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## Why Chinese *de* is not like French *de*: A Critical Analysis of the Predicational Approach to Nominal Modification

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### Abstract

The item *de* subordinating modifiers of different categories to the head noun occupies a prominent place among the unresolved puzzles in Chinese linguistics. Taking den Dikken and Singhapreecha's (2004) "linker" analysis of *de* as a starting point, I will argue in general against proposals analysing the modifier XP in terms of an underlying predicate, located in a small clause (den Dikken and Singhapreecha 2004, den Dikken 2006) or a relative clause (Sproat and Shih 1988, 1991, Duanmu 1998, Simpson 2001, 2003). The aim is to pave the way for an analysis of *de* that is in accordance with the overall syntax of Chinese.

### Keywords

subordinator *de*, "linker", nominal projection, determiner, nominal modification

## 1. Introduction

So far, there has been no analysis of the subordinator *de* accounting for the *complete* array of XPs it can combine with in complex DPs:

- (1a) [<sub>DP</sub> Meili / tamen] de pengyou<sup>1</sup>  
 Mary / 3Pl Sub friend  
 ‘Mary’s/their friend’
- (1b) [<sub>NP</sub> boli] de zhuozhi  
 glass Sub table  
 ‘a glass table’
- (1c) [<sub>AP</sub> tebie congming ] de haizi  
 particularly intelligent Sub child  
 ‘a particularly intelligent child’
- (1d) [<sub>PP</sub> dui wenti ] de kanfa (Lü et al. 2000: 157)  
 towards problem Sub opinion  
 ‘an opinion about the problem’
- (1e) [<sub>adv</sub> lilai ] de xiguan / [<sub>adv</sub> wanyi ] de jihui  
 always Sub habit in.case Sub occasion  
 ‘an old habit / a rare occasion’ (Lü et al. 2000: 157)
- (1f) [<sub>S</sub> ni jilai ] de xin  
 2Sg send Sub letter  
 ‘the letter you sent’
- (1g) [<sub>S</sub> Akiu de jiang] de xiaoxi  
 Akiu receive award Sub news  
 ‘The news that Akiu has received an award’

Typically, most studies concentrate on a subset of the cases (1a) - (1g) only, as can be seen from the short description given below of some of the more representative proposals.

Huang (1982: 62) just states that *de* is a “grammatical marker [...] which marks subordination” of the peripheral elements to the head noun.

Li (1985: 137-139) considers *de* a case assigner on a par with English ‘s (D° hosting the demonstrative pronouns *zhe/na* ‘this/that’ (Li 1998)) in order to capture the requirement for a possessor noun to be assigned Case (cf. (1a)). As Li (1985: 138) acknowledges herself, though, this forces her to postulate Case

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<sup>1</sup> The following abbreviations are used in glossing examples: Cl “classifier”; Dur “durative”; Exp “experiential aspect”; Fem “feminine”; Masc “masculine”; Neg “negation”; Part “sentence-final particle”; Pass “passive”; Perf “perfective aspect”; Pl “plural” (e.g. 3Pl = 3rd person plural); Sg “singular”; Sub “subordinator”.

assignment for adjectives and relative clauses as well, in order to account for the presence of *de* in cases such as (1c) and (1f), a rather implausible move. (For a recent revival of Li's (1985) approach, see Cheung (2006) who in the spirit of Larson and Yamakido (2005, 2006) analyses *de* as a case marker; also cf. Larson (2009) for *de* as a "reverse" *ezafe*).

Cheng (1986, 1997) claims that *de* is a "type marker (a D/C element) marking modification", "a head-final complementizer that does not select any particular category of complement" (Cheng 1986: 321), without attempting, however, any explanation for this lack of selectional restrictions and the mixed D/C nature invoked for *de*. The actual analysis in Cheng (1997) exclusively concentrates on relative clauses and does not spell out how her proposal works for non-clausal modifier XPs.

For Tang (1990: 428, 1993: 737, 2007), *de* is a functional category - different from D and C - that indicates a modifier-modifiee relation, but neither the exact features of this functional head nor its complement structure are discussed.

Simpson (2001, 2003) suggests that *de* is "a determiner whose existence in the language is no longer justified by any contribution of definiteness to the DP, but solely by a secondary function [...] of introducing a predication/modification on the NP [...]" (Simpson 2001: 143). Furthermore, *de*-modifiers of any category are to be derived from relative clauses (analysed within Kayne's (1994) anti-symmetry approach), which presupposes that they can all function as predicates, a problematic assumption directly challenged by (1e) and discussed in more detail below (section 3).

Aoun and Li (2003: 250 note 12), though dissatisfied with the existing analyses for *de*, do not offer a new analysis, but return to Li and Thompson's (1981: 113) term of "associative marker" for *de*, given that *de* "associates" a phrasal category with the head noun.<sup>2</sup>

In this context, den Dikken and Singhapreecha's (2004) (henceforth D&S) proposal seems at first sight a welcome attempt to solve a persisting puzzle in Chinese linguistics. They propose a *unifying* analysis for the "linker" elements occurring in complex noun phrases between the head noun and the modifier in a variety of typologically different languages: French *de*, Thai *tʰi*, Chinese *de*, Japanese *no*. More precisely, they claim that the linker element is the reflex of a DP-internal predicate inversion where the modifier originates as the predicate in a small clause with the (surface) head noun as its subject. As a concomitant result of predicate inversion, the entire DP receives a contrastive interpretation and the modifier is construed as carrying old information.

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<sup>2</sup> For an analysis of *de* as a conjunction-like element, cf. Li (2007). Since this analysis does not assume predicate status for the XP preceding *de*, it is not included here. For a critical appraisal, cf. Paul (to appear).

However, as to be demonstrated in detail in the present article, this “linker” analysis cannot be applied to *de* in Chinese. More generally, the syntactic and semantic evidence arguing against D&S’s proposal likewise invalidates any analysis postulating an underlying predicate for modifier XPs, be it in the form of a small clause (D&S) or in the form of a relative clause, as suggested by Sproat and Shih (1988, 1991), Duanmu (1998), Simpson (2001) and Simpson and Wu (2002). D&S are chosen as representative of the “predicational approach” here because their analysis is presented in enough detail to allow its predictions be checked against the Chinese data. Their opting - as non-specialists - for a predicational approach to *de* highlights the widespread acceptance and importance of this approach both within Chinese linguistics and beyond. As a result, if one wants to refute it, as is my intention in this paper, one must examine it in detail and pay particular attention to whether or not it ties in with the overall syntax of Chinese.

It is this critical appraisal of the predicational approach, representing the mainstream in recent proposals for *de*, that will provide us with the ingredients that will have to be taken into account by any meaningful analysis of *de*. The present paper thus prepares the ground for new proposals concerning *de* (cf. Sze-Wing Tang (ed.) to appear),<sup>3</sup> by excluding those which turn out not to be feasible, such as the family of analyses falling under the predicational approach.

The article is organized as follows. Section 2 introduces D&S’s linker analysis, which takes French *de* as a starting point. Section 3 offers a closer look at modification structures “XP *de* N” in Mandarin and argues that the analysis of all modifying XPs as underlying predicates leads to wrong predictions. Section 4 turns to modification structures without *de* “adjective/noun N<sup>o</sup>” and compares them with the modification structures where *de* is present, in order to check the semantic import associated with *de*. Section 5 summarizes the results obtained which represent the necessary ingredients for any future analysis of *de*.

## 2. Den Dikken and Singhapreecha’s (2004) analysis of *de*

D&S (2004) propose to extend their analysis of French *de* (cf. examples (2)-(4)) to Chinese as well as to Japanese and Thai. More precisely, they focus on data from French where the adjective occurs in a postnominal position introduced by *de* (cf. (2b)), superficially on a par with other cases where *de* introduces a modifying XP (cf. (2b’)). Note that “N *de* adjective” does not represent the default case of adjectival modification in French, which consists in the simple juxtaposition of the adjective with the noun, either in prenominal or postnominal position (cf. (2a) and (2a’)):

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<sup>3</sup> This planned collection of alternative proposals for *de* is a follow-up of the *Symposium on the Attributive Particle in Chinese Dialects*, held at the Chinese University of Hong Kong in June 2011.

- (2a) une pizza chaude (= D&S's (2a-b), p. 2)  
 a-Fem pizza hot-Fem  
 'a hot pizza'
- (2a') une bonne / grande pizza (chaude)  
 a-Fem good-Fem / big-Fem pizza hot-Fem  
 'a good/big (hot) pizza'
- (2b) une pizza de chaude  
 a-Fem pizza DE hot-Fem  
 'a hot pizza'
- (2b') une pizza de la pizzeria / de deux kilos  
 a-Fem pizza DE the-Fem pizzeria / DE 2 kilo  
 'a pizza from the pizzeria/a pizza of two kilos'
- (3a) Il y a deux pizzas (de) chaudes. (= D&S's (6a-b), p. 5)  
 it there has 2 pizzas DE hot-Fem.PI  
 'There are two hot pizzas.'
- (3b) J'ai deux pizzas (de) chaudes.  
 I-have 2 pizzas DE hot-Fem.PI  
 'I have two hot pizzas.'
- (4a) Je n'ai mangé que DEUX pizzas ?(de) chaudes.  
 I not-have eaten but 2 pizzas DE hot-Fem.PI  
 'I have only eaten two hot pizzas.' (= D&S's (5a-c), p. 4)
- (4b) Qui \*(de) sérieux as-tu rencontré?  
 who DE serious have-you met  
 'Which serious person have you met?'
- (4c) Rien \*(d') extraordinaire n'est arrivé ce matin.  
 nothing DE extraordinary not-is happened this morning  
 'Nothing extraordinary has happened this morning.'

First of all, D&S (p. 2) note that examples (2a), on the one hand, and (2b), (3a-b), (4a), on the other, are neither syntactically nor semantically equivalent. The examples (3a-b), (4a) as well as (4b-c) illustrate the requirement of a special licenser for (2b) *une pizza de chaude*, either an existential context as in (3a-b) or a quantificational element within the complex NP itself as in (4a-c). Note that *de* (or its truncated version *d'* before a vowel) are obligatory in (4b) and (4c), while it is optional in (3b) and in (4a); in other words, in these two latter cases the default adjectival modification structure involving simple juxtaposition of noun and adjective is acceptable as well. Furthermore, the DPs in (3)-(4) "receive a contrastive interpretation and must construe the AP to the right of *de* [...] as old information" (ibid.). The special semantics is not contributed by *de* itself, which is considered a meaningless functional head, but rather by the A-movement

operation of predicate inversion within the DP where the predicate raises across the subject (cf. Moro 1997). The linker *de* appears as a concomitant result of this inversion, giving rise to the first step in the derivation of *pizza de chaude* in (2b):

- (5a) [chaude<sub>i</sub> [<sub>FP</sub> de [<sub>SC</sub> [pizza]<sub>j</sub> [<sub>t<sub>i</sub>]]]] (=D&S's intermediate structure (21) for (2b), p. 12)  
       hot           DE       pizza</sub>

For the cases (4a-c) where the licensing is not provided by occurrence in an existential construction (cf. (3a-b)), D&S (p. 17) postulate that the quantificational elements themselves license predicate inversion. In order to be attractable to *wh*-, *Q*-, or Focus positions in the matrix clause, these elements must occupy the periphery of the DP phase i.e., Spec,DP. Accordingly, the nominal part of the small clause must raise to Spec,DP. It is this A-bar movement, triggered by a *Q*-, *wh*-, or Focus head, in combination with the subsequent movement of *de* to the projection above the landing site of the raised predicate that leads to the same relative order as observed prior to predicate inversion (p. 17).<sup>4</sup>

- (5b) [<sub>DP</sub> [<sub>NP</sub> pizza]<sub>j</sub> [<sub>FP</sub> [chaude]<sub>i</sub> [<sub>FP</sub> de ] [<sub>SC</sub> t<sub>j</sub> t<sub>i</sub>]]]  
       pizza           hot           DE

- (5c) [<sub>DP</sub> [<sub>NP</sub> pizza]<sub>j</sub> [<sub>ClIP</sub> [<sub>F°</sub> de ]<sub>k</sub> [<sub>FP</sub> [chaude]<sub>i</sub> t<sub>k</sub> [<sub>SC</sub> t<sub>j</sub> t<sub>i</sub>]]]  
       pizza           DE           hot

It should be noted that D&S's analysis of the French data, serving as the very basis for "linker" as a cross-linguistic category, is not without problems. More precisely, the complex NPs headed by a quantified noun such as *qui*, *rien* (cf. (4b,c)) cannot be subsumed under the same group as the one headed by a lexical noun such as *pizza* (cf. (4a)), these two types of NPs not behaving alike.

First, as D&S observe themselves, *de* in (4b-c) is obligatory, in contrast to (4a), where in fact it is completely optional, in contrast to D&S's marking it as preferable: "?*(de)*".

<sup>4</sup> Note that D&S do not provide the complete derivation for French cases of the type *deux pizzas de chaudes*; hence the structures in (5b) and (5c) can only be inferred from D&S's comments elsewhere in the text. Thus they state on p. 3 that "In [...] French and Thai [...], the surface word-order effect is undone later in the derivation as a consequence of a further phrasal movement operation that raises the remnant of Predicate Inversion [i.e. the small clause subject; WP] up to the specifier position of a projection generated above the landing site of the raised predicate, with concomitant raising of the linker element up to the head of this projection." This projection between D and FP is identified as "Classifier Phrase" (cf. p. 37), based on data from Thai. It is also considerations from Thai that motivate the raising of the linker element itself, a movement then transposed to French *de*. As for the different landing sites invoked for the small clause subject i.e., Spec,ClP or Spec,DP, respectively, they correlate with licensing of predicate inversion by occurrence in an existential construction (cf. (3a-b) above) vs. licensing of predicate inversion by a quantificational element within the DP itself (cf. (4a-b), (5) above). In any case, these details are not relevant for our discussion of Chinese, because in D&S's analysis, the derivation of a Chinese complex DP "XP *de* N" only involves predicate inversion.

Second, agreement between the adjective and the head noun is obligatory in (4a) (repeated in (6a)), which thus behaves on a par with the canonical modification structure via juxtaposition of adjective and noun (cf. (2a') above). By contrast, agreement is excluded in cases (4b,c) (cf. 6b), a difference *not* noted by D&S:

- (6a) une pizza de chaud\*(e)  
 a-Fem pizza DE hot -Fem  
 'a hot pizza'
- (6b) quelque chose de beau / \*belle  
 some-Fem thing DE beautiful-Masc / beautiful-Fem  
 'something beautiful'

Note that the head nouns in both (6a) and (6b), i.e. *pizza* and *chose* 'thing', are feminine.

Third, again passed unnoticed by D&S, while (4b,c) indeed allow for adjectival phrases (cf. (7) and (8)), in (4a), only an adjectival head is admitted (cf. (9)):

- (7) Je cherche quelqu'un de [<sub>AP</sub> vraiment sérieux].  
 1Sg look.for somebody DE really serious  
 'I'm looking for somebody really serious.'
- (8) Rien de [<sub>AP</sub> vraiment extraordinaire] n'est arrivé ce matin.  
 nothing DE really extraordinary Neg-is happened this morning  
 'Nothing really extraordinary happened this morning.'
- (9) Je n'ai mangé que deux pizzas de (\*vraiment) [<sub>A</sub> chaudes].  
 1Sg Neg-have eaten only 2 pizzas DE really hot-Fem.PI  
 'I have only eaten two really hot pizzas.'

The same adjectives do not show this constraint "adjectival head only" when functioning as predicates in an independent clause nor when simply following the head noun without *de*:

- (10) Ces deux pizzas sont [<sub>AP</sub> vraiment chaudes / beaucoup trop chaudes].  
 these 2 pizzas are really hot-Fem.PI / much too hot-Fem.PI  
 'These two pizzas are really hot/much too hot.'
- (11) deux pizzas vraiment chaudes / beaucoup trop chaudes  
 2 pizzas really hot-Fem.PI / much too hot-Fem.PI  
 'two really hot/much too hot pizzas'

Last, but not least, D&S's description of the semantics for "N *de* adjective" seems problematic. Recall that according to D&S, the DPs in (3)-(4) "receive a contrastive interpretation and must construe the AP to the right of *de* [...]" as old information" (p. 2). It appears difficult, if not impossible, to obtain a contrastive interpretation for the DP as a whole while the modifiers are understood as old information. Besides this logical problem, D&S's description of (2b)-(4a) is in



contradiction with the judgements of native speakers, for whom (3b) implies a contrast with pizzas that are not hot, a contrast spelt out in (12):

- (12) J'ai deux pizzas de chaudes , et trois de froides.  
 I-have 2 pizzas DE hot-Fem.Pl and 3 DE cold-Fem.Pl  
 'I have two hot pizzas, and three cold ones.'

Since it is the modifiers themselves that give rise to the contrastive interpretation, they cannot convey old, presupposed information. These observations cast doubt on the validity of D&S's predicate inversion analysis for French. Note, though, that this particular information-structural profile associated with predicate inversion is abandoned in den Dikken (2006) (as indicated by an anonymous reviewer).

D&S propose to apply the same line of analysis as that implemented for French in (5a-c) to modification structures with *de* in Chinese, *modulo* the fact that - unlike in French and Thai - the derivation in Chinese stops after the predicate inversion and the concomitant appearance of the linker element *de*. The structure in (13) indicates their analysis for a DP with an adjectival modifier (adapted to my example (1c) above):

- (13) [<sub>DP</sub> D (...) [<sub>FP</sub> [congming]<sub>i</sub> [ F (=de) [<sub>SC</sub> [<sub>NP</sub> haizi t<sub>i</sub>]]]]]  
           intelligent                  Sub                  child  
           'an intelligent child'                  (D&S's (48), p. 37)

Concretely, their analysis implies that the XP preceding *de* in the Chinese examples (1a-g) above originates as the predicate of a small clause with the (surface) head noun as its subject. *De* itself is analysed as "a linker popping up as a reflex of a fully general Predicate Inversion operation, an operation that [...] can only apply in contexts in which there is a predicate inside the complex noun phrase" (D&S, pp. 35-36).

With respect to the derivation of the modifier from an underlying predicate, D&S's analysis is basically the same as that by Simpson (2001, 2003), Simpson and Wu (2002). The latter follow Kayne (1994) in that the modifier in e.g. *lǜ de huaping* 'green vase' originates as a (copula-less) predicate to the head noun as its subject:

- (14a) [<sub>DP</sub> de [<sub>CP</sub> [<sub>IP</sub> huaping lǜ ]]]  
           DE          vase          green  
 (14b) [<sub>DP</sub> de [<sub>CP</sub> huaping<sub>i</sub> [<sub>IP</sub> t<sub>i</sub> lǜ ]]]  
           DE          vase          green  
 (14c) [<sub>DP</sub> [<sub>IP</sub> t<sub>i</sub> lǜ ]<sub>m</sub> [<sub>D</sub> de [<sub>CP</sub> huaping<sub>i</sub> t<sub>m</sub> ]]]  
           green          De          vase

As illustrated in (14a), *de* is analysed as the head D° selecting a CP as its complement. In (14b), the subject *huaping* 'vase' raises to the specifier of CP. Finally, in (14c) the remnant IP containing only the predicate *lǜ* 'green' raises to the specifier position of DP in order to produce the correct linear order *lǜ*

*de huaping*.<sup>5</sup>

As to be argued for in detail in the remainder of the present paper, these proposals are not compatible with the syntactic and semantic properties of modification structures nor with the overall syntax of Chinese. More precisely, the predictions made with respect to the set of XPs able to function as predicates in Chinese are not borne out by the data. The interpretation of modification structures is not as expected by D&S, either, the modifier XP in “XP *de* N°” not being automatically associated with given information. This is corroborated by a comparison between modification structures with *de* and those without *de* (in section 4 below), where the semantic import associated with *de* is not as predicted by D&S.<sup>6</sup>

### 3. A closer look at modification structures “XP *de* N°” in Chinese

This section provides an overview of the range of XPs occurring as modifiers in the DP and examines for each type whether it can indeed function as a predicate, a prediction made not only by D&S’s analysis in terms of predicate inversion, but also by any approach deriving prenominal modifiers from relative clauses. Given the increasing interest in the subordinator *de* by linguists not familiar with Chinese, I will provide the reader with a detailed picture of the situation in Chinese and thus the possibility to judge for her/himself. At times this might appear superfluous for the specialists in the field whom I thank in advance for their comprehension. But even for “insiders” it might be interesting to note that it

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<sup>5</sup> An anonymous reviewer inquires about the feasibility of a movement analysis for XPs preceding *de* independent of the predicational approach. The reviewer probably has in mind the head-final vs. head-initial nature of the projection headed by *de*. As argued for by Paul (to appear), in an analysis where *de* as a functional head c-selects a nominal projection and where it is the EPP feature of *de* that forces the specifier position to be always filled, the head-initiality of DeP is obtained without movement of XP: [<sub>DeP</sub> XP [*de* NP]].

<sup>6</sup> An anonymous reviewer contests my view that the linker analysis in terms of inverse predication implies the acceptability of the given XP as matrix predicate. The same reviewer refers to the somewhat revised version in den Dikken (2006) where in addition to the linker another null element is posited, viz. the “relator”, and which according to her/him, might be able to solve the problems for the linker analysis listed below. To my mind, however, the introduction of the relator as a second abstract element only increases the problems with the inverse predication analysis of prenominal modifiers; for the conditions under which to spell out or not a linker element are as problematic as those ruling the spell-out of the relator (also cf. Rouveret 2009). It is far from evident how the interplay between relator and linker can account for the syntactic and semantic differences observed between canonical predication and inverse predication both in French and Chinese, such as the head-only restriction in French inverse predication (cf. (9) and (11)), and the obligatory presence of *shi...de* for non-predicative adjectives in Chinese canonical predication vs. its obligatory absence in the inverse predication structure (cf. (16) and (17) below). Importantly, den Dikken (2006: 301, note 104) himself notes complications for his account when trying to derive so-called noun-complement clause constructions in Chinese (cf. (1g) above). Last, but not least, multiple adnominal modifiers (both in French and in Chinese) present a real challenge, for requiring multiple applications of movement which all have to obey relevant constraints such as minimality etc., an issue not addressed by D&S nor den Dikken (2006).

is often sufficient to take into account a more representative array of data in order to detect the shortcomings of analyses based on too incomplete a data sample.

### 3.1. Non-predicative adjectives as modifiers

The distribution and syntactic properties of non-predicative adjectives provide one of the main arguments against D&S's analysis of modification structures "XP *de* N" as cases of predicate (XP) inversion and likewise challenge any approach which analyses adjectival modifiers as relative clauses (cf. Sproat and Shih 1988, 1991, Duanmu 1998, Simpson 2001, 2003, Simpson and Wu 2002).

Besides intersective adjectives that can function as syntactic predicates on their own (cf. (15)) (henceforth referred to as "predicative adjectives"), there also exists a class of intersective adjectives that syntactically cannot function as predicates on their own, but only as modifiers (cf. Lü and Rao 1981) (henceforth referred to as "non-predicative adjectives"). For the predicative function, the copula *shi* and the particle *de* are obligatory (Paris 1979: 61).<sup>7</sup> Crucially, however, *shi...de* is excluded from the modification structure in the DP, as illustrated in (16b) and (17b) (cf. Paul 2005: 760):

(15) Zhangsan zhen congming.<sup>8</sup>  
Zhangsan really intelligent  
'Zhangsan is really intelligent.'

(16a) Zhei-ge panzi \*(shi) fang \*(de).  
this-Cl plate be square DE  
'This plate is square.'

(16b) Ta mai-le [<sub>DP</sub> yi-ge (\*shi) fang de panzi ].  
3Sg buy-Perf 1-Cl be square Sub plate  
'He bought a square plate.'

<sup>7</sup> Note that *de* with non-predicate adjectives is different from the subordinator *de* in the DP (cf. Paris 1979: 60ss). Furthermore, the copula construction in Chinese used for nominal predicates does not involve *de*: "NP *shi* NP".

<sup>8</sup> In fact, predicative adjectives such as *congming* likewise show different properties in predicative vs. attributive function. More precisely, in the predicative function, when not modified by a degree adverb such as *zhen* 'really', *hen* 'very', *tai* 'too' etc., a predicative adjective is interpreted as comparative (with an implicit standard of comparison), i.e. *Zhangsan congming* can only mean 'Zhangsan is more intelligent' (than somebody else present in the discourse) (cf. Paris 1989: 112ff). This restriction does not hold for predicative adjectives as modifiers: *congming de haizi* has the meaning 'intelligent children', not 'more intelligent children' (also cf. Dragunov 1952/60: §165). For further discussion in more recent frameworks, cf. Luther C.-S. Liu (2010) and Grano (2012). My thanks to Hsin-I Hsieh (personal communication) for attracting my attention to this point.

(17a) Zhexie wenjian \*(shi) juemi \*(de).  
 these document be top-secret DE  
 ‘These documents are top-secret.’

(17b) Ta diu-le [<sub>DP</sub> yixie (\*shi) juemi de wenjian ].  
 3Sg lose-Perf some be top-secret Sub document  
 ‘He lost some top-secret documents.’

Importantly, as can be seen from the examples above, the class of “non-predicative” adjectives in the Chinese classification is not limited to non-intersective adjectives such as *benlai* ‘original’, *yiqian* ‘former’ etc. (cf. (18) - (19) below), but has a larger coverage, because it includes those intersective (absolute) adjectives in Chinese for which *shi...de* is obligatory. Non-intersective adjectives - as in other languages - can only function as modifiers and are completely excluded from any predicative function (irrespective of the presence of *shi...de*):<sup>9</sup>

(18a) *benlai de yisi*  
 original Sub meaning  
 ‘the original meaning’

(18b) \**Zhei-ge yisi (shi) benlai (de)*.  
 this-Cl meaning be original DE

(19a) *yiqian de shuxue-laoshi*  
 former Sub mathematics-teacher  
 ‘the former mathematics teacher’

(19b) \**Zhei-ge shuxue-laoshi (shi) yiqian (de)*.  
 this-Cl mathematics-teacher be former DE

It is on the basis of this latter class of non-intersective non-predicative adjectives (‘original’, ‘former’ etc.) that Aoun and Li (2003: 148) likewise conclude that not all pronominal adjectives can be derived from relative clauses. They do, however, not discuss intersective non-predicative adjectives (cf. (16), (17)) and accordingly fail to see the additional evidence provided by the correlation between the presence vs. absence of *shi...de* and predicative vs. attributive function.

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<sup>9</sup> Examples of the kind illustrated in (i) provided by an anonymous reviewer show that several factors must be controlled for, including the type of subject as well as potential meaning differences:

- (i) *Zhe ge xinwen shi yiqian de*.  
 this Cl news be former DE  
 ‘This piece of news is old.’

As indicated in the translation, *yiqian* here means ‘old’, not ‘former’.

In contrast to the same reviewer, the informants consulted by me did not accept (18b) and had diverging judgements (signalled by #) for her/his sentence (ii):

- (ii) #*Zhei ge yuyan dique shi gongtong de*.  
 this Cl language indeed be common DE  
 ‘This language is indeed common.’

When functioning as secondary predicates,<sup>10</sup> non-predicative intersective adjectives require *shi...de* in the same way as when forming a matrix predicate. In this respect, they again contrast with predicative adjectives (e.g. *nankan* ‘ugly’, *da* ‘big’) which can function as predicates on their own:

- (20) Ta you yi-ke yachi \*(shi) jia \*(de) / feichang nankan.  
 3Sg have 1-Cl tooth be fake DE / very ugly  
 ‘He has a tooth which is false /very ugly.’
- (21) Ta you yi-zhang zhuozi \*(shi) tuoyuan \*(de) / tebie da.  
 3Sg have 1-Cl table be oval DE / particularly big  
 ‘He has a table which is oval/ which is particularly big.’

In contrast to Chinese, French behaves as expected under D&S’s predicate inversion analysis in only allowing predicative adjectives in the “NP *de* AP” construction:

- (22) Ce film est bon / \*policier.  
 this movie is good / police(adjective)  
 ‘This movie is good/\*of the police.’
- (23) J’en ai vu un de bon / \*policier. (= D&S’s (22), (23), p. 12)  
 I of-them have seen one DE good / police (adjective)  
 ‘I have seen a good one (i.e., movie)/\* a police one.’

<sup>10</sup> Huang (1984: 568, 1987) provides several arguments against an analysis where the XP following the object in sentences such as (20)-(21) forms a constituent with the object, thus maintaining the head-final nature of NP in Chinese. First, the sequence “DP XP” is only acceptable in postverbal position and, second, the DP must be indefinite and specific:

- (i) Wo dapo-le yi-ge chabei / \*chabei / \*zhei-ge chabei hen zhiqian.  
 1Sg break-Perf 1-Cl teacup / teacup / this-Cl teacup very valuable  
 ‘I broke a teacup which was very valuable.’
- (ii) \*Yi-ge chabei hen zhiqian bei wo dapo-le.  
 1-Cl teacup very valuable Pass 1Sg break-Perf

Third, “DP XP” only occurs in sentences which are existential in a broad sense, i.e. which contain existential verbs such as *you* ‘have’ or verbs of “creation” expressing the coming into existence of the object. Note that for the latter class of verbs the durative aspect (marked with *zai*) is excluded:

- (iii) Ta chao-le /\*zai chao [yi-ge cai] [hen haochi].  
 3Sg fry-Perf / Dur fry 1-Cl dish very delicious  
 ‘He prepared a dish which was very delicious.’

As Huang points out, these constraints on the postnominal XP are incompatible with an analysis considering it as a part of the DP. For it would be very unusual for a nominal modifier to be acceptable only if the DP in question is indefinite/specific and occupies the postverbal position, and to depend on the nature of the VP. Taking furthermore into account that the XP provides a non-restrictive modification, he concludes to its status as a secondary predicate. (Also cf. Tang 1990, Tsai 1994, among others.). For an alternative analysis in terms of an internally headed relative clause, cf. Niina Ning Zhang (2008).

The class of non-predicative adjectives in Chinese presents a challenge for the predicational approach, which derives all prenominal modifiers from underlying predicates, the adjectives in question being defined precisely by their inability to constitute a primary or secondary predicate. In the case of non-intersective adjectives (cf. (18b)-(19b)) the predicative function is furthermore excluded for semantic reasons; *benlai* ‘original’, *gongtong* ‘common’, *yiqian* ‘former’ thus exactly parallel the behaviour of their counterparts in English.

In a footnote (p. 13 fn9), D&S briefly mention the problem the occurrence of non-intersective adjectives in the “XP *de* N” structure presents for their analysis and cite (19a) as (unique) example. However, they are not aware of the existence of intersective non-predicative adjectives in Chinese (cf. (16)-(17) above) which systematically reflect the difference between predicative function (*shi...de* required) and attributive function (*shi...de* excluded), a difference incompatible with the predicate inversion approach. Accordingly, they do not consider non-predicative adjectives a serious challenge for their analysis and offer “the speculation that the ban on predicative use of certain adjectives is not a deep but a surface one, with inversion constructions of the type in (i) [= (19a), WP] apparently not being subject to it in Mandarin Chinese [...]” (p. 13). Regarding (19a) as an isolated case, they relegate its account to future research, instead of accommodating it in their analysis at hand. This is the more surprising as the existence of attributive-only adjectives has been a long-standing problem for any approach aiming at deriving modification structures from predication structures (cf. Bolinger 1976).<sup>11</sup>

### 3.2. Bare nouns and adverbs as modifier

Another case not taken into account by D&S are bare nouns as modifiers:

(24a) yi-zhang \*(shi) boli / mutou de zhuozi (= (1b))  
 1-Cl be glass / wood Sub table  
 ‘a glass/wooden table’

(24b) Zhei-zhang zhuozi \*(shi) boli / mutou \*(de).  
 this-Cl table be glass / wood DE  
 ‘This table is made out of glass/wood.’

(24c) Ta you yi-zhang zhuozi \*(shi) boli / mutou \*(de).  
 3Sg have 1-Cl table be glass / wood DE  
 ‘He has a table out of glass/wood.’

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<sup>11</sup> With respect to the attempt of deriving attributive adjectives from relatives, Bolinger (1967: 3) notes: “By itself, the fact that many more adjectives are restricted to attributive position than to predicative position is suspicious; if anything the reverse should be true if we want to base attribution on predication.”

- (25a) *lilai de xiguan / jintian de huiyi* (= (1e))  
 always Sub habit / today Sub meeting  
 ‘an old habit/today’s meeting’
- (25b) \**Xiguan shi lilai de.*  
 habit be always DE
- (25c) \**Huiyi shi jintian de.*  
 meeting be today DE

While bare nouns indicating material such as *boli* ‘glass’ and *mutou* ‘wood’ need *shi...de* to function as (primary or secondary) predicates (where again *shi...de* is excluded in the modifier position, cf. (24a) above) and thus pattern with intersective non-predicative adjectives, temporal expressions such as *jintian* ‘today’ and *lilai* ‘always’ can never function as predicates, but are perfectly acceptable as modifiers. (Note that they are also used as adverbs.) This state of affairs is incompatible with D&S’s analysis where the XPs preceding *de* originate as predicates in a small clause.

### 3.3. PPs as modifiers

Let us now turn to those cases of modifiers that are actually discussed by D&S.

(26a) illustrates D&S’s analysis for (their only example of) a PP modifier:

- (26a) [<sub>DP</sub> D (...) [<sub>FP</sub> [<sub>PP</sub> *zai Beijing*]<sub>i</sub> [F (=de) [<sub>SC</sub> [<sub>NP</sub> *ren*]<sub>t<sub>i</sub></sub> ]]]]  
 in Beijing DE people  
 ‘people in Beijing’ (= D&S’s (51), p. 38; their glosses)

- (26b) *Xuesheng jintian zai Beijing.*  
 student today be Beijing  
 ‘The students are in Beijing today.’

At first sight, the acceptability of (26b) seems to confirm that *zai Beijing* can indeed function as a predicate. However, *zai Beijing* in (26b) cannot be a PP, but must be analysed as a VP headed by the verb *zai* ‘to be at’, which is homophonous with the preposition *zai* ‘at’; accordingly, *zai Beijing* in (26b) is a relative clause. For it is well-known that PPs do not qualify as predicates in Chinese, as can be seen in the case of prepositions lacking a homophonous verbal counterpart such as *cong* ‘from’, *guanyu* ‘about, with regard to’. (For a detailed discussion of the differences between verbs and prepositions in Chinese, cf. Djamouri and Paul 1997, 2009, Whitman and Paul 2005.)

- (27) \**Zhei-ben shu [pp guanyu Chomsky].*  
 this-Cl book about Chomsky  
 (intended meaning: ‘This book is about Chomsky.’)
- (28) \**Zhei-ge ren [pp cong Beijing].*  
 this-Cl person from Beijing  
 (intended meaning: ‘This person is from Beijing.’)

- (29) \*Ta [<sub>PP</sub> dui zhei-ge wenti ].<sup>12</sup>  
 3Sg towards this-Cl problem

In the modifier position preceding *de* and the head noun, however, PPs - though unable to function as predicates - are perfectly acceptable, which constitutes another piece of evidence against predicational approaches such as D&S's analysis.<sup>13</sup>

- (30a) [<sub>DP</sub> zhei-ben [<sub>PP</sub> guanyu Chomsky] de shu ]  
 this-Cl about Chomsky Sub book  
 'this book about Chomsky'

- (30b) [<sub>DP</sub> [<sub>PP</sub> guanyu tianwenxue] de zhishi ]  
 about astronomy Sub knowledge  
 'knowledge about astronomy'

- (31a) [<sub>DP</sub> [<sub>PP</sub> dui zhei-ge wenti ] de kanfa ]  
 about this-Cl problem Sub opinion  
 'the opinion about this problem'

- (31b) [<sub>DP</sub> [<sub>PP</sub> dui ziji ] de yaoqiu ]  
 towards self Sub demand  
 'the demands on oneself'

Again, the impossibility of PPs to function as predicates does not only hold in

<sup>12</sup> Unlike *cong* 'from' and *guanyu* 'about', *dui* 'concerning, about, towards' does have a verbal counterpart *dui* 'to treat, cope with; to be opposite of'. In such a case, it is the different selectional properties which allow to distinguish between the preposition *dui* and the verb *dui*.

<sup>13</sup> The unacceptability of (i) below cannot be interpreted as evidence against the generalisation that PPs are allowed as nominal modifiers. Instead, it illustrates the fact that PPs are only allowed in DPs headed by relational nouns (cf. (v) vs. (iii)):

- (i) \* [<sub>DP</sub> [<sub>PP</sub> cong Beijing] de ren ]  
 from Beijing Sub people  
 (ii) [<sub>DP</sub> [<sub>S</sub> [<sub>PP</sub> cong Beijing] lai ] de ren ]  
 from Beijing come Sub people  
 'people who come from Beijing'  
 (iii) \* [<sub>DP</sub> [<sub>PP</sub> dui ta ] de hua ]  
 towards 3Sg Sub words  
 ('the words for him')  
 (iv) [<sub>DP</sub> [<sub>S</sub> wo [<sub>PP</sub> dui ta ] shuo ] de hua ]  
 1Sg towards 3Sg say Sub words  
 'the words I spoke to him'  
 (v) [<sub>DP</sub> [<sub>PP</sub> dui ta ] de yijian ]  
 towards 3Sg Sub opinion  
 'the opinion about him'

While body part and kinship terms as relational nouns *par excellence* require the presence of a possessor, deverbal nouns (e.g. *re'ai* '(deep) love for sb.', *aihao* 'interest in something') and nouns such as *kanfa*, *yijian* 'opinion about sb.', *xingqu* 'interest for something' etc. are relational insofar as they require a complement (here in the form of a PP). For a similar view, cf. Fu (1987: 144).



matrix sentences, but also in secondary predicate structures:

- (32) Ta you yi-ben shu \*[<sub>PP</sub> guanyu Chomsky]/ [<sub>VP</sub> tandao Chomsky] /  
 3Sg have 1-Cl book about Chomsky / talk.about Chomsky /  
 [<sub>AP</sub> feichang gui ].  
           very expensive  
 ‘He has a book about Chomsky/talking about Chomsky/which is very expensive.’

(32) illustrates that a secondary predicate structure requires a VP or a predicative AP, to the exclusion of PPs, bare nouns and non-predicative adjectives (unless they are embedded in *shi...de*; cf. (20)-(21), (24c) above). This once again strengthens our point against the predicational approach, namely that there is no relationship between the predicative or non-predicative character of an XP and its acceptability as a nominal modifier. On the contrary, predicative and non-predicative XPs alike are allowed in “XP *de* N” in Chinese.

### 3.4. Possessor DPs as modifiers

The preceding discussion of the properties of PPs in Chinese is also important for an appraisal of D&S’s account of possessor DPs as modifiers:

- (33) tamen / Meili de pengyou / qiche  
 3Pl / Mary Sub friend / car  
 ‘their/Mary’s friends/car’

Based on Den Dikken (1995), the DP in (33) is derived from a small clause structure where the possessum is the subject and the possessor is embedded in a PP headed by the dative preposition or its null allomorph (D&S, p. 38):

- (34) [<sub>SC</sub> [possessum] [<sub>PP</sub> P<sub>Dat</sub> [possessor]]] (= D&S’s (52), p. 38)

For possessor structures in French such as (35b), D&S postulate a derivation from (35a) via predicate inversion (applying to a null-headed dative PP) and subsequent remnant movement (undoing the word order effect of predicate inversion) (D&S, p. 38):

- (35a) une voiture à Jean (= D&S’s (53a-b), p. 39)  
       a car to Jean

- (35b) une voiture de Jean  
       a car of Jean

Applying this analysis to Chinese, D&S (p. 39) state: “With this [= (35), WP] as background, an analysis of Chinese (46b) [= *wo-de shu* ‘my book’; WP] immediately presents itself. The null-headed dative PP inverts with its subject, with the linker *de* showing up as a result; and unlike in French (53b) [= (35b), WP], the derivation stops here”:

- (36) [<sub>DP</sub> D (...) [<sub>FP</sub> [<sub>PP</sub> [<sub>P</sub> Ø] wo]<sub>i</sub> [F (=de) [<sub>SC</sub> [<sub>NP</sub> shu ] t<sub>i</sub> ]]]]  
           1Sg Sub book  
           ‘my book’ (= D&S’s (54))

This analysis encounters the same problem as already observed in the derivation of PP modifiers above (cf. (27)-(29)), i.e. it wrongly predicts the possibility for a possessor DP to function as a predicate on its own, be it as matrix predicate (37a) or as a secondary predicate (37b):

(37a) \*[Shu / qiche] [wo / Meili].  
 book / car 1Sg / Mary  
 (intended interpretation: ‘The book/car is mine/Mary’s.’)

(37b) \*Ta you [yi-ben shu / yi-liang qiche] [wo / Meili].  
 3Sg have 1-Cl book / 1-Cl car 1Sg / Mary  
 (intended interpretation: ‘He has a book/car belonging to me/to Mary.’)

Note that irrespectively of the analysis adopted for the possessor DP, the unacceptability of (37a-b) is expected, given the general constraints on predicates in Chinese syntax: if the possessor is a PP with a zero head as claimed by D&S, then the general ban against PPs as predicates observed above (cf. (27)-(29)) applies; if the possessor is a DP, it cannot function as a predicate, either, but requires the presence of the copula *shi*.<sup>14</sup>

The same problems just outlined also apply to Simpson’s analysis of possessor modifiers. Simpson (2001: 151-152) again follows Kayne (1994) and postulates an empty (possessive) verb taking the surface head noun *shu* ‘book’ as its object. The complete derivation is given in (38a-c):

(38a) [<sub>DP</sub> de [<sub>CP</sub> [<sub>IP</sub> wo I° [<sub>VP</sub> e shu ]]]]  
 (38b) [<sub>DP</sub> de [<sub>CP</sub> shu<sub>i</sub> [<sub>IP</sub> wo I° [<sub>VP</sub> e t<sub>i</sub> ]]]]  
 (38c) [<sub>DP</sub> [<sub>IP</sub> wo I° [<sub>VP</sub> e t<sub>i</sub> ]]<sub>k</sub> de [<sub>CP</sub> shu<sub>i</sub> t<sub>k</sub> ]]

However, the underlying structure in (38a) incorrectly predicts for a DP to be able to function as a predicate without the copula *shi*.

Furthermore, there remains the problem of how to account for those DPs that cannot possibly be construed as possessors, such as bare NPs already discussed above (cf. section 3.2 above) or quantified phrases illustrated below. Note that neither D&S nor Simpson (2001, 2003) mention these two cases.

<sup>14</sup> A proper name may be marginally acceptable as a nominal predicate without the copula *shi*. However, in such a case, it can never be interpreted as a possessor. Instead, the relation established between the two DPs is a relation of identity, not of predication (cf. Paul 1995).

- (i) (Ni gui xing ?) ?Wo Zhang Ping.  
 2Sg honorable name 1Sg Zhang Ping  
 ‘What is your name? I’m Zhang Ping.’
- (ii) (Context : distributing roles in a play)  
 ?Wo Hamlet, ni Ophelia.  
 1Sg Hamlet 2Sg Ophelia  
 ‘I’m Hamlet, and you’re Ophelia.’

(39a) [<sub>DP</sub> [<sub>QP</sub> *wu li* ] *de* *lucheng*]  
           5 mile Sub journey  
           ‘a journey of five miles’

(39b) \**Lucheng* [<sub>QP</sub> *wu li* ].  
           journey 5 mile  
           (intended meaning: ‘The journey is five miles.’)

(40a) [<sub>DP</sub> [<sub>QP</sub> *san tian* ] *de* *liangshi* ]  
           3 day Sub provision  
           ‘provisions for three days’

(40b) \**Liangshi* [<sub>QP</sub> *san tian* ].  
           provisions 3 days  
           (intended meaning: ‘The provisions are for three days.’)

(41a) [<sub>DP</sub> *yi-ge* [<sub>QP</sub> *san-ge xiaoshi*] *de* *yanjiang*]  
           1-Cl 3-Cl hour Sub talk  
           ‘a talk of three hours’

(41b) \**Yanjiang* [<sub>QP</sub> *san-ge xiaoshi*].  
           talk 3-Cl hour  
           (intended meaning: ‘The talk is three hours (long).’)

We obtain the same situation here as in the discussion of the other modifier XPs, namely that the XP - here a quantified phrase - is perfectly acceptable as a modifier in the DP, but does not qualify as a predicate. Accordingly, it is not appropriate to derive it from a predicate, be it that of a small clause or that of a relative clause.<sup>15</sup>

### 3.5. Modifiers in DPs with a kinship term as head

DPs headed by a kinship term such as *meimei* ‘(younger) sister’ are different from “ordinary” DPs (cf. (42a)), because in the former, *de* is optional:

(42a) *ta* \*(*de*) *maoyi* (= D&S’s (55), p. 39)  
           3Sg Sub sweater  
           ‘his sweater’

(42b) *ta* (*de*) *meimei*  
           3Sg Sub sister  
           ‘his sister’

In order to account for the special properties of kinship DPs, D&S (p. 40) suggest that “kinship nouns have an argument structure of their own, thus introducing the relative (*ta* ‘he’ [...]) autonomously, without the need for a preposition to establish

<sup>15</sup> If, as suggested by an anonymous reviewer, Corver’s (2009) analysis of measure expressions as predicates should be adopted, an alternative explanation must be found to account for the contrast between (39a-41a), on the one hand, and (39b-41b), on the other.

a predication relationship between the kinship term and the relative.”

This special assumption allows D&S to account for the absence of *de*, but not for the optional presence of *de*, a problem which they mention in passing (cf. p. 40 fn27) without, however, offering any solution.<sup>16</sup>

Furthermore, they do not seem to be aware of the fact that *de* is optional in kinship DPs only when the modifier is a pronoun (cf. Li and Thompson 1981: 115). With DPs as modifiers, *de* is obligatory:<sup>17</sup>

- (43) Akiu \*(de) meimei  
 Akiu Sub sister  
 ‘Akiu’s sister’

This strongly suggests that the optionality of *de* does not exclusively depend on the properties of the head noun, but also on the nature of the modifier itself (pronoun vs. other DPs), a fact which cannot be captured within D&S’s proposal, where the presence vs. absence of *de* is associated with presence vs. absence of predicate inversion. Last, but not least, returning to the case of a pronominal modifier in a kinship term DP where *de* is present (cf. (42b) *ta-de meimei* ‘his sister’) it needs to be stated once again that contrary to the prediction made by D&S’s predication inversion approach for the modification structure with *de*, pronouns can never function as predicates (cf. (37) above). Importantly, as outlined in section 2.4 above, this holds irrespectively of the analysis adopted for the possessor DP: if the possessor is a PP with a zero head as claimed by D&S, then the general ban against PPs as predicates applies (cf. (27)-(29) above); if the possessor is a DP (including pronouns), it cannot function as a predicate, either, but requires the presence of

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<sup>16</sup> “In Mandarin, apparently, it *is* nonetheless possible to introduce the relative (*ta* ‘he’ in (54b) [= (42b); WP]) with the aid of a predicate head external to the kinship noun phrase. Although the use of the linker *de* is by no means necessary, it is nonetheless possible in the Mandarin counterpart of *his sister*.” (D&S, p. 40 note 27)

<sup>17</sup> Note that institutions and locations may behave on a par with kinship terms:

- (i) women (de) xuexiao (Lü et al. 1980: 158)  
 IPI Sub school  
 ‘our school’  
 (ii) women (de) jiaoshi (Lü et al. 1980: 558)  
 IPI Sub classroom  
 ‘our classroom’

While plural pronouns can be immediately juxtaposed with a head noun referring to an institution as illustrated in (i) - (ii), this is much less acceptable with a kinship term such as *meimei* ‘younger sister’:

- (iii) tamen ??(de) meimei  
 3Pl DE younger.sister  
 ‘their younger sister(s)’

Thanks to an anonymous reviewer for reminding me of this point.

the copula *shi*.<sup>18</sup>

#### 4. The *de*-less modification structure

So far I have concentrated on checking the syntactic properties predicted for the modifier XP by the predicational approach. I have shown that with the exception of relative clauses and predicative APs, the other XPs cannot function as predicates. In this section, I turn to the semantic import associated with *de* and the categorial status assigned to it in D&S as well as in Simpson (2001).

Recall that D&S postulate a particular “information-structural profile” to result universally from predicate inversion, where the inverted predicate represents a topic (i.e. given information) and its subject a focus (cf. D&S, p. 49). As far as I understand this part of D&S’s proposal (which is not further spelt out), this would lead us to expect that a modification structure without *de* should lack this particular information-structural profile, the absence of *de* signaling the non-existence of predicate inversion.<sup>19</sup> In this respect, Chinese offers a welcome opportunity to check this prediction. For Chinese also allows *de*-less modification structures and provides numerous minimal pairs where for the same combination of modifier and head noun, *de* may be present or absent.<sup>20</sup>

(44) boli / mutou (de ) zhuozhi  
 glass / wood Sub table  
 ‘a glass/wooden table’

(45) congming / laoshi (de) ren  
 intelligent / honest Sub person  
 ‘an intelligent/honest person’

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<sup>18</sup> Last, but not least, it is not clear how the different variants of the predicational approach can be implemented when the nominal projection following *de* remains covert, which in their terms amounts to a configuration with an empty subject: “XP *de* Ø”. By contrast, this case can be straightforwardly accounted for in an analysis where the relation between *de* and the empty category is that between a head and its complement. Cf. Niina Ning Zhang (2012: 98) and Paul (to appear).

<sup>19</sup> Note that in their analysis of Chinese, D&S - without any explanation - do no longer invoke the particular information-structural profile associated with predicate inversion.

<sup>20</sup> I limit myself here to the well-studied cases where the modifier is an adjective or a noun and where the sequence “modifier head noun” is to the right of the classifier phrase. For it is well-known that the conditions for the optionality of *de* are different when the modifier precedes a demonstrative plus classifier phrase; in this case, *de* may also be omitted after a possessor NP or a relative clause:

- (i) Lisi (de) nei-ben shu  
 Lisi Sub that-Cl book  
 ‘Lisi’s book’
- (ii) Ba ni dashang (de) nei-ge ren  
 BA 2Sg strike Sub that-Cl person  
 ‘the person who struck you’

- (46) piaoliang / ganjing (de) yifu  
pretty / clean Sub dress  
'a pretty/clean dress'
- (47) yange (de) guiding  
strict Sub rule  
'strict rules'
- (48) fang (de) panzi  
square Sub plate  
'a square plate'
- (49) tianran (de) zhenzhu  
natural Sub pearl  
'natural pearls'
- (50) juemi (de) wenjian  
top-secret Sub document  
'top-secret documents'

As argued for extensively in Paul (2005, 2010), a *de*-less modification structure - contrary to the dominant view (cf. Sproat and Shih 1988, 1991, Duanmu 1998, Aoun and Li 2003: 149, among others) - is *not* a compound, but a phrase, it is not subject to phonotactic constraints controlling the number of syllables, and both predicative (cf. (45) - (47)) and non-predicative adjectives (cf. (48) - (50)) are permitted as modifiers.<sup>21</sup>

The absence or presence of *de* naturally induces an interpretational difference. As noted by the Chinese linguists back in the 50s and 60s (cf. Paris 1980 for translations of the most influential articles), with the *de*-less modification structure a new sub-category is established where the modifier is presented as a

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<sup>21</sup> Evidently, Chinese does have "A-N" and "N-N" compounds such as [<sub>N</sub>lü-cha] 'green tea', [<sub>N</sub>cha-hua] 'tea-flower' = 'camelia' etc. While these can be distinguished from the phrasal *de*-less modification structures by standard tests based on e.g. the *Lexical Integrity Hypothesis*, there exist no phonotactic well-formedness conditions allowing to tell compounds, i.e. words, apart from phrases. I therefore do not follow Feng (1995) who not only postulates constraints exclusively for compounds (exempting phrases) excluding e.g. three-syllable compounds, but also extends them to *de*-less modification structures, analysed as compounds by him. Apparently, this kind of confusion has been around for a long time, because it is explicitly corrected by Fan (1958: 213) and Zhu (1956/80: 3). Fan (1958: 213) even goes as far as providing a list illustrating the possible combinations of monosyllabic or polysyllabic head nouns with monosyllabic or polysyllabic adjectives in the *de*-less modification structures. The ill-formedness of Feng's example \*[xian-hong] hua 'fresh-red flower' is thus not due to the undesired number of syllables. It cannot be a compound noun, because modifier-head, i.e. derived adjectives such as xian-hong 'fresh-red' = 'bright red, scarlet' are excluded from compounding. As a *de*-less NP it is not well-formed, either, because modifier-head adjectives describe a property rather than purely refer to it and are therefore unacceptable in the *de*-less modification structure. (Cf. Paul 2010, section 4 and references therein).

defining property of the resulting new sub-category: *congming haizi* ‘intelligent children’, *fang panzi* ‘square plate’, *boli zhuozi* ‘glass table’ (cf. Paul (2005) for a detailed discussion). This is reminiscent of the semantics of prenominal adjectives in Romance: French *la blanche neige* ‘the white snow’ vs. *la voiture blanche* ‘the white car; Italian *dolce miele* ‘sweet honey’ vs. *vino dolce* ‘sweet wine’ (cf. Bouchard 1998, Klein-Andreu 1983). With the notable difference that in Chinese, modifiers referring to an intrinsic property of the noun are excluded from the *de*-less modification structure, because it is impossible to establish a new sub-category by using an intrinsic property of the category concerned: *\*tian fengmi* ‘sweet honey’ (cf. Paul 2010).<sup>22</sup> Given these properties of the *de*-less modification structure, it is clear that the modification structure with *de* does not differ from the *de*-less modification structure in the way predicted by D&S, i.e. along the parameter of old vs. new information.

In any case, the uniform interpretational value of “given information” assigned to the modifier XP in the structure “XP *de* N” in D&S’s approach is problematic in itself. This is particularly obvious in the case of relative clauses and noun complement clauses always requiring *de* preceding the head noun. Since according to D&S the presence of *de* signals predicate inversion, D&S (p. 15) predict that both types of clauses always involve predicate inversion and hence always carry old information, certainly not a desirable result. The same holds for the other modifier XPs (DPs, QPs, APs, adverbs etc., cf. (1a)-(1g) above). If D&S’s claim were correct for Chinese, we would e.g. not expect DPs containing *de* (cf. (51b)) where the modifier carries new information as answer to a preceding question:

(51a) Ni zui xihuan na-yi zhong hua ?  
 2Sg most like which-one kind flower  
 ‘Which kind of flowers do you prefer?’

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<sup>22</sup> Given the examples (i) - (iv) provided by an anonymous reviewer (who however, confirms the unacceptability of *\*tian fengmi* ‘sweet honey’), this constraint on *de*-less modification must probably be refined:

- (i) suan yangmei  
 ‘sour bayberry’
- (ii) lü caodi  
 ‘green lawn’
- (iii) xiao ying’er  
 ‘small infant’
- (iv) yuan qiu  
 ‘round ball’

Note, though, that there is also some variation between individuals. For example, the native speakers consulted by me only accepted (iii) as term of endearment e.g. used by a wife for her husband. *Xiao ying’er* was judged (iii) awkward, though, when simply referring to a small i.e. young child, precisely because *ying’er* are small by definition, in other words because *xiao* ‘small’ encodes an inherent property of *ying’er* ‘infant’, as predicted by the generalization in Paul (2010).

(51b) Wo zui xihuan [<sub>NP</sub> lan-se ]/[<sub>AP</sub> xinxian]/[<sub>S</sub> cong helan jinkou] de hua.  
 1Sg most like blue-colour fresh from Netherlands import Sub flower  
 'I prefer blue /freshly-cut flowers/flowers imported from the Netherlands.'

To summarize, the characterization of the semantic import associated with *de* and the categorial status assigned to it within the predicational approach are not borne out by the actual properties of the “XP *de* N” structures in Chinese. More precisely, the meaning differences observed between modification structures with and those without *de* invalidate D&S’s claim that in a predicate inversion structure containing a “linker”, “XP *de* N<sup>o</sup>”, the modifier XP necessarily carries old, “topical” information.

Note that the *de*-less modification structure remains a challenge for D&S even if the particular information-structural profile associated with predicate inversion is abandoned, as in den Dikken (2006). Given that the presence of *de* is an automatic consequence of predicate inversion, this approach in fact wrongly predicts the non-existence of a modification structure without *de*. However, as the preceding discussion has demonstrated, the *de*-less modification structure is clearly phrasal and must therefore be taken into account in addition to the structure with *de* when examining modification in Chinese.

## 5. Conclusion

Drawing upon a more representative array of data from Chinese and checking the predictions made by the predicational approach of modified DPs “XP *de* N” against the general properties of Chinese syntax, the present article has argued that the modifier XP cannot uniformly be derived from an underlying predicate, be it contained in a small clause or in a relative clause (contra Sproat and Shih (1988, 1991), Duanmu (1998), Simpson (2001, 2003), Simpson and Wu (2002), D&S (2004), den Dikken (2006)). Accordingly, an analysis of *de* based on the predicational approach such as D&S’s cannot be correct. In addition, D&S’s claim that a modifier XP in “XP *de* N” carries old information (a universal consequence resulting from predicate inversion) is not borne out by the Chinese data. Consequently, the successful application of the predicate inversion analysis to typologically very distinct languages, presented as supporting evidence in favour of their approach by D&S, does not exist to the extent claimed and at least Chinese must be crossed off the list of languages covered by this “linker” analysis. Instead, what is needed is an analysis of *de* that ties in with the general properties of Chinese syntax and that does not make use of *ad hoc* categories such as “linker”.

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## 論為何並非所有的名詞修飾性成分都可以從謂詞成分轉換而來

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### 提要

究竟把“的”字看作是修飾性成分好還是看作是名詞中心語好的問題，迄今為止語言學界對此問題並未達成共識。大部分學者基本上認為修飾性短語要麼是由小句中的謂詞成分轉換而來，要麼是由關係分句中的謂詞成分轉換而來。然而這些看法也並非完全無懈可擊。其實諸多修飾性成分的短語，例如介詞短語，並非能完全獨立作為謂詞成分使用。因此本文旨在論證，倘若“的”字的分析要與漢語總體句法特點保持和諧一致的話，我們就必須從新的角度對這個問題進行重新剖析。

### 關鍵詞

結構助詞“的”，連線性功能詞，名詞短語，限定語，名詞短語中的修飾關係