) and verbal *le* are the same and where in the structure they are represented; however, there is some concensus on that sentence-final *le* has a wider scope than verbal *le*, as it expresses the meaning of 'change of state', and serves as a discourse-final particle, marking the end of a discourse unit (Chao 1968).

(14) a. Wǒ   yào   hē   yì-bēi   jiu   le.
          I   want   drink   one-glass   wine   INCH
          'I wanted to drink one glass of wine now.'

      b. Wǒ   yào   hē   tā   yì-bēi   jiu
          I   want   drink   it   one-glass   wine
          le.
          INCH
          'I wanted to drink one glass of wine now.'

1.2.3. LOCALITY IN *tā*-LICENSING

As mentioned in Section 1.1.2, excessive *tā* is licensed by a modal in the sentence. Importantly, *tā* licensing has to be local, i.e., it cannot be across a clause boundary, or an island boundary:

(15) a. John   <u>xiǎng</u>   mǎi   tā   jǐ-bǎi-bĕn
          John   <u>want</u>   buy   it   several-hundred-CL
          shū.
          book
          'John wants to buy several hundreds of books.'

      b. John   <u>xiǎng</u>   zhīdào   tā   mǎi   (*tā)
          John   <u>want</u>   know   he   buy   it
          jǐ-bǎi-bĕn   shū   le   ma.
          several-hundred-CL   book   PRF   Q
          'John wants to know if he bought several hundreds of books.'

In (15a), the modal *xiǎng* 'want' and the pronoun *tā* are located in the same clause, and licensing holds between these two elements. However, when the modal is separated from excessive *tā* by the boundary of a finite clause, *tā*-licensing is blocked and the result is ungrammatical, as shown in (15b). (16) below shows again that licensing between a modal and *tā* must respect locality:

(16) a. wǒ   rènshì   [xiǎng   hē   tā   liǎng-bēi
          I   know   want   drink   it   two-glass
          de]   rén.
          DE   person
          'I knew the person who wants to drink two glasses (of wine).'

      b. * wǒ   <u>xiǎng</u>   rènshì [hē   tā   liǎng-bēi
            I   <u>want</u>   know   drink   it   two-glass
            DE   rén

de] person .
 Intended, 'I want to meet the people who drank two glasses (of wine).'

(16a) is acceptable since the modal *xiǎng* 'want' and the non-referential pronoun *tā* are both in the relative clause, an island for extraction; however, licensing is blocked when the modal is outside the island that contains the pronoun *tā*, as (16b) shows. Note that as claimed by J.-W. Lin and Tang (1995), the modal *xiǎng* takes an infinitive clause as its complement. It is therefore not the clause boundary that causes the problem in (16b); instead, the ungrammaticality of (16b) is attributed to the violation of an island condition. In sum, the relation between *tā* and its licensor observes locality constraints.
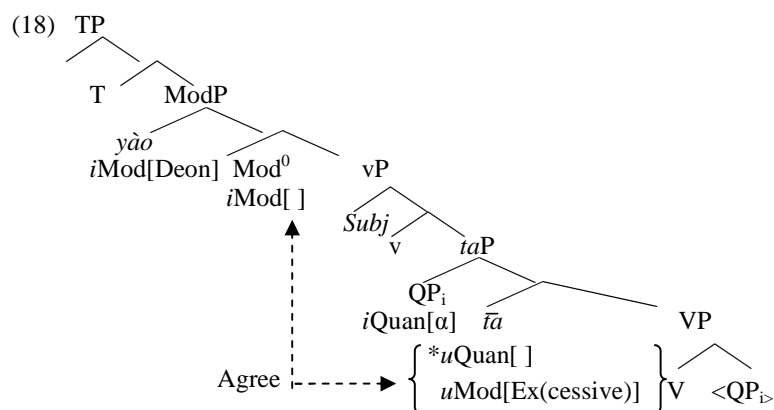
In the next section, I show that the syntactic operation Agree is responsible for the establishment of the relation between *tā* and the modal.

2. AN AGREEMENT APPROACH

I start this section by answering the questions in (17) one by one:

(17)   Questions:
   a.   Why must excessive *tā* be licensed by a modal?
   b.   Why must *tā* be immediately followed by a quantity-denoting nominal?
   c.   Why can objects headed by certain quantifiers and demonstratives not co-occur with *tā*?
   d.   Why is *tā* barred from double object constructions?

Following Cinque (1999), Butler (2003), Tsai and Portner (2008), I assume that root modals are generated between TP and vP. This modal projection is headed by Mod^0 with an interpretable yet unvalued feature, which probes another instance of modal feature with which to agree in its c-command domain. In the *tā* excessive construction, Mod^0 establishes an Agree relation with *tā*, which heads a functional projection inside the vP domain. The licensing relation held between the modal and the excessive *tā* can be best characterized by syntactic agreement between these two elements; this agreement occurs to establish a functional relation between the modal and the excessive *tā* (Miyagawa 2009), and to fulfill the requirement of Full Interpretation (Chomsky 2000). Assuming the feature sharing model proposed by Pesetsky and Torrego (2007), the functional relation in the excessive *tā* construction can be represented in the following tree diagram (irrelevant details are ignored):

(18)

```
       TP
      /  \
     T    ModP
    yào   /  \
iMod[Deon] Mod⁰   vP
          iMod[ ]  /  \
                 Subj   \
                   \v    taP
                         /  \
                      QPᵢ    \
                  iQuan[α]  ta    VP
                            ⎧ *uQuan[ ]        ⎫  / \
              Agree ------→ ⎨                  ⎬ V  <QPᵢ>
                            ⎩ uMod[Ex(cessive)]⎭
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Let's start from the top of the tree respresentation in (18). First, the interpretable and unvalued modality feature of Mod^0 is valued by the modal feature on ta, as stated above. After the sentence is converged, the output of the Agree relation between Mod^0 and ta is a meaningful input (an interpretable modal feature with a value [excessive]) at LF. A deontic modal is merged at the specifier of Mod^0, and values Mod^0 if it can't otherwise find a matching goal in its c-command domain[4]. Second, I assume that ta possesses some uninterpretable features, $*u$Quan and uMod; the former attracts a quantity-denoting phrase to its specifier, while the latter is checked by agreeing with an interpretable modal feature. As will be discussed in details below, the excessive ta takes the quantity-denoting expression as its specifier, and this configuration derives the meaning of excessiveness. Lastly, head movement takes place from V to ta to v, and thus the order V ta QP is derived[5].

One of the merits of this agreement approach is that the locality conditions on ta licensing observed in the previous section fall out naturally if there is agreement between the modal and ta in the excessive ta construction; relevant examples are repeated below:

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[4] The syntactic status of Chinese modals is still in much debate. While J.-W. Lin and Tang (1995) argue for a 'modals as verbs' approach, Tsai (2009) and X. -Y. Huang (2009) adopt the universal hierarchy proposed by Cinque (1999), and claim that there is an adverb-auxiliary distinction among Chinese modal elements, which form spec-head pairs in a Cinquian style. Since both root modal adverbs (*yīnggāi* 'should', *kěyǐ* 'can'), and root modal auxiliaries (*yào* 'want', *néng* 'can') can license excessive ta, I assume that they are operators and are base-generated at [SPEC, Mod].

[5] Evidence in the literature of ta being phonologically deficient suggests that the pronoun ta might undergo affixation to the verb. Shu (2007) analyzes ta as a verbal clitic which forms a constituent with the verb.

(19) a. John <u>xiǎng</u> mǎi <u>tā</u> jǐ-bǎi-běn
          John <u>want</u> buy it several-hundred-CL
          book
          shū.
          'John wants to buy several hundreds of books.'

      b. John <u>xiǎng</u> zhīdào tā mǎi (*<u>tā</u>)
          John <u>want</u> know he buy it
          jǐ-bǎi-běn shū le ma.
          several-hundred-CL book PRF Q
          'John wants to know if he bought several hundreds of books.'

(20) a. wǒ rènshì [<u>xiǎng</u> hē <u>tā</u> liǎng-bēi
          I know want drink it two-glass
          de] rén.
          DE person
          'I knew the person who wants to drink two glasses (of wine).'
      b. *wǒ <u>xiǎng</u> rènshì [hē <u>tā</u> liǎng-bēi
          I want know drink it two--glass
          de] rén.
          DE person
          Intended, 'I want to meet the people who drank two glasses (of wine).'

(19) and (20) demonstrate a locality violation. In the (a) examples, the agreement relation is able to maintain between the modal *xiǎng* 'want' and *tā*, since they are both in the same clause, whereas, in the (b) examples, the agreement between these two constituents cannot be established by crossing either the finite clause boundary or the *wh*-island created by the relative clause. The contrasts shown in (19) and (20) follow naturally if *tā*-licensing is understood as syntactic agreement in terms of Agree, which obeys the same syntactic conditions as *tā* licensing (Chomsky 2000, Rackowski and Richards 2005).

To answer the second question of why *tā* must be immediately followed by a quantity-denoting nominal, we need to first understand the semantic role *tā* plays in the structure. Yeh (2006) argues that the constructional meaning of the excessive *tā* construction is postulated as 'above an implicit norm'. Rather than pursuing a construction-based analysis, I claim that the meaning of the excessive *tā* construction can be derived in a compositional way. I propose that the non-referential *tā* establishes a comparison between the degree denoted by the QP in its specifier and the contextual standard/norm. This treatment assimilates the excessive *tā* with the null positive morpheme assumed in sentences like 'Sally is tall' (Kennedy 1999). A gradable predicate such as *tall* is argued to combine with a null positive morpheme, which may be overtly realized by a *for*-phrase

(*Sally is tall for a third grader*), and results in a function of a type that allows it to combine with an individual (Kennedy and McNally 2005). The denotation of the null positive (POS) is given below:

(21) a. $[[POS]] = \lambda G \lambda x. \exists d[\textbf{standard}(d)(G)(\textbf{C}) \wedge G(d)(x)]$
      b. $[[POS]]([[tall]]) = \lambda x. \exists d[\textbf{standard}(d)([[tall]])(C) \wedge \textbf{tall}(x) \geq d]$
      c.   = 'True if and only if there is some degree d that counts as **tall** in context **C**, and x is at least d-tall.'

(21a) expresses that the function of the null positive morpheme is to restrict the degree argument d to values no less than a contextual standard of comparison. (21c) shows that after *tall* combines with the null positive morpheme in (21b), the computation takes in an individual x and returns the value TRUE if and only if there is some degree d that counts as "positive" in the discourse context C and x is at least d-tall (Kennedy and McNally 2005).

I suggest that the excessive *tā* performs the same semantic function as the null positive morpheme in the sense that an implied context-sensitive degree d is compared with/related to a degree denoted by the quantity-denoting phrase by a partial ordering relation $\geq$; a *tā* sentence is true if and only if the degree d denoted by the quantity-denoting phrase no less than the quantity implied in the context C, and thus the meaning of excessiveness is derived.

So far I have answered the first two questions listed in the beginning of the section, that is, the licensing conditions on *tā* and the obligatoriness of the presence of the quantity-denoting complement.

Regarding the issue of why the excessive *tā* doesn't take objects headed by the quantifier *měi* 'every', *suǒyǒude* 'all', *dàbùfèn* 'most' and *hěndōu* 'many', but *jǐ* 'several'. J.-W. Lin (1994) notices that the quantifiers that can appear with the non-referential *tā* are those that can be preceded by demonstratives. In (22a), *jǐ* 'several, a few' is licit with the demonstrative *zhè* 'this/these', whereas it is not possible to have *měi* 'every', *suǒyǒude* 'all', *dàbùfèn* 'most' and *hěndōu* 'many' in the same context, as shown in (22b).

(22) a.   zhè   jǐ-běn   shū
             these   several-CL   book
             'these several books'

      b.   *zhè   měi/suǒyǒu/dàbùfèn/hěnduō-běn   shū
              these   every/all/most/many-CL   book
             'these *every/*all/*most/many books'

On the basis of the data above, J.-W. Lin and Zhang (2006) claim that the quantifiers which do not occur with demonstratives are themselves D-elements. Therefore, the issue of why the excessive *tā* is incompatible with certain

quantifiers and demonstratives now can be unified as the question of why *tā* cannot take DP as its argument. In Su (2012), I have proposed that the co-occurrence restriction on the excessive *tā* with D-elements should be re-interpreted as a co-occurrence restriction between the D-elements and the classifier *ge*, which seems to optionally appear in the excessive *tā* construction. I claimed that the classifier *ge,* as an indefinite determiner, occupies a D position, and thus excludes other D-like quantifiers and demonstratives in the excessive *tā* construction.

Now I turn to the last question: why is *tā* barred from double object constructions? The relevant example is repeated below:

(23) wǒ   yào   sòng   (*tā)   [IDO sān-ge   háizǐ]
      I   want   give   it   three-CL   child
      [DO sān-běn   shū].
        three-CL   book
      'I want to give three children (a quantity of) three books.'

In Section 1.2.1, I have argued that the argument analysis of *tā* cannot be correct, and the example below further shows that it is possible to have excessive *tā* in a prepositional dative sentence without an indirect object:

(24) wǒ   yào   sòng   tā   (ge)[DO sān-běn   shū]
      I   want   give   it   CL   three-CL   book
      ?([IDO gěi sān-ge   háizǐ]).
        to   three-CL child
      'I want to give three books (to three children).'

As (24) indicates, *tā* can appear in a prepositional dative sentence when the indirect object is absent (*gěi sān-ge háizi* 'to three children'). Based on the fact in (24), I suggest that the probihition of excessive *tā* in double object constructions is due to incompatibility between excessive *tā* and the indirect object, which may be linked to the ditansitive usage of excessive *tā* at an earlier stage. The incompatibility between an ethical dative pronoun and an indirect object is also observed in English personal datives (PDs):

(25)   He$_i$ needs him$_i$ a little more sense.

(Horn 2008: 172)

(25) illustrates an English PD sentence, in which "an optional occurrence of a non-subcategorized personal datives pronominal in transitive clauses which obligatorily coindexes the subject" (Horn 2008: 169). Rotschy McLachlan and Queller (2010) claim that English personal datives evolved from the ditransitive construction; it "begins as a recipient/beneficiary reflexive dative pronoun marking the third argument in the construction and is later reanalyzed as an

affect-marking ethical dative" (Rotschy McLachlan 2011). It is possible that Mandarin excessive *tā* construction undergoes a similar process of grammaticalization as English PDs, and the ditransitive usage of the excessive *tā* construction at an earlier stage may impose a restriction on the co-occurrence of *tā* and the indirect object, as *tā* was used as an indirect object. As (24) shows, the presence of an indirect object in the excessive *tā* construction is marginally accepted, which suggests that since excessive *tā* has taken on a new structure, and doesn't bear the recipient role, the restriction on the co-occurrence of *tā* and the indirect object is not as strict. However, more diachronic research on the development of the excessive *tā* constructions and cross-linguistic studies on personal datives/ethical datives need to be done.

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