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ON THE RE-ANALYSIS OF NOMINALIZERS
IN CHINESE, JAPANESE AND KOREAN

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1. Introduction

Grammaticalization is commonly assumed to be a process of categorial re-analysis in which a lexical descriptive element turns into a morpheme with a predominantly functional role. Frequently this process would seem to convert a lexical head into a member of the particular functional structure dominating that head, as for example when verbs with clear descriptive content become re-analyzed as aspactual or modal verbs occurring in functional heads projected over the VP. In this sense grammaticalization may be taken to be the result of a combination of movement and re-analysis – movement of a morpheme from a lexical head position to a higher functional head position and then eventual re-analysis of the morpheme as being base-generated in the latter functional head. Such a view of grammaticalization is proposed in Simpson (1998), Roberts & Roussou (1999) and Wu (2000) and naturally procedes in a simple upwards or ‘vertical’ direction in a tree following the path of movement (e.g. lexical verbs frequently re-analyze as instantiations of the higher modal-aspactual functional heads projected over VP). In Simpson & Wu (1998) it is suggested that grammaticalization may also occur in an essentially ‘horizontal’ direction and that a Chinese nominalizer of type D0 (de) is currently undergoing re-analysis as a new instantiation of a clausal head (past tense/T0); such a change does not result from any upwards movement but from the horizontal/lateral re-analysis of a functional element in the nominal domain as a functional element in the clausal domain. In this chapter I would like to suggest that this basic type of horizontal re-analysis argued for in Simpson & Wu (1998) which re-categorizes nominalizers as clausal functional heads is actually quite widespread as a phenomenon in Chinese, Japanese and Korean and possibly significant as a general areal feature of such languages. Due to differences in the surface typological properties of Chinese, Japanese and Korean it will be shown that the hypothetical re-analysis process is interestingly revealed by different types of evidence, and that there is also indication of certain cross-linguistic variation in the way that the nominal elements become re-analyzed in the clausal functional structure. As a result, the phenomenon is one which both intriguingly unites Chinese, Japanese and Korean cutting across their typological differences, and one which also clearly gives rise to certain parametric variation in its actual realization.
The chapter is essentially structured into two main sections focussing on re-analysis phenomena in matrix and subordinate clause types. Section 2 first concentrates on the re-analysis of nominalizers in matrix clauses when these occur with copula elements. The section begins with a review of Simpson & Wu’s (1998) arguments for the re-analysis of Chinese de and then suggests that similar re-analysis is occurring in structures in Japanese and Korean in a way which in fact also reveals more about the underlying change in Chinese. Section 3 then turns to subordinate clause contexts and argues for the re-analysis of nominalizing elements in relative clauses in Japanese and Korean; the hypothesis of such changes is suggested to allow for a broader insight into the potential nominal structure of relative clauses and how genitive case may be licensed on the subjects of relative clauses. The chapter is closed with a consideration of certain other nominalizer re-analysis phenomena and speculations on why it is that the re-analysis of nominal functional elements as clausal functional heads should actually be so commonly found. Throughout the chapter the attempt is made to show that there is much to be gained from comparative work contrasting Chinese with Japanese and Korean, and that despite apparent dissimilarities among these languages the various typological differences found can actually be used to good advantage in the study of a single phenomenon.

2. The re-analysis of nominalizers embedded under copulas

2.1. Chinese de

Simpson & Wu (1998) examines the syntax of the so-called ‘shi-de construction’ in Mandarin Chinese, forms such as (1) in which the copula shi precedes a VP-type clausal constituent and the particle de occurs in sentence-final position:

(1) wo shi zuotian mai piao de
I be yesterday buy ticket de
‘It was yesterday that I bought the ticket.’

As indicated in the gloss, shi-de sentences have an interpretation similar to English cleft-sentences and highlight a focused constituent immediately following the copula against a strongly presupposed background represented by the residue of the sentence. Commonly there is undeniable contextual information leading to the appropriate use of shi-de forms, and shi-de sentences are often used as explanations of some apparent state, the focussed element functioning to clarify or add some additional information relating to the presupposed background/contextually apparent state (see here de Francis 1963, Chao 1968, Kitagawa & Ross 1982 among others).

The strong presupposition which results from use of the shi-de construction is essentially like a speaker’s guarantee of the occurrence of the background event. Rather naturally, this strongly favours past time interpretations and example (2) below only permits a past time interpretation. In example (3) where de is present only a past time interpretation is again possible, and when it is omitted only a non-past future oriented meaning is available:

(2) wo shi zuo qi-che qu Beijing de
I be sit train go Beijing de
‘It was by train that I went to Beijing.’

(3) wo shi gen Zhangsan qu Beijing (de)
I be with Zhangsan go Beijing (de)
with de: ‘It was with Zhangsan that I went to Beijing.’
without de: ‘Its with Zhangsan that I’m going to Beijing.’

Despite the heavy preference for a past time interpretation, it is however possible to override this with the use of future time adverbials and modal elements such as hui or cai-yao ‘will’ as in (4), in which case the interpretation is that there is a strong guarantee that the event will take place:

(4) wo shi mingtian ??َ(cai yao) qu Beijing de
I be tomorrow only will go Beijing de
‘It’s tomorrow that I’m going to Beijing.’

Syntactically, in Paris (1979), Li & Thompson (1981) and other works it has been assumed that the element de both here and in other relative clause structures is a nominalizer, and that shi-de forms therefore critically incorporate nominalizations of a clausal/VP constituent. Li & Thompson (1981, p. 587) write that: ‘The shi-de construction is a special sentence type in which a nominalization is used. Structurally, it consists of a subject followed by the copula verb shi “be” followed by a nominalization.’ In Kitagawa & Ross (1982) it is additionally suggested that a null PRO element occurs following the de of shi-de constructions; such a proposal accords well with the observation that de elsewhere always precedes a nominal element (modified by the clause introduced by de), and is argued by Kitagawa & Ross to be the syntactic encoding of the strong link to context present in shi-de forms – the PRO is suggested to be anaphorically controlled by some element contextually present in the discourse. Simpson & Wu (1998) furthermore show that there is overt morphological evidence in Burmese in support of such a general possibility; in structures fully equivalent to shi-de forms in Burmese there is indeed a lexically overt dummy head-noun present in such structures. Shi-de forms might therefore reasonably be concluded to have a structure in which the copula shi embeds a CNP-type clausal nominalization headed by some null contextually controlled NP element largely as suggested in Kitagawa & Ross.

Despite the clear unnaturalness of such an analysis, Simpson & Wu (1998) suggest that there are reasons to believe that shi-de structures and de in particular are currently undergoing re-analysis away from an original nominalization base. Specifically it is noted that if the sequence following shi were to be a CNP-type nominalization one would not expect for certain patterns common in shi-de forms to be possible. First of all it is found that wh-adjuncts freely occur between the copula and de and so inside what might seem to be a CNP, as illustrated in (5):
Mandarin and the (b) pattern occurring predominantly in northern areas (in addition to the (a) form):

(12) a. V – Ob – de
    b. V – de – Ob

Assuming that the more restricted (b) form is somehow derived from the fully common (a)-type sequence, it might seem that there are two obvious ways of relating (a) to (b). The first of these would be to suggest that the object moves rightwards over the nominalizer de, the second that the nominalizer de itself moves leftwards over the object. Although one might initially be tempted to suppose that the (b) forms result from rightward object-movement similar to Heavy NP Shift (HNPS), this possibility is actually rather problematic to maintain. First of all there is the noted problem that rightward extraction out of a CNP-type island might be expected to violate Subjacency, and secondly, rightward-movement is commonly associated with some kind of focus and stress, as in (13):

(13) John gave ti to Mary [everything he possessed],/*it,

In Chinese, however, the object actually cannot be focused following de as the focus always immediately follows the copula. As simply part of the pre-supposed background information, it is therefore rather odd to imagine that the object might be subject to a particular stylistic rightward movement. Furthermore it is found that when the object is heavy, as for example a clause, the clearly stated preference is actually for the object to precede de and not to occur in final position, this then being completely the opposite to classic HNPS type patterns.

It therefore seems more likely that it is the nominalizer de which undergoes movement in the (b)-type forms. Striking confirmation that this is in fact what is taking place is found when one looks at double object constructions and the position of de. As shown below schematically in (14) and with an example in (15), it is possible for de to precede both indirect object and direct object:

(14) NP shi Adv/PP V de IO DO

(15) wo shi zuotian gei de tamen san-ben-shu
    I be yesterday give de they 3-cl-book
    ‘It was yesterday that I gave them three books.’

This patterning would seem to indicate that it really is de which is changing position and not the direct object – here de is seen to shift leftward over both the direct object and the indirect object.2 If this is indeed right, then it would appear that de is targeting the verb and arguably moving to attach itself as an enclitic on the verb (de being clearly an enclitic element in all its occurrences). Assuming this to be so, the question arises why this should be happening. Significantly a similar kind of movement is in fact diachronically attested
Concerning the categorial status of de, Simpson and Wu note that nominalizers are essentially functional elements which convert a verbal/adjectival constituent into one with nominal properties. Assuming nominal constituents to be DPs, this is then basically taken to suggest that nominalizers are either D^9 elements or some other lower head in the functional structure of a DP. In Chinese for a variety of reasons Simpson & Wu suggest that the nominalizer de is indeed a D^9, this reflecting not only its current functional role but also its likely early D^9 origin as a demonstrative pronounced as zhi, as in (19):^5

(19) zhi er chong you he zhi these two worm again what know 'And what do these two worms know?' (Zhuang 1.10)

The change in modern day Mandarin shi-de structures is therefore suggested to be a case of horizontal/lateral re-analysis taking place between the functional structure of a DP and the functional structure of a clause. The D^9 head de in a DP becomes re-categorized as instantiating the T^0 head of a clausal constituent. Rather than there being upwards grammaticalization in the functional structure projected by a single lexical VP/NP, here the direction of re-analysis interestingly proceeds in a horizontal manner, an element in the referential locus of the DP (D^9) being re-interpreted as instantiating the (temporal) referential locus of the clause (T^0).

2.2. Japanese no

Turning now to Japanese, one finds that there are sentence types with copulas and nominalized clauses which appear to correspond very closely to shi-de structures in Chinese. These are referred to in Kuno (1973) as the 'explanatory no desu' construction and consist in the combination of a clause followed by the element no and the copula desu as in (20). Example (21) shows that no is elsewhere clearly a clausal nominalizer and occurs followed by case-markers indicating that it converts a clause into a DP:

(20) Taroo-wa kino kita no desu
    Taroo-top yesterday came no be 'I came yesterday/It was yesterday that I came.'

(21) Taroo-ga tsuita no-o shitte imasu ka
    Taroo-nom arrived no-acc knowing be q 'Did you know that Taroo has arrived?'

The use of the explanatory no desu construction would also appear to be highly similar to that of the shi-de construction; no desu forms are commonly used to explain certain apparent circumstances and a situation or event whose truth is presupposed knowledge shared by both speaker and hearer, adding in explanation which may often be a time or place clarification. Kuno (1968) characterizes no desu and no desu ka (no desu based questions) in the following way:
'No desu gives some explanation for what the speaker has said or done or the state he is in. No desu ka asks for the hearer's explanation for what the speaker has heard or observed.' (p. 232)

Noting the syntactic and semantic similarity between shi-de sentences and explanatory no desu forms, and that no desu forms: '... always refer to something in the context or speech situation and are only appropriate when there is something in the context for the speaker to refer to.' (p. 35), Kitagawa & Ross suggest that there is a null PRO element present in no desu structures anaphorically referring to some contextually salient entity, essentially just as in shi-de sentences. Japanese no desu forms are then basically conceived of as CNPs as in Chinese.

In the light of what has been argued for in Simpson & Wu (1998) with regard to de in shi-de forms, one might however wonder again about the synchronic status of no in the no desu construction and ask whether it really is a nominalizer embedded in a PRO-headed CNP type structure, or whether it perhaps might also have undergone some kind of re-analysis similar to de. Due to the verb-final word-order in Japanese, if there were to be any re-analysis of no into the verbal-clausal functional domain one would not expect to find the type of evidence present in Chinese where the nominalizer de moves over the object to attach to the verb; in Japanese the element no already is adjacent to the verb and so re-analysis into the verbal functional structure should actually be quite easy in this respect. There are however two other clues which suggest that no might indeed have undergone the same fate as Chinese de and been re-analyzed in the verbal functional domain. The first of these, not so significant in isolation, is that no in no desu sentences optionally permits contraction and loss of its vowel nucleus as seen in example (22):

(22) kino no kita-ni no desu yo
    yesterday came no be EMPH
    'I came yesterday.'

Although Osaka dialects of Japanese may permit this kind of contraction with other more clearly nominal uses of no such as pseudo-cleft sentences, standard Tokyo Japanese does not, and no must occur in its full form in nominalization structures such as (23):

(23) [Taro-no ga Mary-to kekkon shita] no-o/*n-o shitte imasu ka
    Taro-nom Mary-with marry did no ACC knowing be q
    'Did you know that Taro got married to Mary?'

This might therefore seem to indicate that no in these no desu sentences is not the same as the nominalizer occurring in other forms. Stronger confirmation of this suspicion comes from evidence which is not available in Chinese and patterns of nominative/genitive ga/no case conversion. In relative clauses and simple clausal nominalizations genitive case is available as an optional colloquial alternative to nominative ga, as shown in example (24):

(24) Taroo-no/ ga kekkon-shita no-o shitte iru?
    Taroo-gen-nom got-married no.acc knowing-be
    'Did you know that Taroo got married?'

The occurrence of genitive case here is natural if the clause final no is indeed a nominalizer providing the genitive case licensed in all DPs. Supposing now that the element no in no desu structures were to be the same nominalizing element as that in nominalizations such as (24), it is clearly expected that ga/no conversion should also be available in such structures. However, contra such an expectation it is found that no in no desu sentences in fact does not license genitive case on the subject of the embedded clause, as seen in (25):

(25) *Watashi-no kino kita no desu
    I-gen yesterday came no be
    intended: 'I came yesterday.'

A simple explanation of this fact can be suggested to be that no has indeed lost its earlier nominalizer status in synchronic no desu forms and like de in the shi-de construction has been re-analyzed from the nominal functional structure to instantiate a functional head in the verbal-clausal domain. No longer being a nominalizer and converting a clause into a DP constituent, genitive case is simply no longer available for any subject of that clause.

Assuming that the loss of genitive-case and the possibility of reduction of the vowel nucleus do indicate re-analysis of no as suggested, a natural question which arises is whether the re-analysis and re-categorization process is really fully parallel to what was argued for in Chinese. Here the immediate answer is that it cannot in fact be exactly the same as in Chinese, and that the differences found with no in Japanese may actually suggest that there is more to the re-analysis process in Chinese than originally assumed.

Critically in Japanese it is found that the verb preceding no does already carry a tense specification, which may be either past or non-past. Consequently it cannot be the case that no is undergoing re-analysis as an instantiation of past tense as suggested for de in Chinese. In (22) above it is seen that the verb stem ki- carries the past tense suffix -ta in addition to no and that no can therefore not be re-analyzing as past. This is further confirmed by examples such as (26) where the verb is in a non-past form and the future-oriented adverb ensures that there is no past time reading:

(26) (boku-wa) ashita iku no desu
    (I-tor) tomorrow go no be
    'I'm going tomorrow.'

One therefore needs to reflect again upon the hypothetical re-analysis of no. If it is indeed true that no has undergone re-analysis into the verbal functional structure, it cannot be as past tense but must instead instantiate some other clausal head. If no furthermore occurs as a verbal suffix attached outside the tense suffix as seen in (22) and
(26), Mirror Principle type ordering effects in suffix sequences would suggest that *no* corresponds to a functional head which is structurally higher than tense/\(T^0\). Here I believe it is useful to recall the effect on interpretation that the use of *no* results in in the *no desu* construction. As with *shi-de* forms, *no desu* sentences essentially provide some explanation (new information) of a contextually salient background situation or event (a strongly presupposed event/situation), and *no desu* forms are only appropriate when the speaker is fully committed to the truth of the background pre-supposition. This is particularly clear when the new information/explanation is just a sub-part of the clause preceding *no*, as for example in (20) where the speaker asserts that his obvious arrival took place on the preceding day. In this sense *no desu* forms may be characterized as a mechanism with which the speaker explicitly strengthens his/her commitment to the truth of a presupposition shared by speaker and hearer, allowing for the new information/explanation to be clearly highlighted against this background. Such an aspect of the interpretation of *no desu* forms then indicates that *no* is arguably associated with the notion of evidentiality – a speaker may only appropriately use a *no desu* form if he/she has strong/undeniable evidence available that the background presupposition/event is indeed true. Aoki (1986) in fact refers to *no* as an evidential marker, noting a slightly different use of *no desu* forms and stating that: ‘An evidential *no*, or more informal *n*, may be used to state that the speaker is convinced that for some reason what is ordinarily directly unknowable is nevertheless true.’ (p. 228). Aoki points out that sentences such as (27) are felt to be quite unacceptable without the addition of *no desu* as one can normally not know that another person is feeling hot inside:

(27) *kare-wa atsu *(*no da*)

he-TOP hot NO BE

'(I know that) he is hot.'

Assuming evidentiality to be a sub-type of epistemic mood, it can therefore be suggested that in Japanese *no* has been re-analyzed not as past tense but as an instantiation of the head of a higher MoodP dominating tense/TP and representing speaker assertion of the truth of a statement. Such a proposal is represented in (28) below:

(28) Japanese

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  MoodP
    TP   no
      T
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If the above is plausible, it may now lead to a natural reassessment of the re-analysis of Chinese *de*. As the use of *de* would basically seem to cause the same type of interpretation that occurs with Japanese *no*, namely speaker commitment to the truth of a commonly held background presupposition, it might be suggested that *de* has undergone re-analysis not only as an instantiation of a \(T^0\) tense head, but also as a marker of evidentiality like Japanese *no*. This would effectively be equivalent to assuming that *de* is actually re-analyzed as instantiating two distinct functional heads, (past) tense and (epistemic) mood/evidentiality.

The possibility that a single functional morpheme might in fact correspond to more than a single functional head position is neither odd nor particularly novel (see e.g. Koopman 1996), especially when it is assumed that movement may relate a single morpheme to two (or more) functional heads. Here a brief comparison of the C-system in Japanese and English can be used as an example illustrating the general idea. In Japanese (and many other languages) one finds the co-occurrence of both overt Q-morphemes (ka/ka-doo-ka) and embedding complementizers (to ‘that’ under verbs of communication and thought), whereas in English only a single embedding Q-morpheme occurs in indirect yes/no questions ‘whether’:

(29) *Tarou-wa [Mary-ga kuru (ka-doo-ka)] to kikimashita.*

*Tarou-TOP Mary-NOM come Q C asked

‘Tarou asked whether Mary was coming.’

literally: ‘Tarou asked that whether Mary was coming.’

(30) John asked (*that) whether Mary was coming.

If the evidence in Japanese indicates that there are in fact at least two distinct complementizer positions present in the C-systems of languages (a lower Q-position and a higher simple embedding complementizer position), then one might expect that these two positions would also be present in languages such as English. As English has however only a single overt morpheme ‘whether’ where Japanese has two, it could be suggested that English ‘whether’ functions both as a Q-marker and an embedding complementizer. Supposing such a dual role might result from ‘whether’ being related to both C-positions via movement, (31a/b) can then be suggested to represent the relevant difference between Japanese and English, with ‘whether’ raising from \(Q^0\) to \(C^0\) at some point in the derivation:

(31) a. Japanese

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  CP
    QP  C^0
      Q^0 to
        ka
         `whether`
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b. English

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  CP
    Q^0 to
      `whether`
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Given now that Chinese *de* in the *shi-de* construction arguably both has the interpretation of a past tense morpheme and also results in the evidentiality type reading found with Japanese *no*, it can be suggested that when *de* is re-analyzed in the verbal functional structure it actually fulfills the roles of both tense/T⁰ and evidentiality/Mood⁰. At some point in the derivation, *de* as a suffix can then be suggested to be licensed/checked against both T⁰ and Mood⁰ as in (32):

(32) Chinese

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MoodP
  Mood⁰
    TP
      ṭ⁰
    (V)-de
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Aside from being supported by a consideration of Japanese *no*, such a more sophisticated analysis of the re-categorization of Chinese *de* has the advantage that it is also able to explain certain restrictions on the distribution of *de.* Supposing that *de* were indeed to have been re-analyzed as a simple new instantiation of past tense, one would expect that it should in principle be able to occur in all environments where a past tense interpretation is possible. This turns out not to be true however, and whereas *de* is perfectly acceptable in matrix and other embedded clauses, it may not occur in relative clause structures, as shown in (33):

(33) *[tsiu]oian mai de che] de nei-ge-ren jiushi wo gege

  *yesterday uy de car de that-cl-person be I brother

  intended: ‘That person who bought the car yesterday is my brother.’

The unacceptability of structures such as (33) can be explained if it is assumed that the MoodP which licenses interpretations of evidentiality is simply not projected inside relative clause structures and that the evidential function of *de* can therefore not be licensed (formally its evidential ‘features’ remain unchecked). Functionally the absence of the relevant MoodP from relative clauses would be quite understandable as in many languages subordinate structures such as relative clauses do not support the full range of propositional attitude projections available in other non-embedded environments.

Consequently it can be seen that the cross-linguistic comparative analysis of *de* and *no* is instructive in many ways. First of all, given the SVO word order of Chinese combined with the clause-final position of *de* as a nominalizer one finds particularly clear evidence that *de* in ‘situational/explanatory’ copula-related structures is undergoing re-analysis, *de* overtly re-positioning itself right-adjacent to the verb as a new verbal suffix. As the re-positioning furthermore clearly correlates with a forced past time interpretation, it is rather simple to conclude that *de* is indeed becoming a new past tense morpheme. In Japanese due to the SOV head-final nature of the language, such kind of clear re-positioning evidence is not available as a clue to any re-analysis of *no* in structures with interpretations similar to *shi-de* forms. The conclusion that *de* is undergoing a significant change in Chinese does however prompt one to look for other possible indications of re-analysis with *no*, and interestingly one finds that there is evidence from case-marking phenomena (and nucleus reduction) that *no* may indeed be undergoing re-analysis as a new clausal head in a way quite similar to Chinese *de.* Due to the lack of a contrastive case system and an equivalent of *ga/no* conversion in Chinese such case-related evidence of change would clearly not be available as a clue to the re-analysis of *de.* The occurrence of such evidence in Japanese does however arguably add support to the general idea that nominalizers such as *de* may indeed be re-analyzing as functional heads in the clausal domain, and also shows how the contrastive typological properties of Chinese and Japanese can in fact be useful in the analysis of a single phenomenon. Finally, an examination of the potential change in Japanese was shown to lead to a significant reassessment of the change argued for in Chinese and suggest that the re-analysis in Chinese may actually have been more complex than originally imagined. Such a reappraisal of the change with *de* as instantiating both tense/T⁰ and Mood⁰ then allowed for an explanation of restrictions on its distribution which would otherwise remain unaccounted for in a simple equation of *de* with past tense.

2.3. Korean *kes*

I now turn briefly to Korean and the element *kes*. The role of *kes* as an element used in the nominalization of clauses similar to Japanese *no* in sentences (23/24) is illustrated in examples (34) and (35) below:

(34) na-mun [ku-ka o-ass-ta-nun]-kes-ul mollae-ess-ta

  I-TOP he-NOM came KES-ACC did not know

  ‘I didn’t know that he came.’

(35) [to-wuul-i ton-ul hvumchim] kes-un yeki lopuhe ta

  robber-NOM money-ACC stole KES-TOP here from BE

  ‘Its from here that the robber stole the money.’

Although it is not clear whether *kes* occurs in any fully parallel analogue to the Chinese *shi-de* and Japanese *no desu* construction,⁹ there does exist a construction making use of *kes* and the copula which interestingly seems to show signs of re-analysis and the incorporation of nominal *kes* into the verbal functional structure in a way somewhat similar to *de* and *no*. This is illustrated in example (36):

(36) Yeng-gwuulk-ul to-ena ss-ul ke-eyo/kes-ieryo

  England-to left-IRR-KES-BE

  ‘He must have left for England.’
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The use of such a construction is not the same as the shi-de or no desu patterns but it does nevertheless clearly relate to evidentiality and speaker commitment to the truth of a situation, introducing a probable future or a probable past (see King & Yeon 1997). Syntactically it is formed with a verb which may carry past tense or appear bare added to the irrealis marker –(a)l, the element kes and the copula in some speech level form, i.e. plain, polite or formal style:

(37) mek-ul-ke-eyo/ke-pniida
cat-IRR-KES-BE/KES-BE
‘He will (probably) eat.’

While it is clear that a sub-part of this construction historically was the element kes pronounced with a final [s] or [sh]-coda depending on the type of following vowel, in the contemporary speech of most speakers, this element is now regularly pronounced in a reduced form without the final sibilant and a full form pronunciation with [s/sh] is rejected.10 Such obligatory reduction of the coda of the original element then allows for the plausible speculation that kes has undergone re-analysis when it occurs with the copula in this modal type construction and is no longer a simple nominalizer element. A natural assumption in the light of what has been seen with Chinese de and Japanese no and one which might seem to coincide with speaker’s intuitions is that kes here has been incorporated into the verbal string and in so doing has ceased to function specifically as a nominalizing type/nominal element. While it may be conceded that there is still certain evidence of the bi-clausal origin of the construction with honorific agreement occurring on the lexical verb rather than on the copula, as seen in (38), this does not in fact imply that kes necessarily retains its earlier nominalizer status:

(38) neyktai-lul may-shi-l-ke-eyo
tie-ACC WEAR-HON-IRR-KES-BE
‘He will (probably) wear a tie.’

Instead, it might seem likely that this construction is another instance where one of the de/no/kes nominalizer type paradigm co-occurring with a copula is on the way to switching from a nominal-functional status to incorporation into the verbal functional domain and a connection to the notion of epistemic modality and speaker perspective. If this is indeed so, Korean might in fact now also be able to add to our understanding of the patterning in Chinese and in Japanese and possibly suggest that it is not just a bare nominalizing element such as de or no in isolation which is responsible for the particular epistemic interpretation attested. In Korean it is rather clearly the addition of the irrealis morpheme –(a)l which critically results in the relatively decreased strength of evidentiality and the prediction-type reading in examples such as (36–38). Assuming this to be correct and a general property of evidentializer + copula constructions, it potentially adds credence to earlier suggestions noted in Kitagawa & Ross (1982) and Simpson & Wu (1998) that de originally receives its evidential force indirectly from a contextually salient entity binding an empty nominal PRO head selected by de and that it is consequently not de in isolation which results in the guarantee-type interpretation.11

3. The re-analysis of nominalizers in relative clauses

Section 2 considered the interaction of nominalizers with copulas in constructions encoding evidentiality and epistemic modality. Evidence was presented indicating that the Chinese D⁰ element de is re-analyzing into the verbal functional domain as tense and mood, and there were also hints that Japanese no and possibly also Korean kee may well have met with similar fates. I would now like to suggest that this basic path of horizontal nominalizer re-analysis of the functional structure of a DP into the functional structure of a clause is a process which has also occurred in relative clause structures in Japanese and Korean and that nominalizers present in such environments as D⁰ elements have been re-categorized as instantiations of higher clausal functional heads. Such changes can be argued to be revealed in the changing patterns of the licensing of genitive-case relative clause subjects as discussed in Whitman (1998), and lead to the assumption that there are two distinct potential sources of genitive case in languages with normalized DP relative clauses. Before starting in to consider the relevant data, I would like to acknowledge that the spirit of certain of the general conclusions reached in this section coincides in part with a suggestion made in Whitman (1998) that the loss of genitive-marking is connected to the status of a relative clause as a nominalization. How such a general idea is technically interpreted and the focus of interest will nevertheless be noted to be rather different from Whitman’s interesting account.

In Japanese it is well-known that subjects in relative clauses may appear in either nominative or genitive case, as in (39), this being commonly referred to as ga/no conversion:

(39) Taroo-ga/no katta hon
Taroo-NOM/-GEN bought book
‘the book that Taroo bought’

A similar alternation exists also in Korean, but appears to be subject to more restrictions than in Japanese. Various linguists such as Yoon (1991) and Sohn (1997) have noted that in modern Korean the only subject DPs which can be marked with genitive case in relative clauses are those which essentially bear a potential possessor-type relation with the head-noun, or a relation in which there is a very close association between the subject and the head-noun, as for example in (40):

(40) na–uy sal-te-n kohyang
I-GEN live-RET-N hometown
‘the hometown where I used to live (my old hometown)’

Yoon (1991) notes that (41) below is perfectly acceptable with the verb ip-ta ‘wear’ but not with the verb po-ta ‘see’ as only ‘wearing’ satisfies the close association-type relation:
Andrew Simpson

(41) [John-uy ip-nuun/*po-n] os
   John-gen wear-n/see-n clothes
   'the clothes that John wore/*saw'

(42) from Sohn (1997) is similarly argued to be unacceptable because there is no
    possession type relation existing between the head-noun salam-tul 'persons' and
    the genitive-marked NP ku-umak-uy 'that music' (i.e. the music does not possess the
    people):

(42) [ku-umak-uy/*-uy kamdongsikki-n] salam-tul
    that music-nom-gen move-n person-pl
    'the people who the music moved.'

Whitman's (1998) research into middle Korean however shows that this kind of
restriction on genitive subjects might appear to be just a property of modern Korean. In
middle Korean the relation between a genitive subject and the relative clause head-noun
seems to be thematically unconstrained, in the same way that it is unconstrained in
modern Japanese and a subject need not stand in a possessor-type relation with the
relative clause head-noun to be marked with genitive case. (42) below is an example
Whitman gives from middle Korean which would not be acceptable in present-day
speech:

(43) I pali-yy ey mwoolgay-lul [na-y totni-n-o-n] stoh-ey skola-la
    this bowl-in gen sand-acc 1-gen go-fr.mod.ad place-gen spread-imp
    'Spread this sand in the places where I go.'  (Sekpo sangeul, 24: 9b)

In addition to the thematic 'possessor' restriction in modern Korean, it is also not possible
for a genitive subject in modern Korean relative clauses to be preceded by an adverb such
as ecey 'yesterday' which refers to the action of the relative clause, as in (44). This is in
sharp contrast to modern Japanese where a sentential adverb may indeed precede a
subject, as shown in (45):

(44) [ecey John-i-*/John-uy sa-n] chayk
    yesterday John-nom/john-gen buy-n book
    'the book that John bought yesterday.'
    (Sohn 1997)

(45) [kinoo Hanako-no katta] hon-wa Bottyan desu
    yesterday Hanako-gen bought book-top Bottyan be
    'The book which Hanako bought yesterday is Bottchan.'
    (Nakai 1990)

These two facts might seem to point to the same conclusion and suggest that the genitive
case possible with relative clause 'subjects' in modern Korean is assigned by the D₀
head selecting the relative clause head NP₁ in a simple structure such as (46). In (46) DP₂ is
the possessor-specifier of DP₁, and the CP is the relative clause:

This will straightforwardly account for the restriction that the genitive 'subject' DP₂
must precede any sentential adverb which is part of the CP relative clause and also
allow for a natural understanding of the possessor-type thematic restriction on DP₂ – the
relative clause head-noun/np appears to have been unrestricted, and it is clearly unrestricted in modern Japanese, so
a natural question now is to ask how the un/restricted distinction between modern Korean
and middle Korean/Modern Japanese should be captured. One possible route of
explanation, I believe, is to pursue the connection between gerund-type nominalizations
and the occurrence of genitive subjects in relative clauses. It is well-known that
nominalizations of certain types cross-linguistically license thematically-unrestricted
genitive subjects. This is seen in English gerunds and Korean type III gerund
nominalizations and also in a number of nominalizations formed with no in Japanese,
as for example in (47) and (48), (47) being a simple clausal nominalization, (48) a
pseudo-cleft type structure also formed with the element no and allowing for optional
genitive case on the subject in place of nominative:

(47) Hanako-ga [Taro-no tsuita] no-o mita
    Hanako-nom Taro-gen arrived no-acc saw
    'Hanako saw Taro arrive.'

(48) [Taro-no katta] no-wa hon desu
    Taro-gen bought no-top book be
    'What Taro bought was a book.'
Supposing one assumes that the nominalizer no here is a functional head of type D₀ just as Chinese de is, it can be suggested that the subjects in (47) and (48) have their genitive case licensed/checked directly in SpecDP by no (either overtly or at LF; in either case it may be assumed that the genitive case-marker no is attached to the subject DP as an inflectional suffix in the lexicon, in line with current Minimalist views). Because there is no ‘head’ N(P) in such pure nominalizations, there will be no possessor-like semantic restrictions on genitive subjects and genitive subjects will be thematically-unrestricted, as noted. (49) is an approximation of the underlying structure assumed for nominalizations such as (47) above (the brackets around the genitive-marked subject DP₂ are intended to indicate that the occurrence of DP₂ in SpecDP₁ checking its genitive case has not been here determined to be overt or covert):

\[
(49) \quad \begin{array}{c}
\text{DP₁} \\
(\text{DP₂-no)} \\
\text{D'} \\
\text{IP} \\
\text{no} \\
\text{D₀} \\
\end{array}
\]

The critical lack of any thematic restriction on the genitive subject DP₂ in such structures contrasts with the genitive case which is licensed by D₀ when D₀ selects for a noun/NP with clear semantic content in relative clause structures such as (46). There the occurrence of the head-noun/NP results in the possessor-like restriction on a DP licensed genitive case in SpecDP; in nominalization structures such as (49) there simply is no NP present to impose similar restrictions. The important point to bear in mind then is that bare-nominalizers such as no having no intrinsic semantic content can be taken not to semantically/thematically constrain the type of DP assigned genitive case in SpecDP, whereas the genitive case assigned/checked in a SpecDP projected over a semantically contentful head-noun/NP in relative clauses naturally will impose such restrictions.

Above it was noted that Korean and Japanese are both languages which currently have, or previously had thematically unrestricted genitive subjects in relative clauses. A further piece of information which can now be used to help explain the genitive-case marking patterns is the observation that Korean and Japanese are also both languages which either currently have, or previously had some kind of special ‘adnominal’ morphology on verbs in relative clauses (this meaning that verbs appear in relative clauses with suffixes which do not occur in other non-embedded clauses). Importantly now Whitman (1998) points out that various Korean linguists such as Lee (1961) and Hong (1990) have argued that the adnominal morphology present on verbs in relative clauses in Korean should in fact be analyzed as being the addition of nominalizers to the verb. If this is correct, it can be suggested that the (relative) clauses to which such nominalizers are attached in final position are clausal nominalizations and therefore significantly expected to license their own thematically unrestricted genitive subjects. Assuming as before that nominalizers are nominal functional heads which are either D₀ elements or otherwise part of an extended functional structure which projects up to a DP (with the associated genitive case being licensed/checked in SpecDP), this basically leads to the conclusion that relative clause structures in some languages in fact involve a DP nominalized clause embedded within a DP rather than there being just a simple CP relative clause. (50) below is one hypothetical representation of such a structure, with D₂₀ assumed to be the head-position containing the relevant nominalizer, NP the head-noun/NP, and RC the relative clause:

\[
(50) \quad \begin{array}{c}
\text{Spec} \\
\text{D₁₀} \\
\text{NP} \\
\text{D₀} \\
\text{DP₂} \\
\text{RC} \\
\text{D₂₀} \\
\text{D₁₀} \\
\text{Spec} \\
\text{D₁₀} \\
\text{NP} \\
\text{D₀} \\
\text{DP₁} \\
\end{array}
\]

An alternative might be to assume some kind of simple juxtaposition structure as in (51) possibly similar to the structure of correlative in languages such as Gujarati:16
Indeed, in old English there seems to be evidence that relative clauses in certain languages may start out as the juxtaposition of two DPs. In example (52) both the relative clause noun-head and the relative clause are case-marked with genitive case assigned by the matrix verb, indicating that they are actually both DPs (with some kind of case-sharing effect):

(52) Hi adulon gehwylene dael paes wrytgeardes paesa pe pacer aer undolen was they dug each part thatGEN garden.Gen theGen c there before not-dug was 'They dug every part of the garden that had been left undug before.'

lit. ‘... of that garden, that one left undug.' (c.1050, Gregory’s dialogues)

In either analysis (50) or (51), the nominalized relative clause DP  will significantly license its own genitive case in SpecDP2 quite independently of the head-noun/np and the possessor-type genitive case licensed in SpecDP1. Consequently such genitive case will not be thematically constrained and there will not be any restrictions on the type of subject carrying such genitive case. In fact, in nominalized relative clause constructions of the type schematized above, there will actually be two independent sources of genitive case – one made available by the D10 regularly projected over the head noun/np, and a second provided by the nominalization of the relative clause with the nominalizer assumed to be located in D20. These two independent genitive cases can be called ‘outer restricted genitive case’ and ‘inner unrestricted genitive case’ respectively.

Assuming this much will now allow for a relatively simple explanation of the historical change in Korean. In middle Korean, relative clause genitive subjects appear to have been thematically-unrestricted and so can be suggested to have been licensed as inner unrestricted genitives by the putative D0 nominalizer of the relative clause (the adnominal morphology on the verb in final position in the relative clause). Turning to modern Korean, one finds that relative clause genitive subjects are now thematically restricted, indicating (under present assumptions) that only an outer genitive can be licensed by the D10 head projected in the functional structure immediately dominating the relative clause noun-head. However, special adnominal morphology is still strongly present on the verb, and as such morphology has been assumed to instantiate a D0 nominalizer, it might well be expected to license a thematically unrestricted inner genitive subject, contra observation. A way of accounting for this apparent contradiction without abandoning the basic mode of explanation is now to suggest that there has been a critical re-analysis of the same basic type as that suggested earlier in Chinese and Japanese, and that a D0 nominalizer (here the adnominal morphology) has again significantly undergone a category shift from the nominal domain into the higher functional structure projected by the verb. Undergoing re-analysis out of the nominal domain the unrestricted genitive case which is licensed by the gerund-like nominalization-structure and the D20 head automatically disappears and ‘subject’ DPs may only be assigned the outer restricted genitive licensed by D10 in the nominal functional structure dominating the relative clause noun-head.

If this is indeed what has possibly occurred in Korean relative clauses, the next question which arises is how genitive subjects are licensed in modern Japanese relative clauses. As noted earlier, Japanese also used to have special adnominal morphology in its relative clauses, verbs appearing in the attributive form with suffixes which contrasted with the conclusive forms of other clauses. This system of opposition is well-documented as having later got restructured into a general tense system which then did not manifest any difference between matrix and subordinate clauses (see e.g. Shibatani 1996, Takeuchi 1998). If one now supposes that the older attributive adnominal forms were possibly just like middle Korean adnominal suffixes and therefore by hypothesis D0 nominalizers, the re-organization of the attributive forms into a tense system would then actually constitute another good case of a nominalizer being re-analyzed as a tense-form, precisely as suggested for the D0-to-T0 conversion in contemporary Chinese. If this is so however, one now needs to try to understand how thematically unrestricted genitive case continues to be available for subjects of relative clauses in Japanese. If the earlier D0 nominalizer (the attributive adnominal suffix) which would have licensed an inner unrestricted genitive has undergone re-analysis as tense, one might not expect to find unrestricted genitive subjects occurring in relative clauses, as these are otherwise only licensed in clear nominalizations such as (47). Here I would like to suggest that there are actually two potential explanations for the continued persistence of unrestricted genitive subjects.

The first of these is to suggest that the re-analysis of clause-final D0 nominalizers into tense-morphemes is actually a process which is still only optional in Japanese relative clause structures. In the case of the suffixal ending of non-past verb-forms, this morphology essentially corresponds to the original adnominal attributive suffixes (modern non-past tense forms deriving from the earlier attributive endings in the re-organisation to a full system of tense); consequently it can be suggested that the original attributive nominalizer ending may simply remain un-reanalyzed, and as a D0 continue to license (unrestricted) genitive case. As for the past tense forms found in relative clauses, a similar account may also be given. The re-organization of both attributive and conclusive forms into a global tense system essentially resulted in the creation of a tense position/T0/TP in relative clauses. Non-past tense forms resulted from the re-analysis of attributive adnominal suffixes and past tense forms resulted from the re-analysis of conclusive aspecual suffixes. Both tense forms can critically be taken to have been re-analyzed into a position which was previously instantiated by a D0 nominalizer. In the case of the conclusive suffixes which became re-analyzed as past tense, it can now be suggested that this re-analysis into the T0 position as tense is also possibly still optional in relative clauses and that what appears to be past tense in relative clauses is actually still the older un-reanalyzed aspecual suffix. If the past tense suffix is in fact actually an aspecual suffix, it can consequently be assumed that no T0 tense position is necessarily projected and instead this position may be instantiated as a D0 head occupied by a phonetically null nominalizer. Reason to believe that there may not have been necessary re-analysis into a full tense system inside relative clauses is the interesting fact that the ‘past tense’ morpheme in relative clauses in fact need not always result in a past time meaning and can instead correspond simply to perfective/completive aspect which is fully compatible with a future reading, as seen in (53) from Nakamura (1994):
(53) [ashita ichiban hayaku kita] hito-ni kore-o ageru
  tomorrow most early came person-DAT this-ACC give
  ‘I will give this to the person who comes (lit. came) first tomorrow.’

This future-oriented interpretation of the past tense morpheme is restricted to relative clauses and therefore suggests that re-analysis of attributive and conclusive forms as tense may still be optional in this environment. Supposing this to be so, it can therefore be maintained that the earlier D⁰ nominalizer position hypothesized to exist in relative clauses has not in fact been necessarily re-analyzed as a T⁰/tense head and is consequently still potentially present to license unrestricted genitive case.

A second possible way of accounting for the unrestricted genitive case available for Japanese relative clause subjects might be to suggest that when the postposed attributive form nominalizer became re-analyzed into the tense system, the nominalizer position might not have simply disappeared but instead may have been retained and occupied by a new nominalizer element. Elsewhere where the attributive form was re-analyzed and its hypothetical nominalizer status was lost, a new overt nominalizer was in fact inserted in a renewal process common in language development. Horie (1993) compares the classical Japanese example in (54) with its adnominal verb-form and no apparent nominalizer with a modern Japanese equivalent with no in (55). When the adnominal suffix became reinterpreted as non-past tense, the new nominalizing element no is seen to be added in:

(54) [te tatake-ba yamabiko-no kotaeru] to urusai
  hand clap-as echo-gen [Negprod] very annoying
  ‘It is very annoying that there is an echo when he claps his hands.’  
  (Genji monogatari, 11thC)

(55) [te-o tataku-to kodama-ga kotaeru] no-wa taihen hayakai-da
  hand-ACC clap when echo-NOM answer no-top very annoying be
  In fact it is not easy to see how the verb-form in (54) can actually be labelled as having ‘adnominal’ morphology as it does not appear to precede any kind of nominal; the most natural explanation for the genitive subject in (54) would seem to be that the adnominal morphology is indeed a nominalizer attached to the clause and that when this becomes re-analyzed as a tense morpheme, no is inserted to replace it. Consequently, if there is indeed productive replacement of certain nominalizers which have undergone re-analysis with new nominalizing elements, it would not be unreasonable to speculate that a null nominalizer might have been introduced into relative clauses following re-analysis of the attributive ‘nominalizers’ and it is this D⁰ element which is basically responsible for the possibility of unrestricted genitive subjects.

Ultimately then it can be argued that the differing patterns of genitive case licensing in earlier and contemporary forms of Japanese and Korean can be given a rather natural account if it is assumed both that unrestricted genitive case is assigned by D⁰ nominalizing elements and that such heads may over time be re-analyzed as instantiations of heads in the higher clausal functional structure, just as has arguably occurred with nominalizers in copula constructions. In the case of Japanese at least, it has been speculated that if the adnominal endings found on verbs in classical Japanese are assumed to have been clause-peripheral D⁰ nominalizers (as in Korean), then their clear re-analysis into tense elements would also constitute another interesting case of the D-to-T conversion phenomenon reported in Chinese. Before concluding this section now, I would like to stay just a little longer on this theme of D-to-T conversion and briefly present one last CNP type case in Japanese where there might again seem to be evidence of such a D-to-T re-analysis.

As mentioned earlier on and noted in Kitagawa & Ross (1982), the distribution of Chinese de and Japanese no is quite similar. One regular difference however concerns the occurrence of no and de following clausal constituents. In adult Japanese no occurs following a clause (a relative clause, nominalization, head-internal relative clause etc) only when there is no other head-noun following no. This contrasts with Chinese (and children's Japanese, see Murasugi 1991) where de does co-occur with an overtly-realized relative clause head. Such differences lead Simpson & Wu (2000) to suggest that no is actually base-generated in N⁰ and then raised to D⁰, whereas de is inserted directly into D⁰ and so allows a discrete instantiation of the N⁰ position. (56) below schematizes the patterns found:

(56) a. Chinese
    ✓ [clause] de Ø
    ✓ [clause] de NP

  b. adult Japanese
    * [clause] no NP
    ✓ [clause] no Ø

  c. child Japanese
    ✓ [clause] no NP
    ✓ [clause] no Ø

One apparent counter-example to this generalization over adult Japanese however is constituted by forms such as (57) and (58) where no is legitimately followed by an overt head-noun in an appositive CNP type structure, these examples being first noted in Kitagawa & Ross (1982):

(57) [kane-o haratte]-no-ageku
    money-ACC paying-no consequence
    ‘the consequence of having paid money’

(58) [kare-ga kureba]-no-hanashi
    he-NOM come-if no talk
    ‘the talk which would become relevant if he came’

Interestingly, as pointed out in Murasugi (1991), what consistently characterizes these examples is that the verb in the CNP is un-tensed, i.e. not in any regular past or non-past tense-form. It can therefore be suggested that the generalization in (56b) about nominalizer no actually is correct, and that the exceptional patterning in (57/58) in fact
results from no having undergone re-analysis into $T^0$ when $T^0$ is not occupied by a regular tense morpheme. Such a re-analysis would then be very similar both to the conversion of Chinese de into tense and the hypothesized re-analysis of Japanese (D$^0$) attributive nominalizers into tense.

An interesting related case is found elsewhere in relative clauses in Hebrew. Siloni (1995) notes that the Hebrew definite determiner ha occurs in relative clauses in a position preceding the VP as in (59). Significantly this is only possible in participial relative clause structures where there is no overt instantiation of tense:

(59) *iš ha-kore *itón ba-rexov
    man the-reading newspaper in.the-street
    'a man reading a newspaper in the street'

In order to explain this distributional constraint, it can be suggested that the D$^0$ determiner like other cases of D$^0$ nominalizer elements examined here is actually re-analyzed into the verbal functional structure and specifically into the tense position, hence being incompatible with anything but a tenseless participial complement. What is perhaps different between the Japanese and Hebrew cases in (57–59) and the D-to-T conversion of Chinese de is that in the former instances and particularly Hebrew, the nominalizer determiners do not bring with them into the tense position any of the referentiality they might be associated with in the nominal system. Thus whereas the discourse-operator determined referentiality of Chinese D$^0$-nominalizer de is re-interpreted as past tense, the definiteness present in Hebrew ha is quite absent in its use in participial relatives and Siloni describes such relatives as having an ‘understood tense’ (which is determined externally by the context). The same can be said of the Japanese example (57) (and possibly also (58)). What the introduction of the nominal functional elements into $T^0$ seems to do in these cases is simply to provide an element in $T^0$ which can be anaphorically controlled by some higher tense operator, much as English to is also controlled in English infinitival clauses.

4. Summary

The aim of this chapter has been to suggest that nominalizers occurring in Chinese, Japanese and Korean (and possibly other languages) frequently undergo categorial re-analysis and grammaticalize in a horizontal direction from a role in the functional structure of a DP to instantiate some functional head in the clausal functional structure projected above VP. The particular view of nominalizers assumed here is that these purely functional elements may be either D$^0$ heads directly embedding a clause and outputting a DP constituent (essentially like determiners in Spanish, see footnote 5), or possibly some lower functional head which naturally projects up to a DP. Considering the two principal environments of copula constructions and relative clauses, it was observed that Japanese, Korean and Chinese provide a variety of evidence indicating re-analysis, and that the re-categorization of nominalizers as instantiations of clausal functional heads would arguably seem to be surprisingly common.
Notes

1 Concerning relative clauses Li & Thompson (1981, p. 116) state the following: ‘A relative clause is simply a nominalized clause placed in front of a noun to modify it.’ and assume that de is the nominalizer of the (relative) clause.

2 Kitagawa & Ross refer to Chao (1968) as suggesting that shi-de sentences may often be translated with phrases such as ‘such is the case’ or ‘this kind of situation’ as in (i):

(i) Ta shi zuotian qu de
he BE yesterday go DE
‘It’s the case that he went yesterday.’

They suggest that this may be taken to indicate that there is indeed a phonologically null PRO equivalent to the noun ‘case/situation’ present following de.

3 The alternative is to assume that both direct object and indirect object move rightwards, which seems rather unlikely. Rightwards object-shift has never before been attested to occur with both direct and indirect object at the same time.

4 When de occurs sentence-finally and a nonpast time reading is possible with adverbs and modals, it is assumed that de is still a nominalizer. Simpson & Wu thus take de in sentence-final position to have a potentially ambiguous status, either occurring as a nominalizer or as past tense. When de attaches to the verb, it is however unambiguous and only past tense.

5 It is clear that D1 determiners fulfill the role of nominalizing clauses in other languages. The example below is from Spanish, the simple determiner el ‘the’ functioning to nominalize the following clause:

(i) [de el [CP que Juan haya ganado el concurso]] garantiza nuestro triunfo
that Juan has won the competition guarantees our triumph
‘That Juan has won the competition guarantees our victory.’

6 Kitagawa & Ross attempt to suggest that the lack of genitive no in no desu forms results from Bedell's early (1972) account of ga/no conversion. Following Bedell they assume that genitive marking occurs when a subject NP from within a relative clause is raised outside of the relative clause and receives the genitive case licensed by the relative clause head-noun. In the case of no desu sentences, they claim that raising of a subject out of a PRO-headed relative clause would result in an illegitimate structure in which PRO is forced to bind the trace of the raised subject and that ga/no conversion is therefore impossible in no desu sentences. Because the same considerations should however result in illegitimate structures in regular relative clauses and the relative clause head-noun having to bind the trace of a raised subject, it is also predicted that ga/no conversion should not even occur in simple relative clauses. As this is clearly false, such an attempted account of the lack of ga/no conversion cannot be maintained.

That is, cross-linguistically it is found that suffixes closer to the verbal stem consistently relate to functional heads which are lower than those licensing outer suffixes, see here Baker (1985). In addition to its occurrence in (34) and (35), kes also occurs in many other environments where Chinese de and Japanese no are found. As in Japanese, kes occurs in head-initial relative clauses (i), children’s (externally-headed) relative clauses (ii) and pseudo-clefs (iii) (data here is taken from Whitman, Lee & Lutj 1991):

(i) kiriko [appa sau-nun]-ke anykeng-un...
then papa wear-ing KES glasses-POP

(ii) chayk pily-ve ka-n, kes noyil kac-ko o-kyes-upni-ta
book borrow go-PAST KES tomorrow bring-ing cone-FUT-POL-DECL
'I will bring back the book that I borrowed tomorrow.'

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(iii) [nae-ka meko-iss-nun]-kes
I-NOM eat-ing be KES
'what I am eating'

This is similar to the occurrence of Chinese de in adult (externally-headed) relative clauses, pseudo-clefs, and children’s internally-headed relative clauses (Chiu 1998).

9 A reviewer of the chapter points out that there is a structure which occurs in narratives in Korean which may be structurally quite like the shi-de/no desu construction, with kes combining with the copula as in (i) below:

(i) Cheli-ka mikwuk-ey ka-as-te-n kes-iess-ta.
Cheli-NOM USA-to go-PASTRET-N KES-BE-PAST-DECL
'It so happened that Cheli went to the USA.'

However, as it is not clear whether the full spectrum of meanings present in such structures parallels those with colloquial shi-de and no desu, I simply note this pattern here without further analysis and thank the reviewer for this potentially useful information.

10 King & Yeon (1997, p. 253) maintain that for some speakers kes may still optionally be pronounced in its full form as in (i). Other speakers strongly reject pronunciation of the final [s/ sh] sibilant:

(i) %mek-uls-kes-iyo/kes-ipmida
eat-IRR-KES-BE
‘He will (probably) eat.’

11 Such indirect evidential force is then later taken to become an inherent part of the meaning of de when it is re-analyzed as tense/mood. This would then parallel a hypothetical collapsing of Korean -u/ and kes as a single epistemic marker after re-analysis in the verbal functional structure.

12 Note that much of the Korean data here comes from sources quoted in Whitman (1998).

13 Whitman (1998) rejects the possibility of a base-generated structure such as (46) and suggests instead that the genitive DP is ‘re-structured’ from inside the relative clause to the possessor/SpecDP position. This is done primarily for two reasons. First of all it is noted that structures in which a genitive possessor DP precedes a relative clause with an overt subject are degraded:

(i) *John-uy [Mary-ka pulli-n] chayk
John GEN Mary-NOM borrow-AND book
intended: ‘John’s book that Mary borrowed.’

Secondly, if a pro subject were to be possible in the relative clause controlled by a preceding DP possessor, it is argued that one might expect that examples such as (41) with the verb po-ta ‘wear’ would be acceptable contra what is observed. Without going into detail here, in the first case I believe it might be possible to suggest that the apparent unacceptability may be due to phonological reasons and that there is a preference for heavier/longer modifying constituents to precede shorter modifying elements in DPs. This is certainly true in parallel structures in Chinese (as noted in Tsao 1997). When the subject of the relative clause is overt, this makes it heavier than the preceding genitive expression and so sequences such as (i) may be felt to be unbalanced. When the subject is hypothetically a pro however as in (46), the relative clause may not be heavier than the possessor DP and so the possessor occurs more naturally preceding the relative clause. In the second case (41), I believe that there may be a simple semantic problem here; the English translation of (41) is very odd in the intended meaning: ‘John’s clothes that he saw’. A similar case in Whitman (1998) also indicated as bad in Korean for the same reason translates into English as: ‘John’s noodles that he ate’ again semantically very strange. If such
examples are therefore unacceptable for inherent semantic reasons, they do not constitute arguments specifically against a base-generated structure such as (46) with a pro subject.

4 In Simpson & W. (2000), it is actually suggested that the Japanese nominalizer no functions both as an Np and a Dp, being base-generated as a semantically empty noun in Np and then raising up to Dp. This contrasts with Chinese de which is taken to be base-generated directly in Dp, and allows for an explanation of certain differences in the distribution of de and no in nominal constructions. Here it may be noted that even if no is an Np (as well as a Dp), because it has no semantic content it imposes no semantic restrictions on a genitive subject DP.

5 In modern Korean the hypothetical nominalizers are commonly collapsed together with tense in complex morphological forms; Whitman (1995) however shows that if one adds a retrospective mood morpheme it becomes possible to separate the relative clause verb-form into its stem, tense, mood and a distinct element –n as in (i); –n therefore corresponds to the suggested clausal nominalizer:

(i) [Chelswu-ka ecey pro manna-ass-te -nl-salam
Chelswu-NOM yesterday meet-PAST-RET-N person
‘the person Chelswu met yesterday’ (Whitman 1995)

In structures such as (51) the first DP may be assumed to contain a pro co-referring with DP1, this resulting in the relative-clause type interpretation.

On the topic of empty nominalizers and genitive subjects, it can be noted that classical Chinese seems to have permitted genitive subjects both in relative clauses and in simple nominalizations, but in neither case is there any overt nominalizing morpheme; it must therefore be concluded that the nominalizing morpheme is phonetically null. This is illustrated in (i) and (ii) from Pulleyblank (1995):

(ii) [Wang-zhi hao shal-zhe
king-GEN SUG kill-those
‘those whom the king killed’

(ii) [Wang-zhi lal]
king-GEN come
‘the coming of the king/the king’s coming’

As noted in the beginning of this section, Whitman (1998) also suggests that there is an important connection between the loss of adnominal morphology and the change in patterns of genitive-marked subjects, and following other researchers, Whitman also assumes that the adnominal suffixes in Korean and Japanese were indeed nominalizers. However, in the actual account Whitman develops, no real connection is ultimately made between the presence/absence of nominalizers and the possibility of genitive case. Specifically, because modern Japanese relative clauses are seen to show no signs of overt nominalizers and the earlier adnominal morphology on the verb appears to have been lost, an analysis of the unrestricted genitive case possible in such environments is given in which no nominalizing element occurs in the structure and nominalizers hence have no role in licensing this unrestricted genitive case. As such an analysis is suggested to apply also to Middle Korean and the unrestricted genitive case found in that period, it is clear that the diachronic loss of unrestricted genitive case in Korean is actually not formally connected to any change in the change of status of adnominal morphology/nominalizers. Put in other words, a general mechanism for the licensing of unrestricted genitive is posited which is fully independent of any nominalizer/adnominal morphology (in order to allow for modern Japanese where adnominal morphology has been lost but unrestricted genitive case still occurs); taking this to be the mechanism which licensed unrestricted genitive in Middle Korean, the loss of such a mechanism (and unrestricted genitive) must therefore actually be assumed to be formally independent of any changes in the status of nominalizers/adnominal morphology. The present approach, by way of contrast, sees the role of nominalizers as central in the licensing of genitive case and as instantiating (or projecting further functional structure up to) Dp heads. When such nominalizers hypothetically undergo re-analysis as instantiations of clausal heads, the ability to license genitive case is then automatically and naturally lost. Furthermore, in modern Japanese to account for unrestricted genitive case it was argued that the re-analysis of adnominal morphology is actually not complete, and nominalizing elements are in fact suggested to still be present in such structures. Consequently, although the analysis here might seem to agree with certain initial suggestions in Whitman (1998) that the change in relative clause genitive case-licensing relates to the change in status of adnominal morphology/nominalizers, further examination reveals important differences in the interpretation of such a hypothesis. While the present account closely pursues the relevance of nominalizer re-analysis to the genitive paradigm and argues that it reflects a wider paradigm of nominalizer change, Whitman’s engaging analysis ultimately shifts its focus to a development of a wider ‘anticipatory spell-out’ theory and in the end no longer makes clear how the re-analysis of nominalizers and the loss of genitive case actually would be related.

19 Having assumed that Chinese de and Japanese no were originally interpreted as being anaphorically linked to an element in the discourse (via a pro element), it would seem that these cases are in fact rather similar, and the nominalizers simply provide elements which may be optionally bound and controlled by some other temporal/discourse operator (in other cases of course the same morphemes may simply serve as semantically empty embedding elements either in the nominal or clausal domain). The difference among those nominalizers which are associated with a certain interpretation would reduce to whether the operator-binding is syntactically effected (as with Japanese no and Hebrew ha in ts being bound by a higher +finite Ts) or whether the binding becomes grammaticalized as part of the necessary meaning of the morpheme (as with Chinese de coming to instantiate past tense).

20 Note in this regard too that copulas often do not assign any overt Case to their complements whereas other verb-types do. Consequently nominalized complements of copulas are not so clearly signalled as nominal categories, this facilitating re-analysis as simple clausal elements.

21 If a Kaynean analysis of relative clauses is adopted where there is a selection relation between a Dp head and the relative clause, it can be suggested that the obvious optionality of relative clause modification must somehow make this a weaker selectional relation than in other head-argument pairings.

References


THREE TYPES OF EXISTENTIAL QUANTIFICATION IN CHINESE*

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1. A puzzle

Chinese you 'have', when construed as existential, is traditionally analyzed as a modal
verb or an auxiliary (see Y.-C. Li 1972, R. Cheng 1978, Huang 1988, L. Cheng, 1991,
Tsao & Y. Cheng 1997, among many others). Nevertheless, problems arise when we take
a closer look at you in terms of both its syntactic distribution and semantic
interpretations. There are actually three variants of existential you, presentational you
in (1a), partitive you in (1b), and specific plural you in (1c):1

(1) a. you ren lai-le.
  have person come-Inc
  'There is/are a person/people coming.'
  b. you-de ren lai-le.
  have-DE person come-Inc
  'Some of the people are coming.'
  c. you-(yi)-xie ren lai-le.
  have-one-some person come-Inc
  'Some people are coming.'

When presentational you and partitive you are instead put in a postverbal object position,
the sentences are simply out, as evidenced by (2a,b) respectively:

(2) a.* Akiu pian-le you ren.
  Akiu cheat-Prf have person
  'Akiu cheated someone.'
  b.* Akiu pian-le you-de ren.
  Akiu cheat-Prf have-DE person
  'Akiu cheated some of the people.'
  c.? Akiu pian-le you-(yi)-xie ren.
  Akiu cheat-Prf have-one-some person
  'Akiu cheated some people.'