

Silent Verbs in Northern Mandarin: A Silence Neither Gaps Nor Emptiness Can Fill

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Ji-yung Kim. 2007. Silent Verbs in Northern Mandarin: A Silence Neither Gaps Nor Emptiness Can Fill. *Language and Information* 11.2, 87–103. This paper reanalyzes examples with missing verbs. Northern Mandarin rejects argument nominal phrases after a silent verb, as well as silent verbs inside islands. These restrictions suggest a grammatical process which silences verbs. I propose that these restrictions are the result of VP-topicalization followed by ellipsis. This analysis accounts for the island sensitivity of these constructions: since VP-topicalization feeds ellipsis, constructions with elided VPs are not derivable from configurations where movement is impossible. Also, to avoid topicalization along with the VP, the argument must move out of VP; the subsequent topicalization of the VP containing the argument's trace would then give rise to a configuration where that trace c-commands the moved-out DP. Adjuncts do not pose a problem because they are located outside of that smallest VP-shell. The data presented here are accommodated by neither of Tang's (2001) proposals for silent verbs (gapping and empty verbs). Instead, they provide support for a third source for silent verbs, VP-ellipsis via topicalization. (Korea University)

Key words: Gapping, ellipsis, topicalization, Mandarin, argument, adjunct

1. Introduction

Can one and the same account for gapping apply to English as well as Mandarin? If not, what other mechanism may be at work behind missing verb constructions? This is the question that Tang tackles in his 2001 paper. This paper reinterprets Tang's (2001) work on so-called gapping constructions in Chinese. Tang (2001) shows gapping in Chinese to be extremely limited, and attributes the other instances of what Paul (1999) formerly analyzed as gapping to what he calls empty verbs. However, the exact mechanism which licenses these so-called empty verbs, and the peculiar

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properties of the sentences resulting from that mechanism remain unexplained. Evidence from Beijing Mandarin suggests that what Tang (2001) lumped together as empty verb sentences might need further differentiation. A portion of those “empty verbs” deserve a separate treatment; my proposed alternative is that VP-ellipsis is responsible for these cases.

I begin by presenting facts about silent-verb sentences in Mandarin, and the two main issues they raise: (i) the crosslinguistic perspective concerning the extent of verb movement relative to the subject in English and in Chinese, and (ii) the dialectal divide within Mandarin. The Northern dialect of Mandarin exhibits restrictions on silent-verb sentences distinct from the Southern/Taiwan variant, which has so far been the main focus of previous analyses (Paul, 1999; Tang, 2001): in Beijing Mandarin, the possibility of silencing verbs is dependent on the argument status of the postverbal material in the remnant. The discrepancy between Beijing Mandarin and Southern Mandarin will turn out to be most revealing for the analysis of silent verbs in Chinese; it will become apparent that we need a further differentiation among the cases that fall outside of the purview of gapping.

For the gaps in Beijing Mandarin that neither gapping nor empty verbs can fill, I propose a VP-ellipsis account. The scenario that I posit for VP-ellipsis is very much akin to Huang’s (1984) proposal about null objects in Chinese, and explains the restrictions on the silent verb that we observe in Beijing Mandarin. It also explains the restrictions noted by Tang (2001) on a portion of the so-called empty verb sentences.

2. Gapping in English and Chinese

This section presents the key examples along with Tang’s (2001) account. Tang shows that a slightly revised version of Johnson’s (1996) proposal for English gapping does apply to a portion of Chinese examples. A good portion of Chinese examples, however, exhibit properties very different from the English examples and their Chinese counterparts; they defy a Johnson-style account as well as Tang’s tentative proposals.

The examples of ‘gapping proper’ are presented first along with Tang’s successful account. The characteristics of these examples should be of special interest to the reader, as they are not shared by the examples that motivate the alternative analysis that I propose in §3.

2.1 Gapping

Gapping structures in English seem fairly uniform. Consider the following examples of English gapping:

- (1) a. Tony gave Meadow a car, and (Tony gave) A.J. a PlayStation.
 b. Tony made Meadow clean his mother’s house, and (Tony made) A.J. brush his teeth.
- (2) a. Asians eat rice, and Italians (eat) pasta.
 b. Tony fell twice, and Carmela (fell) once.

(1) and (2) differ in the material that is left in the wake of the silent verb. Let us call this material the remnant, following Johnson (1996). In (1), the remnant consists only of postverbal material, elements that follow the missing verb. In (2), the remnant contains the subject, which would have preceded the verb, had this latter not been silent.

The two sets of “gapping” seem to be non-distinct in English, insofar as they are uniformly grammatical, and can be accommodated by one and the same analysis (see Johnson (1996)). In the case of Chinese, however, the two sets of “gapping” do not behave alike, as illustrated by the following examples:¹

- (3) a. Laoshi song-le Zhangsan yi-ben shu, (song-le) Lisi yi-zhi bi.
 teacher give-Perf Zhangsan 1-CL book give-Perf Lisi 1-CL pen
 ‘The teacher gave Zhangsan a book and Lisi a pen.’
- b. Yisheng quan Zhangsan jie yan, (quan) Lisi jie jiu.
 doctor persuade Zhangsan quit smoke persuade Lisi quit wine
 ‘The doctor persuaded Zhangsan to quit smoking and Lisi to quit drinking.’
 Tang (2001, 209)
- (4) a. Nanren chi mi, beiren *(chi) mian.
 Southerner eat rice Northerner eat noodles
 ‘Southerners eat rice, and Northerners (eat) noodles.’ Tang (2001, 220)
- b. Ta lai-guo wu-ci, wo (lai-guo) yi-ci.
 He come-Exp 5-CL I come 1-CL
 ‘He has been here five times, and I once.’ Paul (1999, 213)

These examples parallel the structure of the English ones in (1) and (2). However, (3) and (4) exhibit a contrast that is not found in English: (3), where the remnant consists only of postverbal material, is uniformly good, while (4), where the remnant includes the subject, is not. Johnson’s (1996) proposal for gapping can be successfully extended to (3), as shown in the synopsis of Johnson (1996) and Tang (2001) that follows in §2.2. The discussion will also make it evident that (4) cannot be accommodated in the same manner; instead, the examples in (4) necessitate a different treatment, as I discuss in §2.3.

2.2 Gapping as ATB-movement

Gapping (illustrated in (1) and (2) above for English) exhibits a few peculiarities that need explaining. For one thing, gapping is restricted to coordinated structures:

- (5) a. Vivek likes Chinese action films, but Nishi ?*(likes) sci-fi movies.
 b. While some like beans, most *(like) chocolate. Johnson (1996, 20)

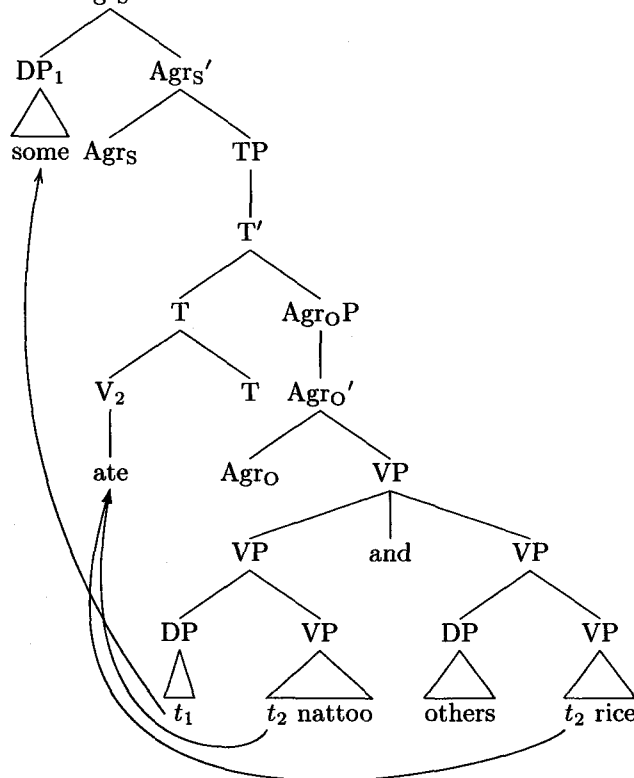
¹ Abbreviations: Perf (perfective); CL (classifier); Exp (experiential); DE (relative-clause particle).

Also, as various authors (Hankamer, 1979; Neijt, 1979; Sag, 1980) have observed, English gapping is subject to locality restrictions, which are absent from other processes such as ellipsis:²

- (6) Some ate nattoo, and Mittie claimed that others *(ate) rice.
 Johnson (1996, 21)

To account for these distinctive features of gapping, Johnson (1996) proposes that we analyze English gapping as ATB (across-the-board) movement of (the phrase³ containing) the verb that gaps:

- (7) ... Agr_SP Johnson (1996, 23)



According to this analysis, the verb *ate* ATB-moves out of the conjunct VPs. The subject of the first conjunct moves out of the first conjunct VP into [Spec,Agr_SP], presumably driven by EPP. Movement of the subject from the first conjunct does not appear to violate Ross's Coordinate Structure Constraint because it is an instance of A-movement.⁴

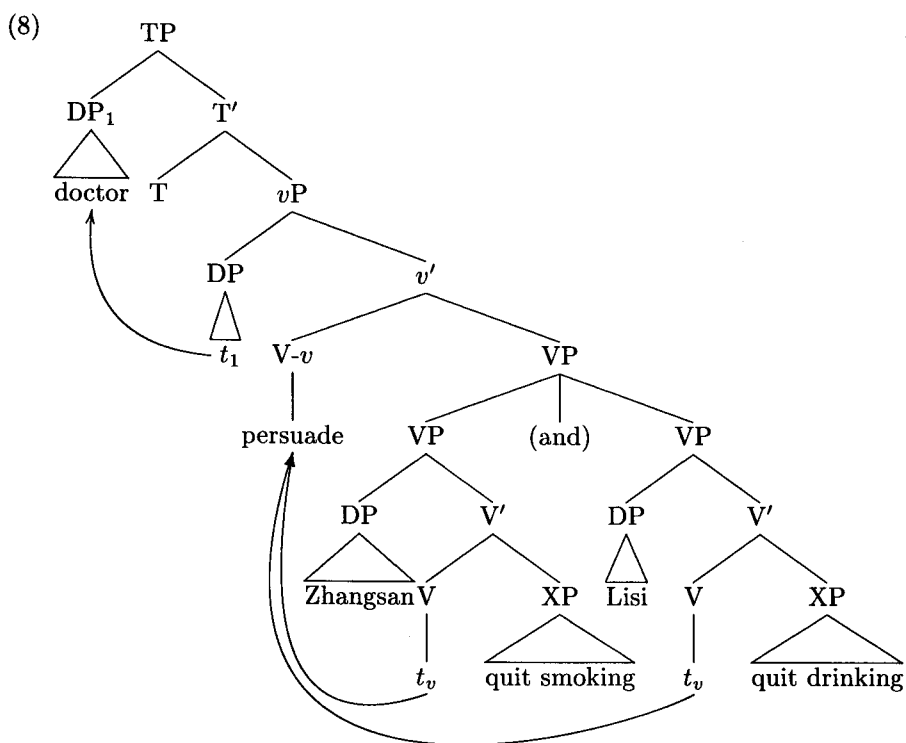
² We will see below that this is one other trait that distinguishes English ellipsis and (some cases of) Chinese ellipsis.

³ Johnson (1996) ultimately opts for an analysis where the ATB-moved element is a phrase, not a single head. What I illustrate here is his analysis from an earlier section, for ease of exposition.

⁴ See Johnson (2004) and the references cited therein for detailed discussion of this assumption.

The two properties of English gapping, along with others not illustrated here, follow from this analysis. First, the restriction of gapping to coordination (illustrated in (5)) is attributed to the fact that ATB-movement is itself found only in coordinated structures. Second, the locality restrictions on gapping (illustrated in (6)) can now be reinterpreted as the well-known locality restrictions on movement. Furthermore, (1), where the remnant does not contain the subject, can receive the same account as (2), where the remnant does, once we assume that the subject+verb string, instead of the V head, ATB-moves (Johnson (1996, p. 65), Larson (1988; Larson (1990)).

Tang (2001) successfully applies this “gapping as ATB-movement” analysis to the Chinese data in (3). Given that Chinese has been independently argued to exhibit a shorter verb movement, from V to *v* (Huang, 1997), Tang (2001) claims that it is such shorter movement in an across-the-board (ATB) fashion that derives the gapping examples in (3).⁵



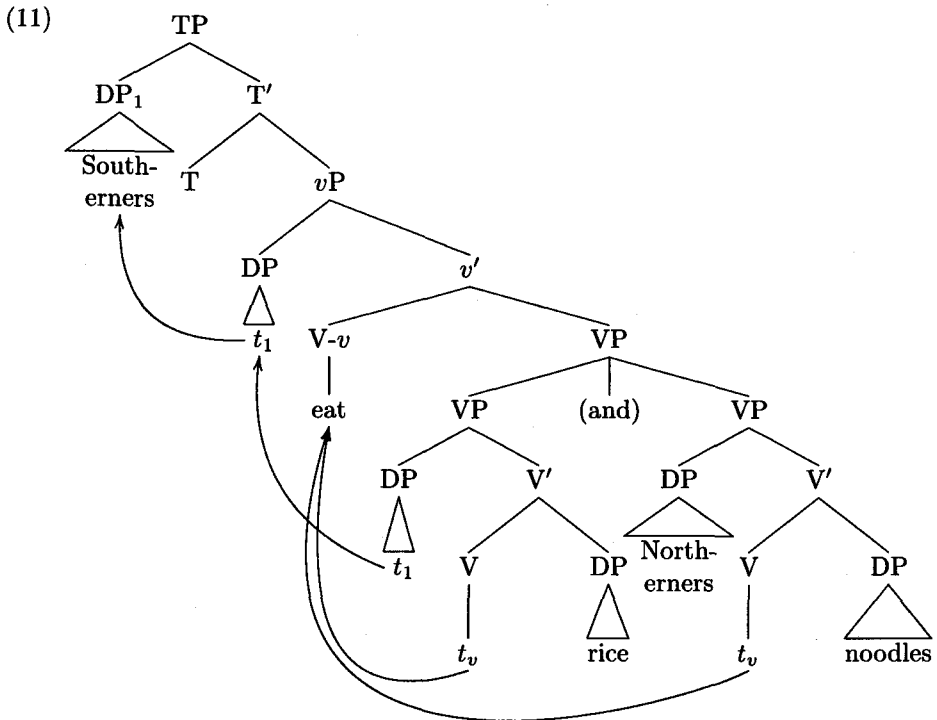
Tang’s (2001) proposal for (3) is all the more convincing because it brings together two independent proposals: Johnson 1996, which accounts for the properties of gapping structures in general, and Huang 1997, which highlights the differences between English and Chinese in the extent of verb movement. In fact, *v* might be the farthest that the verb can move in Chinese. Unlike English verbs, the Chinese

⁵ For the readers’ convenience, I use English glosses for the Chinese examples in the trees that follow.

ones (including auxiliaries) always follow sentential adverbs and negation (Huang, 1993):

- (9) a. Zhangsan bu xihuan Lisi.
 Zhangsan not like Lisi
 'Zhangsan does not like Lisi.'
 - b. *Zhangsan xihuan bu Lisi.
 Zhangsan like not Lisi
 - (10) a. Zhangsan changchang ma Lisi.
 Zhangsan often scold Lisi
 'Zhangsan often scolds Lisi.'
 - b. *Zhangsan ma changchang Lisi.
 Zhangsan scold often Lisi
- Tsai (1994, 220)

But it is worth noting that this assumption concerning the extent of verb movement in Chinese versus English only gets us half of the contrast between (3) (where the remnant consists of postverbal material only) and (4) (where the remnant contains the subject) observed in Chinese. A successful account of the difference between the two languages also hinges on the fact that the subject in Chinese originates too high to be part of what is conjoined. Supposing that the Chinese subject originated within the VP like the English subject illustrated in (7), we could derive the *ungrammatical* (4a):



As illustrated in (11), for the subject to be part of the remnant in (4a), in parallel with the English sentences in (2), the Chinese subject would also have to be base-generated low as in English, below the *vP* at the very least.⁶ That assumption is incorrect, however: it predicts that Chinese subjects would exhibit scope interaction with lower elements, like the English one illustrated below:

- (12) [_{AgP} [A boy]₁ [_{VP} often [_{VP} *t*₁ doodles in my class]]].

Assuming that English subjects originate inside the VP, this surface word order is the result of the DP *a boy* moving to [_{Spec,AgP}]. The DP can therefore be construed in two sites, (i) its surface position or (ii) the position of its trace, thus giving rise to the two readings represented below:

- (13) a. $\exists x[x \text{ is a boy \& } x \text{ often doodles in my class}]$
 ‘There is some boy who often doodles (whenever he is) in my class.’
 b. often [$\exists x[x \text{ is a boy \& } x \text{ doodles in my class}]$]
 ‘It is often the case that some boy or other doodles in my class.’

In (13a), the existential quantifier (associated with the indefinite noun) takes scope over the adverb ‘often’, thus giving us the reading that there is a specific individual who can be characterized as an repeat offender. In (13b), the opposite scope configuration holds, resulting in the construal that doodlers are a frequent occurrence in my class, and the doodlers need not be one and the same individual.

In contrast, the Chinese counterpart of (12) is not ambiguous:

- (14) You yi-ge nan-sheng changchang zai wo-de ke-shang hua-hua(r).
 exist 1-CL male-student often at I-DE class-on draw-picture
 ‘There is a boy who often doodles in my class.’

The interpretation of this sentence corresponds to the representation in (13a). To express the other reading represented in (13b), a different structure is employed instead:

- (15) Zai wo-de ke-shang changchang you yi-ge nan-sheng hua-hua(r).
 at I-DE class-on often exist 1-CL male-student draw-picture
 ‘In my class, it is often the case that a boy doodles.’

Note the close similarity between the Chinese surface word order and the logical forms given in (13).

Thus, as Tang (2001) shows, the difference we observe between the English and the Chinese examples in (1)–(4) correlates with the extent of verb movement relative to the underlying subject position in the two languages.

⁶ Although Tang (2001) does not discuss this consideration, this oversight poses no problem for his analysis. As my discussion in this portion makes evident, Tang’s (2001) implicit assumptions about the positions of the subject and the verb in Chinese are in keeping with facts about word order and interpretation.

2.3 Gapping vs. “empty verbs”

What about (4) (repeated below)?

- (4) a. Nanren chi mi, beiren *(chi) mian.
 Southerner eat rice Northerner eat noodles
 ‘Southerners eat rice, and Northerners (eat) noodles.’ Tang (2001, 220)
- b. Ta lai-guo wu-ci, wo (lai-guo) yi-ci.
 He come-Exp 5-CL I come 1-CL
 ‘He has been here five times, and I once.’ Paul (1999, 213)

Does Tang’s (2001) version of Johnson (1996) extend to these examples as well? The short answer is that it does not. In fact, according to Tang (2001), the examples in (4) differ from those in (3) in more than one way. To begin with, they do not exhibit island effects, which fact suggests the lack of a movement operation involved in their derivation.⁷ On the other hand, they exhibit sensitivities of an entirely different type. Tang (2001) claims that the type of verb and the interpretation of the to-be-stranded nominal seem to determine the grammaticality of (4):

- (16) Some characteristics of the empty verb sentences in Chinese:
- a. The empty verb sentences should not be non-episodic.
- b. The second nominal [in the remnant] should not be existential/indefinite.
 Tang (2001, 207)

Tang (2001) analyzes (4) as involving phonetically empty verbs, whose occurrence is restricted by the conditions in (16).

However, Tang’s (2001) proposal of “empty verbs” cannot be the full story for (4). For instance, it fails to account for the robustly attested difference in judgments that vary according to regional variants of Mandarin. The factors that decide between the cases in (4) differ from one dialect of Chinese to another. Paul (1999) and Tang (2001) each gives a detailed account of what those factors are, with respect to the Southern variant of Mandarin.

In Beijing Mandarin, the main focus of this study, the deciding factor is the argument status of the postverbal material: verbs which we typically classify as intransitive can be silent, leaving behind an adjunct specifying the duration or frequency of the event it denotes. These adverbs can be full-blown adverbs, as *(bu)chang* ‘(not) often’ in the example below:

- (17) Zhangsan chang pao-bu, Lisi buchang (pao-bu).
 Zhangsan often run-step Lisi not-often run-step
 ‘Zhangsan jogs often, and/but Lisi not often.’

The adverbs can also take a form identical to nominal phrases, as illustrated above in (4b) (numeral + classifier (+ noun)).

So-called transitive verbs, on the other hand, cannot be omitted:

⁷ We will see in the next section that in fact island effects are observed in a subset of the cases Tang (2001) attributes to empty verb sentences. Those are the cases which form the main focus of this paper. Island insensitivity, as claimed by Tang (2001) only apply to (4a).

- (18) Zhangsan chi-le san-ge pingguo, Lisi *(chi-le) si-ge juzi.
 Zhangsan eat-Perf 3-CL apple Lisi eat-Perf 4-CL orange
 'Zhangsan ate three apples and Lisi four oranges.' Li (1988, 41)

The * here indicates that Northern Mandarin speakers reject this sentence if the verb in the second conjunct is silent, contrary to the Southern speakers' judgments reported in Li (1988), Paul (1996; Paul (1999), and Tang (2001).⁸ This is the main divergence reported between Northern dialects of Mandarin and the Southern variants, as observed in Paul (1999, p. 217). This discrepancy should not be dismissed as a mere variation, however; the judgments are very robust, and hint at a division between arguments and adjuncts that resists the frequent blurring between the two categories.

For instance, the verb can be silent even when one might be tempted to characterize the relation between the verb and the time adverbial as closer than a "modification" relation:

- (19) Ta deng-le yi-ge xiaoshi, wo (deng-le) liang-ge (xiaoshi).
 He wait-Perf 1-CL hour I wait-Perf 2-CL hour
 'He waited an hour, and I, two hours.'

Furthermore, the adverb + object fused phrases discussed in Huang (1997), which show earmarks of a common noun phrase, also behave like argument DPs with regard to the silent verb(phrase)s:

- (20) Zhangsan kan-le yi-tian shu, Lisi *(kan-le) liang-tian baozhi.
 Zhangsan read-Perf 1-day book Lisi read-Perf 2-day paper
 Intended meaning: 'Zhangsan read a book for a day, Lisi the paper for two days.'

This is the puzzle that Beijing Mandarin presents. The analysis I propose for it in the following section will have interesting consequences, not only for this variant of Mandarin, but for other dialects as well.

3. VP-ellipsis in Chinese

This section lays out my analysis of (4) and (17)–(20). I show that a particular version of VP-ellipsis can get us the argument-adverb asymmetry we seek to capture.

Before I present the analysis in detail, I summarize in §3.1 why we cannot rely on gapping to explain the structures in (4) and (17)–(20). I then turn to the discussion of the proposal in §3.2, after reviewing Johnson's (2000) discussion of parallels between VP-ellipsis and VP-topicalization. These parallels also hold in Chinese. Given these considerations, it will become apparent that a new analysis is required for the Beijing Mandarin examples in (4) and (17)–(20), and that VP-ellipsis (via VP-topicalization) may be a good candidate for the task.

⁸ From this point on, I substitute the usual asterisk for this symbol.

3.1 Why not gap?

As discussed in §2.3, two assumptions are indispensable to Tang's (2001) analysis of the structures in (3). First, the placement of the subject relative to the verb is connected to the base position of the subject and the extent of verb movement in a given language. Second, gapping is related to verb movement and the position of the subject. It is impossible to extend the gapping analysis in such a way as to simultaneously maintain these crucial assumptions and explain (4) and (17)–(20).

Beside this theoretical consideration, there are also significant differences between (3) versus (4) and (17)–(20) which argue against a unified analysis for the two sets. The gapping structures in (3), where only postverbal material stays in the remnant, do not exhibit any asymmetry of the sort discussed in §2.3. For one thing, objects (whether direct or indirect) as well as adverbs are allowed to stay in the remnant, as shown in (3), repeated below. This is very much like the English example (1).

- (3a) Laoshi song-le Zhangsan yi-ben shu, (song-le) Lisi yi-zhi bi.
 teacher give-Perf Zhangsan 1-CL book give-Perf Lisi 1-CL pen
 'The teacher gave Zhangsan a book and Lisi a pen.'

In addition, (3) shows that it is perfectly acceptable to have an "existential/indefinite" nominal in the remnant in gapping structures, which (4) showed not to be possible.

Still another trait that sets gapping apart is the fact that in gapping, the construction-initial subject has scope over the material in the remnant:

- (21) [Not every girl]₁ ate a GREEN banana and her₁ mother (ate) a RIPE one.
 Johnson (1996, 33)

One possible construal of this sentence is one where *not every girl* binds the pronoun *her*. This is not a case of accidental coreference, given that *not every girl* is not a referential expression and *her* is in the singular form. The cases characterized by Tang (2001) as Chinese gapping behave the same way:

- (22) Bu-shi [mei-ge haizi]₁ dou gei ta₁-baba yi-liang che, ta₁-mama yi-jian
 not-be every-CL child all give his-dad 1-CL car his-mom 1-CL
 fangzi.
 house
 'Not every child₁ gives his₁ father a car and his₁ mom a house.'

In this example as well, a bound interpretation for the pronoun *ta* is possible. Also, just as with the English example, the singular form of the pronoun *ta* is used (despite the availability of the pronoun *tamen*), and the subject of the first conjunct is quantificational as well. Given Johnson's (1996) and Tang's (2001) analyses of the above sentences in the respective languages, where the construction-initial subject is not part of either conjunct, this is not at all surprising. The first subject c-commands (and is thus an eligible binder for) the pronoun in the second conjunct (as shown in the tree in (7)). The cases in (4) and (17)–(20), on the other hand, behave differently in this respect:

- (23) Bu-shi mei-ge haizi dou pao-le yi-ge xiaoshi, tamen-de mama liang-ge.
not-be every-CL child all run-Perf 1-CL hour they-DE mom 2-CL
'Not every child ran for an hour and his mom for two.'

With (23), there must be a fairly explicit context for the example, and the pronoun is the plural *tamen* 'they' (as opposed to the singular *ta*). This suggests that this is not a case of binding but of *coreference*, which has little to do with scope or c-command. This is yet another piece of evidence supporting a treatment for (4) and (17)–(20) which is distinct from the gapping analysis for (3).

Still, Tang's (2001) "empty verb" proposal, summarized in §2.3 above, will not do. There is something that (3) and (4), (17)–(20) do have in common, at least in the Beijing variant of Mandarin: (4) and (17)–(20) also exhibit sensitivity to islands.

- (24) Subject island

*Zhangsan shui(-le) san-ge xiaoshi, ni [] si-ge xiaoshi rang wo danxin.
Zhangsan sleep(-Perf) 3-CL hour you 4-CL hour make me worry
Intended meaning: 'Zhangsan sleeps/slept 3 hours, and your sleeping 4 hours worries me.'

Consultant comment: Without the verb *shui* 'sleep' repeated, the second clause simply means that 'you have me worried for 4 hours'.

- (25) Complex NP island

*Zhangsan pao-le san-ge xiaoshi, danshi wo bu-neng jieshou Lisi [] wu-ge
Zhangsan run-Perf 3-CL hour but I not-can accept Lisi 5-CL
xiaoshi de shishi.
hour DE fact
Intended meaning: 'Zhangsan ran 3 hours, but I cannot accept the fact that Lisi ran 5 hours.'

- (26) Adjunct island

*Yinwei wo pao-le san-ge xiaoshi, ni [] liang-ge xiaoshi.
because I run-Perf 3-CL hour you 2-CL hour
Intended meaning: 'Because I ran 3 hours, you ran 2 hours.'

As neither the gapping analysis nor the "empty verb" analysis explains these examples, a different explanation is called for. §3.2 discusses one such proposal.

3.2 VP-ellipsis and VP-topicalization

It is a common assumption in the literature that sensitivity to islands is characteristic of constructions derived from syntactic operations. For instance, the ATB V-to-v movement accounts for the island sensitivity of the examples in (3). By analogy, the fact that the constructions under scrutiny ((4) and (17)–(20)) exhibit similar locality restrictions suggest that these are not simply cases of verbs without any phonetic content from the outset, but the result of phonetically suppressing a moved element.

Such an approach has been discussed in Johnson (2000): what if VP-topicalization were to take place, moving the VP out and leaving the remnant that we

see/hear, and the topicalized VP is dropped (i.e., is left unpronounced)? As Johnson (2000) points out, this idea is akin to Huang's (1984) proposal about null objects in Chinese.

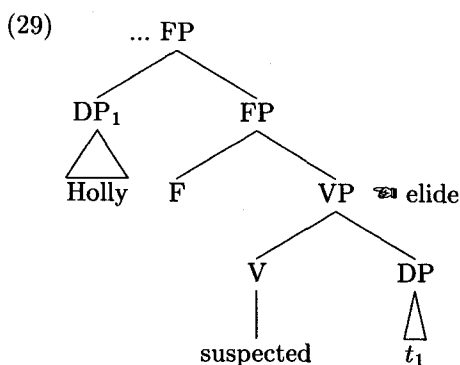
Johnson (1996) considers the various similarities between gapping and ellipsis in English, the latter of which is illustrated below:

(27) Gary talked to Betsy yesterday, and Mittie did [VP] today.

Johnson (1996, 5)

(28) Sally suspected Joe, but he didn't [VP] Holly.

(28) looks very similar to the Chinese examples in (4) and (18). It is an instance of what Levin (1986) labels as "pseudogapping", and is analyzed by Johnson (2000) as an instance of VP-ellipsis after non-verbal material has scrambled out of the VP (thanks to elision of the VP in the tree below):⁹



However, the idea is probably *not* accurate for English VP-ellipsis, since VP-ellipsis in this language is *not* sensitive to islands, as noted by Sag (1980, p. 13):

(30) a. John didn't hit a home run, but I know [NP a woman who did (hit a home run)].

b. That Betsy won the batting crown is not surprising, but [CP that Peter didn't know she did (win the batting crown)] is indeed surprising.

The insensitivity to islands illustrated in (30) directly contradicts what a VP-topicalization analysis would predict for such VP-ellipsis examples.

One lesson to draw from the literature on English gapping, however, is that VP-ellipsis is a viable explanation for a silent verb (phrase): except for the absence of the auxiliary, the Beijing Mandarin examples in (4) and (17)–(20) could be instances of deleting a VP under identity. Moreover, these examples show strong characteristics of sentence grammar, in their sensitivity to (i) the relation between the postverbal material and the verb (as discussed in §2.3), and to (ii) islands (see

⁹ "FP" is used here since the exact identity of the projection is immaterial. The tree is adapted from Johnson (2000, p. 23).

below). We thus need a mechanism that would (i) mimic the effects of VP-ellipsis, while (ii) reflecting these grammatical sensitivities.

Let us therefore suppose that VP-ellipsis in Chinese is an instance of elision where the VP is topicalized first, and is then phonetically suppressed.

As alluded to above, my analysis of VP-ellipsis is very much like Huang's (1984) proposal about Chinese null objects. Null objects in Chinese, Huang (1984) observes, are not bound by a matrix argument:

- (31) Zhangsan₁ xiwang [Lisi keyi kanjian $e_{2/*1}$].
 Zhangsan hope Lisi can see
 'Zhangsan₁ hopes that Lisi can see him₂.'

(Adapted from Huang (1984, 538))

Neither of the arguments *Zhangsan* nor *Lisi* binds the null object. Huang (1984) points out that this state of affairs is parallel to that of null objects in the presence of an overt topic:

- (32) [Nei-ge ren]₂, [Zhangsan₁ xiwang [Lisi keyi kanjian e_2]].
 that-CL man Zhangsan hope Lisi can see
 'That man₂, Zhangsan₁ hopes that Lisi will be able to see him₂.'

(Adapted from Huang (1984, 542))

These examples suggest the following analysis for (31):

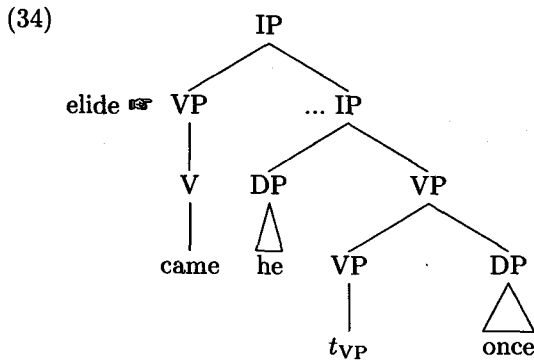
- (33) [_{Top} e_2], [Zhangsan₁ xiwang [Lisi keyi kanjian e_2]].
 Zhangsan hope Lisi can see

(Adapted from Huang (1984, 542))

Null objects appear in embedded clauses as well as in matrix ones. Given this fact, Huang (1984) assumes that the position to which the object topicalizes is the topic position of the matrix clause.

I propose that Huang's account of null objects finds straightforward application in (4) and (17)–(20), assuming that it is a VP (rather a DP) that is topicalized and then elided.

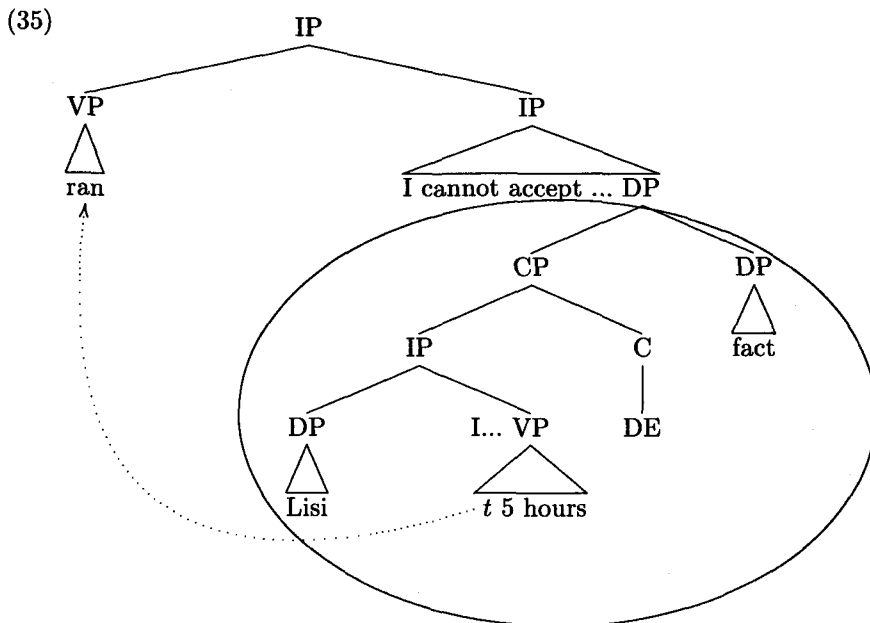
In the examples under discussion, the VP has to move only so far as to allow the subject to stay in the remnant; therefore, the working hypothesis is that the VP topicalizes to the highest IP (or some higher, discourse-related position such as TopP) above its subject. This structure is illustrated in the tree below, which shows the leftmost portion and the 2nd conjunct of (4b):



Let us now see how the analysis predicts the island effects observed in §3.1.

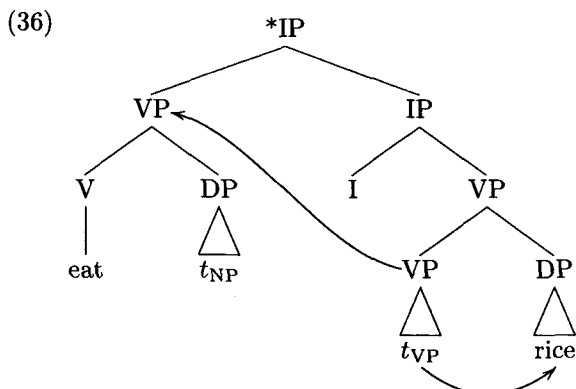
- (25) *Zhangsan pao-le san-ge xiaoshi, danshi wo bu-neng jieshou Lisi [] wu-ge
 Zhangsan run-Perf 3-CL hour but I not-can accept Lisi 5-CL
 xiaoshi de shishi.
 hour DE fact
 Intended meaning: 'Zhangsan ran 3 hours, but I cannot accept the fact
 that Lisi ran 5 hours.'

To form this example, the VP has to topicalize/move out of the DP *Lisi pao-le wu-ge xiaoshi de shishi* 'the fact that Lisi ran 5 hours' (encircled in the tree below), before it can be elided. This move is not allowed, and the construction is ruled out as a result:



The heretofore puzzling asymmetry between adjuncts vs. arguments also falls out in a straightforward manner. For the object to escape the to-be-elided VP, it has

to move out first. Let us say it does, either via heavy NP shift or right-node raising (or some other movement mechanism). The VP containing the object's trace would then topicalize, thus giving rise to a configuration where the trace of the object is not c-commanded by the moved-out original. This is the exact opposite of the configuration where binding of a trace occurs, and is thus ruled out by Fiengo's (1977) Proper Binding Condition:



Adjuncts, on the other hand, are located *outside* of the VP which moves (and is elided), and can thus be “stranded” after this movement operation takes place. No problem arises in this case, given that adjuncts do not have to move out of the innermost VP in the first place.

A third corollary of this analysis is that one of Tang's (2001) characteristics of empty verb sentences (repeated below from (16)) is no longer a mystery:

- (16) Some characteristics of the empty verb sentences in Chinese:
- a. The empty verb sentences should not be non-episodic.
 - b. The second nominal [in the remnant] should not be existential/indefinite.
- Tang (2001, 207)

Both variants of Mandarin agree on the second point (16b), and these are the set of examples to which the VP-ellipsis analysis proposed in this paper could be uniformly applied. It is a long-standing crosslinguistic observation that nominals with indefinite existential interpretation are VP-internal. When such nominals escape the VP, they are no longer under the scope of the default existential closure (Diesing, 1992; Tsai, 1994, among others), and would be ruled out in precisely the same way as (16) states. When these nominals stay within the VP, they would be topicalized and elided along with the verb, violating the lower bound on ellipsis (see Johnson (1996, p. 2), for discussion of the lower bound on gapping).

4. Concluding Remarks

Northern Mandarin sentences with silent verbs fall into two main categories: (a) those where the remnant consists only of postverbal material and (b) those where

the remnant includes the subject. We saw that the (a) cases can be analyzed on a par with English gapping, using an analysis analogous to Johnson (1996): the verb ATB-moves to *v*, leaving behind the remnant. Under this approach, the features distinguishing gapping from ellipsis follow naturally: gapping, as an instance of (ATB-)movement, is (i) restricted to coordination and (ii) island-sensitive. Furthermore, given that the subject of the first conjunct is the one that moves to the surface subject position (i.e., [Spec,Agr_SP]), it follows that it has scope over the subject of the second conjunct (which is stranded in the remnant), and can thus bind a pronoun in the second conjunct.

Adopting Johnson (1996) and Tang (2001) has an added advantage: a principled account of why the Chinese (b) cases do not fall under the rubric of gapping, unlike their English counterparts. While the English subject is underlyingly low enough to be stranded in the remnant, the Chinese subject seems to originate higher, as independently show by the paucity of scope interaction between the subject and other elements in the sentence. This was illustrated and discussed in §2.3.

I have thus concluded that the Chinese (b) cases are *not* gapping in the Johnsonian sense. First, the Chinese subject cannot be stranded inside the phrase out of which the verb ATB-moves, since it does not start out there in the first place. Secondly, in the (b) cases, arguments of the verb cannot stay in the remnant, either; adjuncts, in contrast, can. Thirdly, the subject of the first conjunct does not have scope over the subject of the second one, as illustrated in §2.3. Interestingly enough, however, the (b) cases *do* exhibit island sensitivity.

To account for these properties, I proposed that what is happening in the Chinese (b) cases is ellipsis (or “drop”) of a VP that has been topicalized. The subject and the adverb were never inside of this VP that elides, and thus appear to be left behind. Objects, on the other hand, originate inside the VP and do not manage to escape the VP prior to its movement (and subsequent ellipsis). Also, since neither conjunct’s subject is stranded inside the VP, it follows that neither has scope over the other.

There is a third category of sentences with silent verbs attested in Southern Mandarin, but not Northern Mandarin. These are the sentences where the remnant includes both the subject and the object, and which Tang (2001) partially captures using (16). Evidently, these cases should be (and are) ruled by my proposal, and should thus be attributed to another source. I leave the elucidation of that third source to future research.

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