Sentence Fragment Ellipsis in Chinese 🗟

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Summary

Understanding what sentence fragments requires a detailed investigation of their properties. Relevant studies have classified fragments into four types according to the use of the copular verb *shi* 'be' with fragments: the occurrence of the sentence-final particle *ne*, syntactic categories allowed, island effects, P-stranding, and connectivity effects. It is shown that the distinction of fragments into different types is not necessary. The wider range of data considered fails to convincingly support the need for distinction, and a unified analysis of all fragments should be pursued. Three logical possibilities for a unified approach to sentence fragments are evaluated: (a) fragment as a result of deleting all but the fragment of a sentence (movement + deletion approach), (b) fragment base-generated as [*pro* + copular verb + fragment], and (c) fragment base-generated as a fragment. The first two options face challenges. The last option, even though seemingly a more adequate analysis for the range of facts, requires connectivity effects to be analyzed in semantic terms.

Keywords: structure and derivation of sentence fragments, fragment types, shi as linking verb versus contrastive focus marker, connectivity effects, base-generated fragments, fragments with clausal structures

Subjects: Syntax

1. Sentence Fragment and Related Ellipsis Constructions

As described in this encyclopedia on nominal ellipsis in Chinese, issues on Chinese ellipsis constructions have centered on their structures and derivations, including whether (a) the missing part is fully represented syntactically, left unpronounced (non-spell out or deletion of the lexical materials) at the phonological form (PF-deletion), or (b) the missing part is basegenerated as it is. For the latter approach, the structure might have different options. One has a full clausal structure, which may have an empty subject and a copular verb 'be'. An option opposite to this is "what we see is what we have." There are no empty or invisible materials. These considerations play important roles in understanding fragments in Chinese. Added to the complication are works like Wei (2013, 2016, 2018), which argue that different fragment types should be recognized, some of which should be analyzed as deletion of lexical materials from a full clausal structure at PF, and others, base-generated as a clausal [pro + 'be' + fragment]. Section 2 briefly presents the support provided for the distinction, and Section 3 reconsiders the criteria proposed for the distinction and demonstrates that enriched sets of data do not endorse the need to make such distinctions. A unified analysis is possible. Section 3.3 evaluates the strengths and weaknesses of each of the logically available options of a unified analysis.

Fragments have been considered in the context of stripping, gapping, and pseudo-gapping (see, e.g., Chao, 1987; Hankamer & Sag, 1976; Johnson, 2019; Lobeck, 1995; Williams, 1977). These constructions are illustrated by the following English examples respectively; the examples are from Johnson (2019), (1–2) on p. 562 and (9) on p. 564.



(1)

John likes seafood and Smith, bread.

Stripping

(2)

John likes seafood a lot, and bread too.

Pseudo-gapping

(3)

John likes seafood and Smith does bread.

These constructions do not have direct counterparts in Chinese. For instance, Tang (2001), Ai (2006, 2014), Paul (1999), and Wei (2008, 2011b, 2017), among others, show that even though gapping in English requires an antecedent in a parallel structure, a clause missing an overt verb is possible without an antecedent in Chinese in some cases. This casts doubt on Chinese having constructions corresponding to gapping in English. It is even harder to construct a Chinese counterpart to pseudo-gapping in English, because Chinese does not have morphemes corresponding to the English auxiliary *do* used in such a construction and other auxiliaries cannot serve the purpose, either. Accordingly, readers will only be referred to the relevant works such as those mentioned earlier for an understanding of the relevant constructions, due to space considerations and the concern about how a more detailed discussion of such constructions can contribute to the literature on ellipsis.

The "stripping" construction is also difficult to identify in Chinese. Nonetheless, as a segue to a more detailed discussion on fragments in Chinese, the brief discussion that follows demonstrates the issues the stripping construction raises in Chinese.

The term *stripping*, created by Hankamer and Sag (1976, p. 409), is "a rule that deletes everything in a clause under identity with corresponding parts of a preceding clause except for one constituent (and sometimes a clause-initial adverb or negative)," illustrated in (4).

(4)

- a. Jane gave presents to John, but not [e] to Geoff. (Lobeck, 1995, p. 27)
- b. Jane loves to study rocks, and [e] geography too.
- c. John studied rocks but not Jane [e].

Lobeck (1995, pp. 27–28) observed that stripping is similar to "ellipsis" in the possibility of its occurring across utterance boundaries. However, it differs from ellipsis in a number of properties, including its failure of occurring in subordinate clauses or relative clauses.¹

(5)

This is the place where we grow flowers.

- a. and sometimes herbs.
- b. *and that is the place where sometimes herbs.

Lobeck suggested that stripping is like "gapping" (cf. Johnson, 2019). In contrast, Merchant (2019) proposed that stripping can be analyzed as fragments, as both are sensitive to island conditions between the antecedent and the "bare argument" (a term used in Reinhart, 1991).

(6)

- a. The man stole the car after midnight, but not the diamonds.
- b. *They caught the man who'd stolen the car after searching for him, but not the diamonds.

However, the issues related to stripping have not gained much attention in Chinese literature. This might be due to the doubt that a true counterpart to English stripping exists in Chinese.

Stripping is a part of a sentence (fragment) that generally contains a connector and an adverb such as *but not . . . and . . . too/as well/also* in English, as in (4); however, Chinese differs in the behavior of adverbs. The relevant adverbs can occur with just noun phrases in English. In contrast, adverbs in Chinese cannot immediately precede and modify noun phrases directly.

Examples (7a-c) are examples of *ye* 'also' and *bu* 'not' being unable to modify noun phrases, and verbal expressions such as *you* 'have' and *shi* 'be' are required as in *mei-you* 'not-have', *hai-you* 'still have', *ye-shi* 'also be', and *bu shi* 'not be'. When *ye* 'also' and *bu* 'not' require a verbal element following them, the combination makes clauses (with null subjects), not just fragments.

(7)

- a. ta xihuan yanjiu shitou, hai you/*ye dili. he like study rock still have/also geography '(Lit.) He loves to study rocks, and [e] geography too.'
- b. Lisi yanjiu shitou, bu *(shi) Mali.
 Lisi study rocks, not be Mary '(Lit.) Lisi studied rocks but not Mary [e].'
- c. ta xihuan yanjiu shitou, Lisi ye *(shi). he like study rock Lisi also be '(Lit.) He loves to study rock and Lisi [e] too.'

In the preceding examples, verbs like 'have' and 'be' must be present so that an adverb is possible, unlike their counterparts in English. Accordingly, constructions that allow noun phrases alone as fragments need to be identified in order to better characterize fragmentary expressions. Johnson (2019, p. 599) noted the importance of studying fragment answers, gapping, and stripping at the same time because they "have superficially similar-looking ellipses. If these cases [fragment answers and similar discourses, as well as comparatives] are to be brought into the analysis, then a force that uniquely singles out these environments should be found."²

Fragments in Chinese have not received as much attention as other ellipsis constructions such as predicate ellipsis, sluicing, or sluicing-like constructions. Previous works are mainly on short verbal answers to questions, such as Simpson (2015), and the need to distinguish different types of fragments as in Wei (2013, 2016, 2018). It will be shown that the differences observed in Wei's works can be deduced from factors independently needed in the grammar and discourse notions such as topic, contrast, and focus. The logically possible approaches to fragments are evaluated: movement + deletion versus base-generation of full clause [pro + copular + fragment] versus base-generation of fragments as they are. The conclusion is that a straightforward analysis of fragments might be to recognize that they are indeed fragments structurally.

2. Fragment Types and Behaviors

An important point made in Wei's works on fragments is that four types of fragments need to be distinguished, including three types of fragment answers or responses (abbreviated as FA; Wei, 2016) and one type of fragment questions (FQs; Wei, 2013, 2018). FQs in Chinese consist of a contrastively focused constituent and a sentence-final particle *ne* as in (8). An FQ is a constituent question and can solicit answers from the linguistic antecedent or from contexts; the copular verb 'be' is not used.

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A: Zhangsan huilai-le
Zhangsan back-LE
'Zhangsan has already come back.'

B: Lisi ne?
Lisi Q
'What about Lisi?'
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FAs or responses are those answering wh-questions (FAW), those answering yes-no questions (FAY), and fragments of correction (FCs, Wei's FA for correction). According to Wei, the major difference between FAs to wh-questions (9) versus FAs to yes-no questions (10) and FCs (11) lies in the presence or absence of the copula verb shi 'be'. FAs to wh-questions disallow the occurrence of shi; whereas FAs to yes-no questions and FCs require shi when the fragment is a determiner phrase (DP) (10–11) or adverbial phrase (AdvP) (13), but allow shi to optionally precede verb phrase (VP) (15), prepositional phrase (PP) (17), adjunct clause (19), and modal (21). FAs to yes-no questions and FC are alike in the use of shi, as opposed to FAs to wh-questions in (9), (12), (14), (16), (18), and (20).

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DP fragment

(9)

A: ta kanjian-le shei (ne)?
he see-LE who Q
'Whom did he see?'

B: (*shi) Lisi. (ta kanjian-le Lisi.)
be Lisi he see-LE Lisi
'Lisi. (He saw Lisi.)'
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(10)

A: ta kanjian-le *Zhangsan ma?* he see-LE Zhangsan Q 'Did he see Zhangsan?'

(FAY)

B: bushi, *(shi) *Lisi*. not.be be Lisi 'No, it is Lisi.'

(11)

A: ta kanjian-le *Zhangsan*. he see-LE Zhangsan 'He saw Zhangsan.'

(FC)

B: bushi, *(shi) *Lisi*. not.be be Lisi 'No, it is Lisi.'

ADV fragment

(12)

A: ta *zheme* chuli ziji-de shi (ne)? (FAW) he how deal.with self-DE business Q 'How does he deal with his own business?'

B: (*shi) xiaoxinyiyidi. be carefully 'Always carefully.' (13)

- A: ta *cuxindayidi* chuli ziji-de shi (ma)? (FAY) he carelessly deal.with self-DE business Q 'Does he deal with his own business carelessly?'
- B: bushi, *(shi) xiaoxinyiyidi. not.be be carefully 'No, it is with care.'

VP fragment

(14)

- A: Zhangsan zai zuo shenme (ne)? (FAW) Zhangsan PROG do what Q 'What is Zhangsan doing?'
- B: (*shi) xie gongke. be write assignment 'Writing assignment.'

(15)

- A: Zhangsan xiang kan xiaoshuo (ma)? (FAY) Zhangsan want read novel Q 'Does Zhangsan want to read novels?'
- B: bushi, (shi) kan zazhi.
 not.be be read magazine.
 'No, it is to read magazines.'

PP fragment

(16)

A: ta zai nali gongzuo (ne)? (FAW)

He at where work Q

'Where did he work?'

B: (*shi) zai Gaoxiong. be in Kaohsiung 'In Kaohsiung.'

(17)

A: ta zai Gaoxiong gongzuo. (FAY) he in Kaohsiung work 'He works in Kaohsiung.'

B: bushi, (shi) zai Taibei. not.be be in Taipei 'No, it is in Taipei.'

Clausal fragment

(18)

A: ta weishenme yao likai (ne)? (FAW) he why want leave Q 'Why did he leave?'

B: (*shi) *yinwei xiang jia*. be because want home 'Because he was homesick.'

(19)

- A: ta yinwei mei qian cai yao likai (ma)? (FAY) he because no money then want leave Q 'Does he want to leave because of the lack of money?'
- B: bushi, (shi) yinwei xiang jia. not.be be because want home 'No, it is because he was homesick.'

Modal fragment

(20)

- A: ta *yinggai-bu-yinggai* lai (ne)? (FAW) he should-not-should come Q 'Should or shouldn't he come?'
- B: (*shi) *yinggai*. be should '(Lit.) He should come.'

(21)

- A: ta keneng hui lai (ma)? (FAY) he may will come Q 'May he come?'
- B: bushi, (shi) bu *keneng*. not.be be not possible 'No, it is impossible.'

In addition to the use of *shi*, Wei identifies some other differences among the types of fragments, briefly described in the following subsections.

2.1 Syntactic Categories

Fragments in Chinese differ in their syntactic categories; according to Wei (2016, 2018), the syntactic categories of FQs are definite/generic DPs, VPs, and PPs denoting time and location, as in (22-24). Unacceptable categories are indefinite DPs, manner adverbs, frequency adverbs, sentential adverbs, and modals (25-28). Wei (2018) suggested that the syntactic categories that cannot be FQs are those unable to serve as topics.

(22)

A: ta xiang renyang (na-zhi) gou he want adopt that-CL dog 'He wants to adopt (that) dog.'

B: (zhe-zhi) mao ne? this-CL cat Q 'What about (this) cat?' (Definite or generic DP)

(23)

A: ta xiang/yao kan xiaoshuo. he want/want read novel 'He wants to read novels.'

B: xie gongke ne? (VP)
writing assignment Q
'What about writing assignment?'

(24)

A: ta zai xuexiao bu kan shu. he at school not read book 'He does not read books at school.'

B: zai jia ne? at home Q 'What about at home?' (PP)

(25)

A: Zhangsanxiang renyang yi-zhi gou. Zhangsanwant adopt one-CL dog 'Zhangsan wants to adopt a dog.'

B: *yi-zhi mao ne? (*Indefinite DP)
one-CL cat Q
'What about a cat?'

(26)

A: Zhangsan xiang hen kuai-de xie-wan yi-feng xing. Zhangsan want very fast-DE write-finish one-CL letter 'Zhangsan wants to finish writing a letter in a fast way.'

B: *hen man-de ne? (*Manner Adverb) very slow-DE Q

(27)

A: ta changchang ma Lisi. He often scold Lisi 'He often scolds Lisi.'

B: *ouer ne? (*Frequency Adverb) occasionally Q

(28)

A: ta *keneng* mai zhe-dong fangzi. he may buy this-CL house 'He may buy this house.'

B: *bu keneng ne? (*Modal)
not may Q

In contrast, Wei (2016) showed that definite and indefinite DPs, VPs, PPs, AdvPs, adjunct clauses, and modals can all serve as FAs. The following two acceptable cases are to be contrasted with, for instance, the unacceptable (25) and (27).

(29)

- A: Zhangsan kandao shenme le? (FAW) Zhangsan saw what LE 'What did Zhangsan see?'
- B: yi-ge liwu. (Indefinite DP) one-CL present 'A present.'

(30)

- A: ta *zheme* chuli ziji-de shi (ne)? (FAW)
 He how deal.with self-DE business Q
 'How does he deal with his own business normally?'
- B: (*shi) xiaoxinyiyidi. (Adverb) be carefully 'Always carefully.'

To capture the distinction, Wei (2016, 2018) proposed that FQs in Chinese are a contrastive topic. In contrast, FAs are not topics; they are focused elements.

2.2 Island Sensitivity

FQs are sensitive to the complex noun phrase (NP) constraint and the adjunct condition.

(31)

A: ta zhaodao [[mama zui ai de] bi]. he find mother most like DE pen 'He found the pen that his mother likes most.'

B: *baba ne? (Island-sensitive)
father Q
'What about his father?'

(32)

A: Zhangsan [yinwei tade baba bu zhichi] cai fangqi yinyue. Zhangsan because his father not support then give.up music 'Zhangsan gave up the study of music because his father did not support it.'

B: *tade mama ne? his mother o

(Island-sensitive)

In contrast, fragment answers to *wh*-questions are insensitive to island conditions, illustrated by the acceptable the complex NP constraint and adjunct island cases that follow.

(33)

A: zhaodao [shei zui ai de bil (ne)? (Huang, 1982) ta he find who most like DE pen Q 'Who is the person x such that he found the pen that x likes most?'

B: Lisi. Lisi (Island-insensitive)

(34)

A: Zhangsan [yinwei *shei* bu zhichi] cai fangqi yinyue (ne)? Zhangsan because who not support then give.up music Q 'Who is the person x such that Zhangsan gave up Music because x did not support it?'

B: tade mama.

(Island-insensitive)

However, all fragments (FQs and FAs) are insensitive to the sentential subject constraint.

(35)

A: [Zhangsan dai-zai jiali] hen hao. Zhangsan stay-at home very good 'It is good that Zhangsan stays at home.'

B: zai xuexiao ne? at school Q

(36)

A: [Zhangsan dai zai nali] bijiao hao? Zhangsan stay at where more good 'Where is the place x such that Zhangsan stays at x is much better?'

B: zai jia. at home.

2.3 Preposition Stranding

Merchant (2001, p. 92) observed that a language allows the object of a preposition as the sluice iff it also allows P-stranding under *wh*-movement. For Merchant, this is an important correlation because, in a movement approach to ellipsis constructions, a PP is contained in the elided part and the P becomes stranded after the object of the P is moved away. The generalization is extended to fragments by Merchant (2004, 2006). Furthermore, Merchant noted that P-

stranding languages such as English, Swedish, and Danish, but not non-P-stranding languages such as Greek, German, and Polish, allow objects of P as sluice and FAs, illustrated by the following acceptable English examples and the unacceptable examples in Greek.

(37)

English

- a. Peter was talking with someone, but I don't know (with) who.
- b. Who was he talking with?

(38)

Greek

- a. I Anna milise me kapjon, alla dhe ksero *(me) pjon. the Anna spoke with someone but not I.know with who
- b. *Pjon milise me? who she.spokewith

Chinese does not allow P-stranding (e.g., Huang, 1982). However, Merchant's P-stranding correlation does not hold with Chinese fragments. For instance, an FQ in (39) can be a prepositional phrase *gen Lisi* 'with Lisi' or just the object of the P, *Lisi*, without differences in interpretation.

(39)

A: ta gen Zhangsan hen chu-de-lai. he with Zhangsan very get-DE-along 'He gets along well with Zhangsan.'

B: (gen) Lisi ne? with Lisi Q 'What about (with) Lisi?'

Similarly, FAs to wh-questions can be a PP dui Lisi 'to Lisi' or the object of P Lisi as in (40), with no differences in meaning.

(40)

A: Zhangsan dui *shei* hen keqi (ne)? Zhangsan to who very polite Q 'To whom is Zhangsan polite?'

B: (dui) Lisi. to Lisi 'To Lisi (Zhangsan is very polite).'

However, for FAs to *yes-no* questions and FCs, Wei observes that they vary their meanings according to the presence or absence of the P, even though both forms are acceptable. Take FAs to *yes-no* questions as in (41) for instance. The PP fragment *dui baba* 'to father' differs from the DP fragment *baba* 'father' in interpretation. The PP fragment means that 'Zhangsan is very polite to his father', whereas the DP fragment expresses the meaning that it is his father who is very polite to his mother. FCs behave alike. In short, the presence or absence of P in FAs to *yes-no* questions/ FCs affects the interpretation; such an interpretive distinction is not observed in FQs or FAs to *wh*-questions.

(41)

- A: Zhangsan *dui mama* feichang keqi (ma)? Zhangsan to mother very polite Q 'Is Zhangsan very polite to his mother?'
- B: bushi, [(shi) dui baba].
 not.be be to father
 'No, it is to his father that he is very polite.'
- B'. bushi, [shi baba].
 not.be be father
 'No, it is his father who is very polite to his mother.

2.4 Connectivity Effects

Connectivity effects are generally used to argue for the existence of non-overt materials (e.g., Morgan, 1973). The claim is that if fragments show connectivity effects, they contain invisible materials. Wei (2013, 2016, 2018) showed that fragments in Chinese also manifest connectivity effects with respect to binding and scope, briefly described in the following discussion.

Consider first the cases of FQs. Connectivity effects are present in instances involving Binding Principle C, as in (42B). *Zhangsan* in the fragment cannot be co-indexed with the pronoun *ta* 'he' in the matrix clause of the question (42A). The unacceptability can be understood as a violation of Binding Principle C, like the full structure in (42B'). Nonetheless, note that the sentence-final particle *ne*, indicating an interrogative reading, cannot appear in (42B').

(42)

- A: ta_i xiang dai-zai Lisi-de fangjian (li). he want stay-at Lisi-DE room inside 'He wants to stay at Lisi's room.'
- B: zai Zhangsan_{j/*i}-de fangjian ne? at Zhangsan-DE room Q 'What about at Zhangsan_i's room?'
- B': ta_i xiang dai-zai Zhangsan_{j/*i}-de fangjian (*ne)? he want stay-at Zhangsan-DE room Q 'He_i want to stay at Zhangsan_{j/*i}'s room.'

The binding of pronouns and reflexives also shows connectivity effects. For instance, the pronoun *tade* 'his' in fragment (43B) can be bound by the quantificational subject *meigeren* 'everyone' in (43A), like the acceptability of a bound pronoun/reflexive in a full clausal structure in (43B') (with the same caveat on the use of the sentence-final question particle).

(43)

- A: meigeren_i dou hui ganxie ta_i/ziji_i-de mama. everyone all will thank he/self-DE mother 'Everyone_i will thank his_i own mother.'
- B: ta_i/ziji_i -de baba ne? he/self -DE father Q 'What about his_i father?'
- B': meigeren_i dou hui ganxie ta_i/ziji_i-de baba (*ne). everyone all will thank he/self-DE father Q 'Everyone_i will thank his_i own father.'

So is the case with those instances containing scope-bearing elements interacting with each other. The unambiguous scope relation remains in the fragment in (44B), resembling its non-fragmentary counterpart in (44B).

(44)

- A: meige laoshi dei zhidao san-ge xuesheng.(every > three) every teacher has.to instruct three-CL student 'For every teacher x, x has to instruct three students.'
- B: si-ge (xuesheng) ne? (every > four)
 four-CL student Q
 'What about four students?'
- B': meige laoshi dei zhidao si-ge (xuesheng).(every> four) every teacher has.to instruct four-CL student 'For every teacher x, x has to instruct four students.'

FAs, including FAs to *wh*-questions, FAs to *yes*–*no* questions, and FC, also exhibit connectivity effects. For instance, the R-expression *Zhangsan* in (45B) cannot be co-indexed with the pronoun *ta* 'he' in the matrix clause of the antecedent question in (45A)—an instance of Binding Principle C violation, just as the non-fragmentary structure in (45B').

(45)

- A: ta_i dai zai nali? he stay at where 'Where did he stay?'
- B: zai Zhangsan_{j/*i}-de fangjian. at Zhangsan-DE room 'At Zhangsan_{j/*i}'s room.'
- B'. ta_i dai zai Zhangsan_{j/*i}-de fangjian. he stay at Zhangsan-DE room 'He_i stayed at Zhangsan_{i/*i}'s room.'

Binding of pronouns/reflexives behaves alike, illustrated by (46B, B'). Both allow the third person pronoun *ta* and the reflexive *ziji* 'self' to be bound by the quantificational expression *meigeren* 'everyone'.

(46)

- A: meigeren_i dou hui ganxie shei (ne)? everyone all will thank who Q 'Whom will everyone_i thank?'
- B: ta_i/ziji_i-demuqin. he/self-DE mother 'His_i/Self_i's mother.'
- B'. meigeren; dou hui ganxie ta;/ziji;-de muqin. everyone all will thank he/self-DE mother 'Everyone; will thank his;/self; mother.'

The scope properties of FAs are like those of FQs. The following examples show that both fragmentary and non-fragmentary structures yield the unambiguous reading (every > three), "for every teacher x, x has to teach three students," as in (47B, B').

(47)

- A: meige laoshi bixu jiao ji-ge xuesheng? every teacher must teach how.many-clstudent 'How many students do every teacher has to teach?'
- B: san-ge (xuesheng). (every > three) three-CL student 'Three students.'
- B'. meige laoshi bixu jiao san-ge xuesheng. (every > three) every teacher must teach three-CL student 'For every teacher x, x has to teach three students.'

2.5 Summary of Properties of Fragments

Wei categorizes fragments into four types according to the properties he observed, as described in the previous sections. They are summarized in Table 1. 6

Table 1. Categories of fragment

	Fragment question	Fragment answer to wh-question	Fragment answer to yes-no question	Fragment of correction
Examples	(8) ZS returned.	(9) Who did he see?	(10) Did he see ZS?	(11) He saw ZS.
	Lisi-ne?	Lisi.	Bushi; shi Lisi. 'No; it's Lisi'.	Bushi; shi Lisi. 'No; it's Lisi'.
(a) Sentence final particle	-ne			
(b) Use of shi 'be'	Not used	Not used	Required with DP/AdvP; optional with others	Required with DP/AdvP; optional with others
(c) Syntactic categories	Only categories that can serve as topics	No restrictions	No restrictions	No restrictions
(d) Island sensitivity	Complex NP island, adjunct island (but not subject island)	None ⁷	None	None
(e) P-stranding	Allowed	Allowed	Allowed	Allowed
	P + DP, DP identical in meaning	P + DP, DP identical in meaning	P + DP vs. DP differing in meaning	P + DP vs. DP differing in meaning
(f) Connectivity	Yes	Yes	Yes	Yes

Next, the structure and derivation proposed by Wei are briefly presented and evaluated according to the summary in Table 1.

3. Structure and Derivation

As mentioned, there has not been much attention to fragments in Chinese. Wei is the one we are aware of who has described and compared the properties of Chinese fragment constructions described earlier and proposed analyses for them. Therefore, Section 3.1 presents the main points of Wei's analyses, but without the implementation and technical details for the sake of readability within the limited space, followed by the challenges facing the analyses in Section 3.2. For more details, readers are referred to Wei (2013, 2018) for FQs and Wei (2016) for FAs.⁸

3.1 Movement + Deletion Versus Clausal Base-Generation

With the same reasoning for deciding on whether the Chinese sluicing–like construction should be derived by a movement + deletion approach or base–generated as a single clause structure with a subject *pro*, Wei proposed the movement + deletion analysis for FQs and FAs to *wh*–questions but a base–generated single–clause structure with a subject *pro* for FAs to *yes–no* questions and FCs. That is, FQs and FAs to *wh*–questions have syntactic representations similar to their antecedents, with the fragment raised from within the sentence and all but the fragment is deleted. In contrast, FAs to *yes–no* questions and FC are base–generated with a subject *pro*, the copular verb *shi* 'be', and the so–called fragment [*pro* + copula + fragment], although the fragment is not a real "fragment" in the sense that there is no operation of moving an element and deleting everything but the moved phrase. These claims are summarized in Table 2 (and the type of movement specified).

Table 2 Analyses of fragment

Fragment question	Fragment answer to wh-question	Fragment answer to <i>yes-no</i> question	Fragment of correction
(8) ZS returned. Lisi-ne?	(9) Who did he see? Lisi.	(10) Did he see ZS? Bushi; shi Lisi. 'No; it's Lisi'.	(11) He saw ZS. Bushi; shi Lisi. 'No; it's Lisi'.
Moving fragment + deleting the rest of the sentence identical to the correlate in the antecedent.	Moving fragment + deleting the rest of the sentence identical to the correlate in the antecedent.	No movement or deletion; base- generating the structure [pro + be + fragment]	No movement or deletion; base-generating the structure [pro + be + fragment]
[Fragment _i [t_i]]	[Fragment _i [t_i]] ♣		
Movement is Topicalization	Movement is Focalization		

Wei's reasoning for the proposal is as follows. First, the use or non-use of the copular verb *shi* 'be' is like what it is for the Chinese sluicing-like construction. *Shi* is noted to be impossible for FQs and FAs to *wh*-questions but possible (either required or optional) with fragments answer to *yes-no* questions and FCs. For the latter group, *shi* is the verb in the base-generated structure. Specifically, when a fragment cannot be a predicate, such as an adverb *xiaoxinyiyidi* 'carefully' in (13) or a noun like *Lisi* in (10–11), *shi* 'be' is an obligatory copular verb to form a predicate. In contrast, when the fragment itself can be a predicate, *shi* 'be' is optional and can function as a focus marker (cf. Longobardi, 1994; Wei, 2004). For example, the VP fragment *kan zazhi* 'read magazine' in (15) and the PP fragment *zai Taibei* 'in Taibei' in (17) can be predicated of the empty subject *pro*, and the optional *shi* 'be' is a focus marker. So are the other acceptable cases in (19) and (21).

For FQs and FAs to *wh*-questions, *shi* does not appear because these constructions are derived by moving the fragment to the peripheral position of a sentence and the rest of the sentence is deleted. The movement process to derive FQs is topicalization (contrastive topic; the meaning of an FQ is to ask about an entity in contrast with the corresponding one in the antecedent clause). Therefore, only syntactic categories that can function as topics make well-formed FQs. The movement process of FAs to *wh*-questions is focalization (providing an answer to a *wh*-question). All syntactic categories can be focalized. Accordingly, FAs to *wh*-questions do not have restrictions on categories. In addition, the movement process in the movement + deletion approach may be responsible for the island sensitivity of FQs.

Nonetheless, challenges face the generalizations listed in Table 1 and the proposed structures and derivations in Table 2.

3.2 Challenges

First of all, note that island sensitivity does not align with the presence of movement—even though FQs and FAs to *wh*-questions are proposed to be derived by movement + deletion, only the former is sensitive to island conditions. Moreover, only some island conditions are relevant. To accommodate such inconsistency of island sensitivity, Wei (2016, 2018) resorts to tools such as variability of island violations, the failure of contrastive fragments to repair island violations (Griffiths & Liptak, 2014; Merchant, 2008, among others), and the movement to different projections (topic phrase for topicalization vs. focus phrase for focalization) triggering deletion of different projections. Nonetheless, he did note that such tools are empirically based on observations on a small number of languages and the issues require further investigation.

In addition, the same behavior of all four fragment constructions in regard to connectivity effects and P-stranding is not expected (the alleged different interpretations for P + DP versus DP in FAs to *yes-no* questions and FCs is addressed shortly). In general, aside from island conditions, the relevance of P-stranding and connectivity effects have been used as evidence for a movement derivation (see, for instance, Merchant, 2001, 2004; Pesetsky, 2013). A PP is contained in the elided clause, and the P becomes stranded after the object of the P is moved away. ¹⁰ Connectivity effects have been taken to indicate the presence of invisible lexical materials and structures so

that grammatical dependency relations can be established. The challenges from items (d, e, f) of Table 1 suggest that either the proposal of distinguishing the fragments into two major types as in Table 2 (base-generated or derived by movement + deletion) is not on the right track or the relevant tests do not really determine structures and derivations.

Indeed, there have been alternative accounts using semantic mechanisms to capture connectivity effects (no syntactic structures are needed) and P-stranding has been shown to be an unreliable test for the movement + deletion approach (see, for instance, Merchant, 2013). In fact, Merchant (2013) suggested that only three tests are reliable as evidence for deriving ellipsis via movement + deletion applying to fully represented syntactic structures: extraction, agreement, and availability of inverse scope. According to Merchant, VP ellipsis in English is derived by movement + deletion (lexical materials deleted or not spelled out); therefore, the construction has a full representation syntactically. Evidence and explanations by Merchant (2013, Sections 2.2 –2.4) are briefly summarized in the following discussion.

First of all, ellipsis sites, if derived by movement + deletion, can be extracted out of, in contrast to a position that does not have a structure identical to its antecedent correlate. For instance, VP-ellipsis in English is derived by movement + deletion; therefore, extraction of a wh-phrase from within a deleted VP is possible, as in (48a). Such VP-ellipsis forms a minimal pair with a synonymous case of Null Complement Anaphora (a complement that is not syntactically present), as in (48b). The contrast follows, if the latter, Null Complement Anaphora, does not contain an object of the verb *agree* syntactically, in contrast to the former, which, syntactically, must contain a full infinitival clause as object *see which films* of the verb *agree* to allow the syntactic movement of the wh-phrase.

(48)

- a. Which films did he refuse to see, and which films did he agree to?
- b. *Which films did he refuse to see, and which films did he agree?

Second, elements inside ellipsis sites can trigger agreement on items outside the site, as in the following examples:

(49)

- a. First, there were bananas available, and then there weren't.
- b. First, there were going to be bananas available, and then there weren't.

Third, quantificational elements inside ellipsis sites can take wide scope over elements outside the ellipsis; such inverse scope readings are missing from otherwise similar anaphoric devices (with the pro-form *did it*). For instance, (50a) allows the subject existential quantifier to have a wide and a narrow scope with respect to the object universal quantifier. The wide scope reading of the universal quantifier (inverse scope reading) is missing in (50b).

(50)

- a. A doctor examined every patient, and then a nurse did. (∃∀, ∀∃)
- b. A doctor examined every patient, and then a nurse did it. (∃∀, ∗∀∃)

How do these three tests work in Chinese? Chinese does not have agreement. The scope test is challenging, due to the many controversies on the availability of true inverse scope in this language, the limited contexts where inverse scope may be available, the identification of appropriate types of quantificational expressions (see, among others, Aoun & Li, 1989, 1993; Li, 1998, 2012; Liu, 1997; Soh, 1998), and the fact that fragments are a root phenomenon (not possible in embedded contexts, which is further discussed in Section 3.3). Moreover, FQs are topics, and topics must be definite, affecting inverse scope possibilities. A potential case might be to consider the dative construction for FAs to wh–questions, FAs to yes–no questions, and fragments of corrections, because dative constructions allow the second object to take scope over the first object (inverse scope) for some speakers. It appears that the interpretation possibilities are the same in FAs to wh–questions and FAs to yes–no questions/FCs.

(51)

- A: ta song-le shenme gei mei-ge yi-nianji de xuesheng? he give-LE what to every-CL first.year DE student 'What did he give to every first year student?'
- B: liang-ben bijiben. two-CL notebook 'Two books.'

(52)

- A: ta song-le liang-ben shu gei mei-ge yinianji de xuesheng./(ma)? he give-LE two-CL book to every-CL first.year DE student Q 'He gave/Did he give two books to every first year student./?'
- B: bu shi, shi liang-ben bijiben. not be be two-CL notebook 'No, it is two notebooks.'

The fragments "two notebooks," in the forms of FAs to *wh*–questions, FAs to *yes–no* questions, and FC can have the interpretation according to which everyone receives the same two notebooks or two different notebooks, as long as the quantity is two. The availability of the latter reading (different book reading, as long as the quantity is two) makes it look like the inverse scope reading is available. Unfortunately, this need not be the only understanding of the fact. It is possible that the phrase "two books" in these cases is a quantity expression denoting the quantity being two. There is no true scope interaction (see Li, 1999, for the lack of scope interaction with quantity expressions).

The extraction test can be a better candidate to decide on the structure and derivation. For the fragments in question, it seems that there are no convincing instances demonstrating that extraction is possible.

(53)

- A: shei zixidi kan-le na-ben shu? who carefully read-LE that-CL book 'Who read that book carefully?'
- B: wo. (FAW)

Extraction of the object "that book" from within the "elided clause" in (53B) does not sound acceptable in either ordering with respect to the fragment, as in (53C). The spelled-out version (53C') is fine. The same reasoning applies to the FQ in (54).

(53)

- C: *wo, na-ben shu; *na-ben shu, wo me that-CL book that-CL book me '(Lit.) I, that book.' 'That book, I.'
- cf. C': na-ben shu, wo zixidi kan-le. that-CL book I carefully read-LE 'That book, I read carefully.'

(54)

- A: wo zixidi kan-le na-ben shu. I carefully read-LE that-CL book 'I read that book carefully.'
- B: ta ne? (FQ) he Q 'How about him?'
- C: *na-ben shu, ta ne? *ta, na-bu shu ne? that-CL book he Q he that-CL book Q '(Lit.) That book, how about him?' 'How about him, that book?'
- C': na-ben shu, ta shi-fou zixidi kan-le ne? that-CL book he whether carefully read-LE Q '(Lit.) That book, did he read carefully?'

The relevant strings for FAs to yes-no questions or FCs do not show that extraction is possible, either:

(55)

A: ta zixidi kan-le na-ben shu./(ma)? he carefully read-LE that-CL book Q 'He read that book carefully./Did he read that book carefully?'

B: bu-shi, shi daluedi. (FC/FAY) not-be be casually '(Lit.) No, it was casually.'

C: *bu-shi, na-bu shu, shi daluedi/shi daluedi, na-ben shu not-be that-CL book be casually/be casually that-CL book '(Lit.) No, that book, it was casually.'

In short, there is no positive evidence to support a movement + deletion analysis. Further note that all the fragment types behave alike regarding the tests. This raises the question of the need to distinguish different types of fragments. Answering this question requires the review of the differences among the fragment types listed in Table 1 in Section 2.5—(a) use of non-use of the sentence-final particle ne, (b) use or non-use of shi, (c) syntactic category, (d) island sensitivity, and (e) interpretive possibilities of the DP in the P-stranding cases. While items (a) and (b) are the focus of the next section, the following paragraphs show that the differences in (c-e) of Table 1 need not be due to different derivations for the fragments as listed in Table 2.

Consider, first, item (c) in Table 1—the categorical distinction between FQs and the others. As Wei noted, this distinction is due to the fact that FQs must be a contrastive topic, contrasting with the counterpart in the antecedent. That is, the antecedent must have a topic for the FQ to contrast with. This opens up an alternative to capturing the island conditions on FQs (item d)—the locality conditions could be due to the conditions on an element in the antecedent becoming a topic, like the establishment of a discourse topic to identify the subject pro in the base-generated singlesluice structure. The antecedent can create a discourse topic for the following FQ to contrast with. In creating a topic from the antecedent, locality conditions can be relevant, that is, when an element in the preceding discourse can become a topic. In other words, the locality conditions observed for FQs in Table 1 can be on the antecedent establishing a discourse topic, and an FQ simply contrasts with what can be a topic in the antecedent. No statements on locality conditions applying to FQs would be needed. The irrelevance of island conditions to FAs to wh-questions, which is also proposed to be derived by movement + deletion (Table 2), follows as well, because FAs to wh-questions are not concerned with the establishment of a discourse topic. A potential additional advantage of such an alternative is the possibility to capture the selectiveness of island violations. As noted earlier, island violations are not consistent in FQs, unexpected if there is an overt movement process. The creation of a discourse topic from the antecedent through contextual information may be subject to the issue of accessibility—how accessible it is for an

element to become a discourse topic. Research on processing would be necessary to lead us to a better understanding of the issue. Nonetheless, if we take this option, there is no evidence from island conditions for the analysis proposed in Table 2.

Regarding item (e)—differences in interpreting the DP of [P + DP], illustrated by (41), it is doubtful that this is grammar at work, because the use of P or no P does not affect interpretation in all cases. In addition to cases like (i) in note (3), the following example also shows that, when the DP of [P + DP] is inanimate, the meaning is clear and unambiguous: The presence or absence of P does not create differences in interpretation.

(56)

A: Zhangsan *dui zhe-jian shi* feichang guanxin (ma)? Zhangsan to this-CL matter very concerned Q 'Is Zhangsan very concerned about this matter?'

```
B: bushi, [(shi) (dui) na-jian shi].
not.be be to that-CL matter
'No, it is (about) that matter (that he is concerned (about)).'
```

In fact, animacy does not matter, as long as the context is clear. It is always possible to have the fragment as a PP or just the object without the P.

```
(57)
```

A: ta xiang gen ni-de jiejie chu qu (ma)? he want with you-DE elder.sister out go Q 'Does he want to go out with your elder sister?'

```
B: bushi, [(shi) (gen) wo-de meimei].
not.be be with me-CL younger.sister
'No, it is (with) my younger sister (that he wants to go out (with)).'
```

Indeed, Wei notes later that the P-object interpretation for (41B) is indeed acceptable. The sentence is ambiguous between the reading indicated in (41B) and the P-object reading. This suggests that there are no grammatical rules ruling out certain options of the references of the DP in FAs to yes-no questions/FCs. Otherwise, cases like (56-57) and (i) of note (3) could not be derived. FAs to yes-no questions/FCs are just like FQs/FAs to wh-questions in allowing the same

interpretative possibilities grammatically. The differences noted in (41), if they do exist at all, are simply preferences due to factors outside grammar. P-stranding is always possible in these fragment types, and no interpretive differences exist due to grammatical rules.

Also recall that item (f) in Table 1, connectivity effects, are the same with all the fragment types, which is not expected by the separation of movement + deletion versus base-generation analysis as listed in Table 2. This amounts to saying that items (c-f) do not convincingly argue for the need to differentiate fragments into two different groups with their own distinct structures and derivations as in Table 2. What about items (a-b)? The next section shows that the facts are more complicated, thereby casting doubt on the adequacy of the proposal in Table 2. Instead, it is concluded that fragments need not be distinguished into different types. Logically possible options for a unified analysis for all fragments will be evaluated. Item (b), the presence of *shi* as an indication of a base-generation structure [*pro* + copular verb 'be' + fragment], will be reconsidered in the context of a unified base-generation approach to fragments. Item (a), the sentence-final particle ne, is discussed in the context of a unified movement + deletion approach.

3.3 A Unified Analysis

The previous section questions whether it is necessary or even desirable to differentiate fragments into different types. Then, can all fragments have similar underlying structures and be derived in the same manner? To evaluate the possibility of all fragments having the same structure and derivation, the logically possible analytical options are considered, including the two listed in Table 2 in Section 3.1: (a) movement + deletion approach; (b) clausal basegeneration approach—base-generating a simple clause with a *pro* subject, a copular verb, and the fragment: [*pro* + 'be' + fragment]. Sections 3.3.1 and 3.3.2 show that neither of the two options is adequate, and in Section 3.3.3, the third logical option is proposed: fragments base-generated as fragments.

3.3.1 A Unified Analysis—Clausal Base-Generation Approach?

First, consider option (b). Recall that Wei (2013, 2016, 2018) argues that the clausal basegeneration approach cannot accommodate FQs and FAs to wh-questions, because they reject the use of shi (item (b) in Table 1). It indeed is true that a copular verb shi does not occur in these cases. However, the following question can be raised about the status of shi in FAs to yes-no questions/FCs—whether it should be analyzed as a copular verb in order to make well-formed predicates and sentences. The following paragraphs examine more carefully the function of shi in fragments and its distribution. It is proposed that shi in FAs to yes-no questions/FCs actually expresses contrastive focus. Indeed, such a contrastive focus shi is allowed in all fragments whenever the contrastive focus interpretation is available. Shi is a marker for contrastive focus in all the fragment constructions when a wider range of facts is considered. This casts doubt on the use of shi to distinguish different fragment types and on the adequacy of a base-generated [pro + copular verb 'be' + fragment] for all fragments. ¹³

Consider the following FA to a yes-no question.

(58)

- A: ni zui xihuan Lisi ma? you most like Lisi Q 'Do you like Lisi the most?'
- B: bu-shi, wo bu-shi zui xihuan Lisi. not-be I not-be most like Lisi. 'No, I do not like Lisi the most.'
- C: bu-shi, bu-shi Lisi (wo zui xihuan). not-be not-be Lisi I most like 'No, (it's) not Lisi that I like the most.'
- D: bu-shi, *(shi) Wangwu wo zui xihuan. not-be be Wangwu I most like 'No, (it's) Wangwu that I like the most.'

It is not surprising that the noun phrase *Lisi* in (58C) needs to be preceded by *shi* when it is negated by *bu*—negation cannot negate a noun phrase directly in Chinese—**bu Lisi* 'not Lisi'. The interesting case is (58D)—*shi* is required as well even though the whole sentence is spelled out. That is, it is not unique for fragments to require the occurrence of *shi* in some cases. However, we also find instances of FAs to *yes-no* questions/FCs without *shi*, if the fragment has a focused prosody (higher in pitch and intensity, longer duration). That is, the fragment is a possible response to (58A).

(59)

Wangwu, bu-shi Lisi. (Wangwu with focus prosody) Wangwu, not-be Lisi 'Wangwu, not Lisi'

The following are additional examples for FAs to *yes-no* questions and FCs using a focused DP or AdvP instead of *shi* 'be'—the cases requiring *shi* in Table 1.

```
(60)
         na-dao
A: ta
                        juzi
                                   le(?)
          take-arrive
   he
                         orange
                                   LE
    'He got oranges(?)'
B: pingguo, bu-shi juzi. (pinguo with focus prosody)
             not-be orange
  apple
  'Apples, not oranges.'
(61)
A: Zhangsan dedao diyijiang le(./?)
  Zhangsan get
                    first.prize LE
   'Zhangsan got the first prize(./?)'
B: Lisi, bu-shi Zhangsan. (Lisi with focus prosody)
  Lisi, not-be Zhangsan
   'Lisi, not Zhangsan.'
(62)
A: ta xixin-di jiaodui-wan
                                   ni-de
                                             gaozi
                                                        le(./?)
  he careful-ly proof.read-finish you-DE
                                             manuscript LE
  'Did he finish proof-reading your manuscript carefully(./?)'
B: culue-di, bu-shi xixin-di. (culue-di with focus prosody)
  roughly not-be carefully
  'Roughly, not carefully.'
```

The preceding data suggest that the use of *shi* used in FAs to *yes-no* questions/FCs can be a marker of focus (contrastive focus, more precisely), rather than necessarily meeting the need of a clause requiring a linking verb (cf. the analysis summarized in Table 2). A fragment of correction is to provide a different option instead of what has been given in the previous discourse. A FA to a *yes-no* question, when it is in the negative form to a *-ma* question, also provides an alternative

different from what has been mentioned. Even with a positive case like the one in (63), the two fragmentary types also affirm that the fragment DP indeed is the right one, instead of other alternatives:

(63)

A: Zhangsan dedao diyijiang le(./?) Zhangsan get first.prize LE 'Zhangsan got the first prize(./?)'

B: shi, shi Zhangsan.
be be Zhangsan
'correct, indeed Zhangsan (not other options).'

However, FAs to wh-questions are to supply answers to wh-questions—not a contrastive focus in general. Along this vein, the prediction is that, even in fully-spelled-out cases, shi is not used when there is no contrastive focus. This is true, as in (64A). However, if a context allows a contrastive focus reading, then even FAs to wh-questions should be acceptable with shi. Again, this prediction is born out. For instance, in a situation when it is well known that Zhangsan generally goes to the library or the coffee shop, the FA to the wh-question in (64A') is possible. The use of shi is to contrast the two potential answers.

(64)

Q: Zhangsan qu nar le? Zhangsan go where LE 'Where did Zhangsan go?'

A: Zhangsan (*shi) qu tushuguan le. Zhangsan be go library LE 'Zhangsan went to the library.'

A': yiding bu-shi tushuguan; (yiding) shi kafei dian. definitely not-be library; definitely be coffee shop 'Definitely not the library; (definitely) the coffee shop.'

To complete the discussion on the occurrence of *shi*, it is expected that *shi* does not appear in an FQ, which is a topic, not a focus.

The preceding discussion shows that the presence or absence of *shi* can be due to semantic reasons rather than the syntactic requirement of having a linking verb to make a well-formed sentence. That is, the occurrence of *shi* is not indicative of the structure [*pro* + *shi* 'be' + fragment]. Accordingly, the distinction made based on item (b) of Table 1 of Section 3.1 loses its significance.

Briefly summing up, the distinction of fragments into different types is not supported convincingly and a clausal base-generation analysis with *shi* as the copular verb [*pro* + *shi* 'be' + fragment] for all fragments cannot be adequate. Then, is it possible that the movement + deletion approach provides a unified account for all the fragment constructions? The next section shows that this approach also faces challenges.

3.3.2 A Unified Analysis—Movement + Deletion?

Consider FQs—the fragment construction that is the best candidate for the movement + deletion approach because it requires the fewest stipulations in Wei's arguments for this analysis. However, challenges arise for the movement + deletion approach when the properties of FQs are examined more closely. An FQ is marked by ne (item (a) of Table 1). The immediate challenge to the movement + deletion approach concerns the underlying structure, to which movement and deletion apply. Putting back the supposedly deleted part (the part identical to the correlate in the antecedent) does not yield an acceptable form. For instance, the source for an FQ like (65B) might be (65B') after the materials from the antecedent are restored to the fragment, but (65B') is not acceptable, not predicted by the analysis.

(65)

A: Zhangsan huilai-le Zhangsan back-LE 'Zhangsan has already come back.'

B: Lisi ne? . (FQ) Lisi Q

'What about Lisi?'

B': *Lisi huilai-le ne? Lisi back-LE Q

It is the sentence-final particle *ne* in FQs that creates difficulties. FQs being interrogative crucially rely on the presence of -*ne*. *Ne* generally needs a *wh*-phrase to be interpreted as interrogative; it marks a *wh*-question. ¹⁴ This means that an FQ must be a *wh*-question. Indeed, an FQ is also expressed as a *wh*-question in English: *John has come back. How about Bill*? But where is the

wh-word in an FQ? What is the structure and derivation for an FQ? Wei (2018) offered an account whose main point is to treat *ne* as a topic marker that gets raised to the C(omplementizer) position to be interpreted as interrogative (which must be wh-interrogative). This marker licenses the deletion of the rest of the clause (C takes a topic phrase as a complement, and a topic takes the tense phrase as the complement).

Nonetheless, questions can be raised on this analysis. In addition to the question of why a topic marker is required in this case when normally a topic marker does not appear in Chinese, the proposal over-generates. For instance, it is not expected that such a fragment clause cannot appear as an object of a verb taking a clausal object. The sentence in (66a) shows that "coffee" can be a topic, indicated by the presence of the alleged topic marker, in the embedded context. In addition, the object of "know" can be a *wh* question as in *wo zhidao shei lai le* 'I know who came'. Despite the fact that "coffee" can be a topic in an embedded clause and the embedded clause can be a *wh*-question, movement of T to C and deletion of the embedded clause except the topic to generate an FQ is impossible, as in (66b).

(66)

- a. wo zhidao kafei ne, ta shi wanquang bu he de. I know coffee NE he be completely not drink DE 'I know coffee, he doesn't drink at all.'
- b. *wo/ni zhidao kafei/cha ne ta shi wanquang bu he de.

 I/you know coffee/tea NE he be completely not drink DE

The following example illustrates an unacceptable FA to a *wh*-question embedded as a verbal object, regardless of whether the interrogative force is in the embedded clause or the matrix clause.

(67)

- A: ta zhidao wo he-le shenme. I know I drink-LE what 'He knows what I drank.'
- B: *ta zhidao kafei. he know coffee

(68)

- A: ta yiwei ni he-le shenme? he thought you drink-LE what 'What did he think you drank?'
- B: *ta yiwei kafei. he thought coffee

The same holds for FAs to *yes-no* questions/FCs. For instance, the following fragment of correction is not acceptable when embedded under the matrix verb. The lexical materials in the parentheses in (69B) cannot be deleted.

(69)

- A: ta zhidao/xiangxin kafei zui hao he. he know/believe coffee most good drink 'He knows/believes coffee is the most delicious.'
- B: bu-shi, ta zhidao/xiangxin cha *(zui hao he). not-be he know/believe tea most good drink 'No, he knows/believes tea *(is most delicious).'

Instances like (67-69) show that fragments in Chinese are not possible in embedded contexts. ¹⁵ Moreover, the properties regarding P-stranding and island effects as listed in Table 1 also fail to support a movement + deletion approach. P-stranding is not observed by any of the fragment constructions, and only FQs have been listed as sensitive to the complex NP constraint (CNPC) and adjunct island but not a subject island. Even with the supposedly island-sensitive cases, there are acceptable examples that violate the CNPC as in (70-71) and adjunct island (72-73).

(70)

- A: [[de diyiming de] ren] dou hui you jiangpin. get first.place DE person all will have prize 'There will be prizes for those that get the first place.'
- B: dierming ne? second.place Q 'How about the second place?'

(71)

- A: [[nadao lan pingguo de] ren] bu neng lai.
 get rotten apple DE person not can come
 'Those that got rotten apples cannot come.'
- B: lan juzi ne? rotten orange Q 'How about rotten orange?'

(72)

- A: meiyouren hui [yinwei nalai lan pingguo] bei ma. nobody will because bring rotten apple BEI scold 'Nobody will be scolded because (he) brings rotten apples.'
- B: lan juzi ne? rotten orange Q 'How about rotten orange?'

(73)

A: [ruguo ni na-zou zhexie zidian], wo jiu gei ni qian. If you take-away these dictionary, I then give you money 'If you take away these dictionaries, I will give you money.'

B: zhexie zhazhi ne? these magazine Q 'How about these magazines?'

In short, even the FQ construction, which was the strongest candidate for a movement + deletion analysis, does not convincingly support such an analysis.

Taking stock of the discussion in Section 3 so far on the structure and derivation of fragments, the arguments to separate them into two different groups as in Tables 1 and 2 seem to be not as clear or convincing as one would like to see. The distinguishing criteria listed in Table 1 either do not hold or do not make the proposed distinction. When distinguishing fragments into distinct types is not supported, it is desirable to consider the possibility of a unified approach for all the fragment constructions. Under a unified approach, we considered the two options listed in Table 2 —movement + deletion versus base-generation of a clause with a subject *pro* and a copular verb. Unfortunately, both options face challenges to accommodate all the fragment constructions.

3.3.3 A Unified Analysis: Fragments as Fragments

The two options listed in Table 2 assume that fragments are base-generated as clauses with subjects and predicates, either as base-generated [subject + copular verb 'be' + fragment] or as movement + deletion applying to a full clause corresponding to the antecedent. Sections 3.3.1 and 3.3.2 showed that both options face challenges. This section explores the third logically possible option: Fragments are generated as they are, not having full clausal structures syntactically—not involving a subject pro, a linking verb, or movement/deletion applying to a full clause. Recognizing that fragments are generated as what they are predicts that they should not behave like clauses structurally. Indeed, this seems to be true. Instances like (66-69) in the previous section are unacceptable straightforwardly if fragments do not have clausal structures. Moreover, this option accounts for the fact that they cannot be conjoined with another clause or use a clausal conjunctor such as erqie (see Aoun & Li, 2003 for instance). Thus, the elements in parentheses in (74a, b) cannot be missing. Example (75B) is not acceptable either.

(74)

- a. Zhangsan xihuan nai chai,(erqie) Lisi *(ye xihuan nai cha). Zhangsan like milk tea; and Lisi also like milk tea 'Zhangsan likes milk tea, and Lisi (also likes milk tea).'
 - b. Zhangsan xihuan nai cha, (erqie) *(ye xihuan) kafei. Zhangsan like milk tea; and also like coffee 'Zhangsan likes milk tea, and ((Zhangsan) also likes) coffee.'

(75)

- A: Zhangsan xihuan nai cha. Zhangsan like milk tea 'Zhangsan likes milk tea.'
- B: *kafei ne erqie ta ye xihuan doujiang ne/ma? coffee Q and he also like soy.milk Q 'How about coffee and does he also like soy milk?'

The fragment-as-fragment approach also allows the preposition to be missing because a fragment can be a PP or a DP (cf. Progovac et al., 2006). The lack of island effects follows because movement is not involved.

Indeed, the proposal of analyzing fragments as they are has been made by various linguists, such as Progovac et al. (2006), Stainton (2006a), and Hall (2019), among others. They argue that fragments are base-generated as fragments. The evidence provided includes the fact that nonfinite, tenseless verb forms are possible as fragments (unlike a full clause requiring a verb to be inflected for tense), and the fact that subject pronouns can appear in the default case, such as the use of the default accusative case in the following English example.

(76)

A: Who wants candy?

B: Me!

Without a full clausal structure, fragments need to resort to semantic and discourse mechanisms to account for their properties. This shift is not far-fetched. In fact, none of the properties listed in Table 1 requires fragments to have clausal structures. For item (a) in Table 1, ne can attach to any categories to form questions, avoiding the problem of not having an acceptable underlying structure for FQs. The use of shi in item (b) can be captured in terms of whether a fragment uses shi to express a contrastive focus, as demonstrated by the non-use of shi in FAs to yes-no questions/FCs in (59-63) and the use of shi in FAs to wh-questions (64), against the generalization stated in (b). The categorical constraint in item (c) and the selective island conditions in item (d) can be due to the possibility of an element in the antecedent clause becoming a discourse topic, and the fragment contrasts with the topic identified in the antecedent. Item (e), the apparent possibility of P-stranding, even though Chinese cannot overtly move the object of a P away from the P, fares better with the proposal that fragments are not the result of movement from within the PP. Finally, for the connectivity effect in item (f), Wei resorts to a semantic approach for FAs to yes-no questions/FCs. The same account can be extended to FQs/FAs to wh-questions. For detailed semantic accounts for connectivity effects, readers are referred to Sperber and Wilson (1986), Heycock and Kroch (1999), Culicover and Jackendoff (2005), Progovac et al. (2006), Stainton (2004, 2006a, 2006b, 2016), and Hall (2019), among others.

4. Conclusion

In order to understand the properties of fragments, the data and claims made in the literature have been critically examined. Wei's published works on fragments, differentiating fragments into different types structurally and derivationally, set a good foundation to study the issues more carefully, refine empirical generalizations further, and revise analyses accordingly. With these, it is possible to move toward a unified analysis for all fragments. Nonetheless, it is a question what such a unified analysis is. An expanded search for relevant data revealed that neither the base–generation approach nor the movement + deletion approach as sketched in Table 2 is sufficient to accommodate all the fragment constructions. A last logical option points to the analysis of fragments as fragments. This option captures all the relevant facts except connectivity effects. The relevance of connectivity effects means a semantic account needs to be adopted instead of the widely adopted syntactic approach, which often takes connectivity effects as evidence for the presence of lexical materials in full structures. Accordingly, this study can be considered as support for taking a semantic approach to connectivity effects, although further research will be helpful.

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Notes

- 1. The properties include stripping not obeying the Backward Anaphora Constraint, the full phrasal constituent, but sensitive to the complex NP constraint, in contrast to ellipsis.
- 2. Johnson also mentioned that the term "stripping" might have been first coined by Hankamer (1971), although he uses it only to refer to the cases that would today be called "fragment answers."
- 3. What Wei claimed regarding the obligatoriness and optionality of *shi* with respect to fragment answers to *yes-no* questions/FCs is similar to his works on sluicing—the predicate status of the remnant or fragment matters (Wei, 2004, 2011a).
- 4. However, cases like (i) show that the presence or absence of P in fragment answers to *yes-no* questions/FCs does not affect its interpretation.

(i)

- A: ta dui di-yi-yinhang hen zhichi ma? he to the-first-bank very support Q 'Does he support the First Bank?'
- B: bushi, shi dui di-er-yinhang. not.be be to the-second-bank 'No, it is to the Second Bank.'
- B': bushi, shi di-er-yinhang. not.be be the-second-bank 'No, it is to the Second Bank.' 'No, it is the Second Bank.'

"When the context explicitly specifies that the target of his support is the First Bank, the fragments with or without prepositions in (iB) and (iB'), respectively, are acceptable. Animacy plays a role in some cases. Nonetheless, this raises questions on a grammatical account for the difference observed by Wei (2016). This issue is discussed later in the text.

- 5. Agreement and the choice of morphological cases have also played a major role in establishing dependency relations (see, for instance, Merchant, 2004). Unfortunately, Chinese lacks relevant morphological markings.
- 6. It is not clear if fragment answers to *yes-no* questions and FCs need to be distinguished. They have identical properties. The distinction is kept here simply to present Wei's works faithfully.

In addition, another fragment construction not listed in Table 1—answers to alternative questions, can be included in the construction of fragment answers to *wh*-questions.

(i)

A: ta xihuan pingguo haishi juzi? he like apple or orange 'Does he like apples or oranges?

B: pingguo. apples

- 7. Not included in Wei's discussions is the left-branch condition, which is also irrelevant.
- 8. Also see Wei (2020) for split questions involving a *wh*-question and its response in the form of a *yes-no* question or an alternative question.

9. An issue challenging fragment answers to *wh*-questions being derived by focalization concerns word order. Chinese *wh*-questions do not front their interrogative words. The answer to the *wh*-phrase cannot be fronted, either. For instance, the word order of a full sentence answer has to be the same as that of the *wh*-question (iB'). The word order in (iB"), with the answer to the *wh*-phrase fronted, is not possible as an answer to the question (iA), even though fronting an object to the beginning of a sentence is generally acceptable.

(i)

A: Lisi xihuan shenme yundong? Lisi like what sport 'What sport does Lisi like?'

B': Lisi xihuan bangqiu. Lisi like baseball 'Lisi likes baseball.'

B": #bangqiu, Lisi xihuan. baseball Lisi like

- 10. The irrelevance of P-stranding in fragment cases of Chinese, a language disallowing P-stranding, suggests that the phonological form (PF) movement analysis of fragments proposed by Weir (2014) cannot accommodate fragments in Chinese. Insensitivity to island effects makes the same point.
- 11. As an example, Serbo-Croation (Stjepanović, 2008), a non-preposition-stranding language, disallows P-stranding in regular *wh*-questions but sluicing is possible with P-stranding. Stjepanović (2012, Chapter 4) argued that the loss of P in sluicing is not due to P-stranding; instead, the preposition is dropped in a post-PF component.
- 12. Note that the scope examples for connectivity effects given in Wei (2016, 2018) are not inverse scope cases.
- 13. It is possible that the focus marking *shi* is a verb categorically. However, the fact that the focus function can be served by prosody in place of *shi* shows that the main function of *shi* in fragments is not to make well-formed sentences. Importantly, fragments need not contain a verb.
- 14. The morpheme -ne can also be a pause marker or an attitude marker, with differences in pitch height (see, e.g., Wei & Li, 2018).
- 15. This contrasts with English, which allows fragments in embedded contexts, as shown in, for instance, Weir (2014), which has the following examples (p. 4).

(i)

What did John eat?
Mary {thinks/believes/was told/suspects/said} the cookies.

³A direct translation of the answer in (i) to Chinese is not possible (except with 'said', which can take a direct quote). The copular verb *shi* 'be' is required in Chinese, reminiscent of the contrast between English sluicing and Chinese sluicing-like constructions.

16. A mixed approach is a Q-based approach to clausal ellipsis (see, e.g., Griffiths, 2019; Weir, 2014), which assumes the existence of an antecedent question-under-discussion (a semantic/pragmatic object), with or without movement applying to the clause containing a fragment. Adopting movement to derive fragments in Chinese has difficulties, as seen in the text. Without movement, it can be similar to a semantic account, which is briefly discussed in Section 3.3.3.

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