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Control and Raising Passives, and Why Mandarin Does Not Smuggle

Na Liu • C.-T. James Huang

Abstract. Collins (2005) proposes a smuggling approach to English passives that solves some problems associated with the traditional analysis. This article will show that while English passives involve smuggling, Mandarin passives do not, and offer an explanation for this difference. We first provide evidence that Mandarin passives can have not only control structures (as previously assumed) but also the possibility of a raising derivation involving A-movement, thus ruling out control as the sole reason for the absence of smuggling. We then attribute the absence of smuggling in Mandarin to the existence of vP-internal movement, which implies that Chinese allows multiple Specs of vP while English does not. This analysis helps tie together a number of otherwise unrelated differences between these languages (vP-internal movement, quantifier float, and constituency). We see the results as falling within the basic tenets of the theory of UG: While UTAH and Minimality are presumably universal requirements, individual grammars may employ different strategies to satisfy them.

Key words: passives, control, raising, smuggling, Mandarin

1. Introduction

N. Liu

1. Foreign Languages College, Tianjin Normal University, West Binshui Road #393, Xiqing District, Tianjin 300387, China
2. Department of Chinese & Bilingual Studies, EF406, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong
email: kristyliu10@126.com

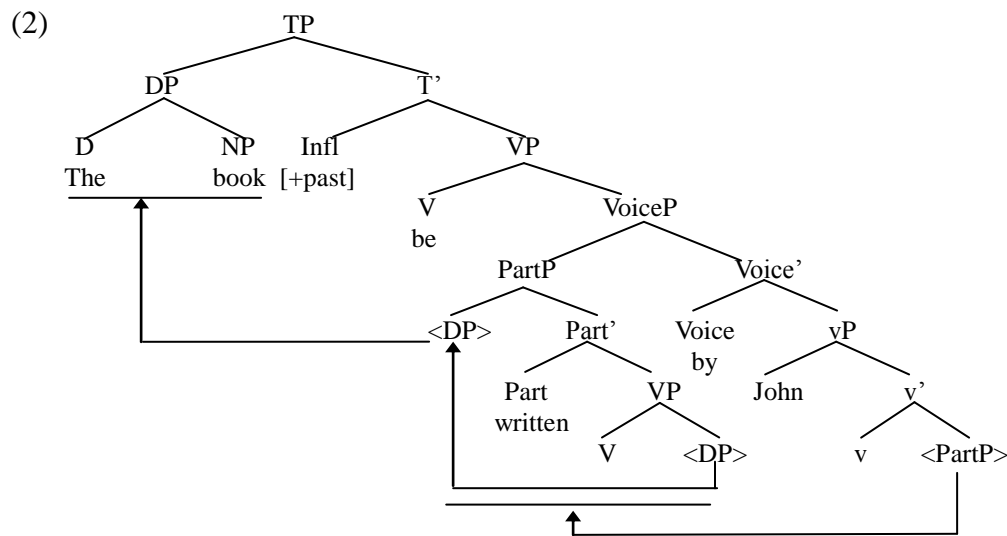
C.-T. James Huang

Department of Linguistics, Harvard University, 307 Boylston Hall, Cambridge, MA 02138 USA
email: ctjhuang@fas.harvard.edu

Collins (2005) points out that the standard analysis of the English *be* passive (Jaeggli 1986, Baker 1988, Baker, Johnson & Roberts 1989, and many others), with the external argument (EA) appearing in different syntactic positions for actives and passives, violates Baker's (1988:46) Uniformity of Theta-Assignment Hypothesis (UTAH). He proposes an underlying structure like (1), in accordance with UTAH, with the EA appearing in Spec of vP for the passive as it does in the active:

(1) [TP e_2 T [VP *be* [VoiceP *by* [vP *John* [v' v [PartP *written* the book]]]]]]

In order to form the passive, the underlying object *the book* needs to move to e_2 in the Spec of TP. However, direct movement of *the book* to e_2 crossing the EA *John* is prevented by Relativized Minimality (RM) or the Minimal Link Condition (MLC). To circumvent this problem, Collins (2005:90) proposes a smuggling approach to passivization, as illustrated in (2):



The main points of this hypothesis are as follows. *By* is the head of VoiceP taking a vP as its

complement. The external argument is merged in Spec, vP in the same way as in the active. Movement of the internal argument *the book* to the Spec, TP position is carried out in 2 steps: First, the participle phrase *written the book* is moved to Spec, VoiceP, and then *the book* is moved to Spec, TP. The two-step process effectively smuggles the internal argument to Spec, TP crossing the EA *John* without violating RM or the MLC. The result strands the EA in Spec, vP but, crucially, does not produce an adjunct PP as in traditional analyses.

The underlying structure of *be* passives proposed by Collins comes close to that of Mandarin *bei* passives proposed by Huang (1999) and Huang, Li & Li (2009, henceforth HLL), in which the external argument is the subject of the complement clause of the passive marker *bei*. A major difference occurs in surface word order between English and Mandarin, however: In English, the main (participle) VP appears before the agent, but in Mandarin, the VP follows the agent—precisely as it does in the corresponding active. This is clear from the ‘long-passive’ example in (3) below with an overt external argument (Lisi). Although this is less clear from the ‘short (agentless) passive’ in (4), everyone who postulates an implicit agent for it will no doubt place it before the VP as well:

(3) Mandarin long passive: Subject – *bei* - EA - VP

Zhangsan bei Lisi da le.

Zhangsan BEI Lisi hit LE²

‘Zhangsan was hit by Lisi.’

(4) Mandarin short (agentless) passive: Subject - *bei* - [EA] - VP

² The abbreviations used are as follows: Bec: the BECOME head; CL: classifier; COP: copula; EC: empty category; Exp: the experiential marker; LE: the perfective suffix or sentence-final particle.

Zhangsan bei da le.

Zhangsan BEI hit LE

‘Zhangsan was hit.’

There are two logical possibilities to look at this word-order difference between English and Chinese. The first is to simply take it to mean that while in English an object needs to be smuggled in a VP across the Agent phrase before moving to the surface subject position, in Chinese the derivation seems more simple, as the object can move by itself without smuggling. Under this hypothesis, the question then arises how this is possible, assuming (as is natural and independently supported) all the relevant conditions (UTAH, RM and MLC, etc.) to be applicable to both languages. The second possibility is that derivation of the Chinese cases is more complex than meets the eye, as it in fact involves smuggling but its word-order effect becomes invisible for some reason. If we take this hypothesis, it remains to spell out how smuggling is done and its effect gets “undone” on the surface.

In this paper, we argue for the first hypothesis and propose a non-smuggling approach for Mandarin passives and relate the word-order difference to other independent differences between the two languages. This will be carried out in Section 3, where we also briefly take up the second hypothesis (and argue against it). Before we get to the main problem, however, we need to be clear of where the problem is. We address this matter first in Section 2.

2. Reanalysis of the structure of Mandarin *bei* passives

*2.1. The control/predication analyses of Mandarin *bei* passives*

According to Feng (1995), Ting (1995), Huang (1999) and HLL (2009) among others, the Mandarin long *bei* passive can be analyzed as a structure of complex predication, as shown in (5).

- (5) Zhangsan_i bei [_{IP} NOP_i [_{IP} Lisi da le t_i]].
 Zhangsan BEI Lisi hit LE
 ‘Zhangsan was hit by Lisi.’

In (5), the semi-lexical verb *bei* selects an active IP complement, within which a null operator (NOP) moves from the object position of the base verb and adjoins itself to IP. *Bei* and the NOP-clause form a complex predicate, which selects *Zhangsan* as its subject argument. The moved NOP object is coindexed with the matrix subject under predication.

The structure of the short *bei* passive is a control structure (Huang 1999, HLL 2009):

- (6) Lisi_i bei [_{VP} PRO_i da-le t_i]
 Lisi BEI hit-LE
 ‘Lisi was hit’

In (6), *bei* selects an Experiencer subject and a VP complement whose Theme object (a PRO) is moved to Spec, VP, where it is controlled by the matrix subject.

The control/predication analysis for the *bei* passive receives considerable support from a number of facts. First, the subject of *bei* may take subject-oriented adverbs (e.g., *guyi* ‘intentionally’), justifying a base-generated position in which it is assigned an Experiencer theta-role:

(7) Zhangsan guyi bei (Lisi) da le. (Huang 1999:5)

Zhangsan intentionally BEI Lisi hit LE

‘Zhangsan intentionally got hit by Lisi.’

Secondly, the long passives exhibit A'-movement properties, such as long-distance dependencies, as in (8), island effects and possible occurrence with resumptive pronouns as in (9), and occurrence of the relativization marker *suo*, as in (10).

(8) Zhangsan bei Lisi pai jingcha zhua-zou le. (HLL 2009: 125)

Zhangsan BEI Lisi send police arrest-away LE

‘Zhangsan was “sent-police-to-arrest” by Lisi.’

(9) Zhangsan bei wo tongzhi Lisi ba [zanmei *(ta) de] shu dou mai-zou le.

Zhangsan BEI me inform Lisi BA praise him DE book all buy-away LE

‘Zhangsan had me inform Lisi to buy up all the books that praise [him].’ (HLL 2009: 125)

(10) zhexie shiqing bu neng bei tamen suo liaojie. (HLL 2009: 126)

these thing not can BEI they SUO understand

‘These things cannot be understood by them.’

The NOP-movement analysis depicted in (5) assimilates the long passive to a *tough* construction (as analysed by Chomsky 1981). Like the *tough* construction, it exhibits long-

distance dependencies as in (8), subject to island constraints as in (9). The fact that the derivation can be saved with a resumptive pronoun as in (9) further supports the A'-movement hypothesis because such a pronoun always appears in an A'-bound position. As for (10), Chiu (1995) has shown that the long passive may include the particle *suo* in the immediate pre-verbal position. In the mean time, it has been well known that the only other construction with *suo* is the relative clause construction, a typical A'-movement structure, suggesting that the long passive itself has a similar structure.³

Now, if all passives are derived as described, via A'-movement followed by Predication as in (5) or via short A-movement followed by control as in (6), then there is already an answer to the question why Chinese passives do not involve smuggling of the object. In (5), A'-movement of the NOP across the EA *Lisi* is no problem since the latter is in an A-position. In (6), short A-movement around VP does not cross the EA position either, because as assumed in Huang (1999), the EA has been suppressed and does not occur in the structure. In neither case does the movement violate RM or MLC, and smuggling is entirely unnecessary (hence also prohibited).

However, in more recent works, Huang (2013) and Liu (2012) argued for the possibility of a raising derivation for *some* passive sentences in Chinese. If their claim is correct, then the question pops up again why Chinese does not resort to smuggling. We briefly summarize their reasoning and add a new argument for the possibility of raising below.

2.2. *The possibility of a raising analysis for bei passives*

³ Both structures involve predication—turning a proposition into a predicate, denoting a property of the Experiencer subject (for a passive) or the head noun (for a relative). Indeed there is a reason to suppose that the Modern long passive was historically born of the relative clause with *suo*. But we shall not go into it here.

Huang (op cit) and Liu (op cit) observe that short passives and *local* long passives (i.e. the long passives that do not exhibit long distance dependencies) allow idiom-chunks to be fronted under passivization, as in (11-12). Such examples imply a raising analysis for the idiom-chunk subject *pianyi* ‘advantage’:

(11) *pianyi dou bei (ta yi-ge-ren) zhan-guang-le*
advantage all BEI (he alone) take-empty-LE
‘All the advantage was taken (by him single-handedly).’

(12) *zhe-zhong mo yijing bei you-guo haoji ci le.*
this-kind -mor already BEI hu-Exp several time LE
‘This type of saying humorous things has been done several times already.’
(Lit.: *you mo = humor* ‘This *-mor* has been *hu*-ed several times already.’)

Such cases do not arise in a sentence with a subject-oriented adverb like *guyi* ‘intentionally’. This situation is as predicted, because such an adverb implies subject thematicity, and idiom-chunks do not bear argument roles. Given these considerations, when a passive involves neither subject-oriented adverbs nor idiom chunks—as in (13), logically either a raising or a control analysis is possible:

(13) *tade pengyou bei (Lisi) piping-le.*
his friend BEI Lisi criticize-LE
‘His friend got criticized (by Lisi).’

There is an additional argument for the possibility of a raising analysis that we can offer. As has been well known in the literature, in Chinese a passive sentence typically describes an event understood as being unfortunate for or adversative to some individual or other. Very often the individual concerned, being physically or psychologically affected, is the subject of *bei*. This situation is aptly captured in the control/predication analysis, according to which the subject receives an independent theta role, Experiencer/Affectee, which serves as the antecedent of the PRO or NOP under predication. However, it has also been well known that the experiencer/affectee of a passive event is not always the subject of *bei*. The experiencer/affectee can be expressed as an oblique, applicative argument, or its existence may be simply implied. This is clearly the case with an idiom-chunk subject. In the case of (14), the subject cannot possibly be an Experiencer, yet the event of all advantage being taken by him alone may be understood as being unfortunate to someone, possibly the speaker or some other salient individual in context. In fact, the experiencer/affectee may appear as an oblique argument as in (14):

- (14) pianyi dou bei ta gei wo zhan-guang-le!
 advantage all BEI he on me take-empty-LE
 ‘All the advantage was taken by him on me!’

In other words, when the subject is not the psychological experiencer, another argument (implicit or explicit) bearing the role Experiencer still exists. The same is true with a non-idiom-chunk subject as well, as shown in (15a), where an implicit experiencer may be felt to exist (e.g., the

speaker or the shoes' owner) and (15b), where the experiencer is expressed.

- (15) a. na-shuang xiezi bei ta ti-po-le
that-CL shoes BEI he kick-broken-LE
'That pair of shoes were kicked-broken by him.'
- b. na-shuang xiezi bei ta gei wo ti-po-le
that-CL shoes BEI him on me kick-broken-LE
'That pair of shoes were kicked-broken by him on me.'

A corresponding example is provided from Taiwanese Southern Min (TSM) with an optional Affectee phrase *ka gua* 'on me':

- (16) hit-shiang e-a hoo yi (ka gua) that-pkua-khi a.
that-CL shoes BEI him on me kick-broken-away LE
'That pair of shoes were kicked-broken by him (on me).'

The existence of a (possibly implicit) experiencer that is distinct from the subject is entirely natural in each case, since an inanimate subject cannot be a (psychological) Experiencer by definition, but may be a Theme/Patient. With an *animate* subject, a sentence may be ambiguous depending on whether the subject is an Experiencer and a pure Theme/Patient. As a concrete example, consider (17):⁴

⁴ In Huang (2013) it was assumed that long-distance passives cannot involve raising, but only NOP movement and predication.

However, we note that long distance passives may also be associated with an implicit experiencer (e.g., the speaker) as in (i):

(i) na-feng xin juran bei ta pai ren tou-zou-le!

(17) xiao haizi bei ta da-de bi-qing-lian-zhong le.

small child BEI he hit-DE black-and-blue LE

‘The little child was hit black-and-blue by him.’

The subject ‘small child’ may be the experiencer (the sufferer) of an event in which he/she is the Theme object, or the child may simply be the Theme of the event while someone else (e.g., the speaker, who might be the child’s mother) is the mental experiencer/sufferer. Under the latter interpretation, the ‘someone else’ Experiencer can be optionally expressed as in (18):

(18) xiao haizi bei ta (gei wo) da-de bi-qing-lian-zhong le.

small child BEI he (give me) hit-DE black-and-blue LE

‘The little child was hit black-and-blue by him (on me).’

This state of affairs strongly suggests that the semi-lexical passive verb *bei* fluctuates between a control and a raising verb. The raising verb is derived from the control verb as a result of argument suppression. In particular, the raising examples (15a)-(15b) can be related to their control ‘source’ below:

that-CL letter to-my-dismay BEI him send person steal-away-LE

‘That letter (to my dismay) got “sent-people-to-steal-away” by him!’

This may imply that the inanimate subject *ne-feng xin* ‘that letter’ has arrived at its matrix subject position via movement. We think this is possible given a recent analysis of the *tough*-construction by Hartman (2012). Based on certain intervention effects with matrix experiencers in tough constructions, Hartman argues for a two-step analysis with “A’-movement to the edge of the highest embedded clause, followed by A-movement to the matrix subject position” (2012:97). Following Hartman’s line raises other issues, however, which we shall not pursue here.

(19) wo bei ta ti-po-le na-shuang xiezi.

I BEI he kick-broken-LE that-CL shoes

‘I had that pair of shoes kicked-broken by him.’

In standard GB terms, suppression of the Experiencer subject in (19) will trigger A-movement of the object to the subject position. The Experiencer subject remains implicit (and existentially closed) as in (15a), or appears as an applicative *gei*-phrase, as in (15b). This is parallel to a familiar assumption about standard *be*-passives in English: passive morphology suppresses the EA, the object is moved to Spec, TP, and the EA may remain, either as an implicit argument or expressed in a *by*-phrase. There is also an (almost) exact parallel here with the two uses of *certain/sure*:

(20) a. John is certain that he will win.

b. John is certain [t to win].

Under coreference between *John* and *he*, (20a) is akin to a control sentence (cf. *John is eager to win*). Suppression of the higher subject argument leads to the raising structure (20b), where the Experiencer is either implicit (often the speaker) or expressed (e.g., *to me*). Similarly, familiar raising verbs like *seem* and *appear* involve an implicit Experiencer (cf. Middle English *methinks* ‘it seems to me’).⁵

⁵ In the same vein, Huang (2013:96-114) provides an analysis for an ‘existential *give*’ sentence involving an implicit Experiencer:

(i) xiao-niao gei fei-zou le.

small-bird give fly-away LE

In short, an argument for allowing a raising analysis for certain Mandarin *bei* passives is that it enables one to identify the bearer of a misfortune not otherwise expressed in the sentence as an implicit Experiencer. The conclusion that raising is possible means, of course, that we have to face the question why Mandarin raising passives do not seem to smuggle. In the next section we shall entertain new structures for Mandarin *local* long passives.

3. The new structures of Mandarin local long *bei* passives

3.1. No smuggling occurs in the Mandarin *bei* passive

We propose that the absence of smuggling in Mandarin is related to another property of Mandarin, i.e., Mandarin allows an object to be preposed to a post-subject but pre-verbal position (Ernst and Wang 1995, Shyu 1995), as illustrated in (21). However, such movement is not available in English.

(21) a. Lisi kan-guo le na-ben shu (Shyu 1995:100)

Lisi read-Exp LE that-CL book

‘Lisi has read that book.’

‘The little bird flew away (on someone).’

Huang argues that *gei* ‘give’ here is actually an existential raising verb ‘happen’ that is derived from (ii) by subject suppression and subsequent raising of *xiao-niao* ‘little bird’.

(ii) [(mouren) *gei* [xiao-niao fei-zou le]] (with Experiencer subject)

someone had small-bird fly-away LE

‘(Someone) experienced/suffered/had [the little bird flying away]’

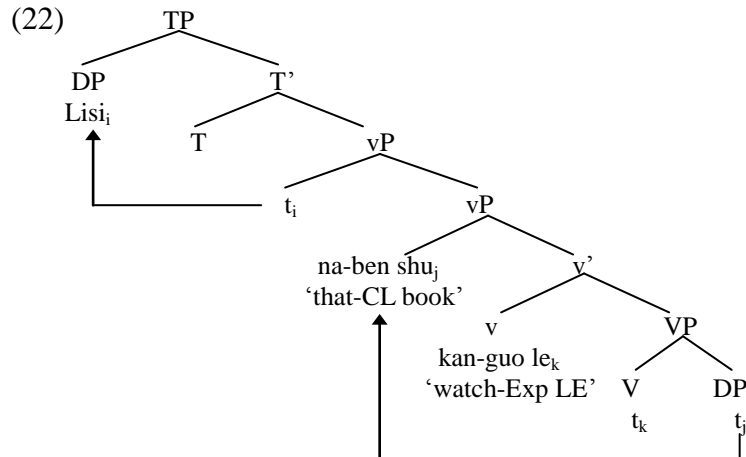
The suppressed subject remains in (i) as an implicit Experiencer, existentially closed, in a way parallel to cases discussed in the text.

b. Lisi na-ben shu_i kan-guo le t_i (object preposing structure)

Lisi that-CL book read-Exp LE

‘Lisi has read *that book*.’

Ernst and Wang (1995) argue that the preposed object is adjoined to VP. Gaining insights from their analysis and following Richards (1997) and Ura (1996, 2000), we assume that the head *v* allows two specifiers, and that an object, such as *na-ben shu* ‘that book’ in (21b), may move to the *inner* Spec, vP. The external argument *Lisi* is merged in the outer Spec, vP and moves to Spec, TP to check its Case feature and satisfy the EPP feature of T.



In addition, Shyu (1995:105ff) argues that object preposing as in (21b) shows A-movement properties:

(23) a. Wo yijing jiao Zhangsan₁ xian na-zou le [DO naxie taziji₁ de shu]

I already ask Zhangsan first take-away LE those himself 's book

‘I have asked Zhangsan to take away his own books.’

b. ??Wo [naxie *taziji*₁ de shu]₂ yijing jiao *Zhangsan*₁ xian na-zou le *t*₂
 I those himself 's book already ask Zhangsan first take-away LE

(24) a. *Wo jiao *ta*₁ na-zou le [*Zhangsan*₁ de shu]

I let him take-away LE Zhangsan 's book

'I let *him* take away *Zhangsan*'s book.'

b. Wo [*Zhangsan*₁ de shu]₂ jiao *ta*₁ na-zou le *t*₂

I Zhangsan 's book let him take-away LE

(25) a. *Wo bei [youguai *ta*₁ de ren] pian-zou le *meige haizi*₁

I by abduct him DE person kidnap-away LE every-CL child

'(lit.) I was affected by *every child* being kidnapped by the person who abducted *him*.'

b. Wo *meige haizi*₁ dou bei [youguai *ta*₁ de ren] pian-zou le *t*₁

I every-CL child DOU by abduct him DE person kidnap-away LE

The sentences in (23) and (24) show that object preposing lacks obligatory Binding Principles A and C reconstruction effects. (25) shows that object preposing can rescue a sentence from weak crossover effects. Based on these facts, we deduce that the inner Spec, vP position is an A-position.⁶

⁶ As pointed out by an anonymous reviewer, since the A-movement of the object [*Zhangsan de shu*] in (24b) to a post-subject position crosses *ta* 'him', it apparently violates Relativized Minimality under Shyu's (1995) account. Under the analysis we shall propose below for the A-moving passives, the problem is solved by the assumption that movement of *Zhangsan de shu* 'Zhangsan's book' proceeds through the (inner) Spec of vP below *ta* 'him'. At this intermediate landing site, *Zhangsan de shu* 'Zhangsan's book' and *ta* 'him' are equidistant to the higher landing site, so no violation of minimality conditions occurs.

Based on the availability of object preposing in Mandarin but not in English, we assume that Chinese allows multiple Specs of vP while English allows a single Spec of vP. It should be noted that the Spec of vP mentioned here is different from the *edge* of v*P in Chomsky's (2004, 2008) sense. According to Chomsky (2008), v*P is a phase and the outer Spec, v* is an A'-position. For instance, in the derivation of the sentence *Who did John see?*, *who* moves to the outer Spec, v* and goes on moving to Spec, CP, as in [_{CP} who_i... [_{v*P} who_i [_{v*P} John... [_{vP} see t_i]]]]. The edge of v*P is available language-universally. However, the multiple Specs of vP mentioned here are only available in a language like Chinese but not English-like languages. As for why English and Chinese differ with respect to the availability of multiple vP specifiers, we simply take this as reflecting a parametric difference, given the possible occurrence of an overt preposed object in Chinese (and possibly also clause-internal scrambling in Japanese, etc.), and its impossibility in English. This assumed parametric difference about vP is, in fact, parallel to one proposed by Richards (1997) concerning the availability of multiple CP specifiers. Richards (1997) argues that, by assuming that Chinese (together with Japanese, Bulgarian etc.) have multiple CP specifiers (which enable 'tucking-in' operations) while English-type languages do not, a number of well known differential behaviors of *wh*-movement between these two types of languages can be made to fall out nicely. To the extent that Richard's (1997) CP-Spec parameter is justified, our vP-Spec parameter can be seen as a welcome natural extension from CP to vP, i.e., a generalization of the 'tucking-in parameter' to both phase domains.

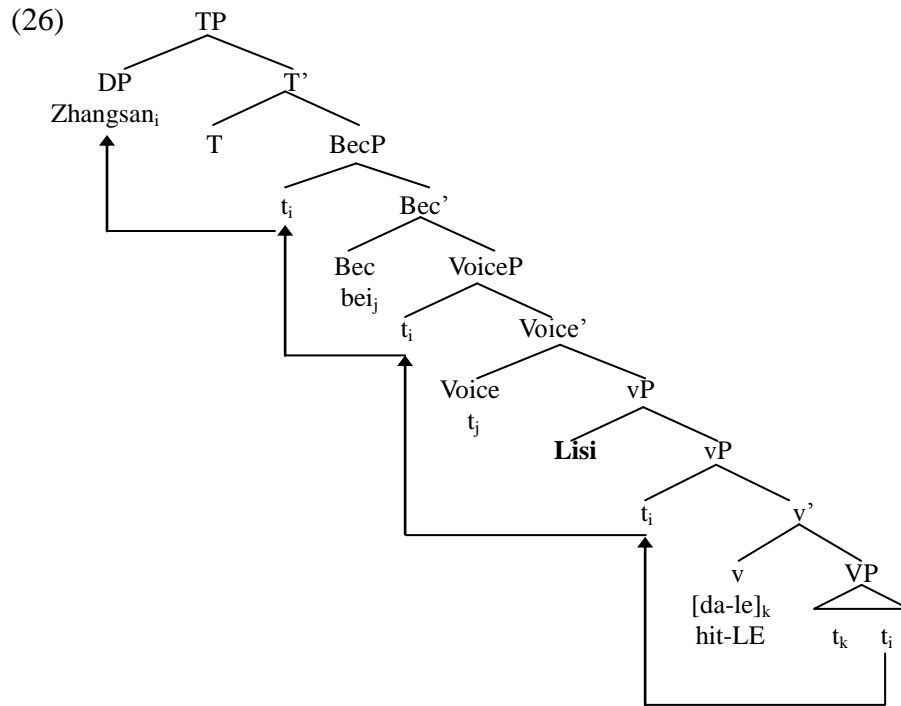
We further assume that the multiple Specs of vP can be an escape hatch in Mandarin passives for the object moving on its way to Spec, TP without violating minimality conditions. English, however, does not have such an escape hatch for the object. In order to avoid the violation of minimality conditions, smuggling is therefore called for.

3.2. The derivations of Mandarin local long *bei* passives

Some basic assumptions are made as follows: Firstly, as Collins (2005) assumes, the preposition *by* in the English *be* passive occupies the head of VoiceP because the distribution of agentive *by*-phrase is restricted to passive. Similar to *by*, the Mandarin passive marker *bei* only occurs in the passive and with the external argument. Therefore, we assume that Mandarin passives involve a VoiceP headed by *bei*, which takes a vP complement. The Spec of vP is occupied by the external argument. Moreover, according to Huang's (2013) proposal of "Passivization Cartography", the fluctuating properties of Mandarin *bei* passives (between control and raising) may be caused by the semi-lexical verb *bei* occupying more than one point on the causative-unaccusative spectrum (cause > let > witness > undergo > be affected by > become > exist > be). We hence suppose that *bei* can be decomposed into EXPERIENCE (Exp) and BECOME (Bec) components in local long *bei* passives.⁷ The raising structure a *bei* passive only involves the BECOME component and the derivation of (3) is shown in (26): After the external argument *Lisi* is merged in Spec, vP, the internal argument *Zhangsan* of the main verb *da* 'hit' moves to the Spec of vP below the external argument in the manner of "tucking in" (cf. Richards 1997) since vP in Chinese allows multiple Specs. V moves to v. Importantly, according

⁷ Huang (1999) implies that the Experiencer subject of the *get*-passive is introduced by the Become head (Bec). The causative-ergative alternation such as *Mary got John blamed for the mistake* vs. *John got blamed for the mistake* depends on whether there is a CauseP layer in the derivation. Richards (2001) and Harley (2002, 2004) assume that *get* in the *get*+DP structure can be decomposed into a light verb BECOME in its semantics. Orfitelli (2011) assumes that all *get*-constructions include the light verb *v_{become}*. Along with them, we assume that *get* in the *get*-passive contains a Become (Bec) component, but we make a finer analysis in which *get* also involves an Experience (Exp) component, and the Experiencer subject is introduced by the Exp head. The Exp predicate is thus a two-place control predicate, but the Bec without an EA is an unaccusative, raising predicate.

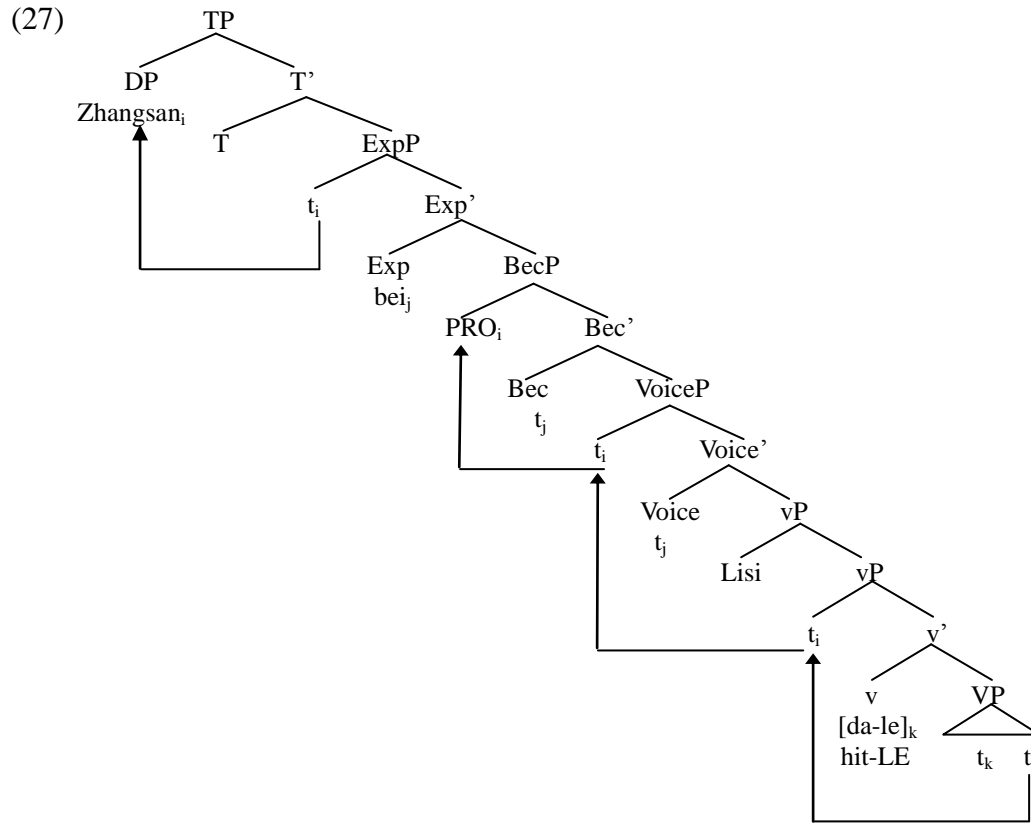
to Chomsky (1995:184-185), the internal and external arguments are equidistant to higher destinations of movement. The Voice head *bei* is merged with vP, checks its accusative Case feature with the external argument and makes it inactive. Therefore, only the internal argument remains active and is available for movement. The head *Bec* is merged in and the morpheme *bei* moves to adjoin to it. The internal argument moves to Spec, VoiceP and then to Spec, BecP and Spec, TP to check Nominative Case. There is no violation of minimality and hence smuggling is not needed.



The control structure of the local long passive involves both the Experience (Exp) and Become (Bec) components of *bei*.⁸ The derivation of (3) is hence shown as in (27), in which the passive verb *bei* is base-merged in Voice and then moves to Bec and Exp. The PRO object of the verb ‘hit’ moves to inner Spec, vP, then to Spec, VoiceP and Spec, BecP. Exp introduces the

⁸ Under the NOP-movement analysis of the long passive, the issue of minimality does not arise. But given the structures assumed, we also entertain the possibility of A-movement of PRO for the *local* long passive here.

Experiencer subject *Zhangsan*, which controls PRO in Spec, BecP. Similarly to the raising case, smuggling is not needed.



We have shown that smuggling is not necessary in the derivation of Mandarin passives. Below we present additional evidence that smuggling indeed does not take place in Mandarin.

3.3. More evidence for the lack of smuggling in Mandarin *bei* passives

3.3.1. The quantifier floating test

Following Sportiche (1988), quantifiers and the DPs they quantify are commonly considered to originate as a single constituent. The positions where a quantifier floats are the ones through

which DP movement passes. The distribution of the floated quantifiers in Mandarin *bei* and English *be* passives as in (28)-(29) respectively can be explained if we assume that Mandarin does not have smuggling while English does.

(28) a. pingguo bei Lisi **quanbu** mai-zou-le.

apple BEI Lisi all buy-away-LE

‘The apples were all bought up by Lisi.’

b. pingguo **quanbu** bei Lisi mai-zou-le.

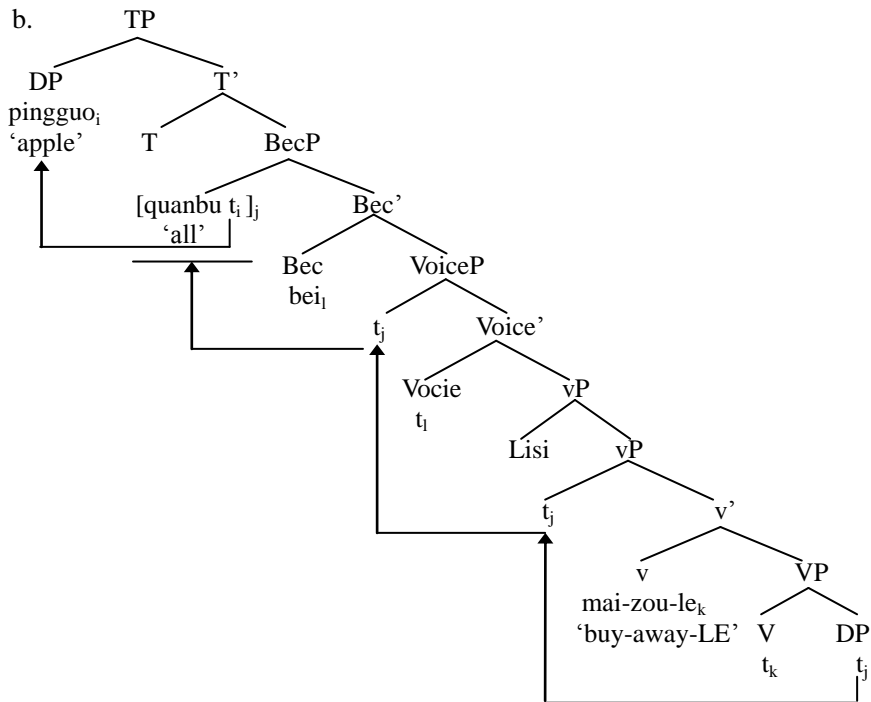
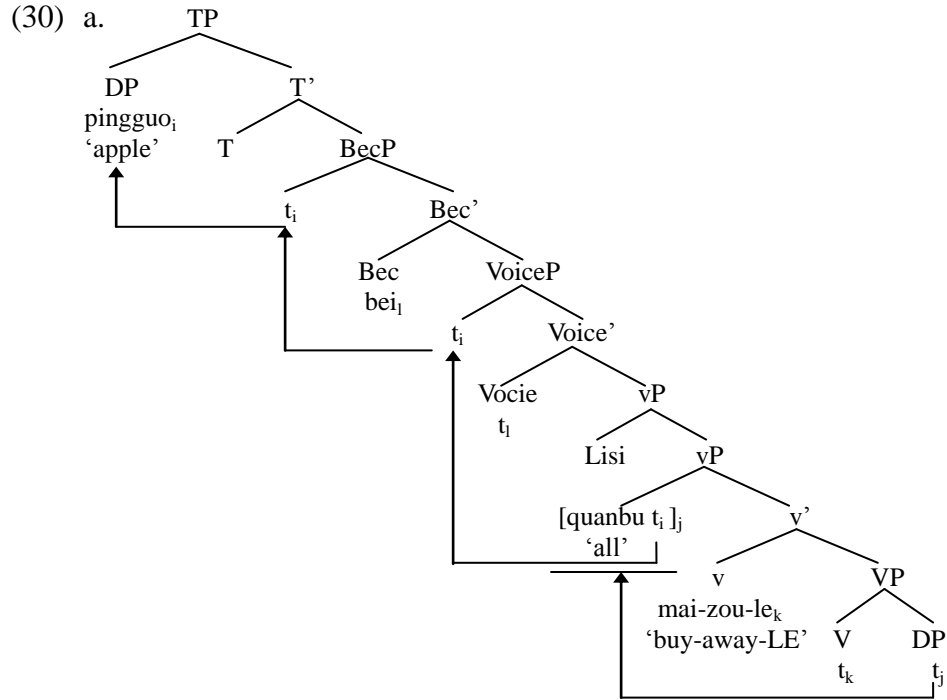
apple all BEI Lisi buy-away-LE

‘The apples were all bought up by Lisi.’

(29) a. *They were arrested by the police **all**.

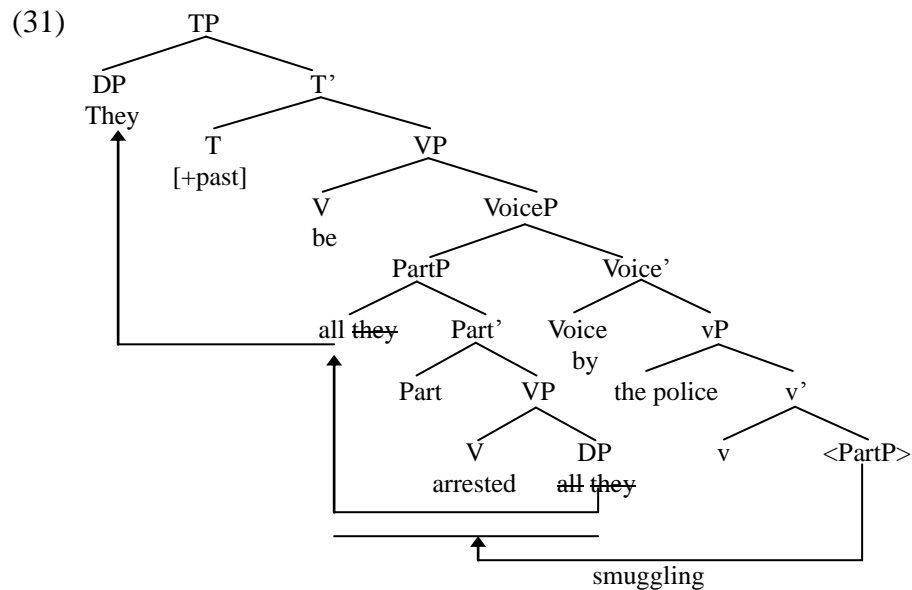
b. They were **all** arrested by the police.

In Mandarin *bei* passives, the floated quantifier *quanbu* ‘all’ can appear either below *bei*+Agent DP, as in (28a), or above it, as in (28b). However, in English *be* passives, *all* cannot float below the agentive *by*-phrase, as in (29a). The difference between *bei* passives and *be* passives can be accounted for if we assume that Mandarin allows multiple Specs of vP but no smuggling, while English has smuggling but not multiple Specs of vP. The explanation goes as follows: The derivations of (28a, b) are illustrated in (30a, b) respectively. In (30a), the quantifier *quanbu* ‘all’ is assumed to be floated in the inner Spec, vP position. In (30b), *quanbu* is floated in the Spec, BecP position. This shows that on its way moving to Spec, TP, the object has passed through these positions.



However, in the derivation of the English passive (29b), as shown in (31), the PartP smuggles the object to Spec, VoiceP, a position above the Agent *by*-phrase. That is why *all* cannot float below

the agentive *by* phrase.⁹



⁹ Note that quantifiers cannot be floated at positions immediately following main verbs in English or Chinese:

- (i) a. They were all arrested by the police.
- b. *They were arrested all by the police.
- (ii) *pingguo bei Lisi mai-zou-le quanbu (as compared to (28a,b))
- apple BEI Lisi buy-away-LE all
- ‘The apples were all bought by Lisi.’

This is the case even if the verbal head is followed by another predicate:

- (iii) a. John caused them all to leave early.
- b. *They were caused all to leave early.

Hence it is also impossible to float a quantifier after *bei*, even when the latter has raised to *Bec*. The following is ungrammatical with *quanbu* stranded at Spec, VoiceP following the raised *bei*:

- (iv) *pingguo bei quanbu Lisi mai-zou-le (as compared to (28a,b))
- apple BEI all Lisi buy-away-LE
- ‘The apples were all bought by Lisi.’

Interestingly, the English *get* passive does not allow quantifiers to float in the same position either:

- (v) *They got all arrested. (Fleisher 2008)

We simply acknowledge this as a general restriction, not peculiar to (ii) and (iv), but will not attempt to explain the reason for this restriction.

3.3.2. The “by-phrase” constituency test

According to Huang (1999) and HLL (2009), unlike the *by*-phrase in English, the *bei*-DP in Mandarin does not behave as a constituent, i.e. it cannot move across a time phrase or prepose to a sentence initial position, as shown in (32b, c) respectively:

(32) a. Zhangsan zuotian bei Lisi da-le. (HLL 2009:116)

Zhangsan yesterday BEI Lisi hit-LE

(cf. John was hit by Bill yesterday.)

b. *Zhangsan bei Lisi zuotian da-le.

Zhangsan BEI Lisi yesterday hit-LE

(cf. John was hit yesterday by Bill.)

c. *bei Lisi Zhangsan zuotian da-le.

BEI Lisi Zhangsan yesterday hit-LE

(cf. It was by Bill that John was hit yesterday.)

These differences can be explained if we assume that the English passive has smuggling while the Mandarin one does not. As shown in (31), after the movement of PartP to Spec, VoiceP, Voice’ includes *by*, the Agent DP *the police* and the trace of PartP. That’s why the *by*-DP behaves like a constituent.¹⁰ However, in the Mandarin passive, as shown in (26-27), VP does

¹⁰ As pointed out by a reviewer, since in English *by* and *the police* form a Voice’ (not VoiceP), the fact that *by*-phrase can be preposed seems to suggest X’-movement. We doubt the status of an X’-movement but defer to Collins (2005), who rejects the stipulation made by Chomsky (1986) that intermediate categories cannot undergo movement, but did not go further to explain the

not move to Spec, VoiceP but stays in situ within Voice'. Therefore, the Voice *bei* and the Agent DP do not form a constituent.¹¹

An apparent counter-example to the above explanation was suggested by Shi & Hu (2005), quoting Chen (2001), as shown in (33).

(33) yihuir, zhe meimiao de shengyin bei shu, bei cao, bei (Shi & Hu 2005:216)

a while this beautiful DE voice BEI trees BEI grass BEI

yi-ge guangmo de kongjian tunshi-le

one-CL wild DE space swallow-LE

'Not for a while, this beautiful voice got swallowed by trees, grass and a wild space.'

In (33), *bei*-DP seems to be able to pass the coordination constituency test. However, this test should not be treated as the one for the constituent status of "*bei*-DP". Rather, it is a phenomenon of right node raising (RNR), as argued by Huang (1999) and Xiong (2010). It is similar to (34) which is a typical case of RNR:

(34) [John bought ____] and [Mary read *the book*].

According to Wilder (1999:2), in an RNR construction, if the shared constituent α surfaces the final conjunct, gap(s) corresponding to α must be at the right edge of their non-final conjuncts. In (34), the shared constituent *the book* is in the final conjunct *Mary read* and the gap that corresponds to it is at the right edge of non-final conjunct *John bought*. The "coordinated" *bei*-

issue. The relevant point is that if Collins is right about English *by*-phrases, then the Mandarin *bei* + DP is not a phrase.

¹¹ We thank Grant Goodall (p.c.) for a question that led us to this argument.

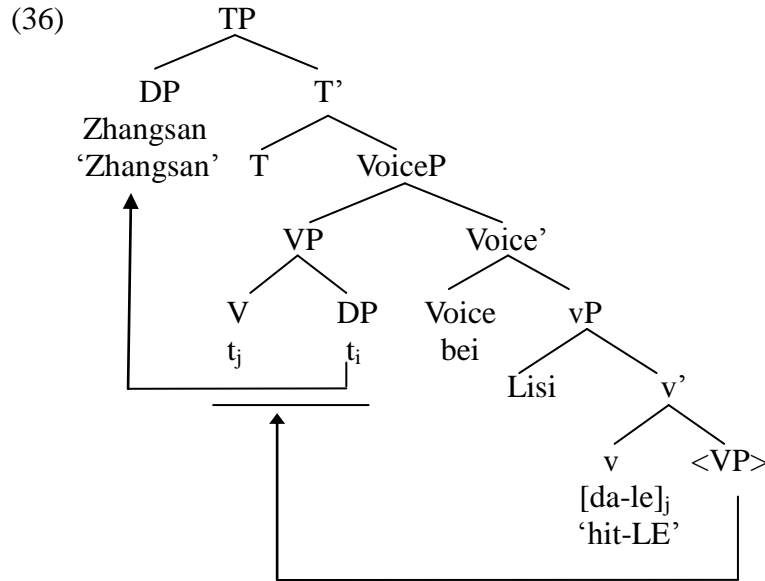
NPs in (33) are in the similar configuration, as shown in (35).

(35) yihuir, zhe meimiao de shengyin [bei shu __], [bei cao __],
a while this beautiful DE voice BEI trees BEI grass
[bei yi-ge guangmo de kongjian *tunshi-le*]
BEI one-CL wild DE space swallow-LE

In (35), the shared constituent (the VP *tunshi-le* ‘swallow-LE’) surfaces with the final conjunct *bei yi-ge guangmo de kongjian* ‘BEI a wild space’, and its corresponding gap is at the right edge of the non-final conjuncts *bei shu* ‘BEI trees’ and *bei cao* ‘BEI grass’. Therefore, (33) is a case of RNR. Furthermore, according to Postal (1974), Gazdar (1981), and Williams (1981) among others, the function of RNR is to identify the constituency status of the raised rightmost part (such as *the book* in (34)), but not that of the remnant (such as *John bought* or *Mary read* in (34)). Therefore, (33) has the RNR structure illustrated in (35), which does not establish the constituency of a *bei* - DP sequence.

3.3.3. *Smuggling is not only unnecessary but also impossible in Mandarin passives*

According to Soh (1998), verb raising is obligatory in Mandarin. This suggests, at first sight, the possibility (C. Collins, p.c.) that smuggling may still be applied after V moves to v, as in (36).



In (36), after V ‘hit’ raises to v, the VP containing the trace of V could undergo remnant movement to Spec, VoiceP, thus smuggling the internal argument *Zhangsan* across the external argument *Lisi*. However, we argue that this alternative must be excluded. Passivizing the Theme object in (37a), we get (37b). If there is VP movement to Spec, VoiceP, the dative PP ‘to Lisi’ should be able to move above *bei*-DP, contrary to fact, as in (37c).¹²

(37) a. *Zhangsan song-le yi-ben shu gei Lisi.*

¹² Although our account, in terms of the availability of an inner Spec, vP, offers an explanation for why smuggling is not needed, nothing we have said so far explains why smuggling is not allowed in Mandarin. While we do not have a fully developed theory for this latter situation, we think a plausible explanation is available from the assumption, suggested to us by a reviewer, that vP is a phase in Mandarin passives (though not in English passives). Assuming Phase Theory, the derivation indicated in (36) is excluded by the Phase Impenetrability Condition (PIC, Chomsky 2000, 2008) if vP is a phase. (VP movement through the inner Spec of vP is prevented by considerations of anti-locality (Bošković 2005, Grohmann 2003).) The phasehood of the vP under *bei* in Chinese may follow from the well known fact that it retains active morphology, unlike the English vP with a passive participial phrase. Other questions arise that go beyond the scope of our current inquiry, but we think this suggestion is well worth further pursuing in future work.

Zhangsan give-LE one-CL book to Lisi

‘Zhangsan gave a book to Lisi.’

b. na-ben shu bei Zhangsan song le gei Lisi le.

that-CL book BEI Zhangsan give LE to Lisi LE

‘That book was given to Lisi by Zhangsan.’

c. *na-ben shu [_{VP} t_V gei Lisi] bei Zhangsan song le t_{VP}

that-CL book to Lisi BEI Zhangsan give LE

4. Conclusion

In this paper we have shown that while English and Mandarin passives share similar underlying structures in observance of UTAH, they differ in their (non-)use of smuggling. We argued that this difference cannot be attributed to the supposition that Chinese passives involve only control or predication, but provided evidence for the possibility of a raising derivation involving A-movement. Instead, we tie the ability to do without smuggling in Mandarin to the existence of vP-internal movement, construed as part of a more general parameter that also applies to the CP domain, which provides the object with an intermediate landing site on its way to the subject position without violating minimality conditions. The conclusion that smuggling is not universal is not necessarily a bad result: While UTAH and minimality are presumably universal requirements, languages may employ different strategies to satisfy them. As we have shown, the non-universal view of smuggling allows us to tie together a number of otherwise unrelated differences among these languages—with respect to the constituency of the ‘*by* phrase’, the distribution of quantifier float and clause-internal object-preposing. It should be noted that this paper has not invalidated Collins’ smuggling analysis of English passives. Indeed, some of

the correlated differences follow from the assumption that while smuggling does not occur in Mandarin, it does in English.

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