

Topic-comment and the Chinese Existential Construction

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0. Introduction

This paper examines the Chinese Existential Construction (EC) with Coda(s) (Locative)-V-NP-XP, as in (1). A Coda is defined as any constituent to the right of the post-verbal NP that is not part of it (Keenan 1987). The underlined phrase in (1) is the NP being asserted, and the bold face phrase is the Coda.¹

- (1) (zhuo-shang) you yi-ben shu **hen youqu**
 table-up have one-CL book very interesting
 “On the table there is a book, which is very interesting.”

In section 1, I point out that Coda as an adjunct and Coda as an NP analyses are not possible for the Chinese EC, and that a V-complement analysis is more ideal. In section 2, three properties are discussed to clarify what the Chinese EC with Coda(s) is. First, the post-verbal NP and the Coda form a constituent, which serves as a complement of the existential verb (section 2.1). Second, the Coda must be predicative when the post-verbal NP is understood as its subject (section 2.2). Third, the EC with Coda(s) show movement effects (section 2.3). The three properties point to a solution, a topic-comment analysis, proposed in section 3. Section 4 uses the proposed structure to account for the absence and presence of Coda restriction in Chinese and English. That is, Chinese allows both I(ndividual)-level and S(tage)-level Coda (in the sense of Carlson 1977) while

¹ The abbreviation in this paper is as follows: CL= classifier, PFV=perfective aspect, EXP= experience aspect, PROG=progressive aspect.

English only allows S-level Coda. Section 5 is the impliction and conclusion of the paper.

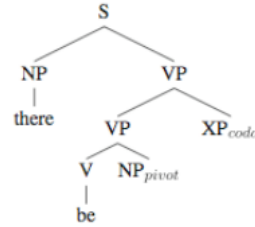
1. The structure of the EC with Coda

1.1. Coda as an adjunct

McNally (1992) argued for the Coda as an adjunct analysis (adjunct analysis for short), such as (2).

(2) a. There was a [NP chicken] [AP cooked]

b.



Adjunct analysis has also been proposed in the Chinese literature (Huang 1987, Lin & Fang 2008.) Huang argued for an adjunct analysis for three types of Chinese EC² because 1) the verbs of these three types ECs generally subcategorize an NP, not a clause, and 2) Codas are optional in EC, as in (3).

- (3) a. fasheng-le yi-jiang xiongshaan
 here happen-ASP one-CL murder case
 “A murder case happens here.”
 b. chang-shang tang-zhe bingren
 bed-on lie-PROG patient
 “On the bed lies/lie a patient/patients.”
 c. wo jiao-guo yisheng
 I teach-EXP doctor
 “I taught doctors before.”

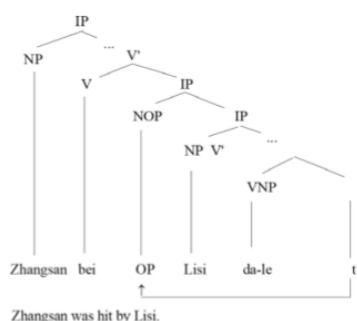
Lin and Fang (2008) further argued that the *you*-type existential (1) (fn. 2) also has an adjunct structure because the Coda exhibits CED. In particular, they showed that the *you*-type EC cannot be the complement of the passive verb *bei* in the Mandarin passive construction.

² Huang (1987) identified four types of ECs in Chinese. These are: (i) sentences with the existential verb *you* ‘have’ as in (1), (ii) those with a verb of appearance or disappearance like *lai* ‘come’, *fasheng* ‘happen’, *si* ‘die’, and *pao* ‘escape’ as in (3a), (iii) those with a locative verb like *zuo* ‘sit’, *tang* ‘lie’, *fang* ‘put’ as in (3b), and (iv) those with a verb expressing the existence of an event or experience and suffixed with the experiential morpheme *-guo* or the perfective morpheme *-le* as in (3c). According to Huang, type (ii)(iii) (iv) has an adjunct structure; type (i) has a small clause structure. In this paper, I did not discuss type (iv) because to my knowledge there is no other language that has this type of EC.

- (4) *[na ben shu]_i bei you san-ge ren mai t_i le.
 That CL book BEI have three CL people buy LE
 “That book was bought by three people.”

Based on Huang's (1999) analysis that Mandarin passive sentences involve A'-movement of a null operator, as in (5), Lin and Fang argued that the ungrammaticality of (4) is due to the fact that the null operator, which is now part of the Coda in the adjunct, cannot be moved, otherwise an adjunct island violation.

(5)



(From Huang 1999: 45)

However, an adjunct analysis cannot be correct. First, the optionality of the Coda is not a valid argument. There are cases where Codas cannot be omitted (Zhang 2008). (6) is semantically weird since *renqun* “crowd” implies more than one person, and a book usually has more than one page. Something must be said after the NP to provide subsequent descriptions/information.

- (6) a. renqun dangzhong you yi-ge ren ??(shi mingxing)
 crowd among have one-CL person COP movie star
 “There is a person (who is a movie star) in the crowd.”
 b. zhe-ben shu you yi ye ??(bujian-le)
 this-CL book have one page missing PFV
 “There is a page (missing) in this book.”

Second, elements in the Coda can be extracted, showing that no (adjunct) island effect is induced (contra Lin & Fang 2008).

- (7) a. [zhe-zhong chou-tofu]_i, you yi-ge laowai hen ai chi t_i
 this-CL stinking tofu have one-CL foreigner very love eat
 “This kind of stinking tofu_i, there is a foreigner, who likes to eat (it_i).”
 b. [zhe-shou quzi]_i, you yi-ge xuesheng hen hui tan t_i

this-CL song have one-CL student very able play
 “This song_i, there is a student, who is able to play (it_i) very well.”

The reason why (4) is ungrammatical is simply that *you* is a verb, and *you*+NP as a verb phrase cannot occur in an argument position, such as the object position of a transitive verb (8a), after *ba* in *ba*-construction (8b), and after *bei* in passive construction (8c).

- (8) a. ta xihuan [(**you*) yi-ge ren].
 he like have one-CL person
 “He likes a student.”
 b. Lisi ba [(**you*) yi-ge huaidan] sha-le.
 Lisi BA have one-CL scoundrel kill-PFV
 “Lisi killed a scoundrel.”
 c. tade mimi bei [(**you*) liang-ge ren] faxian le
 his secret BEI have two-CL person discover-PFV
 “His secret is discovered by two people.”

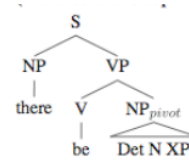
Third, binding tests show that the post-verbal NP must locally bind the Coda. According to Binding Principle A, the reflexive *taziji* needs a local antecedent. If the Coda were an adjunct, the matrix subject Zhangsan’s group or the possessor Zhangsan would bind *taziji* ‘itself/himself’, and serve as its antecedent. However, this is contra to the fact. *Taziji* can only get reference from *yi-ge xuesheng* ‘a student’³.

- (9) [Zhangsan_i de shetuan-li]_j you yi-ge xuesheng_k hen ai piping taziji_{*i/*j/k}
 Zhangsan DE group-in have one-CL student very love criticize himself
 “In [Zhangsan’s_i group]_j there is a student_k who loves to criticize itself_{*i}/himself_{*i/k}.”

1.2. Coda as a part of NP

Since Barwise and Copper (1981), many have argued that Coda is an NP-internal modifier.

- (10) a. There was a [_{NP} chicken cooked] b.



NP-internal modifier analysis is difficult to implement for the Chinese EC because Chinese nominal phrases are head-final, that is, the modifier always goes before the head

³ I assume with (Lin 2001, 2008) that the locative expression is a subject originated in Spec vP.

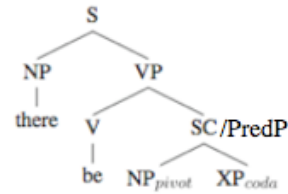
noun, as in (11). More ad hoc stipulations on word order have to be made for this analysis to work in Chinese (Huang 1987)⁴.

- (11) a. wo xiang chi [haochi] de dangao
 I want eat delicious DE cake
 “I want to eat [delicious] cake.”
 b. ta kanjian na ge [zuotian ma ta] de ren
 he see that CL yesterday scold him DE person
 “He saw the person [who scolded him] yesterday.”

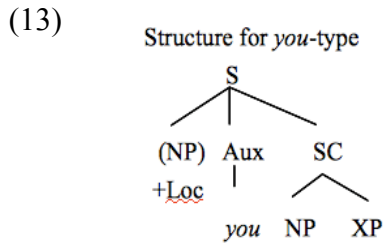
1.3. NP-XP as a V-complement

The main line of this analysis is the small clause (SC) analysis (Gu 1991, Stowell 1978, Chomsky 1981, Safir 1981, a.o.). The post-copular NP and the Coda hold a predicational relationship with the analogy to the copular sentences, as in (12).

- (12) a. There was [SC/PredP [NP a chicken] [AP cooked]] b.



Huang (1987) also suggests that the *you*-type EC has a SC (fn. 2). Following Wang’s analysis (1965) that *you* is in Aux and that Aux can subcategorize for all categories, Huang (1987) suggests that *you* can subcategorize a clause, another instance of XP.



The SC analysis naturally captures the relationship between the post-verbal NP and the Coda, that is, the former must dominate the latter as the binding example (9) shows. Alternatively, an E-type pronoun analysis seems possible for (9), repeated in (14), where the optional pronoun is referential to the post-verbal NP, and no c-command relation

⁴ Zhang (2008) claimed that the Chinese EC with Coda(s) is an internally headed relative clause, and thus a DP. See Zhang (2008) for details. See Liu (2010 ms.) for a critical review.

between the antecedent and the pronoun is needed. The reference of the reflexive *taziji* ‘himself’ is satisfied by the pronoun *ta* ‘he’.

- (14) Zhangsan de shetuan-li you yi-ge xuesheng_i (ta_i) **hen ai piping taziji**_i
 Zhangsan DE group-in have one-CL student he very love criticize himself
 “In Zhangsan’s group there is a student_i who loves to criticize himself_i.”

However, (15) shows that there must be a dominant relationship between the matrix clause and the subordinate clause. Otherwise, the NPI *renhe* ‘any’ in the Coda would not be licensed by the negation quantifier *mei* ‘not’ in the matrix clause. Furthermore, no E-type pronoun is allowed in (15). McCawley (1989) suggested that no pronoun can precede the Coda when the matrix verb is negated since the pronoun will be outside the scope of the quantifier. The necessary absence of the pronoun indicates that Coda is a complement of the matrix clause, and that the legal pronoun in (14) should not be analyzed as an E-type pronoun.

- (15) *mei* you yi-ge laoshi (***ta_i**) **hui ban wo (renhe) mang**
 not have one-CL teacher will help me any favor
 “There is no teacher, who will do me any favor.”

In section 1, I argue that the V-complement analysis is a more ideal analysis for the Chinese EC with Coda(s) because it correctly captures the tight relationship between the matrix clause and the Coda.

2. Post-verbal NP and the Coda

In this section, I show three properties of the Chinese EC with Coda(s). First, the post-verbal NP and the Coda form a constituent according to the coordination and the VP-ellipsis tests. Second, the Coda is predicative when the post-verbal NP is understood as its subject. Finally, Chinese EC with Coda(s) show movement effects. The discussions point to the direction that Chinese EC with Coda(s) is functionally a topic-comment structure.

2.1. Constituency test

If the post-verbal NP and the Coda form a constituent, they should be able to coordinate. (16) shows that coordination is possible for the EC with Coda(s).

- (16) a. you yi-ge nusheng **zai saodi**, yi-ge nansheng **zai ca chuanguhu**
 have one-CL girl PROG sweep-floor one-CL boy PROG wipe window
 “There is a girl sweeping the floor, a boy wiping the window.”
 b. gongsi xin lai-le yi-ge mishu **hen qinkuai**, yi-ge qingjieyuan **hen lan**
 company new come-PFV one-CL secretary very diligent one-CL janitor very lazy

“In the company newly comes a secretary who is very diligent, a janitor who is very lazy”

A constituent can be pronominalized or elided when it is repeated in the second conjunct. The so-called null object constructions (NOC) (Hoji 1998) can be used to test the EC with Coda(s)⁵. If the Coda were not an internal argument of the existential verb (i.e. the coda is an adjunct), then one would expect that a different Coda could surface in the second conjunct in the NOCs. However, (17) show that a different coda in the second conjunct is illicit, suggesting that the post-verbal NP and the Coda must be a constituent.

- (17) *jiaoshi-li you yi-ge shizhong hen da, litang-li ye you (*hen xiao)*
 classroom-in have one-CL clock very big auditorium-in also have very small
 “There is a clock which is big in the classroom, and also (one which is big) in the auditorium.”
 “*There is a clock which is big in the classroom, and also (one) which is small in the auditorium.”

2.2 The coda is predicative

The coda must be predicative when the post-verbal NP is understood as the subject of the Coda. In (18), the post-verbal NP *yi-zhi gou* ‘one-CL dog’, not the matrix clause subject *wo jia* ‘my house’, is what the Adjectival phrase (AP) *hen da* ‘very big’ is predicated on.

- (18) *wo jia you yi-zhi gou hen da*
 my house have one-CL dog very big
 “In my house there is a dog, which is very big.”

In Chinese, the morpheme *hen* ‘very’ is regarded as a predicative marker, which indicates the predicative status of an AP⁶. The degree meaning *hen* ‘very’ is absent

⁵ NOC allows a different adverbial in the second conjunct like *do so* in English. For details of NOC, see Hoji (1998) and Xu (2003).

(i) John carefully brushed his teeth, and Paul did so sloppily.

(ii) *Zhangsan zixide shua-le ya, Lisi ye suibiande shua-le*
 Zhangsan carefully brush-PFV teeth Lisi also sloppily brush-PFV
 “Zhangsan carefully brushed his teeth, and Lisi also sloppily brushed (it).”

⁶ Huang (2006) argued that adjectives in Mandarin denote individuals (<e>) and hence require *hen* as a type-lifter to be used as predicates. Liu (2009) observed that *hen* is not required with adjectives in negation, polar questions, contrastive focus, and certain kinds of embedded clauses. He adopted the view that positive semantic is provided by a null morpheme or type-shifter POS, and argues that Mandarin POS has a null version and its overt counterpart *hen*. *Hen* is required

unless stress is put on the morpheme.

- (19) a. zhe-ge nuhai *(hen) piaoliang
 this-CL girl very beautiful
 “This girl is (very) beautiful.”
 b. wo *(hen) e
 I very hungry
 “I am (very) hungry.”

As observed in Zhang (2008), the AP Coda must have *hen* 'very', while the prenominal modifier counterpart does not necessarily require it.

- (20) a. wode ban-shang you yi-ge nuhai *(hen) keai
 my class-in have one-CL girl very cute
 “In my class there is a girl, who is very cute.”
 b. wode ban-shang you yi-ge (hen) keai de nuhai
 my class-in have one-CL girl very cute DE girl
 “There is a (very) cute girl in my class.”

Furthermore, the AP Coda can only be predicative adjectives, but the prenominal modifier does not have to be. For example, *gongtong* 'common' are non-predicative adjectives, and they cannot appear as a Coda in EC.

- (21) a. zhe liang-ge buluo you yi-ge gongtong de yuyan
 this two-CL tribe have one-CL common DE language
 “There is a common language between the two tribes.”
 b. *zhe liang-ge buluo you yi-ge yuyan gongtong
 this two-CL tribe have one-CL language common

2.3. The movment effects

The EC with Coda(s) show movment effects in that 1) it obeys Binding Principle; 2) idioms can be separated; 3) island effects are observed.

According to Binding Principle A, reflexives must be locally bound. In the EC examples in (22a), *taziji* 'himself' can be successfully bound by *Zhangsan* by reconstructing *yi-ben taziji de shu* ‘a book of himself’s’ back to the object position of the

whenever there is no predicate-accessible operator available to license covert POS. Finally, Gu (2008) analyzed the phenomenon not in terms of special properties of adjectival predication in Mandarin but rather as the manifestation of a more general phenomenon of tense-licensing. Specifically, Mandarin Tense has a [telicity] feature that must be checked by any of a variety of functional morphemes, and when the predicate is a gradable adjective, *hen* is one way of doing so.

Coda since *kan* ‘read’ is a two-place verb that takes an external and an internal argument. On the other hand, *shui-zhao* ‘fall-asleep’ in (22b) is a one-place verb which does not have an extra argument position for *yi-ben taziji de shu* ‘a book of himself’s’ to reconstruct back to. *Taziji* ‘himself’ cannot be properly bound, and hence (22b) is ungrammatical. (See the *cf.* for the regular topic construction.)

- (22) a. you [*yi-ben taziji_i de shu*]_j **Zhangsan_i bu xiang kan t_j**
 have one-CL himself DE book Zhangsan not want read
 Lit: “There is [a book of himself_i’s]_j Zhangsan_i does not want to read t_j”
 “There is a book Zhangsan_i wrote himself_i, which he_i does not want to read.”
cf. [*Zhe-ben taziji_i de shu*]_j Zhangsan_i bu xiang kan t_j
 this-CL himself DE book Zhangsan not want read
 “The book of himself_i, Zhangsan_i does not want to read t_j.”
- b. *you [*yi-ben taziji_i de shu*] **Zhangsan_i dou shui-zhao le.**
 Have one-CL himself DE book Zhangsan even fall-asleep LE
 Lit: “There is a book of himself_i’s which even Zhangsan_i fell asleep.”
 “There is a book Zhangsan_i wrote himself_i, which even he_i fell asleep.”
- cf.* * [*Zhe-ben taziji_i de shu*]_j Zhangsan_i dou shui-zhao le.
 this-CL himself DE book Zhangsan even fall-asleep LE
 “The book of himself_i, Zhangsan_i fell asleep.”

The same point can be illustrated by (23). If we reconstruct “Zhangsan’s picture” back to the object position of the verb *kan* ‘see’, Zhangsan will be bound by the pronoun *ta* ‘he’, resulting in Principle C violation.

- (23) *you yi-zhang [*Zhangsan_i de zhaopian*]_j **ta_i bu xiang kan t_j**
 have one-CL Zhangsan DE picture he not want see
 “There is [a picture of Zhangsan’s_i]_j that he_i does not want to see t_j”
- cf.* * [*zhe-zhang Zhangsan_i de zhaopian*]_j ta_i bu xiang kan t_j
 this-CL Zhangsan DE picture he not want see
 “[The picture of Zhangsan’s_i]_j, he_i does not want to see t_j”

Reconstruction effect can also be observed from idiom expressions. It is generally accepted that an idiom is one unit in the lexicon. If some part of the idiom is separated from the rest of it, movement must have taken place. In (24), the two morphemes *kai dao* ‘open knife’, which means operating on (someone), are not adjacent. The fact that we can interpret them as idioms indicates that they are together at one point in the derivation, and movement takes place later.

- (24) (*jintian zaoshang*) lai-le *yi-ge dao_i* **wo bu gan kai t_i**
 today morning come-PFV one-CL knife I not dare open

Lit: “This morning (here) comes a knife that I do not dare to open.”

“This morning (here) comes a patient that I do not dare to operate on.”

cf. **zhe-ge dao**_i, wo bu gan **kai** t_i.
this-CL knife I not dare open

Lit: “This knife, I dare not open (it).”

“I do not dare to operate on this patient.”

Extraction out of an island is generally not possible (Ross 1967). The only way to rescue island effect is to have a resumptive pronoun. The ECs with complex NP (25a) and adjunct (25b) are only acceptable when a resumptive pronoun is in the trace, showing that movement does take place⁷.

⁷ It is observed that island effects in EC can be nullified just as in the regular topicalization sentences when a given island occur in a (pre)-subject position. The similarity further strengthens our analysis that the post-verbal NP and the coda hold a topic-comment relationship.

(i) **(Subject Condition)**

you yi-ge xuesheng_i [[e_i zhaogu zhe-tiao gou] zui heshi].
have this-CL student take-care this-CL dog most appropriate
‘There is a student_i, for [him_i] to take care of the child is the most appropriate.’

cf. zhe-ge xuesheng_i, [[e_i zhaogu zhe-tiao gou] zui heshi].
this-CL student take-care this-CL dog most appropriate
‘This student_i, for [him_i] to take care of the dog is the most appropriate.’

(ii) **(Left Branch Condition)**

lai-le yi-ge xin tongshi [[e_i mama] hen heshan].
come-ASP one-CL new colleague mother very nice
‘(Here) comes a new colleague, whose mother is very nice.’

cf. Zhangsan_i, [[e_i mama] hen heshan]
Zhangsan mother very nice
‘Zhangsan_i, [his_i] mother is nice.’

(iii) **(Adjunct Condition)**

zhiye jieshaosuo waimian zhan-zhe yi-ge ren_i, yinwei e_i dezui-le Zhangsan,
occupation center outside stand-PROG one-CL person because offend-PFV Zhangsan
(suoyi) dui-le gongzuo.
so lose-PFV job
‘Outside the unemployment office stands a person_i, because [he_i] offended Zhangsan, he lost his job.’

cf. zhe-ge ren_i, yinwei e_i dezui-le Zhangsan, (suoyi) dui-le gongzuo.
this-CL person because offend-PFV Zhangsan so lose-PFV job
‘(As for) this person_i, because [he_i] offended Zhangsan, he lost his job.’

Huang (1984a and later works) shows that the topicalized sentences can be explained by Generalized Control Rule (GCR), an empty pronoun is coindexed with the closet potential

- (25) a. you [yi-ge xuesheng]_i [wo hen xihuan [[*(ta)_i changge de] shengyin]] (CNPC)
 have one-CL student I very like he sing DE voice
 “There is a student who I really like the voice with which *(he) sings.”
 cf. [zhe-ge xuesheng]_i wo hen xihuan [[*(ta)_i changge de] shengyin]
 this-CL student I very like he sing DE voice
 “(As for) this student, I really like the voice with which *(he) sings.”
 b. you [yi-ge laoshi]_i xiaozhang [yinwei *(ta)_i mei lai] hen shengqi (AC)
 have one-CL teacher principal because he not come very angry
 “There is a teacher who made the principal very angry because *(he) did not come.”
 cf. [zhe-ge laoshi]_i xiaozhang [yinwei *(ta)_i mei lai] hen shengqi
 this-CL teacher principal because he not come very angry
 “(As for) this teacher, the principal is very angry because *(he) did not come.”

3. The analysis

From the above discussions, we know that (i) the post-verbal NP and the Coda form a constituent, which serves as a complement of the existential verb (section 2.1); (ii) the Coda is predicative when the post-verbal NP serves as its subject (section 2.2); (iii) the EC with Coda(s) show movement effects (section 2.3). These properties point to the direction that the post-verbal NP+Coda has a topic-comment structure, which is subject to movement (Shi 1992, 2000).

Claiming the post-verbal NP is a topic seems to be contradictory to the general observation that a topic has to be definite or generic, since EC generally asserts an indefinite NP (i.e. the Definiteness Effect). However, (26) cited from Shi (2000) shows that the speaker or writer introduces the NP with the *you*-type EC, and the entity can then be discussed in the following comment as given information. This is indeed the basic intuition behind the Chinese EC with Coda(s). (26) fulfills the communicative function of a topic-comment construction in the sense that the first part of the sentence introduces the main issue and the second part elaborates on it.

- (26) you yi-jian shi, wo xiang gen ni shuo (Shi 2000)
 have one-CL matter I want with you say
 “There is one thing, which I want to talk to you about.”

Following Shi (1992), I argue that Chinese EC with Coda(s) is a topic chain⁸ -- the

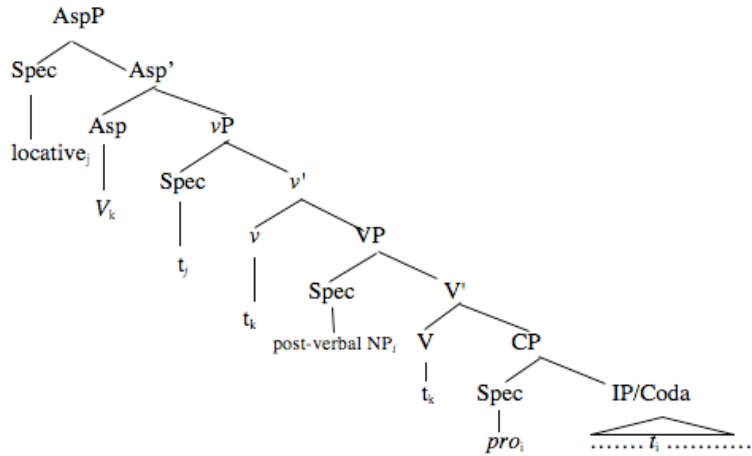
antecedent.

The EC examples can be explained in the same manner. What matters seems to be the nature of the empty category, specifically, whether it is a trace or pro (Huang et al. 2009).

⁸ In Chinese the domain of the topic in the first sentence can be extended to cover the subsequent sentences, so that the topic can take the subsequent sentences as comments. Such a string is named a *topic chain*, and such a topic is called a *shared topic*.

existential verb first introduces the new entity to the discourse, and then the post-verbal NP serves as a shared topic for the Coda(s).

(27)



I assume that the functional projection AspP (aspectual phrase) occurs in Chinese (Cheng 1991, Shen 2001, and Lin 2004). Following Kratzer (1996) and Lin (2004), I assume V incorporates to *v* for the purpose of event identification⁹. After V incorporates to the light verb *v*, all arguments are tied up to the same event structure. The *v*P at this point denotes a property of events, and not yet a truth-value, which is the canonical denotation for a

- (i) *zhe-zhi mao*_i, *e_i* mao hen chang, *e_i* hen keai, dajia dou xihuan *e_i*.
 This-CL cat hair very long very cute everyone all like
 “This cat, (its) hair is very long, (it) is very cute, (and) everyone likes (it).”

Shi (1992) claimed the notion of the topic chain can be extended to include chains with an *in-situ* topic, and that the extended notion of the topic chain allows an indefinite NP to be considered as a shared topic since being overtly topicalized to the sentence-initial position is no longer a necessary condition for being a shared topic.

- (2) ta shou-li qiang-zhe *yi-zhi gou*_i, *e_i* you shou you xiao, *e_i* quan-shen dou shitou le
 he hand-in hold-PROG one-CL dog also thin also small whole-body all soak LE
 “He is holding (the rein of) a dog, (it) is thin and small, (its) whole body is soaking wet.”

⁹ Kratzer (1996) suggests that the external argument of a sentence is not selected by the verb, but a functional category Voice. To make sure that the argument selected by V and the argument selected by Voice fall within the same event, the head V has to move to Voice to substantiate event identification. Lin (2005) followed this proposal and assumed that V-to-*v* movement is triggered by the same event identification.

sentence within an extensional semantics. That is, the event argument is still open and needs to be closed off. One way to close off the event argument is to build existential quantification into the semantics of some higher inflectional head (in the spirit of Higginbotham 1985). In this case, this inflectional head is Aspect. When *v*-to-Asp movement takes place in LF presumably for checking the aspectual feature, the event is spatio-temporally defined and the post-verbal NP gets existential quantification from the V in Asp. The post-verbal NP being the shared topic and base-generated in Spec VP binds the *pro* in the argument position of the lower IP and assigns reference to it. The *pro* then moved up to the lower Spec CP, a topic position according to Shi (1992) and Kuroda (1992). A topic-comment relation is thus established directly in the lower CP level between the *pro* in the Spec CP and the Coda, and indirectly in the higher level between the post-verbal NP and the Coda through co-indexation. The former direct topic-comment relation in the lower CP level is the usual topicalization mechanism that occurs in English and many other languages. The latter indirect topic-comment relation is a property that only a topic-prominent language like Chinese has.

This proposal can explain the properties listed in section 2. The constituency facts are straightforwardly explained by the proposed structure.

- (28) [_{AspP} you [_{VP} yi-ge nusheng zai saodi], [_{VP} yi-ge nansheng zai ca chuanguhu]]
 have one-CL girl PROG sweep-floor one-CL boy PROG wipe window
 “There is a girl sweeping the floor, a boy wiping the window.” (cf. 16a)
- (29) [_{AspP} jiaoshi-li you [_{VP} [_{VP} yi-ge shizhong hen da]]], [_{AspP} litang-li ye you [_{VP} [_{VP} yi-ge shizhong hen da]]]
 classroom-in have one-CL clock very big auditorium-in also have
 “There is a clock which is big in the classroom, and also (one which is big) in the auditorium.” (cf. 17)

The predicational relationship between the post-verbal NP and the AP Coda can now be explained by the fact that a *pro*, which is co-indexed with the post-verbal NP, is base-generated in Spec IP.

- (30) a. wode ban-shang you [yi-ge nuhai]_i [_{CP} *pro*_i [_{IP} *t*_i ***(hen) keai**]]
 my class-in have one-CL girl very cute
 “There is a girl who is very cute in my class.” (cf. 20)
- (31) *zhe liang-ge buluo you [yi-ge yuyan]_i [_{CP} *pro*_i [_{IP} *t*_i **gongtong**]]
 this two-CL tribe have one-CL language common
 “There is a common language between the two tribes.” (cf. 21)

The movement effects are also predicted. In the reconstruction example such as (32), the phrase *taziji de shu* ‘a book of himself’s’ gives reference to the *pro*, which is base-generated in the object position of the embedded IP. *Zhangsan*, which is in the subject position of the embedded IP, is the most local antecedent and thus gives reference to

taziji by way of co-indexation. In the island violation example such as (33), the *pro* is base-generated in a complex NP phrase inside the embedded IP. It cannot be moved out to serve as a topic because a complex NP is an island, and hence the ungrammaticality.

- (32) you yi-ben [taziji_i de shu]_j [CP *pro*_j [IP Zhangsan_i bu xiang kang t_j]]
 have one-CL himself DE book Zhangsan not want read
 Lit: “There is a [a book of himself_i’s]_j Zhangsan_i does not want to read t_j”
 “There is a book Zhangsan_i wrote himself_i, which he_i does not want to read.”
- (33) *you [yi-ge xuesheng]_i [CP *pro*_i [IP wo hen xihuan [DP [IP t_i changge de] shengyin]]]
 have one-CL student I very like sing DE voice
 “There is a student, who I really like the voice with which *(he) sings.”

4. English EC vs. Chinese EC

4.1. The Coda Restriction

Since Milsark (1977), it has been observed that the English EC can take S(tage)-level Codas, but never I(ndividual)-level Codas. Chinese, on the other hand, can take both types.

- (34) a. There is a dog **crossing the street**. (S-level)
 b. *There is a dog **very smart in my house**. (I-level)
- (35) a. wo ban-shang you yi-ge nuhai **zhengzai changge** (S-level)
 my class-in have one-CL girl PROG sing
 “In my class there is a girl, who is singing.”
 b. wo ban-shang you yi-ge xuesheng **hen congming** (I-level)
 my class-in have one-CL student very smart
 “In my class there is a student, who is very smart.”

The Coda Restriction on the English EC has been discussed extensively (Milsark 1977, Barwise & Cooper 1981, Williams 1984, McNally 1992, Chierchia 1995, Francez 2007, a.o). For example, Chierchia (1995) argued that I-level predicates have a Gen operator, and that Gen needs two arguments: an NP (or a set of NPs) and a clause. When there is an I-level predicate in the Coda, Gen appears and binds both the I-level Coda and the post-copular NP, which leaves the existential quantifier nothing to bind, a case of vacuous quantification. McNally (1992) and Francez (2007) proposed that the Coda serves to restrict the spatio-temporal parameters of the instantiated referent of the postverbal NP. The I-level predicates are ruled out simply because they lack the ability to define the spatio-temporal restriction of the NP. None of the proposals can be applied to Chinese. In what follows, I will argue that the fact that Chinese does not have the Coda restriction follows from the topic-comment proposal.

4.2. Two types of judgments

Kuroda (1992), following the philosopher Brentano (1924), proposed two types of judgments¹⁰, the categorical judgment and the thetic judgment. The former involves double judgments: the first act is to recognize the subject/topic, and the other act to affirm or deny what is expressed by the predicate/comment about the subject/topic. The latter involves a single judgment: an act that expresses recognition of the existence of a specific entity (or entities) or situation. Kuroda's most compelling argument comes from the distinction of the two Japanese morphemes, the topicalized marker *wa* and the subject marker *ga*.

- (36) a. *neko ga asoko de nemutte iru* (Thetic)
 cat GA there at sleeping is
 “The/A cat is sleeping there.”
 b. *neko wa asoko de nemutte iru* (Categorical)
 cat WA there at sleeping is
 “The cat is sleeping there.”

(36a) is a thetic judgment: it simply reports the perception of a situation (sleeping there) with participants (a/the cat). (36b) is a categorical judgment: it first recognizes the existence of an entity *neko* ‘cat’, and attributes to the cat the property perceived as the event of sleeping there. Notice that the bare noun marked by *wa* cannot be indefinite nonspecific, which follows from the presuppositional nature of the subject/topic. The differences between the two judgments correlate nicely with the differences between S-level and I-level predicates, such that I-level predicates must have strong NPs as the subject, and S-level predicates can have either weak and strong NPs (in the sense of Milsark 1974), as in (37).

- (37) a. The man is sick (S-level; strong NP)
 b. The man is tall (I-level; strong NP)
 c. Sm men are sick. (S-level; weak NP)
 d. *Sm men are tall (I-level; weak NP)

This correlation is expected since I-level predicates which express permanent properties

¹⁰ A *judgment* is defined as follows:

“A judgment is meant to be a cognitive act. It is externalized by a speech act of stating...” A statement, as well as a judgment, a cognitive act externalized by it, is said to be expressed by an utterance of a sentence. An utterance of a sentence is said to represent the intentional object of the cognitive act it expresses.” (Kuroda 1992:20)

must be able to be evaluated in relation to an entity whose existence within the discourse is presupposed. For S-level predicates, which describe transient properties, the existence of the subject is not as relevant since the predications can be understood as event(s).

However, it does not mean that the categorical judgment is equivalent to I-level predicate. (36b), for example, has a S-level predicate. The categorical/thetic distinction is at the macro-level, but the I-level/S-level distinction at the micro-level. While the sentences with the thetic judgment can only have S-level predicates, those with the categorical judgment can have either I-level and S-level predicates. The subject of the categorical judgment has to be definite or generic (i.e. the property of the subject in topic construction), whereas the subject of the thetic judgment does not have to be definite. This is summarized below:

	Thetic judgment	Categorical judgment
Predicate type	S-level	S-level, I-level
Subject	Definite/indefinite	Definite/Generic

Since only S-level Coda is allowed in English EC whether the post-verbal NP is indefinite or definite by exception (e.g. partitive, list reading, etc.), it has been concluded that English EC is thetic (Ladusaw 2000, Basilico 1997, Zucchi 1995, Walker 2009, a.o.). In the next section, I argue that Chinese EC, being a topic-comment construction, is categorical.

4.3. Why I-level Coda in Chinese

The fact that Chinese EC allows I-level Coda seems contradictory first, since on the one hand the I-level Coda requires a strong NP, and on the other hand the ECs generally do not allow strong NPs. However, I will show the current topic-comment analysis can account for the availability of the I-level Coda(s).

In section 3, we suggest that the discourse function of the Chinese EC is to introduce a new entity. This entity then assigns reference to the *pro* in the lower CP and serves as a shared topic for the Coda(s). For example, the sentence *you yi-ge xuesheng hen congming* “have one-CL student very smart” can be interpreted as “there exists a student_i, and this student_i is very smart.”

The topic-comment proposal corresponds to Kuroda’s categorical judgment in that the existence of the entity is recognized first (because the *pro* is the second mention of the post-verbal NP), and the entity is attributed to the property in the comment clause, i.e. the Coda. The referential/presupposed requirement on the subject/topic in the categorical judgment is satisfied by the *pro*, which is referential in nature. The fact that Chinese EC is a topic-comment structure, explains why I-level Coda is available. S-level Coda, which can also be the predicate of the categorical judgment, is available in Chinese as well.

5. Conclusion

In this paper, I argue against the adjunct and NP analyses for the Coda in the Chinese EC. A V-complement analysis is adopted, and functionally it is a topic-comment construction. The proposed analysis has several advantages: (i) it conforms to the intuition that Chinese EC with Coda(s) first asserts the existence of an NP, and then provides subsequent comment on the NP being asserted; (ii) it can capture the predicational relationship between the post-verbal NP and the AP Coda; (iii) it can account for the relevant movement facts. The absence of the Coda restriction in Chinese (S-level vs. I-level) also follows from the proposed topic-comment structure. Instead of beingthetic like English EC, Chinese EC is categorial, which has a lot to do with the fact that Chinese is a topic-prominent language (Tsao 1990). The referential requirement on the topic in the categorial judgment is satisfied by the *pro* in the lower Spec CP, a topic position according to Shi (2000) and Kuroda (1992).

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