

The grammaticalization of Chinese *ba*: grammaticalization, ‘lateral’ grammaticalization and case theory

Keith Tse

Independent researcher

‘Lateral’ grammaticalization (Chinese *de* and *shi*) is similar to yet different from grammaticalization in Minimalism, since while both involve ‘structural simplification’, the latter displays ‘phonological weakening’, ‘univerbation’ and ‘semantic bleaching’ while the former does not (Tse (2013a, b)). There is another functional category which is not analysed in Roberts and Roussou’s (2003) Minimalist account of grammaticalization, namely K(case), which is postulated to represent morphological case (van Kemenade and Vincent (1997:18-21)). An analysis of case-markers (K) in Chinese (*ba*) suggests that they are ‘laterally’ grammaticalized, which is significant for Chinese and modern case theory since it entails that K(case) is not universal and cannot be equated with abstract case.

1.1. Grammaticalization and Minimalism

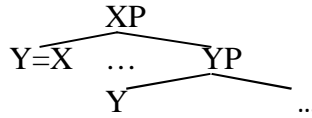
Roberts and Roussou (R & R) (2003) and van Gelderen (2011) argue that grammaticalization is a natural type of change that occurs cross-linguistically, since they argue that grammaticalization always leads to ‘simpler’ structures which are favoured in language acquisition (R & R (2003:2-3,15-17), van Gelderen (2011:8-19)).¹ R & R (2003:201) define ‘simplicity’ as the reduction of ‘feature syncretisms’, which are ‘the presence of more than one formal feature in a given structural position: H [+F, +G...]’, while van Gelderen (2011:16-17) argues that uninterpretable features are ‘simpler’ than interpretable ones. R & R (2003:198-199) discover three types of grammaticalization:

- 1) $[XP\ Y + X\ [YP...t_Y...]] > [XP\ Y=X\ [YP...Y...]]$
- 2) $[XP\ X_F... [YP...Y_F...]] > [XP\ X_F... [YP...Y...]]$
- 3) $[XP\ YP\ X\ ... [\dots t_{YP}\ ...]] > [XP\ Y=X\ ... [\dots]]$

In 1) and 3), there is loss of movement ($Y...t_Y$, $YP...t_{YP}$) and the grammaticalized item (Y) is shifted upwards ($Y=X$), while in 2) there is loss of agreement ($X_F...Y_F$) and features are shifted upwards to the grammaticalized item (X_F). R & R (2003:200) therefore argue that grammaticalization is essentially an ‘upward shift of features’:

¹ This is a modification to Lightfoot (1999) who argues that language evolution is ‘random’ when grammaticalization is a strong cross-linguistic trend (Heine and Kuteva (2002)). ‘Simplicity’ is crucial towards understanding the cross-linguistic distribution of grammaticalization.

4)



Roberts (2010:50-51) generalises between *Move* (1, 3)) and *Agree* (2)) by arguing that both consist of probe and goal features, and so I argue that grammaticalization is an upward shift of goal features due to the loss of probe features (Tse (2013b:99)).

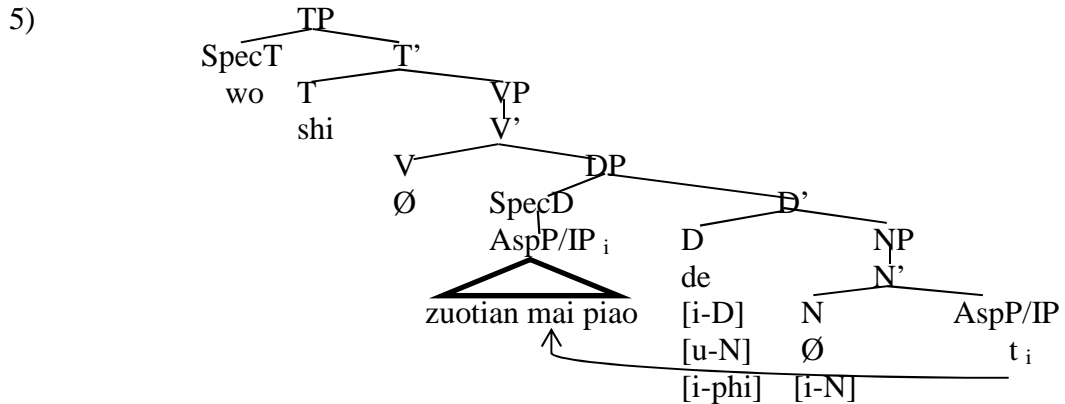
1.2. ‘Lateral’ grammaticalization and Minimalism: Chinese *de* and *shi*

Simpson & Wu (S & W) (2002) and Wu (2004) analyse Chinese *shi-de* constructions in northern Mandarin dialects, which display the following alternation:

- 5) wo shi zuotian mai piao de
- I be yesterday buy ticket DE
- 6) wo shi zuotian mai de piao
- I be yesterday buy DE ticket

‘It was yesterday that I bought the ticket.’ (S & W (2002:169), Wu (2004:120))

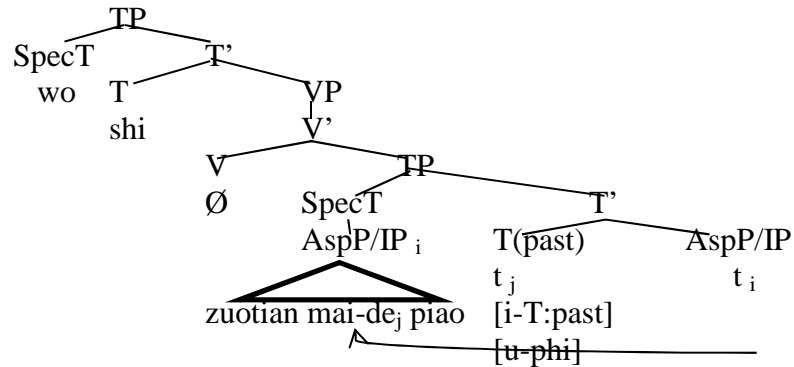
S & W (2002:171) and Wu (2004:122) argue that 6) is derived from 5) since 5) is attested earlier than 6) and 6) only occurs in certain dialects while 5) is pan-Chinese. One is therefore investigating why *de* has been preposed from sentence-final position (5)) to being a verbal suffix (6)) (S & W (2002:171-175, 190-191), Wu (2004:122-125)).² In 5), S & W (2002:180-189) and Wu (2004:132-140) analyse *zuotian mai piao* ‘to buy ticket yesterday’ as a relative clause that is part of a complex noun phrase headed by *de* (D):



S & W (2002:175-177) and Wu (2004:125-127) argue that *shi-de* constructions often imply that the action of the embedded clause (here *zuotian mai piao* ‘to buy ticket yesterday’) has already occurred, and so past tense is implied and *de* can be re-analysed as a past tense marker (S & W (2002:190), Wu (2004:141)). This is especially apparent when *de* is suffixed to the verb (6)), in which case the embedded clause obligatorily refers to the past (S & W (2002:174-177, 190-197), Wu (2004:126-127, 141-146)):

² Cf Chinese completive suffix *-le*, which is derived from sentence-final *liao* (Wu (2004:200ff)).

6)



6) is ‘simpler’ than 5), since *de* as a determiner (D) has an *Agree* relation ([u-N]) with its (empty) nominal complement (N), but as a past tense marker (T) this *Agree* is lost. Furthermore, while *de* as a determiner (D) holds interpretable phi-features ([i-phi]), as a past tense marker it holds uninterpretable ones ([u-phi]) which agree with the subject of the relative clause. The fact that *de* conforms to R & R’s and van Gelderen’s ‘simplicity’ is supported by the cross-linguistic distribution of D-to-T re-analysis (see footnote 1) (S & W (2002:200-202), Wu (2004:149-153)) e.g. determiners (D) > copula verbs (T):

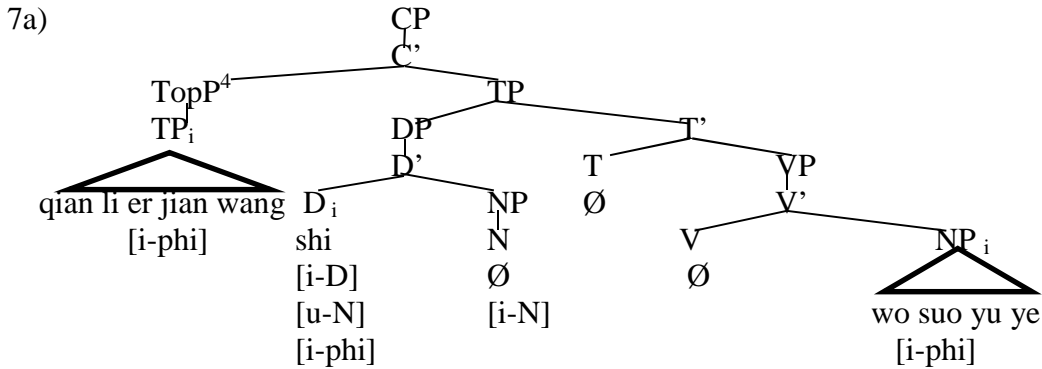
- 7) qian li er jian wang
 thousand mile then see king
 shi wo suo yu ye
 this I NOMINALISER desire DECLARATIVE.PARTICLE

‘To see the king after travelling a thousand miles, this (is) what I want.’ (7a)
 ‘To see the king after travelling a thousand miles is what I want.’ (7b)
 (Mencius, 4th century BC)

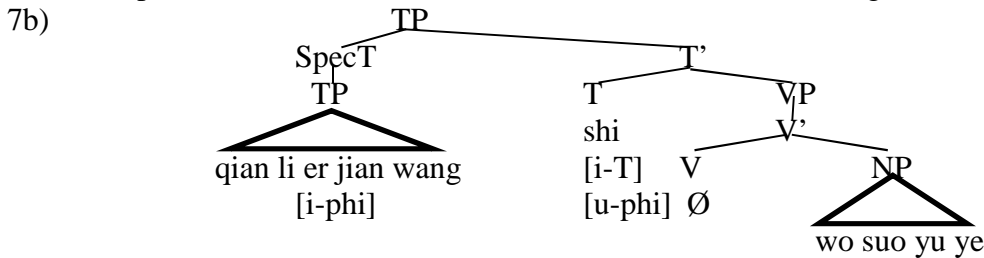
7a) is the original equational construction where *shi* ‘this’ is a demonstrative pronoun in subject position (SpecT) and is in apposition with the topic (*qian li er jian wang* ‘to see the king after travelling a thousand miles’) and the predicate (*wo suo yu ye* ‘what I want’) (Li and Thompson (1977:420), van Gelderen (2011:130), Feng (1993:284-285, 2003:31-33)). The three nominal constituents have interpretable phi-features ([i-phi]) and there is an *Agree* relation between them. Furthermore, as *shi* is a determiner, it holds [u-N]:³

³ *shi* is synchronically attested with nominal complements (Li and Thompson (1977:422-423)):

E.g. zi yu shi ri ku
 Confucius at this day cry
 ‘Confucius cried on this day (*shi ri*).’ (Analect, 5th century BC)



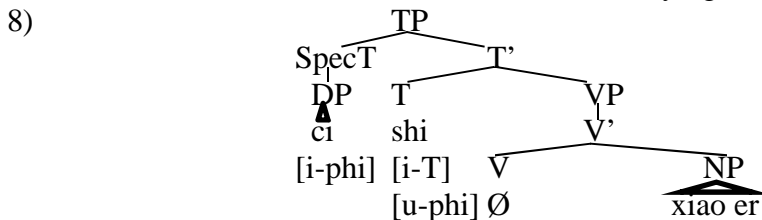
As identity is implied, *shi* can be re-analysed as a copula verb (T) linking the two (7b) (Li and Thompson (1976:424-427), van Gelderen (2011:129-131), Feng (2003:30-35)):⁵



7b) is 'simpler' than 7a), since the *Agree* relation between the three nominal constituents and that ([u-N]) between *shi* (D) and its nominal complement ([i-N]) are lost.

Furthermore, the original interpretable phi-features of *shi* ([i-phi]) become uninterpretable ([u-phi]), since as a copula verb (T) *shi* agrees with the new subject (*qian li er jian wang*). All this is apparent in later examples where *shi* cannot be analysed as a determiner (D) and must be re-analysed as a copula verb (T) e.g. when it is used with another determiner (Li and Thompson (1976:425-426), van Gelderen (2011:133-134)):

- 8) ci shi xiao er
 This be small child
 'This is a small child.' (Buddha's saying in late Han, 25-220AD)



⁴ In generative syntax, topics are on the left-periphery of the complementiser layer (Rizzi (1997:188)).

⁵ Li and Thompson (1977:436) argue that copula verbs are often omissible and are often used only to bear tense. Bowers (2001:302ff) proposes that copula verbs occupy a functional category called Pred(icate), which is structurally very similar to T.

However, neither *de* nor *shi* display R & R's 'upward feature analysis' (4), since they hold T features [(i-T)] that are not upwardly shifted but inferred from pragmatics, namely the tendency for *shi-de* constructions to imply that the embedded action has already occurred (5, 6)) and the implied identity in equational constructions (7a-b)).⁶

1.3. Grammaticalization and 'lateral' grammaticalization

While grammaticalization regularly displays 'phonological weakening', 'univerbation' and 'semantic bleaching' (Tse (2013a:section 3)), 'lateral' grammaticalization does not seem to display them: Chinese *de* is toneless both as a determiner (5)) and as a past tense suffix (6)) with no perceptible phonetic difference (S & W (2002:173-174, 186, 190-194), Wu (2004:123-124, 138-139, 142-144)).⁷ There is no evidence for copula verbs derived from determiners (7)) undergoing 'phonological weakening' or 'univerbation' either.⁸ Furthermore, although Chinese *de* and *shi* undergo featural 'simplicity', they also gain interpretable features [(i-T)] from pragmatics and hence cannot be said to undergo 'semantic bleaching'. I argue that 'upward feature analysis' in grammaticalization causes 'phonological weakening'/'univerbation' while the loss of probe features constitutes 'semantic bleaching' (Tse (2013a:section 3.4, 2013b:section 4)).⁹ All this occurs in Chinese too e.g. resultative constructions (*liao* > *le*):

- 9) Zixu jie meng liao
 Zixu interpret dream finish
 'After his interpretation of the dream finished...' (9a)
 'After he interpreted the dream...' (9b)¹⁰ (*Transformation Texts*, 10th century AD)

⁶ This ties in with Feng's (1993:288ff, 2003:32-35) argument that in equational constructions (7a)) there is a prosodic gap (Ø) between the subject (*shi*) and the predicate (*wo suo yu ye*) which is subsequently filled when *shi* is re-analysed as a copula verb (T). *shi* is therefore filling an empty syntactic position (T) and is holding features [(i-T)] that are not in the original cue.

⁷ Chinese *de* as a past tense suffix (T) is more 'univerbated' than as a determiner (D), since the latter is a clausal clitic (*zuotian mai piao-de*, ex. 5)) while the former is a verbal suffix (*mai-de*, ex. 6)) (S & W (2002:173-175, 190-191), Wu (2004:125-126, 142, 161, 204)). However, *de* is phonetically identical (toneless) in 5) and 6) and the affixal status of *de* in 6) coincides with the fact that verbal suffixes marking tense/aspect (T) are typically attached to the verb in Chinese and cross-linguistically (Wu (2004:204-205)) (cf Chinese *-le* (see footnote 2)). Wu (2004:234-236) also argues that *liao* is 'univerbated' as a verbal suffix before undergoing 'phonological weakening' (> *-le*). 'Univerbation' need not entail 'phonological weakening' (Wu (2004:201ff)).

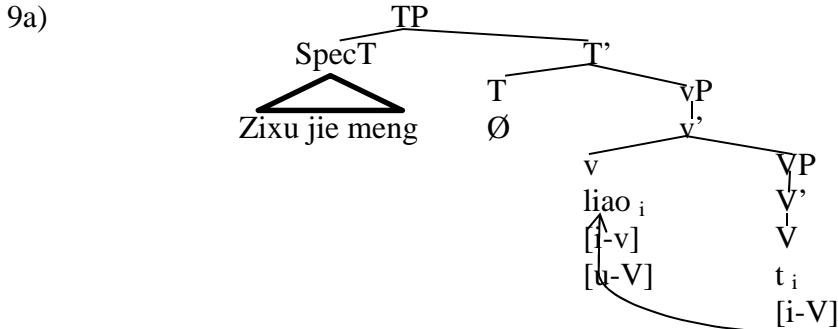
⁸ Chinese *shi* is still toned (tone 4) in modern Mandarin. See Tse (2013b:107 footnote 10) for more examples of copula verbs which do not display 'phonological weakening' or 'univerbation'.

⁹ E.g. Latin/Romance *habere* (V) > clitic (Mod_{obligation/necessity}) > affix (T(future)); English *have to* (V) > *hafta* (Mod_{obligation/necessity}); English *sceal* (Mod_{obligation/necessity}) > *shall* [] / [] (T(future)) (Tse (2013a:sections 3.2, 3.4)). These correspond to Cinque's (1999) hierarchy (T-Mod-V).

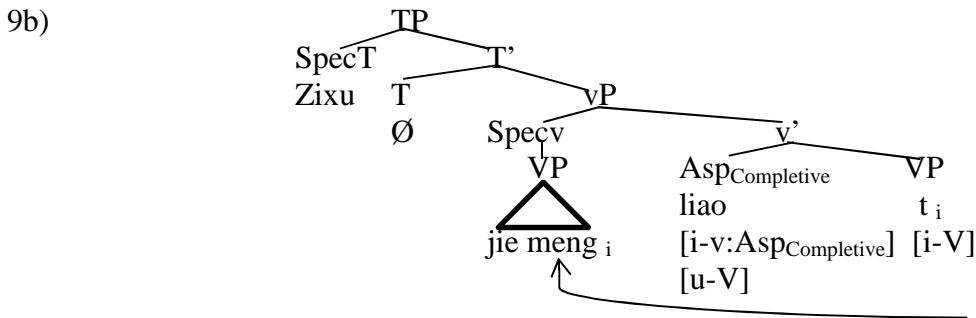
¹⁰ *liao* here corresponds to *-le* in modern Mandarin (Shi (1989:100)):

- 1) Zixu jie-le meng
 Zixu interpret-COMPLETIVE dream

Chinese *liao* is originally a lexical verb ‘to finish’ (9a)¹¹ (Shi (1989:100-102)), and as such it undergoes V-to-v movement (Huang (1997)):

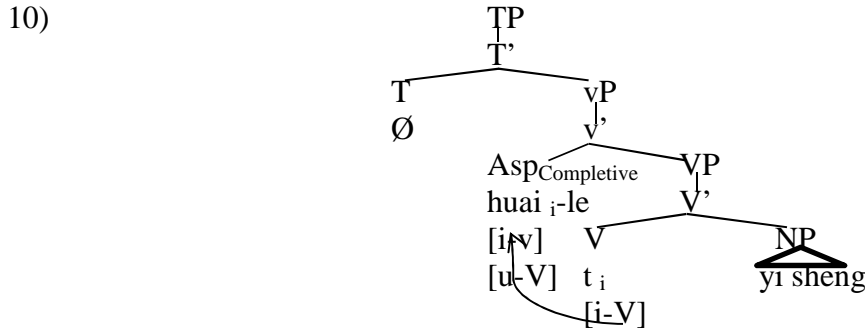


As *liao* denotes the end of an activity, it can be re-analysed as a completive aspectual marker in little v (9b) (Shi (1989:102-103), Wu (2004:187-188, 206-215)):



9b) is ‘simpler’ than 9a), since *liao* loses V-to-v *Move* and is upwardly shifted from V to v ($Asp_{\text{Completive}}$) where its interpretable verb features ([i-V]) become uninterpretable ([u-V]). It becomes a verbal suffix to the main verb (see footnote 7) (Shi (1989:103-104)):

- 10) huai-le yi sheng
 ruin-COMPLETIVE one life
 ‘... you have ruined your entire life.’ (Zhuxi’s quotations, 12th century AD)



‘Zixu interpreted the dream.’

- ¹¹ E.g. wei ke he shi liao
 be guest what time finish

‘When can I stop being a guest?’ (Tang Dynasty, 618-907 AD) (Shi (1989:99))

liao displays ‘upward feature analysis’ (V > Asp) as well as ‘phonological weakening’, ‘univerbation’ and ‘semantic bleaching’. All this is a contrast to Chinese *de* and *shi*.¹²

2.1. K(case)

K(case) was proposed as a functional category by Lamontagne and Travis (L & T) (1986, 1987, 1992), who note that when nominal complements are adjacent to their head predicates, their morphological case-endings can be optionally dropped (11a)), but when they are not adjacent, their morphological case-endings are obligatory (11b)) e.g.

Japanese (L & T (1986:54, 1987:174, 1992:158)):

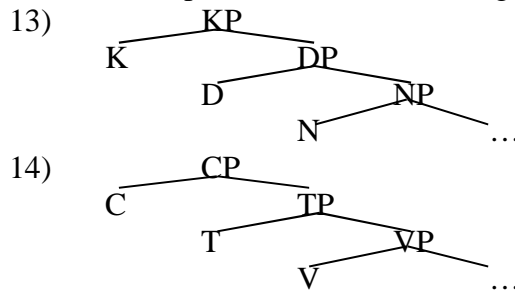
- | | | | | |
|------|------------|-----------|---------|-----|
| 11a) | John-ga | dare(-wo) | nagutta | no? |
| | John-NOM | who-ACC | hit | Q |
| 11b) | dare*(-wo) | John-ga | nagutta | no? |
| | who-ACC | John-NOM | hit | Q |
- ‘Who did John hit?’

This resembles other functional categories e.g. complementisers, which are also omissible only when they are adjacent to their head predicates e.g.

Japanese (L & T (1986:56, 1987:174, 1992:159)):

- | | | | | | |
|------|----------|------------------|------------------|----------|------------|
| 12a) | Mary-ga | John-ni | Koobe-ni | iku (te) | yuuteta |
| | Mary-NOM | John-DAT | Kobe-DIRECTIONAL | go COMP | was.saying |
| 12b) | Mary-ga | Koobe-ni | iku *(te) | John-ni | yuuteta |
| | Mary-NOM | Kobe-DIRECTIONAL | go COMP | John-DAT | was.saying |
- ‘Mary said to John yesterday that she was going to Kobe.’

L & T (1986:57-58, 1987:176-177, 1992:159-161) therefore postulate a functional category for morphological case called K(case) on the left-edge of DPs (13)), just like complementisers are postulated on the left-edge of TPs (14)):



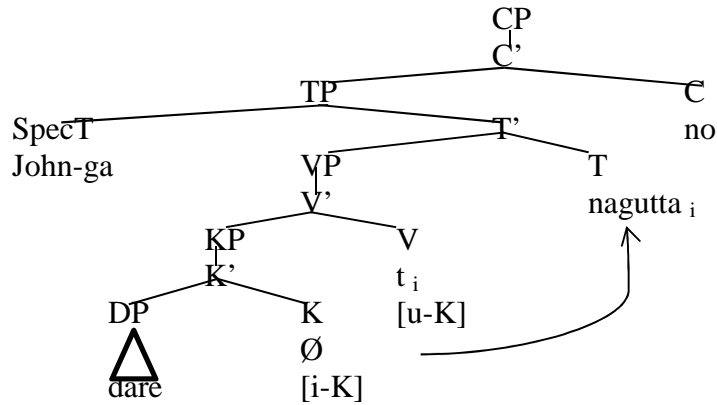
Van Kemenade and Vincent (1997:6-7) argue that functional categories host morphology and lexical categories move to them in order to pick it up e.g. Infl (T), which hosts verbal

¹² Although Wu (2004:234-235) argues that *liao* is ‘univerbated’ before undergoing ‘phonological weakening’ (see footnote 7), ‘phonological weakening’ is beyond question here (*liao* (tone 3) > *le* (tone 0)) and so her argument does not contradict my argument that ‘upward feature analysis’ causes ‘phonological weakening’/‘univerbation’. ‘Phonological weakening’ and ‘univerbation’ are therefore real possibilities in Chinese, especially in ‘upward feature analysis’ (V > Asp).

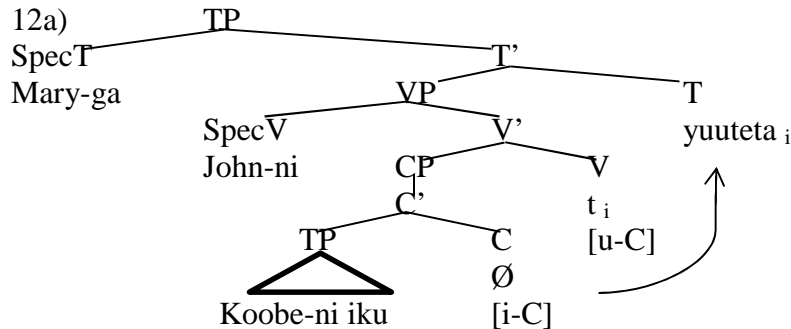
morphology and causes lexical verbs to move from V to T (Chomsky (1991:421-426, 430ff, 1995:133-138)). They argue that K(case) hosts morphological case and NPs/DPs with morphological case move to K (van Kemenade and Vincent (1997:20)).

In order to account for 11-12), L & T (1986:51, 58, 1987:177, 1992:160-163) assume the ‘Empty Category Principle’ (ECP), which states that empty categories must be properly governed and proper government is defined as c-command and feature recoverability in sisterhood (L & T (1986:58-59, 1987:177, 1992:160-165)). This predicts that only KPs/CPs that are sisters (i.e. adjacent) to their head predicates can have empty heads, since only these adjacent KPs/CPs are properly governed (c-commanded and feature-checked) by their head predicates:

11a)



12a)



2.2. K(case): abstract case or morphological case?

In generative grammar, there is a distinction between abstract case and morphological case: the former is postulated as a module of Universal Grammar (Chomsky (1981:5-6, 135), Haegeman (1991:141-144), Freidin, Michaels, Otero and Zubizarreta (2008:ix)), Bobaljik and Wurmbrand (2009:45)),¹³ while the latter is not universal since not all languages have it (e.g. Chinese (Huang, Li, Li (2009:31))).

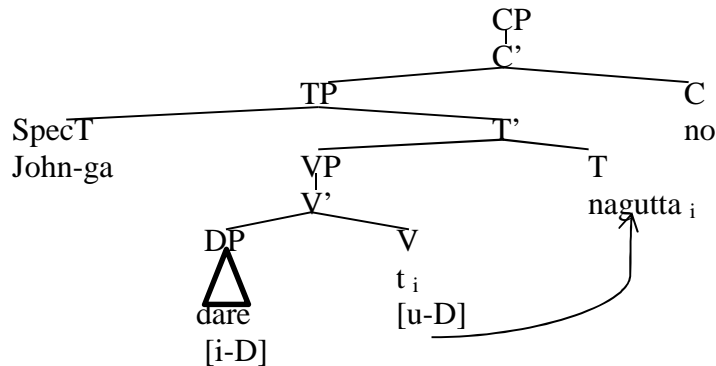
L & T (1986:51-52, 1987:173, 1992:157, 166) subsume the ‘Case Filter’ under ECP (see footnote 13), which entails that K(case) is equivalent to abstract case and

¹³ This is known as the ‘Case Filter’, which states that all overt nouns must have (abstract) case: *NP if NP has phonetic content and has no abstract case (Bobaljik and Wurmbrand (2009:45))

should be universally postulated. This is an attractive hypothesis, since ECP successfully explains why nouns without morphological case (empty K) have to be adjacent to their head predicates and constitute fixed word order.^{14 15}

However, abstract case-assignment in generative grammar is highly structural and configurational anyway, since arguments are assumed to occupy fixed positions where they can be properly governed by the head predicates, and many definitions of government employ c-command and feature-checking as well as adjacency (Stowell (1981:112-113), Haegeman (1991:77, 167-168)).¹⁶ 11a) can therefore be represented without (empty) K:

11a)



It is therefore possible to eliminate K for languages that do not have morphological case, since abstract case-assignment already predicts adjacency.^{17 18} Chinese has never had morphological case and so the grammaticalization of case-markers (K)¹⁹ in Chinese should yield decisive evidence as to whether K exists in Chinese in the

¹⁴ This is a typological tendency, since languages that do not have morphological case must have fixed word order, whereas languages that have morphological case can (but do not necessarily) have free word order (Stowell (1981:122), Kiparsky (1997:470)).

¹⁵ Cf Weerman (1997:441-448), who argues that the loss of morphological case in Dutch gave rise to KPs with empty K heads, which, under the influence of ECP, became adjacent to their head predicates and led to fixed word order in modern Dutch.

¹⁶ Cf the ‘*NP-to-VP filter’, which is identified as the precursor of the ‘Case filter’ (see footnote 13): *[NP to VP], unless is **adjacent to** and in the domain of Verb or *for* ([-N]) (my bold) (Freidin, Michaels, Otero and Zubizarreta (2008:ix), Bobaljik and Wurmbrand (2009:45))

¹⁷ This conforms to Chomsky’s ‘Least Effort Account’, which states that shorter derivations are preferred to longer ones (Chomsky (1991:426ff, 1995:138ff)). Empty Ks are not economical.

¹⁸ Reserving K(case) for languages that have morphological case is an attractive proposal, since it is possible to account for free word order by using K(case) (see footnote 14). Traditionally, free word order is attributed to ‘scrambling’, which can be correlated with K(case) (cf Roberts (1997), who argues that ‘scrambling’ in Old English is due to morphological case, and with the loss of morphological case, the underlying (S)VO word order (re-)surfaces).

¹⁹ Case-markers are functionally parallel to morphological case and are analysed as morphological spell-outs of K(case) (van Kemenade and Vincent (1997:18ff)).

first place. Space constraints prevent me from analysing all Chinese case-markers.²⁰ I therefore analyse the grammaticalization of Chinese *ba*, which has received by far the most scholarly attention and may be taken as representative of Chinese case-markers (see Chappell and Peyraube (2011:787) and Huang, Li, Li (2009:153-167)).

3.1. Chinese case-markers (K)

In Chinese, there are alternations between placing the object after the verb (15a, 16a, 17a) and before it where it is marked by a case-marker (15b, 16b, 17b):

- 15a) ma jie
scold street
- 15b) zai jiedao-shang ma ren
be.at street-LOCALIZER scold people
'Scold people on the streets.' (Feng (2005:8))
- 16a) qie zhe ba dao
cut this CLASSIFIER knife
- 16b) yong zhe ba dao qie rou
use this CLASSIFIER knife cut meat
'Cut meat with this knife.' (Feng (2005:8))
- 17a) da guojia dui
play country team
- 17b) gen guojia dui da qiu
with country team play ball
'Play ball with the national team.' (Feng (2005:8))²¹

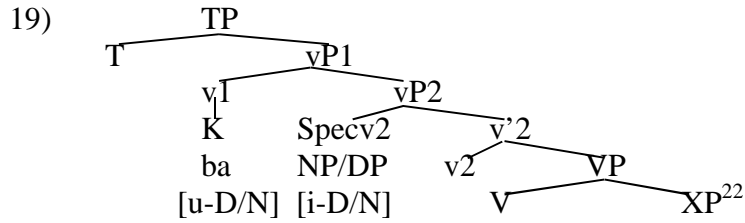
Feng (2000, 2005:4, 7, 10) argues that the main verbs (*ma*, *qie*, *da*) undergo V-to-v movement in 15a), 16a) and 17a), whereas in 15b), 16b) and 17b) these deverbal case-markers (K) are merged in little v and block V-to-v movement. The same alternation is found with *ba*:

- 18a) Lisi sha-le na-ge huaidan
Lisi kill-PERF that-CLASSIFIER scoundrel
- 18b) Lisi ba na-ge huaidan sha-le
Lisi BA that-CLASSIFIER scoundrel kill-PERF
'Lisi killed that scoundrel.' (Huang, Li, Li (2009:153, 172))

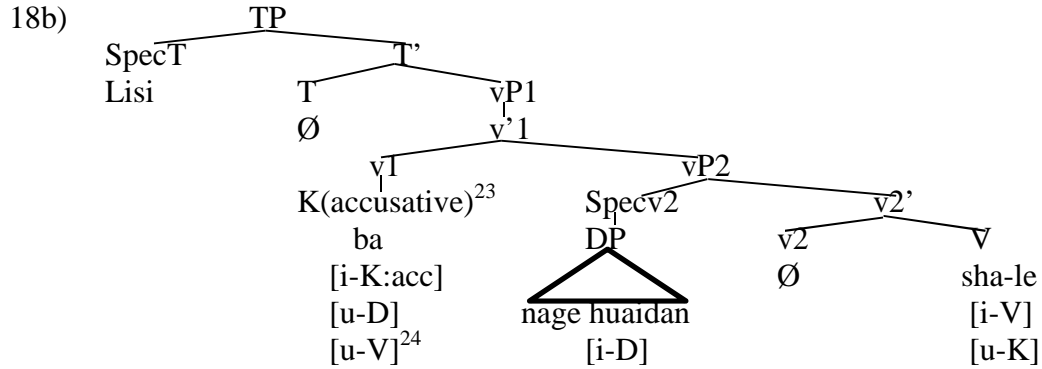
Adopting Zou (1995:74-88), Li (2006:381-382) and Huang, Li, Li's (2009:27-28, 166) argument that *ba* projects its own functional projection in little v, *ba* can be analysed as a case-marker (K) merged in little v (cf van Gelderen (2011:175)):

²⁰ All the main Chinese case-markers are listed in Chappell and Peyraube (2011).

²¹ These case-markers are verbs synchronically and have undergone re-analysis (*zai* 'to be at' > 'at', *yong* 'use' > 'with', *gen* 'to follow' > 'with'). There are numerous typological examples of verbs being grammaticalized as case-markers (van Gelderen (2011:175ff), Chappell and Peyraube (2011:787)), and this cross-linguistic distribution is very relevant to Minimalism (see footnote 1).



A canonical *ba*-construction can therefore be represented thus:



²² This structure is supported by the following constituency test:

- 1) ta ba men xi-hao, chuanguhu ca-ganjing-le
 he BA door wash-finish window wipe-clean-PERF
 'He washed the door and wiped the windows clean.'

The complement of *ba* (*men* 'door', *chuanguhu* 'window') and the main verbs (*xi-hao* 'wash', *ca-ganjing-le* 'wipe clean') are co-ordinated to the exclusion of *ba* (*men xihao*, *chuanguhu caganjingle*), which suggests that they form constituents by themselves (*[ba [NP/DP VP]]*) (Li (2006:382), Huang, Li, Li (2009:166)). Furthermore, Li (2006:408-410) and Huang, Li, Li (2009:174-177) justify merging *ba* higher than little *v* by arguing that while adverbs can occur on either side of *ba* (2a-b)), they can only precede the main verb (2c-d)), which suggests that *ba* is merged higher than the V-to-*v* landing site:

- 2a) wo xiaoxin-de ba beizi na-gei-ta
 I carefully-ADV BA cup bring-give-him
 2b) wo ba beizi xiaoxin-de na-gei-ta
 I BA cup carefully-ADV bring-give-him
 2c) wo xiaoxin-de na beizi gei-ta
 I carefully-ADV bring cup give-him
 2d) *wo na beizi xiaoxin-de gei-ta
 I bring cup carefully-ADV give-him
 'I gave the cup to him carefully.'

I therefore posit another little *v* node (*v*1) between T and little *v* (*v*2) for *ba* (cf Zou (1995:85-87), Li (2006:410-412), Huang, Li, Li (2009:176-178)).

²³ Caha (2009) proposes a hierarchy of K elements, and since *ba* marks the direct object of the main verb, it is equivalent to the accusative case in other languages (K(accusative)). *Zai* (15b), *yong* (16b) and *gen* (17b) represent K(locative), K(instrumental) and K(comitative) respectively.

The main verb (here *sha-le*) does not form a VP since it subcategorises for ([u-K]) the *ba*P ([i-K]) and cannot select any other complement, even if it co-refers to the complement of *ba* (Li (2006:381), Huang, Li, Li (2009:165)):

- 20) *ta ba Lisi_i hai-le ta_i
 he BA Lisi hurt-PERF him
 ‘He hurt Lisi.’^{25 26}

3.2. the grammaticalization of Chinese *ba*

Chinese *ba* is used in serial verb constructions in medieval Chinese (Huang, Li, Li (2009:162-163), Chappell and Peyraube (2011:787ff)) where it is a lexical verb ‘to take/hold’ (Li (1990:183, 2006:379), Feng (2002:128)).²⁷ The origins of *ba* as a case-

²⁴ *ba* holds uninterpretable verb features ([u-V]) because in recent Minimalism complements have uninterpretable Case features ([u-Case]) that have to be checked with the head (here *sha-le* (V)) (Pesetsky and Torrego (2001, 2004)). This is supported by the fact that *ba* cannot be used independently without a main verb (Zou (1995:70), Li (1990:186, 2006:380)):

- 1) *ba shui
 BA water

²⁵ The use of a co-referent resumptive pronoun exists in modern Shanghai, Wuhan and Cantonese dialects (Li (2006:379 footnote 11), Huang, Li, Li (2009:163 footnote 15) e.g.

- 1) chinkei ng hou jeung di taufaaf yim-hak keuih
 be.sure NEG IMP JEUNGCLASSIFIER hair dye-black PRO
 ‘Be sure not to dye your hair black.’ (Cantonese) (Chappell (2014:12))

jeung is related to Mandarin *ba* (Chappell and Peyraube (2011:787)), and its complement (*taufaaf*) is co-referent to the resumptive pronoun (*keuih*) after the main verb (*yimhak*).

²⁶ It is possible for the main verb to have a complement and form a VP, but in this case *ba* does not mark the direct object of the main verb but something else e.g. a related ‘outer’ object (1)); the indirect object (2)) (see Li (2006:383-391)):

- 1) wo ba juzi bo-le pi
 I BA orange peel-PERF skin
 ‘I peeled the orange skin.’ (Zou (1995:32-33, 38))
 2) wo ba ta fa-le henduo qian
 I BA him fine-PERF much money
 ‘I fined him a lot of money.’ (Li (2006:383))

ba can also be used causatively (Zou (1995:42ff), Li (2006:378). Huang, Li, Li (2009:168ff)):

- 3) zhe-ping jiu ba ta zui-dao-le
 this-bottle wine BA he drunk-fall-PERF
 ‘This bottle of wine made him drunk.’

As *ba* is not K(accusative) in 1-3), these usages will not be discussed in this paper.

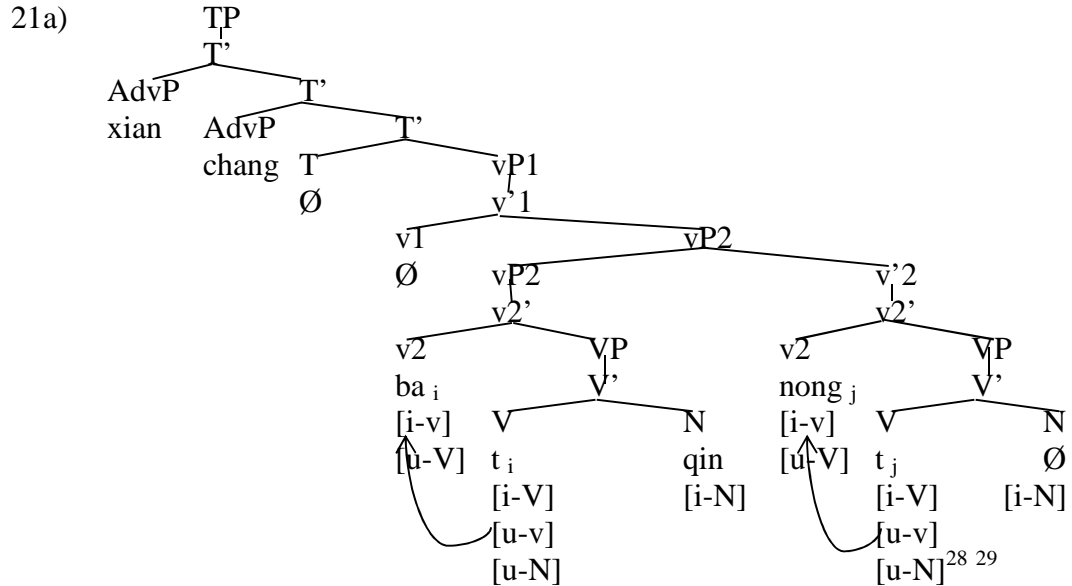
²⁷ Medieval Chinese *ba* can be used on its own and should hence be analysed as a lexical verb (cf footnote 24) e.g.

- 1) zuo shou ba qi zhou
 left hand BA his sleeve
 ‘He held his sleeve with his left hand.’ (*Yan Ce*, 8th century AD)

marker are argued to lie in examples where the second verb denotes purpose and contains an empty argument (Feng (2002:127, 132ff)) e.g.

- 21) xian chang ba qin nong
 leisure often BA lute play
 ‘In my leisure, I often take a lute to play.’ (*Ji Du Shi Yi*, 8th century AD)

ba can be analysed as a lexical verb ‘to take/hold’:



As the argument of the second VP (*nong* \emptyset) is empty, there is implied co-reference between the complement of *ba* (*qin* ‘lute’) and the object position of the second verb

²⁸ In serial verb constructions, each verb has its own argument structure and so they each undergo movement to their respective vPs (van Gelderen (2011:189-190)).

²⁹ This serial verb structure still exists in modern Mandarin, since it is possible to prepose *ba* and its complement together, which suggests that they form a constituent (*baP*) (Huang, Li, Li (2009:178)) (cf footnote 22):

- 1a) ni ba zhe-kuai rou qie-qie... ba
 you BA this-CLASSIFIER meat cut-cut SFP
 1b) ba zhe-kuai rou, ni xian qie-qie ba
 BA this-CLASSIFIER meat you first cut-cut SFP
 ‘You cut the meat and wash the vegetable.’ (Huang, Li, Li (2009:166-167))

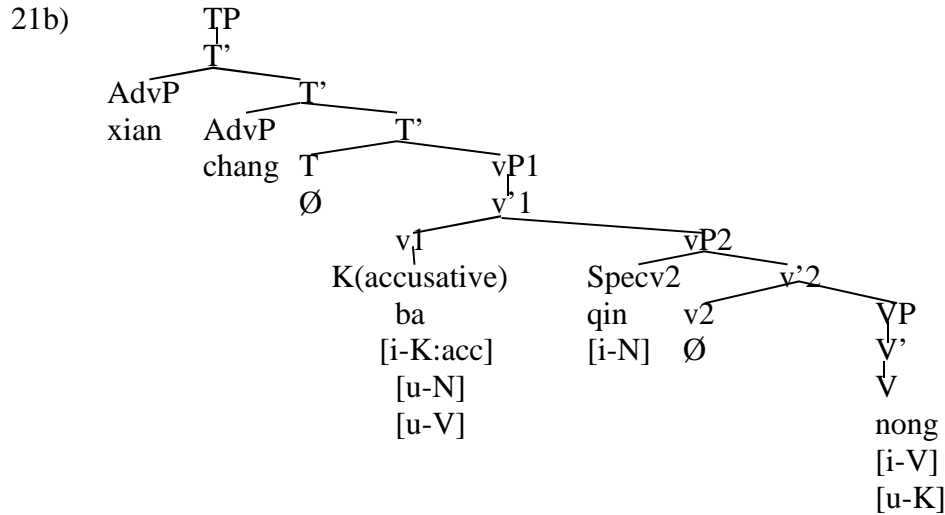
Cf *yong* ‘to use’ (section 3.1, ex. 16):

- 2a) ta yong dao sha-le henduo ji
 He use knife kill-PERF many chicken
 2b) yong dao ta sha-le henduo ji
 Use knife he kill-PERF many chicken

‘He killed many chicken with a knife.’ (Huang, Li, Li (2009:178-179))

Huang, Li, Li (2009:178-179) therefore argue that the preposed phrases here (*ba zhe-kuai rou*, *yong dao*) are VPs, which coincides with the historical example here (21a)).

(*nong* \emptyset ‘to play (something) i.e. lute’) (Feng (2002:132)). *ba* can hence be re-analysed as an accusative case-marker marking the object (*qin* ‘lute’) of the second main verb (‘I often take a lute to play > I often play a lute’) (cf ex. 18b)).³⁰



21b) is ‘simpler’ than 21a), since both verbs (*ba*, *nong*) lose their movement to their respective little *v* (*v*2) and *ba* is merged in little *v* (*v*1) as a case-marker (K). Furthermore, as *ba* now marks the object (*qin*) of the second main verb (*nong*), its interpretable verbal features ([i-V]) become uninterpretable ([u-V]) (see footnote 24). Moreover, as the main verb (*nong*) now subcategorises for the *ba*P as its object ([u-K]), it cannot select any other complement and so the second VP is simplified as V (cf 18b), 20)). The grammaticalization of Chinese *ba* therefore conforms to R & R’s and van Gelderen’s ‘simplicity’. However, although *ba* is shifted upwards from V to *v*1, it acquires interpretable K features ([i-K]) that are not upwardly shifted, since Chinese has never had morphological case and does not have interpretable K features in the first place (see section 2.2). Rather, these features are derived from pragmatic implicature, namely the possibility to re-analyse the first VP of a serial verb construction as the complement of the second verb (‘I take a lute to play’ > ‘I play a lute’). *ba* therefore conforms to ‘lateral’ grammaticalization (see sections 1.2).

³⁰ At an earlier stage, there are examples where a resumptive pronoun is used as the complement of the second verb (Chappell and Peyraube (2011:788)), and this is retained in certain dialects (see footnote 25)) e.g.

1) ru jiang ci ren anxu sha zhi wu sun pi rou
 PRO.2SG take DEM.PRO man careful kill PRO.3SG NEG damage skin flesh
 ‘You take this man_i and kill him_i carefully without damaging his skin and flesh.’ > ‘you kill this man without damaging his skin and flesh.’ (Fo Shuo Chang A Han Jing, 4th-5th century AD)
 There is co-reference between the complement of *jiang* (*ci ren* ‘this man’) and the resumptive pronoun (*zhi* ‘him’), the omission of the latter leads to the re-analysis above (21)).

There is empirical evidence in support of all this, as *ba* and all other Chinese case-markers do not display ‘phonological weakening’ or ‘univerbation’. *ba* is still toned (tone 3) in modern Mandarin,^{31 32} as are all Chinese case-markers (see footnote 20): *jiang* (tone 1), *qu* (tone 3), *na* (tone 2), *gei* (tone 3), *bang* (tone 4), *dai* (tone 4), *gong* (tone 4), *tong* (tone 2), *gen* (tone 1), *bei* (tone 4). The ‘lateral’ grammaticalization of Chinese *ba* (K) is therefore empirically justified, which entails that there is no ‘semantic bleaching’ either, since *ba* has gained interpretable K features ([i-K]) from pragmatics. The ‘lateral’ grammaticalization of Chinese *ba* further entails that K does not exist in Chinese as it seems to have been ‘laterally’ grammaticalized in Chinese case-markers (K).³³ K(case) is therefore not equivalent to abstract case and cannot be postulated universally.

4. conclusions

‘Lateral’ grammaticalization conforms partially to the Minimalist accounts of grammaticalization (sections 1.2-1.3), and there is empirical evidence which suggests that Chinese case-markers (K) are ‘laterally’ grammaticalized (section 3.2). ‘Lateral’ grammaticalization, therefore, is a very relevant topic in Chinese syntax, since it is manifested by three constructions (*shi-de*, *shi*, *ba*), and the fact that it seems to have occurred in the grammaticalization of Chinese case-markers suggests that K(case) is not equivalent to abstract case, which coincides with the synchronic and typological arguments for the postulation of K(case) (section 2).

REFERENCES

- BOBALJIK, JONATHAN, DAVID. AND WURMBRAND, SUSI. 2009. Case in GB/Minimalism. In Malchukov, Andrej. And Spencer, Andrew (eds), *The Oxford Handbook of Case*. Oxford: Oxford University Press, 44-58.
- BOWERS, JOHN. 2001. Predication. In Baltin, Mark and Collins, Chris (eds), *The Handbook of Contemporary Syntactic Theory*. Oxford: Blackwell, 299-333.
- CAHA, PAVEL. 2009. *The nanosyntax of case*. PhD dissertation, University of Tromsø.

³¹ Zou (1995:77) argues that in certain dialects *ba* is pronounced differently depending on whether it is used as a lexical verb [ba] or as a case-marker [bai]. However, as [bai] is not ‘phonologically weaker’ than [ba], these should perhaps be analysed as variant pronunciations.

³² Feng (2002:134-145) argues that when *ba* is grammaticalized, there is a prosodic shift away from *ba* to the second main verb. However, as this has not led to any loss of phonological/phonetic segment in *ba*, prosody should perhaps be considered as extra-phonological here.

³³ If K(case) is universal, the complement of *ba* in 21a) (*qin*) should be a KP and its interpretable K features ([i-K]) should have been shifted upwards from *qin* to *ba* in 21b). This ‘upward feature analysis’ would have entailed ‘phonological weakening’, ‘univerbation’ and ‘semantic bleaching’, which does not hold true.

- CHAPPELL, HILARY. 2014. *Pan-Sinitic Object Marking: Morphology and Syntax*. In Cao, Guangshun; Chappell, Hilary; Djamouri, R.; and Wiebusch, Thekla. (eds) *Breaking down the barriers: interdisciplinary studies in Chinese linguistics and beyond*. Taipei: Academia Sinica.
- CHAPPELL, HILARY. AND PEYRAUBE, ALAIN. 2011. Grammaticalization in Sinitic Languages. In Heine, Bernd. And Narrog, Heiko. (eds), *The Oxford Handbook of Grammaticalization*. Oxford: Oxford University Press, 786-796.
- CHOMSKY, NOAM. 1981. *Lectures on Government and Binding*. Dordrecht-Holland and Cinnaminson, USA: Foris Publications.
- CHOMSKY, NOAM. 1991. Some notes on Economy of Derivation and Representation. In Freidin, Robert (ed), *Principles and Parameters in Comparative Grammar*. Cambridge, MA and London, England: MIT Press.
- CHOMSKY, NOAM. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- CINQUE, GUGLIELMO. 1999. *Adverbs and the Universal Hierarchy of Functional Projections*. Oxford: Oxford University Press.
- FENG, SHENG-LI. 1993. The Copula in Classical Chinese Declarative Sentences. *Journal of Chyinese Linguistics* 22(2).277-311.
- FENG, SHENG-LI. 2000. 'Xie maobi' yu yunlü zufa de dongci bingru. *Yuyan jiaoxue yu yanjiu* 1.25-31.
- FENG, SHENG-LI. 2002. Prosodic structure and the origin of *ba* construction. In Triskova, H. (ed), *Tone, Stress and Rhythm in Spoken Chinese, Journal of Chinese Linguistic monograph* 17.119-168.
- FENG, SHENG-LI. 2003. Gu Hanyu panduan ju zhong de xici. *Research in Ancient Chinese Language* 58(1).30-36.
- FENG, SHENG-LI. 2005. Qingdongci yiwei yu gujin hanyu de dongbin guanxi. *Yuyan kexue* 1.3-16.
- FREIDIN, ROBERT; CARLOS, P. OTERO; and MARIA LUISA ZUBIZARRETA. 2008. Introduction. In FREIDIN, ROBERT; CARLOS, P. OTERO; and MARIA LUISA ZUBIZARRETA. (eds), *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*. Cambridge, MA and London, England: MIT Press.
- GELDEREN, ELLY VAN. 2011. *The Linguistic Cycle. Language Change and the Language Faculty*. Oxford: Oxford University Press.
- HAEGEMAN, LILIAN. 1991. *Introduction to Government and Binding Theory*. Oxford: Blackwell.
- HEINE, BERND and KUTEVA, TANIA. 2002. *World Lexicon of Grammaticalization*. Cambridge: Cambridge University Press.
- HUANG, JAMES. 1997. On Lexical Structure and Syntactic Projection. *Chinese Languages and Linguistics* 3.45-89.
- HUANG, JAMES; LI, AUDREY; and LI, YAFEI. 2009. *The Syntax of Chinese*. Cambridge: Cambridge University Press.

- KEMENADE, ANS VAN. AND VINCENT, NIGEL. 1997. Introduction: parameters and morphosyntactic change. In Vincent, Nigel and Kemenade, Ans van (eds), *Parameters of morphosyntactic change*. Cambridge: Cambridge University Press, 1-25.
- KIPARSKY, PAUL. 1997. The rise of positional licensing. In Kemenade, Ans van. And Vincent, Nigel. (eds) *Parameters of morphosyntactic change*. Cambridge: Cambridge University Press, 460-494.
- LAMONTAGNE, GREG. AND TRAVIS, LISA. 1986. The Case Filter and the ECP. In *McGill Working Papers in Linguistics* 3(2).51-75.
- LAMONTAGNE, GREG. AND TRAVIS, LISA. 1987. The Syntax of Adjacency. In *Proceedings of the West Coast Conference on Formal Linguistics* 6.173-186.
- LAMONTAGNE, GREG. AND TRAVIS, LISA. 1992. The Case Filter and Licensing of Empty K. *Canadian Journal of Linguistics* 37(2).157-174.
- LI, CHARLES N. AND THOMPSON, SANDRA W. 1977. A Mechanism for the Development of Copula Morphemes. In Li, Charles N. (ed) *Mechanisms of Syntactic Change*. Austin and London: University of Texas Press, 419-444.
- LI, AUDREY. 2006. Chinese *Ba*. In Everaert, Martin. And Riemsdijk, Henk van. (eds) *The Blackwell Companion to Syntax: Volume I*. Oxford: Blackwell, 374-468.
- LIGHTFOOT, DAVID. 1999. *The Development of Language: Acquisition, Change, and Evolution*. Oxford: Blackwell.
- PESETSKY, DAVID. AND TORREGO, ESTHER. 2001. T-to-C Movement: Causes and Consequences. In Kenstowicz, Michael. (ed) *Ken Hale: A Life in Language*. Cambridge, MA and London, England: MIT Press, 355-426.
- PESETSKY, DAVID. AND TORREGO, ESTHER. 2004. Tense, Case and the Nature of Syntactic Categories. In Guéron, Jacqueline and Lecarme, Jacqueline (eds), *The Syntax of Time*. Cambridge, MA and London, England: MIT Press, 495-537.
- RIZZI, LUIGI. 1997. The fine structure of the left periphery. In Haegeman, Lilian (ed), *Elements of Grammar*. Dordrecht: Kluwer, 281-337.
- ROBERTS, IAN. 1997. Directionality and word order change in the history of English. In Vincent, Nigel. And Kemenade, Ans van. (eds), *Parameters of morphosyntactic change*. Cambridge: Cambridge University Press, 397-426.
- ROBERTS, IAN. 2010. Grammaticalization, the clausal hierarchy and semantic bleaching. In Traugott, Elizabeth, C. and Trousdale, Graeme (eds), *Gradience, Gradualness and Grammaticalization*. John Benjamins Publishing Company, 45-73.
- ROBERTS, IAN, and ROUSSOU, ANNA. 2003. *Syntactic change. A Minimalist approach to grammaticalization*. Cambridge: Cambridge University Press.
- SHI, ZIQIANG. 1989. The grammaticalization of the particle *le* in Mandarin Chinese. *Language Variation and Change* 1.99-114.
- SIMPSON, ANDREW AND WU, ZOE. 2002. From D to T- determiner incorporation and the creation of tense. *Journal of East Asian Linguistics* 11.169-202.
- STOWELL, TIM. 1981. *Origins of Phrase Structure*. PhD dissertation, MIT.

TSE: THE GRAMMATICALIZATION OF CHINESE BA

- TSE, KEITH. 2013a. Grammaticalization and 'lateral' grammaticalization, formalism and functionalism. *Working papers of the University of Geneva, GG@G, SWIGG 12*.
http://www.unige.ch/lettres/linge/syntaxe/journal/Volume8/6_Tse_2012.pdf
- TSE, KEITH. 2013B What is 'lateral' grammaticalization? *Languages at the University of Essex (LangUE), Proceedings for LangUE 2012*.
http://www.essex.ac.uk/langling/documents/langue/langue_2012_proceedings.pdf
- WEERMAN, FRED. 1997. On the relation between morphological and syntactic case. In Vincent, Nigel and Kemenade, Ans van. (eds) *Parameters of morphosyntactic change*. Cambridge: Cambridge University Press, 427-459.
- WU, ZOE. 2004. *Grammaticalization and Language Change in Chinese: a Formal View*. Oxford: Oxford University Press.
- ZOU, KE. 1995. *The Syntax of the Chinese BA-constructions and Verb Compounds: a Morphosyntactic Analysis*. PhD dissertation, University of South California.