

# Against Comitative Coordinates

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## Abstract

Zhang (2010b), following previous proposals by (McNally 1993) and Kayne (1994)), analyze so-called *comitative coordinates* as identical in structure to true coordination. She also claims that a conjunct can be extracted from a comitative coordinate, in violation of the Conjunct Constraint. I argue instead that comitatives are not coordinates at all, and involve two distinct NPs that do not form a constituent. As such, they can both be extracted. The Conjunct Constraint is inviolable with true coordination.

Keywords: Coordination, the Conjunct Constraint (CC), comitatives, extraction

## 1 Introduction

The CSC, stated below, was proposed by (Ross 1967) as governing extraction from a coordinate complex.

- (1) “In a coordination structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.” (Ross 1967, 89)

Grosu (1973) divides the CSC into two parts: (i) the coordinate constraint (CC) which bans extraction of conjuncts (2a), and (ii) the element constraint (EC) which bans extracting an element out of a conjunct (2b).

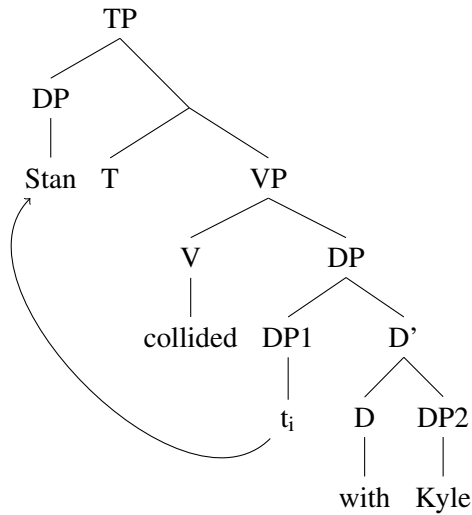
- (2) CC (Zhang 2010a, (4.1a),(4.2a))
  - a. \* John<sub>i</sub> seems to be [ \_<sub>i</sub> and Mary] in the room.
  - b. \* What<sub>i</sub> did Kim [cook supper and wash \_<sub>i</sub> ]?

The element constraint is known to be violable in some contexts (Munn 1993; Johannessen 1998; Merchant 2001, and many others), but most assume that the Conjunct Constraint is inviolable cross-linguistically (Zoerner 1995; Johannessen 1998; Postal 1998). However, Zhang (2010a) claims that the Conjunct Constraint can be violated just with what is called comitative coordination, as in example (3).

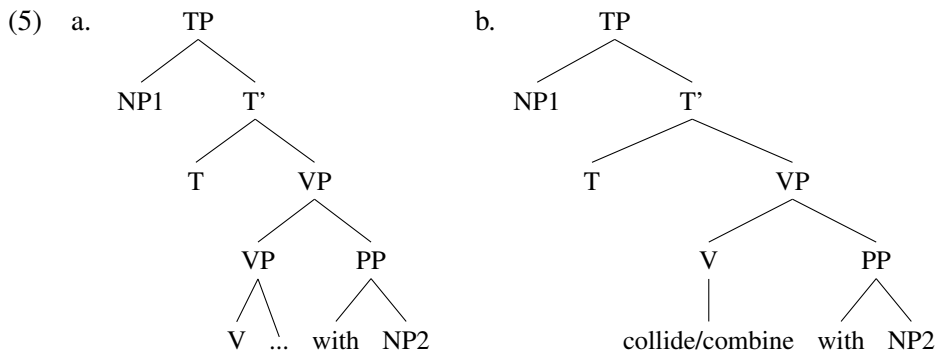
- (3) Huoche<sub>i</sub> hui [ <sub>i</sub> gen qiche] xiangzhuang ma?  
 train<sub>i</sub> might [ <sub>i</sub> and bus] collide Q  
 'Might the train collide with the bus?' (Zhang 2010a, 114, (4.81a); adapted)

Zhang assumes that so-called comitative coordinates are parallel to coordinates in structure. She adopts a version of the complementation analysis proposed in Kayne (1994), Zoerner (1995), Johannessen (1998), among others, where the coordinator heads an &P/ConjP phrase in which the conjuncts are arguments of the head &. The claim that a comitative can have properties of a coordinate dates back to Lakoff and Peters (1966), McNally (1993) and Kayne (1994) and many others. Recent work also adopts this view (Vassiliev 2000). The structure Zhang argues for is shown below.

- (4)



In this paper, I argue against this correlation, focusing on the Chinese case. I show that so-called comitative coordinates are in fact PPs that have a structure distinct from a coordinate. I propose that comitatives can have two structures as in (5), neither of which involves a complex nominal. As can be seen, there is no constituent consisting of NP1 and NP2, and certainly no coordinate structure. Hence, both NP1 and NP2 can be extracted.



The paper is organized as follows. Section 2 establishes that the CC is a constraint on pronunciation. In section 3, I discuss the differences between coordinates and comitatives. Then, I propose two structures of comitatives. In section 4, I argue against Zhang's analysis of Chinese *gen* constructions as comitative coordinates. Section 5 is the conclusion.

## 2 The CC as a Constraint on Pronunciation

I will adopt and defend the idea that the CC is a constraint on pronunciation. Conjuncts cannot be unpronounced (Grosu 1981; Munn 1993; Merchant 2001). This constraint on pronunciation also rules out moving conjuncts since the site of the moved conjunct would be null. A constraint banning an unpronounced conjunct will also ban moving a conjunct. In this section, I review evidence in favor of this analysis.

Merchant (2001) argues that the CC is a PF constraint, along the lines of the Null Conjunct Constraint, proposed by Grosu (1981), which states that conjuncts may not be null. Merchant provides various examples from phenomena that exhibit a ban on deletion at PF, in which coordinating a null element and an overt element is barred. Cases where a conjunct is null but has not undergone movement are ungrammatical.

The first example comes from VP ellipsis. In cases of VP ellipsis, it is ungrammatical to coordinate a null VP with an overt VP (Grosu 1973). There is no movement here, so a constraint on movement would not rule this out. We need a constraint against null conjuncts, and that constraint will also capture the movement cases. As pointed out by Merchant, one explanation for the ungrammaticality of sentences such as (6) is that a conjunct cannot be null.

- (6) \*I couldn't lift this weight but I know a boy who<sub>i</sub> could both [ <sub>i</sub> and lift a crowbar, too]. (Grosu 1973, (53); modified)

Similar facts are found in Right Node Raising (RNR). In many analyses, RNR is analyzed as PF deletion. The ungrammaticality of (7), then, must be due to a ban on leaving a conjunct unpronounced.<sup>1</sup>

- (7) \*[ [Tom is writing an article on Aristotle and <sub>i</sub> ], [and Elaine has just published a monograph on Mesmer and <sub>i</sub> ] ], Freud<sub>i</sub>. (McCawley 1988)

Another argument for the non-movement analysis of the CC comes from Greek null subjects. Greek allows a null subject (a *pro*), but if the subject is a conjunct phrase, one of the conjuncts may not be a *pro*. Since clearly no movement occurs here, the ungrammaticality must be due to a constraint that bans a null conjunct.<sup>2</sup>

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<sup>1</sup>In many analyses, RNR is derived by movement. See Sabbagh (2007). For more recent perspectives on RNR, see Chaves (2014), Larson (2015), and the cited work therein.

<sup>2</sup>In some languages, dropping a conjunct seems to be allowed, in a construction known as Verb Coded Coordination (Schwartz 1988). In this construction, the first conjunct is dropped, and a plural or dual morpheme that encodes the coordination appears on the verb, as shown below. In particular, the morpheme refers to the missing conjunct,

(8) (Merchant 2001, 197, (103))

{*Afros* / \**pro*} kai o Pavlos ine adherfia  
he/pro and the Paul are siblings

‘He and Paul are siblings.’

- a. {*Esi* / \**pro*} kai o pavlos iste adherfia  
you.SG/pro and the Paul are siblings  
‘You and Paul are siblings.’

An argument which I wish to add comes from pied-piping. Pied-piping is known to ameliorate island violations (Cable 2010). If moving a conjunct constitutes an island violation (a movement violation), we predict that pied-piping the whole conjunct will make the sentence grammatical. This prediction is not borne out, as shown in (9b). Pied piping the coordinate complex when a single conjunct is a wh-word appears to be banned.

- (9) a. \* The man who<sub>i</sub> they are going to meet [ \_<sub>i</sub> and you] together is over there.  
b. \* The man [who and you]<sub>i</sub> they are going to meet *t*<sub>i</sub> together is over there.

Similar restrictions have been noted in Postal (1972), and further discussed in Cable (2010), although for cases where the wh-word is an element within a conjunct. A single wh-word inside a conjunct cannot pied-pipe the whole conjunct. One explanation of the ungrammaticality of (10a) could be that the extraction violates semantic parallelism (Safir 1984; Munn 1993; Fox 2000). Coordination seems to have a restriction on what conjuncts may be coordinated. Munn (1993) proposes that the restriction is semantic. Only similar semantic types may be coordinated. Thus, the ungrammaticality here is due to a mismatch in semantic type.

(10) (Heck 2008, 55, (90))

- a. \* Whose paintings and John’s books did you sell?  
b. Whose paintings and whose books did you sell?

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but encodes the plural or dual number of the combination. (Irish is also a language which shows this pattern. See McCloskey (1986).)

(1) (Tak and Botne 1998, 49, (4))

- a. Hausa (Afroasiatic)  
Mun jee kaasuwa da k’aneena.  
1P-PST go market and younger.brother.1POSS  
‘My younger brother and I went to the market.’
- b. Yapese (E. Oceanic)  
ka ra Pow Tamag.  
ASP 3DU come-DU Tamag  
‘He and Tamag came.’

One way to analyze these cases is to assume that the missing conjunct is implicit, that is it is not syntactically projected. I hypothesize that this is licensed by the morphology that appears on the verb. If the missing conjunct is not present in the syntax, the CC is not violated.

In addition, Merchant claims that resumption also shows that the CC is a constraint on pronunciation. Since resumption can ameliorate the CC effects as shown in (11), it must be a non-movement constraint (Merchant 2001; Pesetsky 1998).

- (11) a. That's the guy<sub>i</sub> that they were going to meet [you and him<sub>i</sub>] together.  
b. Which wine<sub>i</sub> would you never serve [it<sub>i</sub> and sushi] together? (Pesetsky 1998, 366, footnote 28)

However, resumption does not seem a strong argument for the PF status of the CC. Resumption is a strategy that ameliorates movement violations as well. For instance in (12), the island violation can be fixed by inserting the resumptive pronoun *it*. Resumptive pronouns are consistent with both a PF constraint and the view that the CC is a constraint on movement.

- (12) This is the thing that I was wondering if you want it.

Although this argument does not go through, there is strong evidence against the analysis that the CC is a movement constraint and for the analysis that it is a constraint on pronunciation. As I have shown, facts from VP ellipsis, null *pro*, and pied-piping argue for treating the CC as a constraint on pronunciation. I adopt this analysis and argue that the CC is inviolable. I formalize the CC below.

- (13) The Conjunct Constraint (CC) as a PF Constraint

In a coordination structure, no conjunct may be phonologically null.

I assume that this pronunciation constraint is also violated when a conjunct is extracted. Under extraction, the lowest copy is (typically) not pronounced, leading to a violation of the constraint.

### 3 Comitatives vs Coordinates

In this section, I will discuss the syntactic and semantic differences between a comitative and a coordinate. On the basis of these differences, I propose that comitatives can have two possible structures, neither of which involves a complex NP. The first NP does not form a constituent with the second, and so can be extracted independently. (Throughout the discussion, I will refer to the NP that precedes the comitative marker NP1 and the NP that follows the comitative marker NP2.)

It is important to draw a distinction between comitative and coordinate constructions. This distinction becomes crucial in languages that encode coordinates and comitatives using the same lexical item. In English, comitative phrases involve the preposition *with*, contrasting with the coordinator *and* (Lakoff and Peters 1966; Kayne 1994; Stolz 2001). On the other hand, in many languages a single lexical item is ambiguous between a coordinator and a comitative marker like in Arabic, Russian, and many other languages.

A number of facts show that in a comitative, NP1 and NP2 are not base generated in a complex NP. English comitatives allow NP1 to move independently of *with* NP2, as shown in (14).

- (14) a. I ate pasta with meatballs.  
b. Pasta<sub>i</sub> is often eaten *t*<sub>i</sub> with meatballs.

In contrast, raising the first conjunct from a coordinate phrase is impossible:

- (15) a. I ate pasta and meat balls.  
b. \*Pasta<sub>i</sub> is often eaten [  <sub>i</sub> and meatballs].

However, (15b) can be grammatical with a long pause before *and* and with emphasis on *and meatballs*. In this case, the coordinator and what follows might be analyzed as a remnant of ellipsis with clausal coordination.

- (16) Pasta is often eaten, and meatballs [ ~~are often eaten~~ ].

The same contrast is found in wh-movement. *With* NP2 may be wh-moved, but *and* NP may not (McNally 1993; Zhang 2007).

- (17) a. I mixed baking soda and vinegar.  
b. I mixed baking soda with vinegar.  
c. [With what]<sub>i</sub> did you mix baking soda *t*<sub>i</sub>?  
d. \* [And what]<sub>i</sub> did you mix [baking soda  <sub>i</sub>]?

Wh-movement can also strand *with* just like any other preposition, but this is not possible in coordination.

- (18) a. What did you mix baking soda with?  
b. \* [What]<sub>i</sub> did you mix [baking soda and  <sub>i</sub>]?

Furthermore, in a comitative, elements may intervene between NP1 and *with* NP2. In (19) *the liquid* is separated from the *with*-phrase by *carefully*. Coordination, in contrast, strictly disallows interruption of the conjuncts (20).

- (19) I mixed the liquid carefully with the unidentified compound I had found.

- (20) \*John met both his ex-wife in the park and his ex-girlfriend on the same day.

Comitatives and coordinates also differ semantically. One difference is that the nominals involved in coordination receive the same semantic role, while nominals in a comitative may or may not have the same thematic role. The semantic oddness in (21b) arises from the fact that in the coordinate *a mother and her baby*, both conjuncts must have the same thematic role.

- (21) a. A mother was cooking with her baby.  
b. # A mother and her baby were cooking.

Consider the examples below.

- (22) a. The bus collided with the truck.  
b. The bus and the truck collided.

This pair and similar ones have been argued to be semantically equivalent (Lakoff and Peters 1966; Kayne 1994; Zhang 2007; Zhang 2010a). This assumption was among the justification to argue that comitatives and coordinates are similar in structure. However, this view does not seem to be accurate. Adopting Talmy's (1978) Figure/Ground distinction in which Figure is the entity which physically or conceptually moves, and Ground is the entity or reference point against which a Figure moves, Gleitman et al. (1996) present an interpretation of *collide*-type sentences, which they refer to as active symmetricals. In (23a), *bus* is Figure/causal agent while *scooter* is Ground/patient. In (23b), *scooter* is the Figure in while *bus* is the Ground. In contrast, in (23c), when the subject of *collide* is a coordinate, both nominals appear to be Figures.

- (23) (Gleitman et al. 1996, 363, (22))  
a. The bus collides with the scooter.  
b. The scooter collides with the bus.  
c. The scooter and the bus collide.

Now consider the examples in (24). The oddness of sentence (24b) shows that in coordination the conjuncts have the same thematic roles. Both the car and the lamp post should be moving, which makes the sentence semantically odd. In contrast, in (24a), we do not find this oddness which indicates that the nominals are distinct in their semantic roles.

- (24) a. The car collided with the lamp post.  
b. # The lamp post and the car collided.

Iterativity is another property that distinguishes a comitative from a coordinate (McNally 1993; Dalrymple et al. 1998). In coordination, *and* NP may iterate with no limit. It is possible to have multiple conjuncts, all of which are parallel (25). This is not always possible with comitatives. Iteration of *with* NP is unacceptable (26).

- (25) I and my friends and my colleagues had drinks.

- (26) I had drinks with my friends (\*with my colleagues).

In some cases, iteration in a comitative is possible. In these cases, iteration is addition of a *with*-PP to a single NP, but that single NP can be complex and can itself include a comitative. In (27b), *pasta with meatballs* is a single NP, which refers to a single dish, that is accompanied

with hot peppers. The reading which is disallowed: I ate a dish of pasta, and the pasta was accompanied by meatballs and by hot peppers.

(27) I ate [[pasta with meatballs] with hot peppers].

In coordination, iteration is more like listing. In (28), the relevant reading is as a list, where three items are equivalent on that list. This is never possible with comitatives.

(28) I ate pasta and meatballs and salad.

Another major difference is related to distributivity. McNally (1993); Dalrymple et al. (1998), and others show that comitatives do not allow distributive reading while coordinates do. Although this descriptive generalization needs to be explained, I leave this issue aside and assume that the generalization is correct. In (29a), the use of the distributive adverb *each* is unacceptable with a comitative in contrast with a coordinate which allows it.

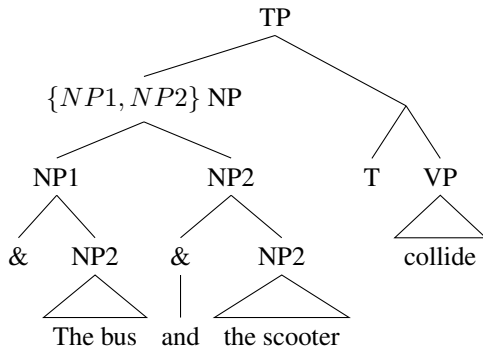
- (29) a. \* [A woman together with her son] each bought a book.  
b. [A woman and her son] each bought a book .

Therefore, as shown above, in languages where comitatives and coordinates are encoded using different markers, such as English, comitatives and coordinates *do* differ in many ways. Nominals in a coordinate are closely grouped together, so no interruption or movement of a conjunct is allowed. Conjuncts are on par and semantically equivalent. Iterativity is freely allowed in coordination. On the other hand, in a comitative construction, NP1 and *with* NP2 can be interrupted. NP1 and NP2 do not have to have the same thematic role, and in some contexts they *are* different in interpretations as shown by Gleitman et al. (1996) .

On the basis of these differences, I propose that comitatives and coordinates should also be different in structure. Al Khalaf (2015) proposes a binary branching structure for coordination in which the coordinator does not project a special phrase, but adjoins to each conjunct. This coordinator triggers a special sort of labeling, which she calls Set Label. Set Label makes the label of the entire phrase the union of the labels of the conjuncts. Al Khalaf claims that Set Label captures agreement resolution in coordination. She also shows that the set label undergoes resolution in the same way agreement features do. I adopt this structure for coordination, which I illustrate below for (23c).



(30)



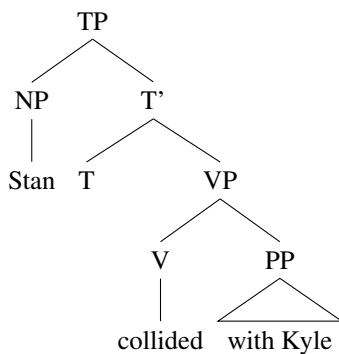
Turning to comitative structure, Yamada (2010) points out that there are three types of comitatives as exemplified below.

- (31) a. Stan collided with Kyle.  
b. Stan built a raft with Kyle.  
c. Shelly cooked with her baby (Yamada 2010, 126, (177))

Note that unlike in (31b-c), the *with*-PP in (31a) is obligatory. *With*-phrase required by *collide* as an argument. Thus, the PP should be a sister of *collide*, as shown below.

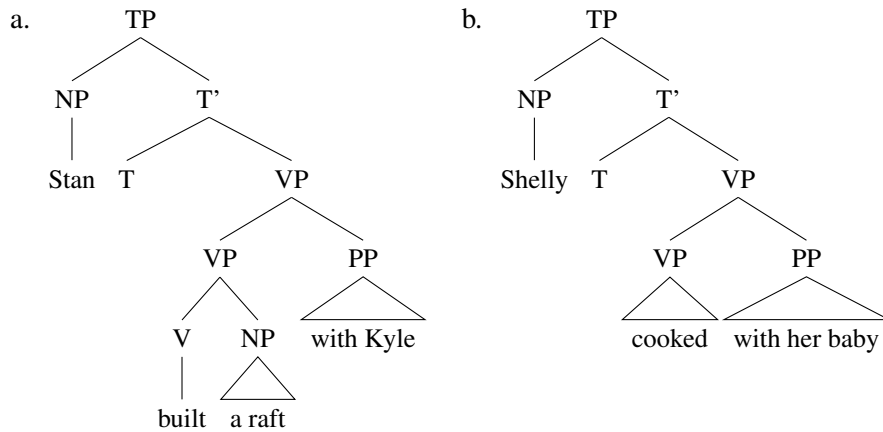
- (32) a. \* Stan collided.  
b. Stan built a house.  
c. Shelly cooked.

(33)



On the other hand, the optionality of the *with*-PPs in (31b-c) indicate that they are adjuncts. Thus, the PPs should be VP-adjuncts:

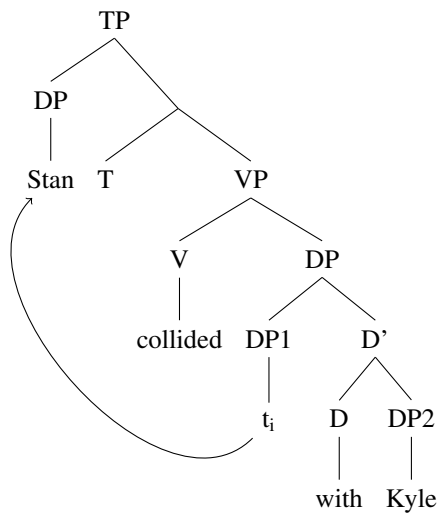
(34)



As can be seen, a major difference between the coordinate structure in (33) and the structures in (31) and (34) is that in the comitative structures NP1 is structurally independent of NP2.

Many analyses of comitatives assumed that comitatives are parallel to coordinates in structure. Following Kayne (1994), Zhang (2007) proposes that a comitative involves a complex nominal that contains NP1 and NP2. In Zhang's analysis, a sentence such as (31) is derived by movement of *Stan* out of a complex subject, *stan with Kyle*, as illustrated below.

(35)



However, the structure above cannot be right. First, the arguments presented in favor of this structure are weak. One argument comes from cases such as (36). Kayne (1994) argues that the use of the plural *friends* indicates that *he* and *harry* must have been base generated in a complex nominal which has a plural number and thus justifies the plural form of *friend*.

(36) He is friends with Harry.

However, I believe the analysis of *friends* here is wrong. Other relational nouns such as *enemies*, may not occur in a similar construction. The use of the plural *with friends* here is

exceptional and only occurs with this one noun. Even the use of the blend *frenemies*, which includes *friend* in it is unacceptable.

(37) \* John is enemies/siblings/colleagues/brothers with Bill.

(38) \* Sarah is frenemies with Sally.

Another argument in favor of a coordinate structure of comitatives is proposed by Zhang (2007). Zhang shows that the complex *NP1 with NP2* may not undergo A-bar movement, as in (39). She claims that this shows that NP1 and NP2 are base generated in a complex NP.

(39) (Zhang 2007, 148, (35a,b))

a. \*The apple with the orange, Mary compared.

b. \*Which apple with the orange did Mary compare?

It is not clear how the impossibility of A-bar movement is relevant to whether an NP is complex or not. This actually shows that there is no such constituent. In Zhang's analysis, a comitative and a coordinate have a similar structure and both involve a complex NP. However, a coordinate may occur in a topic position. It can undergo A-bar movement. A comitative may not, as just shown. This is unexpected in an analysis which treats them as parallel.

(40) [The apple and the orange], Mary will compare.

Thus the arguments for the structure in (35) are invalid. Two arguments show that the structure in (33) captures the facts better. The first comes from VP topicalization. In (41), the PP *with the truck* may be moved in VP topicalization. This shows that they PP and the V form a constituent.

(41) Mary thought she would collide with the truck, and collide with the truck she did.

The PP cannot be an adjunct here because it may not be stranded as shown below. This shows that the PP is an argument of the verb, supporting to the structure I have proposed in (33).

(42) ?? Mary thought she would collide with something, and collide she did with the truck.

The second comes from VP ellipsis. In (43), the *with-PP* must be included in VP ellipsis (43b) and may not be stranded (43c). This shows that it is an argument of the verb. In contrast, in (44), *with-PP* is more like an adjunct because it may be stranded with VP ellipsis .

(43) a. Mary compared the blue apple with the red one.

b. ... and Bill did too.

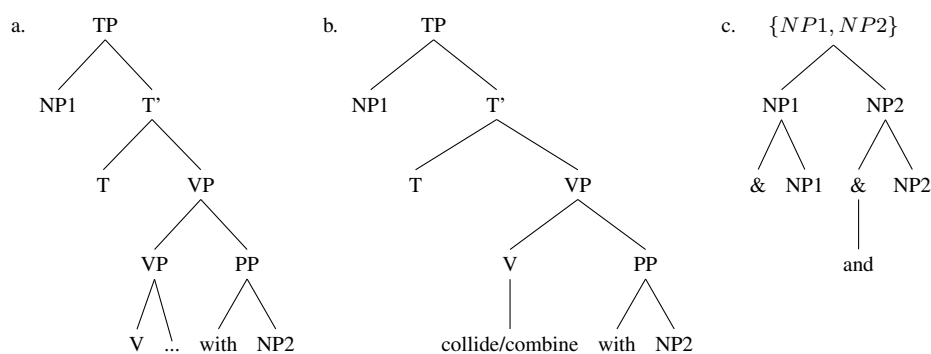
c. \* ... and Bill did with the green one.

(44) Stand built a raft with Kyle, and Mary did with Sally.

All of this shows that *with NP2* is a PP that does not form a constituent with NP1. This contrasts with coordination, where the two NPs *do* form a constituent.

To wrap up, I have discussed some of the differences between a comitative and a coordinate. I proposed that comitatives can have two possible structures, as schematized in (45a,b). It is obvious that NP1 can move because it is structurally independent of NP2 and is not part of a complex NP. In contrast, in the coordinate structure in (45c), neither NP1 nor NP2 can move because they are embedded in a complex structure. Moving or dropping a conjunct member is banned by the Conjunct Constraint. Conjuncts must be pronounced.

(45)



#### 4 Comitative Coordinates in Chinese

Now I move to Zhang's (2010a) proposal that the CC may be violated in Chinese, in what she refers to as *comitative coordinates*. In this section, I will show that *comitative coordinates* are just comitatives. Thus extraction out of them is freely allowed and is irrelevant to the CC.

Zhang (2010b; 2010a) contends that the first conjunct can be extracted in coordination, while the second conjunct cannot. Thus she redefines the CC so that the CC should be split into two constraints: the CCE which bans extraction of the external conjunct, and the CCI which bans extraction of internal conjuncts.

- (46) a. The CCE: extraction of the external conjunct (or the conjunct right before the coordinator) is not allowed.  
 b. The CCI: extraction of the internal conjunct (or rightmost) is not allowed.

Zhang points out that for extraction to be possible, two conditions must be met. First, the coordinator must have categorial features. Second, the coordinate must give rise to a non-distributive reading. Zhang's link between the coordinator's categorial features and extraction is explained as follows. In cases where the coordinator lacks categorial features, the first conjunct must transfer its features to the coordinator. These features will percolate up to the coordinate's topmost node. This will allow the coordinate to be integrated into the surrounding syntax. For example, in (47a), following a previous proposal by Johannessen (1998), Zhang claims that

the coordinator *and* lacks category features and instead gets them from *my assistant*. The verb *depend on* requires a nominal argument. The conjunct phrase gets nominal features from the first conjunct via the coordinator. On the other hand, (47b) is ungrammatical because the feature that the clause provides to the coordinator do not satisfy the selectional restrictions of the verb.

- (47) a. You can depend on [my assistant [and [that he will be on time]]. (Gazdar et al. 1985)
- b. \* You can depend on [that my assistant will be on time] [and [ his discretion]].

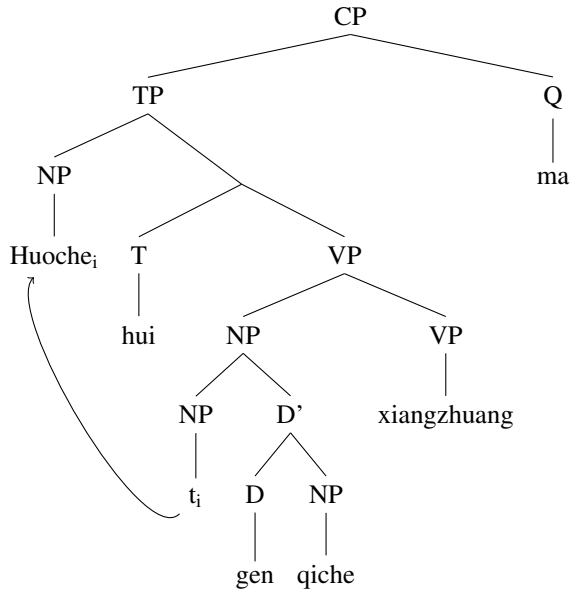
Zhang proposes that when the first conjunct transfers its categorial features to the coordinator, the first conjunct will not be able to move assuming that movement is triggered by feature checking. So, *and* always lacks features in English and always gets its features from the first conjunct. Note that Zhang's analysis stipulates that the second conjunct can never be extracted. The second conjunct should have features and should be available for extraction.

Turning to the Chinese case, Zhang argues that coordination with *he/gen* coordinators allows the first conjunct to move. Consider the examples below, where *hui* 'might' and *yinggai* 'should' are raising verbs. In (48a), it is claimed that *huoche* is base generated in the coordinate *huoche gen qiche*, and has raised to spec-TP.

- (48) Zhang (2010b, 227, (85))
- a. Huoche<sub>i</sub> hui [ <sub>i</sub> gen qiche] xiangzhuang ma?  
 train<sub>i</sub> might [ <sub>i</sub> and bus] collide Q  
 'Might the train collide with the bus?'
- b. Wo caixiang, Baoyu<sub>i</sub> yinggai [ <sub>i</sub> gen Daiyu] xia-zhe qi ne.  
 I guess Baoyu<sub>i</sub> should [ <sub>i</sub> and Daiyu] play-PRG chess PRT  
 'I guess, Baoyu should be playing a chess with Daiyu (now).'

Zhang argues that the first conjunct is allowed to move because the coordinator *gen* possesses categorial features. I show Zhang's movement analysis below:

(49)



Zhang points out that the whole coordinate can also be raised, and in this case no violation of the CC occurs.

(50) (Zhang 2010b, 227, (86))

- a. [Huoche gen qiche]<sub>i</sub> hui t<sub>i</sub> xiangzhuang ma?  
 train and bus might t<sub>i</sub> collide Q  
 ‘Might the train collide with the bus?’
- b. Wo caixiang, [Baoyu gen Daiyu]<sub>i</sub> yinggai t<sub>i</sub> xia-zhe qi ne.  
 I guess Baoyu and Daiyu should t<sub>i</sub> play-PRG chess PRT  
 ‘I guess, Baoyu should be playing a chess with Daiyu in the yard now.’

Adverbs may intervene between the first conjunct and the rest of coordination in *he/gen* coordinates, as in (51b). Zhang argues that this also shows that the CC may be violated.

(51) (Zhang 2010b, 228, (89))

- a. [Baoyu he Daiyu] yiqian jie-guo hun.  
 Baoyu and Daiyu past connect-exp marriage  
 ‘Baoyu and Daiyu married before.’
- b. Baoyu<sub>i</sub> yiqian [ \_<sub>i</sub> he Daiyu] jie-guo hun.  
 Baoyu<sub>i</sub> past [ \_<sub>i</sub> and Daiyu] connect-exp marriage  
 ‘Baoyu and Daiyu married before.’

Zhang shows that the movement and intervention as shown above are only possible when *he/gen* coordinate has a distributive reading. Movement of the first conjunct is ungrammatical with elements that necessitate a distributive reading such as ‘respectively’ (52a). Only raising of the whole coordinate is possible.

(52) (Zhang 2010b, 228, (87))

- a. \*[Lao Li]<sub>i</sub> hui [ <sub>i</sub> gen Lao Wang] fenbie qu-le Shanghai ma?  
[Lao Li]<sub>i</sub> will [ <sub>i</sub> and Lao Wang] respectively go-PRF Shanghai Q
- b. [Lao Li gen Lao Wang] hui *t<sub>i</sub>* fenbie qu-le Shanghai ma?  
[Lao Li and Lao Wang] will *t<sub>i</sub>* respectively go-PRF Shanghai Q  
'Might Lao Li and Lao Wang have gone to Shanghai respectively?'

In addition, coordination with *ji* which Zhang claims is a strictly distributive coordinator does not tolerate intervention. In (53a), the adverbial *zai Riben* 'at Japan' which intervenes between the initial conjunct and *ji qi furen* 'and his wife' makes the sentence ungrammatical.

(53) (Zhang 2010a, 229, (93))

- a. \*[Shizhang] zai Riben [ji qi furen] canguan-le yi ge youeryuan.  
Mayor at Japan and his wife visit-prf one clf kindergarten
- b. [Shizhang ji qi furen] zai Riben canguan-le yi ge youeryuan.  
Mayor and his wife at Japan visit-prf one clf kindergarten  
'The mayor and his wife visited a kindergarten in Japan.'

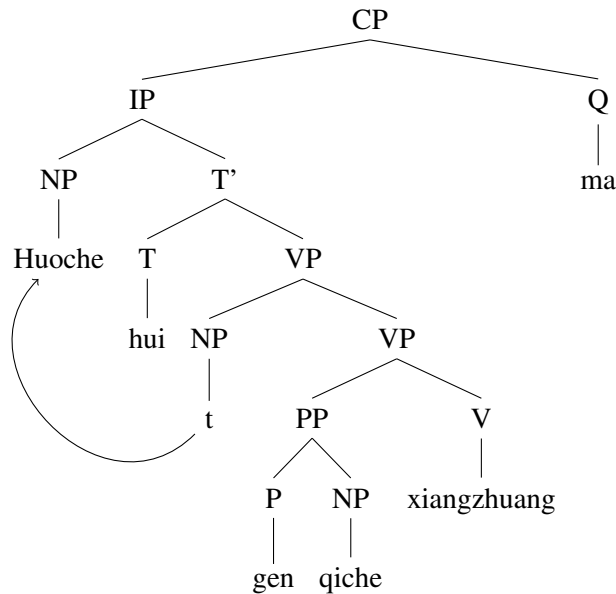
Thus the facts presented above are claimed to show that coordination can allow extraction of the first conjunct in specific contexts. Zhang argues that these contexts are when the coordinator possess categorial features and when the interpretation of coordination is non-distributive. She calls these constructions *comitative coordinates*, following McNally (1993).

I argue that what Zhang characterizes as a comitative coordinate is in fact a comitative. *Gen* is ambiguous between a coordinator and a comitative marker. When *gen* occurs as a true coordinator, extraction is impossible. When it occurs as a comitative marker, NP1 behaves independently of NP2.

First, Zhang's analysis misses the distinction in interpretation between sentences like (48) and (50a) because both of them have the same underlying structure in her analysis. If both sentences have *huoche* and *qiche* base generated in a coordinate complex, then the sentences should not be different in interpretation. However, these two sentences *are* different in information structure. As I have pointed out before, following Gleitman et al. (1996), in (48a) *huoche* is a Figure and *qiche* is a Ground, but in (50a) it is not clear which one is a Figure and which one is a Ground. At least Zhang's analysis predicts that both sentences should receive the same information structure.

In (48a), *gen qiche* holds a thematic relation to the verb *xiangzhuang* 'collide' because it is obligatory. Thus, it must be a complement of the verb 'collide', as I show below. *Huoche* can move with no restrictions because it is not a conjunct.

(54)



To further support my argument that *he/gen* NP2 is a comitative phrase (PP), I checked whether the phrase can iterate. The prediction is that if it is a comitative, then iteration is not possible or is possible but with change of meaning (McNally 1993; Zhang 2010a). The first possibility is borne out, as shown below. Iteration of the PP with the verb ‘collide’ is not possible. This is intuitive if we know that the PP is an argument.

- (55) \*Huoche hui gen gongjiaoche gen qiche xiangzhuang ma?  
 train might and bus with car collide Q  
 The intended meaning: ‘\*The train might (have) collided with a bus with a car’

However, a speaker reports that when the iterating marker is *he*, the sentence is grammatical. In (56), *gongjiaoche he qiche* ‘bus and car’ forms a subgroup, so the meaning is: a train collided with [a bus and a car], so here NP2 is a coordinate that contains two nominals. It appears that *he* here functions as a true coordinator while *gen* is a comitative marker.

- (56) Huoche hui gen gongjiaoche he qiche xiangzhuang ma?  
 train might and bus and car collide Q  
 ‘A train collided with [a bus and a car].’

Therefore, the inability of *gen* NP to iterate shows that it is a comitative. In such cases, the NPs involved are not part of a complex NP and the structure is distinct from the coordinate structure.

In addition, if *he/gen* constructions are coordinates, the whole coordinate complex should be allowed to move to spec-TP in raising constructions. In fact, an NP complex that involves two occurrences of *gen* can move in a raising construction, but the interpretation shows that when this happens the nominals act more like conjuncts. A speaker reports that ‘car’, ‘train’ and ‘bus’ are necessarily moving in (57), while in (56), ‘car’ and ‘train’ can be stationary. This



contrast indicates that in (57) the nominals have the same thematic role, which is a property of coordination.

- (57) [Huoche gen qiche gen gongjiaoche] hui xiangzhuang?  
train and car and bus might collide  
'a train, a car, and a bus might collide.'

In addition, Zhang's claim that extraction from *he/gen* constructions is possible only when it has non-distributive reading is stipulative. In my analysis, this fact follows because comitatives do not allow distributive reading (McNally 1993; Dalrymple et al. 1998). In addition, the fact the *he/gen* constructions can be interrupted as in (52) follows if these are actually comitatives in which NP1 is structurally independent of NP2.

Thus Zhang's arguments in fact show that *he/gen* can occur as coordinators or as comitative markers. When they are coordinators, the coordinate can be compatible with distributive adverbs such as 'respectively' and the coordination cannot be interrupted. When they occur as comitative markers, interruption of NP1 and *he/gen* NP2 as well as movement of NP1 come at no cost because NP1 and NP2 do not form a complex NP. I have shown that comitatives have structures that are different from coordinate structure; a comitative does not involve a complex NP, thus extraction of NP1 should be free. Therefore, Zhang's distinction between initial and non-initial conjuncts in extraction is inadequate. No conjunct may be extracted in true coordination.

## 5 Conclusion

In this paper, I replied to the claim that the Conjunct Constraint may be violated in so-called *comitative coordinates*. First, I defended the analysis that the CC is an inviolable constraint on pronunciation. Conjuncts must be pronounced. Then, I teased apart comitatives from coordinates. I have shown that coordinates and comitatives differ semantically and syntactically, and proposed that comitatives can have two structures. Neither of these structures involves a complex nominal containing NP1 and NP2, thus extraction of NP1 is irrelevant to the CC. Then, I considered Zhang's (2010b) claim the the initial conjunct may be extracted in Chinese *he/gen* coordinates. I showed that the facts presented show that *he/gen* can occur as coordinators or as comitative markers. In the latter case, extraction comes at no cost because NP1 is structurally independent of NP2. Therefore, Zhang's claim that the CC can be violated cannot be right.

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