

# An overt determiner and complementizer in a classifier language

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Chierchia (1998) has proposed a Nominal Mapping Parameter Hypothesis, arguing that in some languages (classifier languages), NPs are argumental and can thus occur freely without determiner in argument position; in others (Romance) they are predicates, and this prevents NPs from occurring as arguments, unless the category D(eterminer) is projected; finally, there are languages (Germanic or Slavic) which allow both parameter setting predicts the presence or absence of the determiner. This hypothesis predicts that languages with a generalized classifier system should not be expected to have overt definite determiners. In this paper, we introduce a morpheme *Su* in Nuosu-Yi (a Tibeto-Burmese language with SOV word order, spoken in the southwest of China) and some newly found data. We argue that *Su* is a definite determiner in the nominal domain; Yi therefore provides empirical evidence for the existence of definite determiner in classifier languages. We also look into clausal domain of Yi and argue that in the clausal domain, *Su* is a complementizer, either introducing a relative clause or a complement clause.

The present paper has three goals: 1) To identify and generalize the functions of *Su* by providing exhaustive descriptions of the syntactic distribution of it under the framework of the generative grammar. 2) To show whether there is a correlation between (overt) determiners and classifiers. 3) To show the implication of our analysis—on one hand, the new data helps us to re-examine the current theories on NPs and DPs by Chierchia (1998, 2008, 2009), Longobardi (1994, 2005), Cheng and Sybesma (1999, 2005), Bošković (2010), etc; on the other hand, our analysis sheds light on the research on the relevant topics in other East Asian languages.

## 1. *Su* in nominal domain

*Su* occurs in the final position of nominal phrases containing classifiers. When the ‘Noun+Num+CL+*Su*’ phrase appears in object positions, it only receives definite interpretation (1). When the ‘Noun+Num+CL+*Su*’ phrase occurs in subject positions, it has definite interpretation only with stage level predicates (2), but it is ambiguous with individual level predicates—either denoting definite or generic, as in (3).

(1) **tsh<sup>33</sup> mu<sup>33</sup> sɔ<sup>33</sup> ma<sup>33</sup> su<sup>33</sup> ʃu<sup>31</sup> bo<sup>33</sup> o<sup>44</sup>.** (Definite)

3s horse three CL SU look for go SFP  
‘He went to look for the three horses.’

(2) **mu<sup>33</sup> sɔ<sup>33</sup> ma<sup>33</sup> su<sup>33</sup> ʃi<sup>44</sup> ndo<sup>33</sup> o<sup>44</sup>.** (Definite)

horse three CL SU lose SFP  
‘The three horses got lost.’

(3) **mu<sup>33</sup> sɔ<sup>33</sup> ma<sup>33</sup> su<sup>33</sup> sɔ<sup>33</sup> tu<sup>33</sup> va<sup>55</sup> bɿ<sup>31</sup>.**

horse three CL SU three thousand Yuan give

a. The three horses cost three thousands Yuan. (Definite)

b. Any three horses cost three thousands Yuan. (Generic)

When the numeral is ‘one’, the ‘Noun+one+CL+*Su*’ phrase has generic reading only, illustrated in (4). When the numeral ‘one’ is omitted, the ‘Noun+CL+*Su*’ phrase could have either definite reading (5a) or generic reading, shown in (5).

(4) **mu<sup>44</sup> tsh<sup>31</sup> ma<sup>33</sup> su<sup>33</sup> sɔ<sup>33</sup> tu<sup>33</sup> va<sup>55</sup> phu<sup>33</sup>.**

Horse one Cl SU three thousand Yuan worth

‘Any single horse is worth three thousands Yuan.’

Not: ‘The horse costs three thousands Yuan.’

- (5) **mu**<sup>33</sup> **ma**<sup>33</sup> **su**<sup>33</sup>  
 horse CL SU  
 a. the horse  
 b. any horse

When *Su* is omitted, the nominal phrases containing classifiers can never receive definite interpretation; they receive indefinite reading in object positions, as given in (6), and either indefinite or generic reading in subject positions depending on whether the predicate is state level predicate or individual level predicate, illustrated in (7) and (8).

- (6) **tshɿ**<sup>33</sup> **mu**<sup>33</sup> **sɔ**<sup>33</sup> **ma**<sup>33</sup> **su**<sup>31</sup> **bo**<sup>33</sup> **o**<sup>44</sup>. (Indefinite)  
 3s horse three CL look for go SFP  
 ‘He went to look for three horses.’

- (7) **mu**<sup>33</sup> **sɔ**<sup>33</sup> **ma**<sup>33</sup> **ɿ**<sup>44</sup> **ndo**<sup>33</sup> **o**<sup>44</sup>. (Indefinite)  
 horse three CL lose SFP  
 ‘Three horses got lost.’

- (8) **mu**<sup>33</sup> **sɔ**<sup>33</sup> **ma**<sup>33</sup> **sɔ**<sup>33</sup> **tu**<sup>33</sup> **va**<sup>55</sup> **bɿ**<sup>31</sup>. (Generic)  
 horse three CL three thousand dollar give  
 Every three horses cost three thousand dollars.

*Su* cannot co-occur with bare argument NPs: it has to appear with classifiers, as in (9).

- (9) **mu**<sup>33</sup> (\***su**<sup>33</sup>) **ɿ**<sup>44</sup> **ndo**<sup>33</sup> **o**<sup>44</sup>.  
 horse SU lose SFP  
 The horse(s) got lost.

Note that, *Su* is not demonstrative and it can not co-occur with demonstratives.

- (10) **mu**<sup>33</sup> **a**<sup>44</sup> **dzɿ**<sup>44</sup> **sɔ**<sup>33</sup> **ma**<sup>33</sup> (\***su**<sup>33</sup>) **ɿ**<sup>44</sup> **ndo**<sup>33</sup> **o**<sup>44</sup>.  
 horse DEM three CL SU lose SFP  
 The (Those) three horses got lost.

As we have shown in (3) and (5), *Su* phrase could be ambiguous—either denoting definite or generic depending on the type of the predicate. However, the supersegmental strategy—tone sandhi can also eliminate this referential ambiguity. The tone that undergoes tone sandhi is shorter and lighter than the original tone in phonetic feature in Yi: when the original tones are stressed, marked as 33 tone in Yi, when the tones that undergo tone sandhi are unstressed, they are marked as 44 tone. In (5) (repeated as (11)), the three morphemes in the phrase are all in original tones (33 tones), and the whole phrase is ambiguous. When the classifier undergoes tone sandhi and gets unstressed, the whole phrase turns to have definite interpretation only (12a); while when the noun undergoes tone sandhi and get unstressed; the phrase has generic interpretation only, as in (12b).

- (11) **mu**<sup>33</sup> **ma**<sup>33</sup> **su**<sup>33</sup>  
 horse CL SU  
 a. ‘the horse’  
 b. ‘any horse’

- (12)a. **mu**<sup>33</sup> **ma**<sup>33-44</sup> **su**<sup>33</sup> **sɔ**<sup>33</sup> **tu**<sup>33</sup> **va**<sup>55</sup> **bɿ**<sup>31</sup>. (Definite)  
 horse CL SU three thousand dollar give  
 ‘The horse costs three thousand dollars.’

- b. **mu**<sup>33-44</sup> **ma**<sup>33</sup> **su**<sup>33</sup> **sɔ**<sup>33</sup> **tu**<sup>33</sup> **va**<sup>55</sup> **bɿ**<sup>31</sup>. (Generic)  
 horse CL SU three thousand dollar give  
 ‘Each horse costs three thousand dollars.’

## 2. *Su* in clausal domain

*Su* can also participate in the clausal domain. When it appears in clausal domain, it behaves like a complementizer, either introducing relative clauses which modify the head(less)

nouns or introducing complement clauses to factive verbs or nouns.

### 2.1 Relative clauses introduced by *Su*

*Su* can either introduce headed relative clauses (13) or headless relative clauses (14), and both external argument and internal argument can be relativized.

(13) **mjo<sup>44</sup>** Mary **ɿu<sup>55</sup>** **su<sup>33</sup>** **ndza<sup>55</sup>** **dmɿ<sup>33</sup>** **ndza<sup>55</sup>**.  
 sheep Mary herd SU fat/beautiful very fat/beautiful  
 ‘The sheep that Mary herds are very fat.’

(14) <sub>e<sub>head noun</sub></sub> [[<sub>RC</sub> **mjo<sup>33</sup>** **ɿu<sup>55</sup>**] **su<sup>33</sup>**] **ndza<sup>55</sup>** **dmɿ<sup>33</sup>** **ndza<sup>55</sup>**.  
 sheep herd SU fat/beautiful very fat/beautiful  
 ‘The one who herds sheep are very beautiful.’

The referential features of the nouns modified by the relative clauses are parallel to those of bare nouns, which can either be definite, indefinite, or generic. When the modified noun appears with classifiers, the clausal level *Su* (complementizer) must be omitted in this sentence, and the whole classifier phrase has indefinite interpretation only, as shown in (15).

(15) **tshi<sup>33</sup>du<sup>33</sup>** Mary **mu<sup>33</sup>ta<sup>3</sup>** (\***su<sup>33</sup>**) **tei<sup>33</sup>** John **ku<sup>31</sup>ka<sup>44</sup>** **dzu<sup>33</sup>o<sup>44</sup>**.  
 dish Mary cook Asp SU CL John AGENT LIGHT V eat SFP  
 ‘John has eaten up a dish that Mary cooked.’

If we want to add definite reading to (15), we have to add the nominal level ‘*Su*’ to the right of the classifier, but the clausal level *Su* still cannot occur.

(16) **tshi<sup>33</sup>du<sup>33</sup>** Mary **mu<sup>33</sup>ta<sup>33</sup>** (\***su<sup>33</sup>**) **tei<sup>33</sup>su<sup>33</sup>** John **ku<sup>31</sup>ka<sup>44</sup>** **dzu<sup>33</sup>o<sup>44</sup>**.  
 dish Mary cook Asp SU CL SU John AGENT LIGHT V eat SFP  
 ‘John has eaten up the dish that Mary cooked.’

### 2.2 *Su* in complement clause

Clauses introduced by *Su* can be the complement of factive verbs and nouns.

(17) John **bi<sup>55</sup>bo<sup>33</sup>o<sup>44</sup>** **su<sup>33</sup>** Mary **dmɿ<sup>33</sup>su<sup>33</sup>ŋa<sup>33</sup>dmɿ<sup>33</sup>o<sup>44</sup>**.  
 John out go SFP SU Mary know SU 1s know SFP  
 I know that Mary knew that John has been out.

*Su* appears final position of sentences, in which *Su* introduces a complement to the omitted copula ‘be’, as in (18).

(18) John **i<sup>33</sup>ho<sup>44</sup>tʂa<sup>33</sup>nur<sup>33</sup>la<sup>33</sup>o<sup>44</sup>su<sup>33</sup>(ŋu<sup>33</sup>)**.  
 John soon CONJ come SFP SU be  
 It is the certain that John will come soon.

Some clauses introduced by *Su* can be analyzed as either relative clause or complement clause. That is to say, some sentences are ambiguous. For example:

(19) **zo<sup>44</sup>zu<sup>33</sup>ɿji<sup>33</sup>ndo<sup>33</sup>su<sup>33</sup>ŋa<sup>33</sup>ʒu<sup>31</sup>mo<sup>33</sup>o<sup>44</sup>**.  
 student smoke SU 1s see SFP  
 a. interpretation: I saw the student that (he) smokes. (relative clause)  
 b. interpretation: I saw that the student smoke. (complement clause)

### 3. The previous studies and their problems

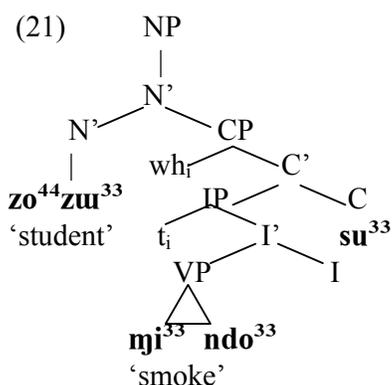
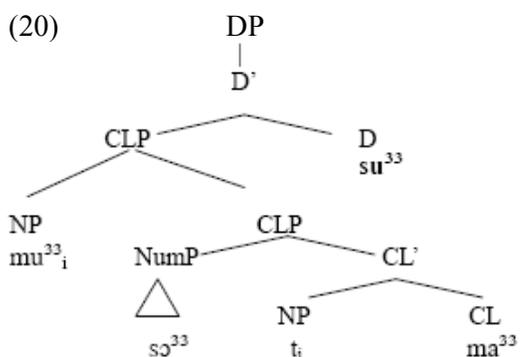
*Su* is rarely discussed in the literature, and the syntactic status of *Su* is not commonly agreed on. *Su* has variously been claimed to be an adjectival modifier, topic marker, and particle denoting definiteness (Chen 1985, 1989); a particle with definite reading, topic marker and stance marker (Hu, 2002), a nominalizer, particle with definite function, and gerundive marker (Liu and Gu 2005, 2010). These analyses have the following problems. First, the data are insufficient and some are incorrect. Secondly, the correlation and connection among the different uses of *Su* have not been made, which lead to inconsistent and non-unified analyses on *Su*. Thirdly, the previous analyses on *Su* only emphasize on the

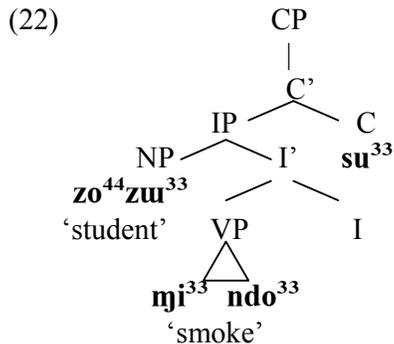
descriptive side, so the explanation to the *Su*-related phenomena is not provided.

#### 4. Our proposal

In this paper, we argue that overt determiners do exist in classifier languages; *Su* is a definite determiner of semantic type  $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ , which turns properties into arguments in the nominal domain in Yi. We adopt Chierchia (1998)'s view on the semantic type of bare nouns in classifier languages—bare nouns are of type  $\langle e \rangle$ . This analysis of bare nouns can help us to explain why bare nouns in Yi can be arguments and why the determiner *Su* cannot combine with bare nouns directly. Meanwhile, *Su* is a complementizer in the clausal domain either introducing a relative clause which modifies the (empty) head noun or introducing a complement clause. We also argue that there no correlation between (overt) determiners and classifiers: classifier languages can have overt determiners, opposing to what Bošković (2010) suggests, and the function of classifiers are not the same as that of determiner, opposing to what Cheng and Sybesma (1999) propose.

Historically, we argue that *Su* undergoes different stages of gramaticalization which explains the correlation between the definite determiner and the complementizer in Yi. Syntactically, we propose the structure in (20) for the definite phrase ***mu*<sup>33</sup> *so*<sup>33</sup> *ma*<sup>33</sup> *su*<sup>33</sup>** ‘the three horses’ in (2) and we propose that the ambiguity of the phrase in (19) is due to two different structures as in (21) and (22).





## 5. Implication

Our analysis has the following implications. Empirically, it helps us to work on a unified analysis on *Su* in the nominal domains and clausal domain. Theoretically, the proposal leads us to re-think some related theories on classifiers and determiner, such as Chierchia (1998), the DP hypothesis Longobardi (1994, 2005), Cheng & Sybesma (1999), Bošković (2010). Typologically, our analysis sheds light on the research on the relevant topics in other East Asian languages.

## 6. Conclusion

In this paper, we argue that *Su* is an overt definite determiner of semantic type  $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$  in the nominal domain, turning predicates or propositions into arguments. Yi therefore provides empirical evidence for the possibility that classifier languages can have overt determiners. In the clausal domain, *Su* is the complementizer, either introducing relative clauses which modify the head(less) nouns or introducing complement clauses to factive verbs and (empty) nouns. Historically, we argue that *Su* undergoes different stages of grammaticalization which explains the correlation between the definite determiner and the complementizer.

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