John Whitman
Cornell University

Relabeling

10.1   Introduction

Minimalist approaches to diachronic syntax have focused primarily on phenomena that

can be accounted for in terms of changes in feature strength, such as innovation or loss of

verb movement. Roberts (1997) shows how the same basic approach extends to changes in

phrasal constituent order (concretely, the shift from OV to VO order in English) within the

antisymmetry framework of Kayne (1994), where head final constituent order across

languages is transformationally derived. A transformational account of word order

variation across languages as well as within languages makes it possible to account for a

large portion of the phenomena that have traditionally attracted the attention of historical

syntacticians in terms of a single mechanism: presence or absence of a feature forcing a

particular movement operation.

Despite the impressive potential coverage of such a theory, there remains an important

class of changes that are not obviously analyzable in terms of gain or loss of a movement

operation. This is the class of 'reanalyses' in Langacker's general sense: 'a change in the

structure of an expression or class of expressions that does not involve any immediate or

intrinsic modification of its surface manifestation' (1977: 59). An example widely cited in

the grammaticalization literature is the reanalysis of serial verbs as prepositional phrases

(Lord 1973, 1976; Li & Thompson 1973, Heine and Reh 1984), as in (1):

(1) Verb > Preposition reanalysis in Ewe (Lord 1976: 182)

```
           S                              S
NP      VP        VP    >    NP      VP        PP        (Ewe; Lord 1976: 182)
      V   NP  V   NP                V  NP    P  NP
```

Me   fle   agbale le   Keta   *Me   ple agbale le   Keta*

I   buy   book be.at Keta   I   buy book   at Keta

In Lord's analysis of this development, the only change is in the category label of the serial verb 'be.at' and its projection. In a Principles-and-Parameters approach to syntactic change, reanalysis of this sort would involve a change in the d-structure representation of the pattern; in fact, in that approach, reanalysis in Langacker's sense might be analyzed as change restricted to d-structure representations.[1]

Under a Minimalist approach to syntactic change this move is unavailable, as there is no general level of pre-transformational structure corresponding to an underlying representation in the traditional sense. The pressure is thus on in this framework to represent (1) in very much the way Lord presents it: as a change in the category of 'be-at' and its projection which induces no modification of surrounding structure. In this paper I will attempt to develop an account of syntactic reanalysis based on the idea that the crucial element in the process is change in the categorial status of the head, what I will call 'relabeling', borrowing the term from Harris & Cambell (1995). Two factors seem to me at the outset to favor this approach to syntactic reanalysis.

The first is an empirical one. Grammaticalization theorists have long argued that grammatical reanalysis proceeds from lexical change, as in Heine and Reh's statement:

---

[1] Lightfoot's (1979) treatment of 'radical re-analysis' appears to be very close to such an approach within an REST framework. In this approach, changes such as the reanalysis of modals from verbs to categories base-generated under Aux, and the same serial -verb > preposition and serial verb >

'…reanalysis is the result of, or has been triggered by, certain processes like Desemanticization or Expansion. This assumption is based on the claim that grammaticalization starts with individual lexical items which, by changing their own syntactic and morphosyntactic status, are responsible for an overall transformation of the syntactic structures in which they occur.' (1984: 96). The empirical basis for this claim is that examples like (1) proceed from individual lexical items: Kwa languages are analyzed as gaining some prepositions from serial verbs, but other serial verbs remain. Let us consider the reanalysis in (1) in terms of a Minimalist conception of phrase structure. Under this conception, the head of the VP undergoing reanalysis is not the word-level category V, but the lexical item *lè* 'be.at':

(2)   *le*   >   *le*

       le   *Keta*   *le*   *Keta*

       [..*v*,..]   [..*p*,..]

       be.at Keta   at   Keta

In (2) neither the head of the phrase (the lexical item *lè*) nor its label (projected from *lè*) changes its identity. Instead, what changes is the categorial feature of this lexical item: if Lord's description of the change is correct, the categorial feature changes from *v* to *p*. Certain consequences follow from this change: for example, the projection headed by *lè* can no longer check a feature of T.

　　Viewed this way, the term 'relabeling' is somewhat of a misnomer. The identity of the head and the label derived from it are exactly what do not change in (2). I retain the term because it captures the notion of a change in category with no attendant change in structure.

---

complementizer reanalyses discussed here are treated as changes affecting the rules of the base component.

The important point here is that this treatment is completely consistent with the claim that reanalysis proceeds lexical item by lexical item.[2]

The second factor in favor of the conception of reanalysis as relabeling is that this move makes it possible to treat reanalysis and innovation or loss or transformational movement in similar ways: both proceed from a change in the feature of a head. Reanalysis is change in a categorial feature; gain or loss of overt movement occurs when features such as a *wh* or case feature undergo a change in strength.

The body of this paper explores how far the conception of reanalysis as relabeling can be extended, beginning with relatively straightforward cases of reanalysis.

10.2   Simple reanalysis as relabeling

Both the example of verb > preposition reanalysis in (1) and verb > complementizer reanalysis in (2) below are instances of what we might call 'simple relabeling': under standard accounts (see Lord 1976, Heine and Reh 1984 for verb > complementizer reanalyses) no change occurs in the affected projection except a change in the categorial identity of its head.[3]

(3) Verb > Complementizer reanalysis in Ewe (Lord 1976)

---

[2] The claim that reanalysis proceeds in a 'lexically' determined fashioned has been disputed (e.g. Lightfoot 1979: 100). Resolving the issue far exceeds the scope of this paper, but I would point out that in the framework proposed here, while relabeling (change in categorial feature) is chiefly visible in its effects on individual lexical items, changes in feature strength associated with a functional category (resulting in gain or loss of an overt movement operation) is predicted to be visible in the behavior of whole syntactic categories.

[3] We see in 10.5 that this is an oversimplification: a change in the internal structure of the projection follow from the changes V > P and V > C.

```
              S                                S
NP    VP      VP        >    NP    VP    CPLT        (Ewe; Lord 1976: 182)
              V    S                      CPTR    S
```

Me   nyá   bé   édzo   *Me   nyá   bé   édzo*

I   know   say   left   "I know that pro left."

Again, restating this change in Minimalist terms, the categorial feature of *bé* 'say' changes

from *v* to *c*:

```
(4)                    bé            >                    bé

              bé            TP                    bé            TP

         [...v..]                              [..c..]

              say                                   say
```

In terms of visible consequences, Lord reports that complementizer *bé* no longer takes

tense-aspect marking or pronoun prefixes, properties of verbs in serial constructions but

not complementizers (1976: 180), and that *bé* also appears in positions where we would

expect a projection of C but not V to appear, such as purpose CPs (1976: 184).

Cases such as these are relatively uncontroversial examples of categorial change;

Minimalism contributes only the idea that what changes is a categorial feature. The more

ambitious proposal that I would like to explore in this paper is that syntactic reanalysis

always proceeds from relabeling, in the sense of change in a categorial feature without any

change in surrounding syntactic structure:

(5) Relabeling

The first step of syntactic reanalysis is restricted to relabeling, where relabeling

refers to a change in the categorial feature of a head. The result of relabeling

must be well-formed independently of any changes outside the minimal domain

of the relabeled item.

For the definition of minimal domain, see Chomsky 1995: 178. In the cases relevant to

this paper, the minimal domain of a head consists of its complement and the specifier of the

minimal maximal projection that contains the head. (5) amounts to the hypothesis that

syntactic reanalyses can be accounted for in terms of changes to a subset of the features of

an individual head, without changes in larger units of structure.

'Simple' reanalyses like V > P and V > C in (1) and (3) (confining ourselves for the time

being to Lord's analyses of these changes) satisfy (5), but other alleged instances of

syntactic reanalysis do not. For example, Harris & Cambell (1995: 62) follow Ebert's

(1978: 12) interpretation of Visser (1966: 967-8) in claiming that English *for*-infinitivals

result from reanalysis of matrix *for*-NP as a complementizer followed by an infinitival

subject (see also Stockwell 1976). On this view, the matrix PP [*for* NP] and infinitive

complement in examples like (6) is the input to a reanalysis where *for* is reanalyzed as

infinitival complementizer and NP is reanalyzed as subject of the infinitive (7):

(6) [it is bet for me] [to sleen my self than ben defouled thus]   (Chaucer; Harris &

Campbell 1995: 62 citing Ebert 1978: 12)

(7) [it is better] [for me to slay myself …]

Stated in terms of changes in the possible expansions of VP, this reanalysis is equivalent to

replacing expansion (8a) with (8b):

(8)   a.   V   [$_{PP}$ for NP]   [$_{IP}$ PRO to VP]   >

b. V [$_{CP}$ for [$_{IP}$ NP to VP]

Such a reanalysis would be a counterexample to (5). Relabeling *for* as a

complementizer is unproblematic, in fact comparable to the serial V > C reanalysis

discussed by Lord. The problem is that, given (5), there is no way to formulate a change

which results in the object of a matrix PP being reanalyzed as the subject of a subordinate

clause. No change in the categorial features of *for* produces this result. While (8) is stated

in terms of changes in phrase structure, (5) restricts the domain of reanalysis to changes in

the features of heads.

In fact Lightfoot (1976, 22-5; 1978, 186-9) presents a very different account of the

genesis of *for*-infinitivals. Lightfoot shows that the *for*-infinitival pattern without overt

subject (*for to* VP) consistently appears in Middle English data 1-200 years before

corresponding patterns with overt subjects (*for* NP *to* VP). Lightfoot suggests that the

previously emergent *to* VP infinitival pattern had NP-like properties and thus came to be

selected by the preposition *for*.[4] The *for* NP *to* VP pattern emerges as the *to*-infinitival

loses its nominal properties. Lightfoot's scenario is consistent with (5). Rephrased in

Minimalist terms, *for* (like all transitive prepositions) bears a D-feature which must be

checked by a nominal complement. When *to*-infinitivals appear as the complement of *for*

they must bear a nominal feature that is able to check the D-feature of *for*. In the majority

of Modern English varieties, where *to*-infinitivals lose this feature, *for* may take an

infinitival complement only when it includes an NP subject able to check the D-feature of

for. None of these changes require reference to the pattern in (8a).

---

[4] Warner (1982: 115-27) argues for a different view, where ME *for to* is a (complex) infinitive
marker and *for* 'grammatically unrelated to the preposition'. However Warner also confirms the
finding of earlier researchers that *for (to)* infinitivals are far more likely to appear in adjunct position

In the sense in which 'syntactic reanalysis' has normally been used, that is, replacement of one syntactic pattern by another with identical post-syntactic form, the pattern in (8a) cannot have undergone a reanalysis resulting in the pattern in (8b), because there is no evidence that any variety of English has ever lost the pattern in (8a). A weaker notion of reanalysis might be invoked, where *for* first becomes analyzable as a complementizer only in the context of (8a); but as Stockwell (1976: 33) acknowledges, this is directly contradicted by the data cited by Lightfoot showing that subjectless *for*-infinitives emerge first. I therefore see no reason to recognize (8a) > (8b) as an actual instance of reanalysis.[5]

This example brings up the crucial issue of what exactly the protagonists of syntactic reanalysis are. Traditionally, reanalysis has been viewed as a type of grammar change, that is, change in the repertory of basic structural patterns made available by the grammar of a language, as in (8). This conception of diachronic change has of course been criticized, most famously by Andersen (1973, 1989), who argues that the concept of changes involving direct mappings between grammars at distinct diachronic stages is suspect, as speakers do not have direct access to the grammars of earlier stages of the language. The issue is further vexed in the case of syntactic change, due to the difficulty of determining the units of a 'diachronic correspondence' in Andersen's sense. This is precisely the problem in the case of the alleged reanalysis of in (8). The protagonists of the 'diachronic correspondences' in (1) and (3) have been taken to be the structural patterns associated with

than elsewhere. If in fact the pattern could be shown to originate in adjunct position, the possibility of a reanalysis like (6) > (7) could be conclusively rejected.

[5]Stockwell (1976) interprets Visser (1966: 968) as endorsing the occurrence of a reanalysis of the form (8a) > (8b), but when Visser refers to '[t]his shift in the interdependence of the constituent parts of the sentence,' he is simply referring to the indubitable fact that the pattern V *for* NP *to* VP becomes structurally ambiguous in English. The fact that he goes on to speculate that the advent of the complementizer *for* in the V *for* NP *to* VP context may have been influenced by use of *for* as complementizer in other contexts (such as adjunct infinitivals) suggests that Visser indeed does not consider the former context to be the original source of complementizer *for*.

particular lexical items: the structural pattern VP associated with a Ewe *lè* 'be-at' at one

diachronic stage corresponds to the structural pattern PP at another stage.   But it is not

clear how the structural pattern (8a) in Middle English 'corresponds' to the subsequent

pattern in (8b), as (8a) persists in the grammar, and (8b) has a different meaning (that is, a

different thematic role structure). The idea that (8a) is reanalyzed as (8b) seems to be

based on the hypothesis that the surface pattern in (8a) plays a causal role in the *innovation*

of (8b) (again using Andersen's term) by individual speakers. But it is not clear how this

hypothesis could be proven, and as Lightfoot shows, it is not supported by the historical

chronology.

Under the Minimalist conception of syntactic change that I have sketched above, the

protagonists of syntactic change, including reanalysis, are heads (in the unmarked case,

overt lexical items). Thus, following Lightfoot's scenario for the development of

for-infinitivals, the protagonists of these changes are *for*, and *to*, the head of *to*-infinitivals.

The changes involving these heads may be outlined as follows.

(9) a. *for* gains a subcatgegorization feature allowing it to select infinitival

complements. At this stage, the head of *to*-infinitivals (presumably *to*) bears a

nominal feature which can check the D-feature of *for*.

b. *to*-infinitivals lose their nominal feature. No change takes place in the features of

for, but *for* now may occur with infinitival complements only when they contain a
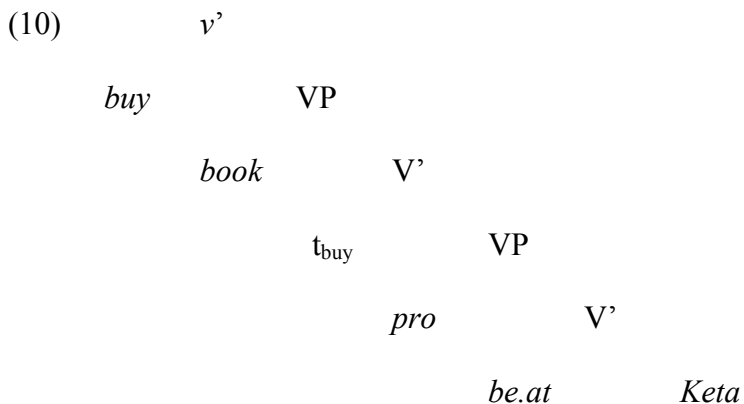
subject able to check its D-feature.

Note that in terms of (5), neither of the steps of (9) involve reanalysis, since *for* does not

undergo a change in categorial feature. It is possible that at some stage subsequent to (9a),

for in infinitivals undergoes a change in categorial feature from *p* to *c* (for example, when

for-to infinitivals begin to appear in subject position), but this is controversial, as some accounts of infinitival *for* analyze it as a preposition in Modern English (e.g. Emonds 1985).

10.3   Relabeling in serial constructions

This section explores the consequences of (5) for reanalysis in serial verb constructions under a more articulated theory of the structure of these constructions.

Collins (1993, 1997) develops such a theory based on the insight that the first verb (V_1) takes a projection of the second verb (V_2) as its complement (see also Campbell 1989, Larson 1991, among others), and that the argument 'shared' between the two verbs originates as the specifier of V_1, controlling *pro* in the specifier of V_2. This leads to the analysis in (10) for the Ewe example in (1) prior to reanalysis of V_2 as a preposition:

(10)   *v'*

      buy   VP

            book   V'

                  t_{buy} VP

                        pro   V'

                              be.at   *Keta*

The surface order V_1 NP V_2 … results from movement of V_1 to the head of a higher verbal projection (here represented as the "light verb" head of *v*P in Chomsky 1995).

The hypothesis in (5) makes the following prediction about syntactic reanalysis in serial verb constructions given an analysis like (10) (or any serial verb construction where the projection of V_2 is a complement of V_1).

(11)   In serial constructions of the form V_1 NP V_2 …, where V_1 is the main

          verb, V_2 may be reanalyzed as the head of a PP, but V_1 may not.

As we saw in 10.2, reanalysis of V_2 is P is a 'simple' reanalysis, merely changing the categorial feature of the complement of V_1.[6] Reanalysis of V_1 as P, on the other hand, would result in (12b):

(12)   a.   *v'*   >   b.   *v'*

                  v   VP   *v*   PP

                        NP   V'   NP   P'

                            V_1 VP   P   VP

From a pretheoretic standpoint, the development in (12) deprives the clause of a main verb; more technically, it eliminates a category capable of checking the V-feature of *v*, (and subsequently T), and requires P to take a VP complement. (12b) is therefore ill-formed in several respects. Thus while reanalysis of V_2 as P (or as C) is countenanced under (5), similar reanalysis of V_1 is not.

A complete survey of the literature on verb > preposition reanalyses exceeds the scope of this paper, but it is possible to make some preliminary predictions about where support or counterexemplification of (11) is likely to be found. [7] The relative order of serial verbs

---

[6] The issue of structural changes internal to the reanalyzed PP, such as elimination of a the specifier position hosting *pro*, is taken up in 10.5.
[7] Asymmetries in the consequences of V > P reanalyses for V_1 as opposed to V_2 have been discussed in previous literature. For example, Givon (1975: 87) points out that V > P reanalysis of of V_1 should result in S-INSTRUMENT-V-O and S-ACCUSATIVE-O-V-X word orders. Hyman (1975) rejects Givon's claim that reanalyzed serial verbs play a major role in word order change in Niger-Congo.

is widely described as being constrained by an 'iconicity' condition (Y.Li 1993: 499), which stipulates that the linear order of V_1 and V_2 in a serial construction must reflect the temporal of the events they represent. Under the iconicity condition, verbs such as 'be.at' (as a candidate for reanalysis as a locative preposition) or 'give' (a candidate for reanalysis as a benefactive or dative preposition) occur in the position of V_2 and are thus unproblematic from the standpoint of (11).

The largest class of potential counterexamples to (11) is composed of serial verbs such as 'take' or 'hold' in the V_1 position, often introducing an instrumental argument. Despite claims to the contrary, the literature on serial V > instrumental P reanalyses appears not to provide clear examples of V_1 undergoing such a reanalysis. For example, Lord's (1973: 280-92) discussion of serial V > comitative P reanalyses includes a case in Yoruba (and possibly Ewe and Fon) where the reanalyzed comitative P can introduce an instrumental argument. However the source for the reanalysis, a verb meaning 'be included among, be together with' occurs in V_2, not V_1 position. Lord contrasts the reanalyzed comitative P with verbs in the same languages of the 'take' type in the V_1 position, which have not undergone reanalysis. Similarly, Durie's (1988) survey of instrumental prepositions in Oceanic (a family which abundantly attests reanalyses of V > P as well as 'intermediate' categories variously labeled 'verbids', 'verbal prepositions', etc.) shows no case where instrumental P originates from V_1. Only one of the 10 languages surveyed by Durie has an instrumental marker which also functions independently as a verb, but in this language, Puluwat, the marker in question is the verb 'give', an archtypical V_2:

(14)   a. wo pwe   ngan-iy-áy   efór suupwa

            you HORTATIVE   give-TR-1SG   cigarette

'Give me a cigarette.'

b. yi pwe   yatipa ngan-i   laayif

   I   FUTURE slice give-TR   knife

   'I will slice (it) with a knife.'

   (Durie 1988: 7)

A case for V_1 > P reanalysis is made by Lord (1982), who analyzes a class of 'object

markers' in Akan, Ga, and Idoma as resulting from reanalysis of a verb with the meaning

'take, hold' in the V_1 position of a serial construction. In the case of Akan, Lord cites 19th

century authors who show *de,* the morpheme in question, functioning as an independent

verb; at the same time, *de* had the function of marking instrumental and comitative

arguments, objects, and causatives. The first two of these functions are shown in (15-16).

(15) O-de   eñkrante   tya   duabasa.   (Lord 1982: 281)

      he-*de* sword   cut   branch

      'He cut off a branch with a sword.'

(16) O-de   mfoníni bi   kyèré nè   bá.   (Lord 1982: 281)

      he-*de* picture certain show   his   child

      'He shows his child the picture.'

In present-day Akan, *de* has ceased to function as an independent verb. It also does not

inflect for tense and aspect. The question is whether *de* has become a preposition. Lord

argues that it has, on the basis of the loss of inflection and independent verbal function, but

other researchers have not accepted this view. Thus Campbell (1989) argues in detail that

de is a verb.[8]

---

[8] Like Lord, many grammaticalization theorists have taken inability to appear as an independent
verb as criterial for preposition status. Thus Givon (1984: 229) claims that Yoruba *fi* 'take, use' has

Lord observes that the object markers in the Benue-Kwa languages she studies are remarkably similar to the Chinese object marker *ba* in range of function and historical source. Since the historical provenience, categorial status and syntactic position of *ba* have been intensively studied over the past twenty-five years, I turn to an examination of this item in the next section to further investigate the validity of (11).

10.4   The Development of Chinese *ba*

Chinese provides surely the best known case of an alleged $V_1 > P$ reanalysis. Mandarin *ba* functioning as a preverbal 'object marker' in contexts like (17) is generally considered to have arisen from the serial construction exemplified in (18), where *ba* has its original 'unbleached' meaning 'hold, grasp' (Wang 1958, Li & Thompson 1974, Peyraube 1985).[9]

(17)   Zhangsan ba Lisi   pian   le.

                  BA   cheat   PERF

      'Zhangsan cheated Lisi .'

(18)   Zui   ba   zhuyu   zixi   kan. (Tu Fu, 8th c., cited by Wang 1958:411)

      drunk   take dogwood carefully look

      'Drunk, (I) take the dogwood and look at it carefully .'

The details of the change relating the modern object marking or 'disposal'[10] pattern in (17) and the serial pattern in (18) are not uncontroversial. A number of linguists, most

---

undergone $V_1 >$ instrumental P reanalysis. But Bamgbose (1972: 42-3) specifically rejects this criterion, and argues that *fi* is a verb.

[9] *Ba* is one of a complex of original verbs including *jiang* 'take' and *chi* 'hold' that underwent parallel developments; specialists in Chinese historical syntax generally treat them together (Wang 1958: 410, Peyraube 1996: 168). While *ba* survives in the object marking function in Modern Mandarin, *jiang* is its counterpart in Cantonese (Sun 1996:60).

[10] As is well known, the ability of objects to appear preverbally with *ba* is restricted by their specificity and the aspectual status of the nuclear verb phrase. The traditional label 'disposal form' refers to the aspectual restrictions in particular. Lord (1982) notes the parallels between these restrictions and those found with the object marker constructions in Benue-Kwa.

recently Mei (1990) (see also Sun 1996) have argued that an earlier pattern involving the morpheme *yi*[11] 'use, with' provided a model for the object marking function of the disposal construction in general. Regardless of these details, it is the case that *ba* has made the change from V_1 in serial constructions like (18) to an item which cannot appear as an independent verb and lacks such characteristics of main verbs as the ability to be followed by aspect markers. These are exactly the considerations that led Lord (1982) to analyze Akan *de* as a preposition.

A number of linguists have analyzed present-day Mandarin *ba* as a preposition, including specialists on its historical development such as Peyraube (1985, 1996) and Sun (1996). This is also the view of A. Li (1990) in a Principles-and-Parameters framework. However there are two alternative views of the categorial status of *ba*: as a verb (Hashimoto 1971, Ross 1991, Bender 2000, to appear), and as the head of a functional projection (Sybesma 1992, Zou 1993, Takahashi 1997, Paul 1999) which takes the projection of the verb to the right of *ba* as its complement. Bender effectively marshals the arguments for *ba* as a verb, and addresses the major counterarguments against this view. These include the fact that *ba* cannot be followed by aspect markers, cannot be used as a one-word answer to a yes/no question, and has a restricted distribution in the A-not-A question form. Bender shows that each of these properties hold of other verbs, such as *rang* 'let' in the case of the aspect marker restriction, and *renwei* 'think, consider' in the case of the other two restrictions. At the same time, Ross, Zou, and Bender summarize the many respects in which *ba* does not pattern with Ps in Chinese:

---

[11] *Yi* itself is generally analyzed as a preposition (Chinese *jieci*: Wang 1958: 336). If the argument that *yi* provided an analogical model for *jiang* and *ba* in the disposal form can be shown to entail that the latter assumed the exact grammatical status of *yi*, then the categorial status and syntactic position

(19) a. *ba* and the following NP never dislocate as a constituent.

b. *ba* and the following NP do not allow coordination with clear PPs.

(Zou 1993: 732 contra A. Li 1990)

c. *ba* contributes to the addition of an external (subject) argument in the so-called 'causative' *ba* pattern.

Property (19a) in particular contrasts with the case of $V_2 > P$ reanalysis involving *yu* 'give' (later a dative/benefactive and finally comitative preposition 'with') in Middle Chinese and Early Mandarin, studied by Peyraube (1986, 1996). Peyraube shows that after *yu* becomes predominant in the ditransitive serial construction in (20), it begins to appear preverbally with the indirect object, as in (21) (examples cited from Sun 1996: 22).

(20) Jii chi ci bao yu zhu xiongdi. (*Dazhengzang shengjing*)

then take this treasure give his brother

'Then take this treasure to his brothers.'

(21) Yu lao seng guo jing shui-ping. (*Zutangji*)

for old monk pass clean water-bottle

'(Someone) rinsed the bottle clean for the old monk.'

The ability to occupy more than one position in the clause is taken to be criterial for the PP status of *yu* and the following NP (Peyraube 1996: 182). This property is not shared by *ba* and the following NP, which are fixed in their immediate preverbal position:

(22) a. *Ba Lisi Zhangsan pian le.

BA cheat PERF

---

of *yi* in earlier Chinese becomes crucial for the argument here. This issue must be left for future research.

    b. *Zhangsan   pian le   ba   Lisi   .

                       cheat   PERF BA

    'Zhangsan cheated Lisi .'

Property (19c) has received different accounts in different frameworks. For example, Sybesma (1992) argues that the causer role in causative *ba* sentences like (23) (from Sybesma 1992: 154-5) is contributed by the head of a projection he labels CAUSP; the head of this projection may be filled by raising the verb, as in (23b), or by inserting *ba*.
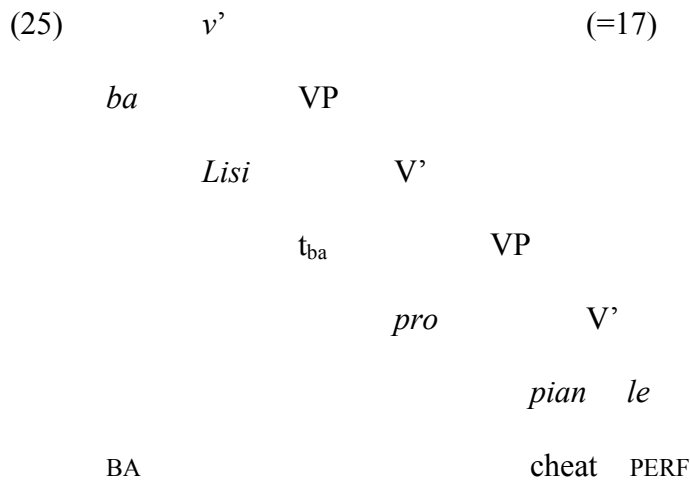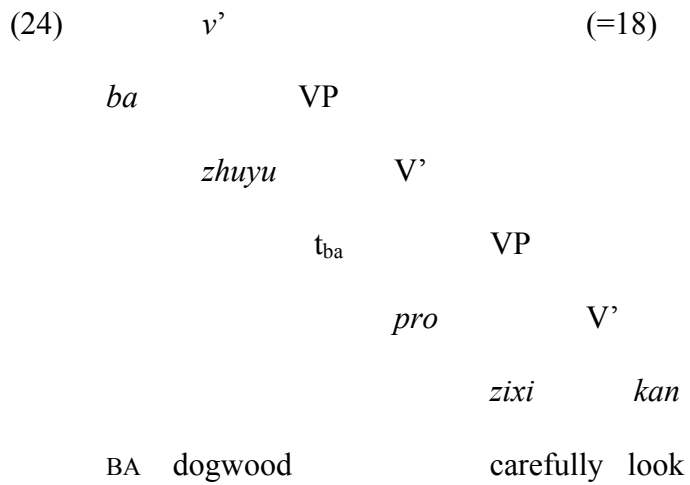
(23)   a. Zhei jian   shi   ba   Zhangsan   ku   lei   le.

             This CLASSIFIER   matter BA   cry   tired   ASPECT

             'This matter got Zhangsan tired from crying.'

        b. Zhei jian   shi   ku   lei   le   Zhangsan   .

             This CLASSIFIER   matter cry   tired   ASPECT

             'This matter got Zhangsan tired from crying.'

On the other hand Ross (1991) and Bender (2000) argue that the causer role is contributed by *ba* itself. Whether the causer role in *ba* causatives is provided by a higher head whose position may be occupied by *ba* or whether *ba* itself assigns that role, neither scenario is compatible with an analysis of *ba* as a preposition. From a crosslinguistic standpoint, while adpositions are commonly associated with addition of adjunct roles within VP, they are not associated with addition of an external roles as in a causative pattern. It is therefore difficult to see how the *ba* causative pattern in (19c) could be accounted for under an analysis of *ba* as preposition.

In this section I have reviewed recent analyses of the categorial status of Mandarin *ba*, by far the best studied example of a putative $V_1 > P$ renanalysis. These studies provide

strong arguments that *ba* is not in fact a preposition. The issue of whether *ba* heads a (lexical) verbal projection or a functional projection is orthogonal to the question at hand, since either analysis is consistent with the hypothesis in (11). To see this, compare the earlier serial verb structure (24) with the analysis of *ba* as higher verb (25).

(24)   *v'*   (=18)

      ba   VP

         zhuyu   V'

              t$_{ba}$ VP

                 pro   V'

                    zixi   *kan*

    BA   dogwood   carefully look

(25)   *v'*   (=17)

      ba   VP

         Lisi   V'

              t$_{ba}$ VP

                 pro   V'

                    pian   *le*

    BA   cheat   PERF

(25) involves no change at all in the categorial status or structural position of *ba*. As in the serial construction (24), the NP in the specifier of the VP headed by *ba* controls an empty category in the specifier of its complement.[12]

The structure in (25) is essentially unchanged on the analysis of *ba* as a functional head. All that differs in this analysis is that the matrix NP *Lisi* appears in the specifier of *ba* as the result of movement. As Takahashi (1997) points out, the surface word order of *ba* and the associated NP suggests that *ba* is still raised to a higher position such as v in (25). In terms of feature change, *ba* ceases to assign a thematic role to the associated NP, and gains a strong feature that forces movement to its specifier.

The background for this discussion has been the hypothesis (5) that reanalysis in serial constructions is must begin by relabeling. This led to the prediction in (11) that while V_2 in serial constructions may undergo reanalysis, V_1 may not. We then examined the *ba* 'object marker' pattern in Chinese and saw that although *ba* in this pattern has undergone some change (in the identity of its complement, and perhaps its thematic role assigning properties), *ba* has not been reanalyzed as a preposition.

10.5.   Pruning

Although (5) requires that changes in the categorial features of a head be independent of any changes outside its minimal domain, it allows for the possibility that relabeling might be accompanied by changes within the minimal domain of the

---

[12] It is possible that the complement of *ba* in (25) is a larger projection than VP, at least in patterns such as the *ba* causative in (23a). In such patterns, the controlled ec shown in the specifier of this category in (25) cannot be restricted to internal arguments of V_2. Under the analysis in (25), this would be the only change between (25) and the serial pattern in (24).

head. Even in the cases of 'simple' serial $V_2 > P$ reanalysis discussed in 10.3, it seems that such changes occur. Thus under Collins' analysis of serial constructions as in (10), V_2 assigns a thematic role to *pro* in its specifier; but when V_2 is reanalyzed as C as in (4), it no longer assigns this role. The same is true of at least some cases of $V_2 > P$ reanalysis. For instance, the preposition *yu* 'with' (originally a serial V_2 'give') discussed in 10.4 occurs only in preverbal position and has a comitative function in present-day Mandarin:

(28)　Zhe jian　　　shi　　yu　ni　　mei　　　　　guanxi.

　　　this CLASSIFIER matter　with you　not.have　　　connection

　　　'This mattter has nothing to do with you.'

Both of these facts indicate that its projection has ceased to contain a *pro* controlled by the object.

　　　Let us assume that in these cases the only relation between the head (originally V_2) and its specifier is that the former assigns the latter a thematic role, and that this relationship is eliminated when the categorial change takes place. As a result, no category is merged in the specifier of the reanalyzed P. Due to the prohibition on non-branching projections, the reanalyzed projection of P is 'pruned'. This result is shown in (29), using Mandarin *yu* 'with' as an example.

(34)　　　　　VP　　　　　　　　　>

　　　Pro　　　　V'　　　　　　　　　　　PP

　　　　yu　　　　NP　　　　*yu*　　　　　NP

　　　　give　　　　　　　　　with

The term 'pruning' is taken from Ross (1967), where it refers to an operation which removes projections that have been rendered non-branching as the result of a transformational operation. Here the term refers not to a syntactic operation, but the consequence of a change that makes a syntactic position cease to be the target for merge or for movement, resulting in a non-branching projection. In a theory which disallows non-branching projections, the consequence of such a change will be elimination of the projection. Pruning is a relatively straightforward structural change within the minimal domain of a relabeled head. In the following section I examine a more complex case.

10.6 Specifier > head reanalysis

The literature on syntactic reanalysis has included cases which appear to involve a greater modification of structure than the 'simple' renalyses discussed above. In this section I will focus on one such case, reanalysis of a subject pronoun as a copula. I will argue that a Minimalist treatment is in fact consistent with (5).

In a number of languages, subject pronouns are reanalyzed as copulas, as first discussed from a comparative standpoint by Li & Thompson (1977). Modern Mandarin *shi* 'be' has such a source, from an original function as a proximal demonstrative 'this' (Wang 1958, Peyraube and Wiebusch 1995). (30), cited by Li & Thompson (1977: 421) from the *Lun yu* (500 BCE) shows the pattern without an overt medial copula typical of this period of Chinese.[13] (31) shows an example where *shi* clearly functions as a demonstrative (1977: 423).

---

[13] The sentence final particle *ye* in (30) is analyzed by many scholars as a clause-final copula (e.g. Peyraube and Wiebusch 1995: 389-90). *Ye* is common in examples from the Late Archaic (500-100 BCE) containing *shi* where it is difficult to determine whether the latter is pronoun or copula. It

(30) Zi   yu: ru   ji   ye.   (*Lun yu*)

         say: you   tool   PARTICLE

   'Confucius says: "You are a tool".'

(31) Zi   yu   <u>shi</u>   ri   ku.   (*Lun yu*)

         at   this   day   cry

   'Confucius cried on this day.'

In this period it is also possible to find examples of *shi* as a resumptive pronominal subject with a nominal predicate, as in (32) from Peyraube & Wiebusch (1995: 393).

(32) Fu   yu   gui   <u>shi</u>   ren zhi   suo   yu   ye.   (*Lun yu*)

    riches and honor this   man 's   NOMINALIZER desire PARTICLE

     'Riches and honor, this is what men desire.'

The pattern in (32) is held by the authors cited above to be the source construction for the reanalysis of *shi* as a copula.[14] In examples prior to 200 BCE it is often difficult to determine whether *shi* functions as a subject resumptive pronoun or copula (Peyraube and Wiebusch 1995: 396-7), but Peyraube and Wiebusch cite examples such as the following from the 2nd century BCE where *shi* occurs twice, first as subject pronoun and next as copula, confirming that the latter function has been established (1995: 398):
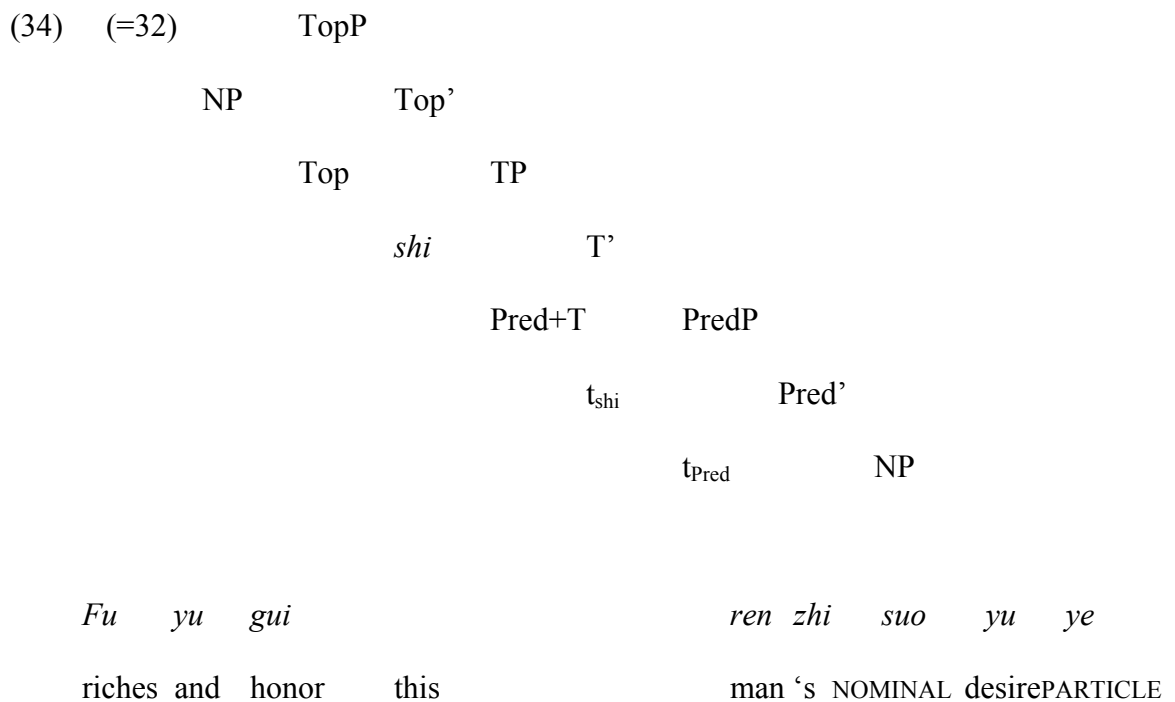
(33)   Shi   <u>shi</u>   lie   gui.   (*Shuihudi Qin mu zhujian*)

    this   is   violent ghost

    'This is a violent ghost.'

---

seems likely that the decline of *ye* and the establishment of *shi* as medial copula are related phenomena, but clarifying this relationship requires a clear structural analysis of *ye*.

[14] Peyraube and Wiebusch discuss and reject alternative analyses, which attempt to relate copular *shi* to its earlier adjectival/adverbial function 'right/truly' (clearly related to to its demonstrative source, as with English 'thus'), or to its affirmative/focus function (likewise derivable from the demonstrative source). I am indebted to Erwin Chan for discussion of this debate.
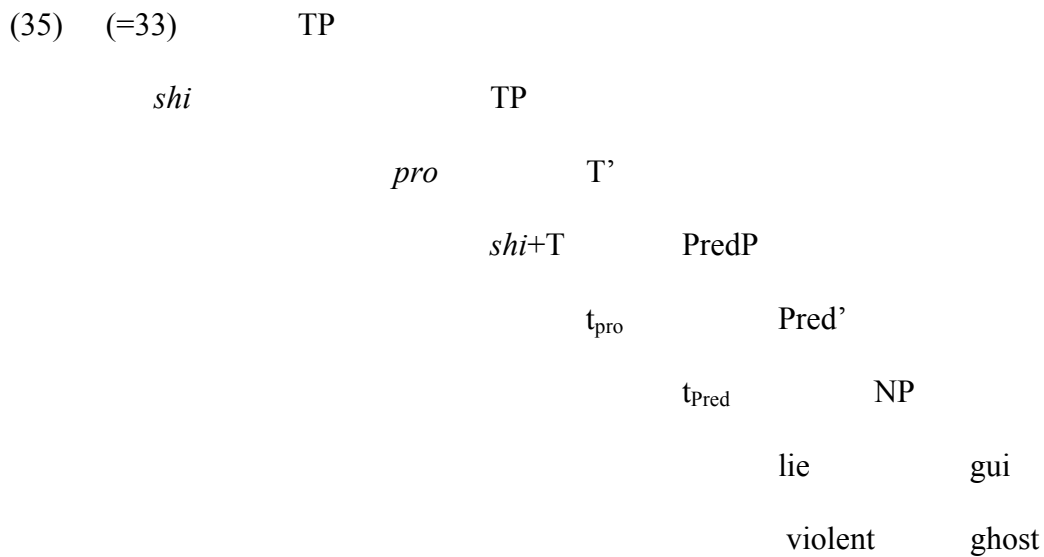
As Li and Thompson (1977) and subsequent authors have shown, reanalysis of a subject resumptive pronoun as a copula is a widely attested phenomenon. The structural adjustment involved in such a reanalysis is not just a simple categorial change on the part of the pronoun. Not only must the pronoun change from pronoun to copula, it must change its structural status from specifier of the clausal projection (subject) to head of a verbal projection. Let us see how this change is consistent with (5), first by positing a structure for the subject resumptive pronoun pattern in (32).

(34) (=32)   TopP

             NP   Top'

                    Top   TP

                    shi   T'

                            Pred+T   PredP

                                t_{shi}   Pred'

                                    t_{Pred}   NP

     Fu   yu   gui   *ren zhi   suo   yu   ye*
     riches and   honor   this   man 's NOMINAL desirePARTICLE

I have followed conventional practice in assuming that a left dislocated phrase binding a resumptive pronoun resides in the specifier of a higher projection, Topic Phrase in (34). The subject pronoun *shi* originates in the specifier of the projection where it is predicated of the NP *ren zhi suo yu* 'what man desires'. This projection is identified as PredP following Bowers (1993); its crucial properties are that it selects a predicate NP as complement and has a phonetically null head whose categorial feature may check the

V-feature of T.[15] *Shi* raises to Spec, TP to check the strong D-feature of T and satisfy the

Extended Projection Principle; the categorial feature of the empty copula checks the

V-feature of T. *Shi* in this structure is both a maximal projection and a head. As it is a

pronoun, I will assume its category is D.

Change of the categorial feature of *shi* from *d* to *v* is accompanied by the change in

structural status shown in (35):

(35)   (=33)   TP

      shi   TP

               pro   T'

                 shi+T   PredP

                    t_{pro} Pred'

                      t_{Pred} NP

                          lie   gui

                       violent   ghost

Let us consider how this change takes place. When the categorial feature of *shi* changes

from *d* to *v*, *shi* becomes available to select the predicate NP and check the *v*-feature of T; it

therefore can be merged with the predicate NP to form PredP. The category Pred assigns a

thematic role to its specifier (Bowers 1993); an empty pronominal is available in Chinese

to be merged in this position. The empty pronominal subject raises to check the D-feature

of T, and *shi* raises to check its V-feature.

Thus the change from pronoun to copula forces a change in the identity of the head and

specifier of PredP, but these changes are internal to the minimal domain of *shi*. (5) requires

---

[15] I assume that Pred is a subtype of the category V.

that relabeling of *shi* be independent of any changes outside its minimal domain. This predicts that change in status of the left dislocated phrase in Spec, TopP to subject in Spec, TP occurs independently of the reanalysis of *shi* as copula; that is, this phrase may retain its left dislocated status after reanalysis of shi, as in (35). Although this possibility is difficult to confirm in the case of Chinese, it can be confirmed in the case of a parallel development in Saramaccan.

McWhorter (1997) discusses the same the development of the Saramaccan copula *da* from an element corresponding to the English demonstrative *that*.

(36)   Mi   da   i   tata.

       I   COPULA   your father

       'I am your father.'

Assuming a development parallel to what we have described for Chinese *shi* above, after reanalysis of *da* as a copula, structure outside the minimal domain of *da* is unchanged: subject position is occupied by a null pronoun, and the clause-initial NP retains its left dislocated status, as in (37).

(37) [_TopP_ Mi [_TP_ *pro* [_T'_ da   i   tata]]]

          I   COPULA   your   father

McWhorter provides three pieces of data which suggest that a representation like (37) is correct. First, he shows that the third person subject pronoun form co-occurring with copular *da* must be the topic form *hɛn* rather than the non-topic form *a*. This is shown in the contrast between the non-copular sentence (38a) and the copular sentence (38b) with a third person pronominal subject.

(38) a. A tei faka   koti   di   gwamba.   (McWhorter 1997: 98)

he take knife   cut   the   meat

"He cut the meat with a knife."

    b. Hɛn/*A   da   di   Gaama.   (McWhorter 1997: 98)

    he   COPULA the   chief.

    "He is the chief."

Second, McWhorter observes that the copula is normally obligatory in modern

Saramaccan (39), but must be dropped in sentences with predicate fronting (40). The

ungrammaticality of predicate fronting with *da* can be explained if subjects with *da* are

always topicalized or left dislocated. Predicate fronting over a topicalized or left

dislocated constituent results in a violation of Relativized Minimality, as in English (41).

(39)   Disi *(da) mi tata.   (McWhorter 1997: 90)

    this   COP   my   father

    "This is my father."

(40)   Mi tata,   disi (*da).   (McWhorter 1997: 90)

    my   father this   COP

    "This is my father."

(41)   *Smart, my father he is.

Similarly, McWhorter observes that *da* must be dropped in wh-questions (20). Again this

is explained because wh-movement over topicalized or left dislocated subjects violates

Relatived Minimality (43).

(42)   Un   buku   di-de (*da/dɛ).   (McWhorter 1997: 91)

    which book   that   COPULA

    "Which book is that?"

(43) *Which book, that is it?

The data cited by McWhorter indicate that the overt subject NP in *da* copular sentences remains in a topicalized or left dislocated position even after reanalysis of *da* as copula, showing that resumptive pronoun > copula reanalysis need not be accompanied by immediate change in the status of the topicalized or left dislocated NP to subject.

10.7 Conclusion

The objective of this paper has been to develop an account of syntactic reanalysis formulated in terms of changes in the features of lexical items rather than correspondences between syntactic patterns or rules of historically distinct grammars. The relabeling hypothesis in (5) claims that reanalyses begin with a change in the categorial feature of a head, and that the structural consequences of this change (pruning resulting from a change in thematic role assignment, or change from specifier to head status) are limited to the minimal domain of that head. (5) is in effect a hypothesis about possible types of reanalysis: it rules out changes that affect structure over a larger domain, while allowing the range of reanalyses in serial verb and copular constructions that we have reviewed. Further validation of this 'lexical' conception of the domain of reanalysis requires a fuller study of the syntactic changes commonly described as syntactic reanalysis.

References

Andersen, H. 1973. Abductive and deductive change. *Language* 48. 765-94.

Andersen, H. 1989. Understanding linguistic innovations. In Breivik, L, and E. Jahr eds. *Language Change: Contributions to the Study of Its Causes*. 5-28. Berlin: Mouton de Gruyter.

Bambgbose, A. 1972. What is a verb in Yoruba? In Bamgbose, A. ed*., The Yoruba Verb Phrase*. 17-60. Ibadan: Ibadan University Press.

Bender, E. 2000. The syntax of Mandarin *ba*: Reconsidering the verbal analysis. To appear in *Journal of East Asian Linguistics*.

Bowers, J. 1993. The syntax of predication. Linguistic Inquiry

Campbell, R. 1989. *The Grammatical Structure of Verbal Predicates*. Ph.D. dissertation, UCLA.

Chomsky, N. 1995. *The Minimalist Program.* Cambridge: MIT Press.

Collins, C. 1993. *Topics in Ewe Syntax.* Ph.D. dissertation, MIT.

_____1997. Argument sharing in serial verb constructions. *Linguistic Inquiry* 27. 391-444.

Ebert, R.P. 1978. *Historische Syntax des Deutschen*. Stuttgart: Sammlung Metzler.

Emonds, J. 1985. *A Unified Theory of Syntactic Categories.* Dordrecht: Foris.

Durie, M. 1988. Verb serialization and 'verbal prepositions' in Oceanic languages. *Oceanic Linguistics* XXVII.1-2. 1-23.

Givon. T. 1975. Serial verbs and syntactic change: Niger-Congo. In C. Li, ed. *Word Order and Word Order Change*. 113-148. Austin: University of Texas Press.

Givon, T. 1984. *Syntax: A Functional Typological Introduction*. Amsterdam: John Benjamins.

Harris, A. and L. Campbell. 1995. *Historical Syntax in Cross-linguistic Perspective.* New York: Cambridge University Press.

Hashimoto, A. 1971. Mandarin syntactic structures. *Unicorn* 8. 1-149.

Heine, B. and M. Reh. 1984. *Grammaticalization and Reanalysis in African Languages*. Hamburg: Helmut Buske.

Kayne, R. 1994. *The Antisymmetry of syntax*. Cambridge: MIT Press.

Langacker, R. 1977. Syntactic reanalysis. In C. Li, ed. *Mechanisms of Syntactic Change*. 57-193. Austin: University of Texas Press.

Larson, R. 1991. Some issues in verb serialization. In C. Lefebvre, ed. *Serial Verbs: Grammatical, Comparative and Cognitive Approaches*. 185-210. Amsterdam: John Benjamins.

Li, C. and S. Thompson. 1973. Serial verb constructions in Mandarin Chinese: Subordination or coordination? In C. Corum, T.C. Smith-Stark and A. Weiser, eds. *You Take the High Node and I'll take the Low Node: Papers from the Comparative Syntax Festival.* 96-103. Chicago: Chicago Linguistic Society.

Li, C. and S. Thompson. 1974. An explanation of word order change SVO > SOV. *Foundations of Language* 12.201-14.

Li, C. and S. Thompson. 1977. A mechanism for the development of copula morphemes. In C. Li (ed*.) Mechanisms of Syntactic Change*. 419-444. Austin: University of Texas Press.

Li, Y. 1993. Structural head and aspectuality. *Language* 69.3. 480-504.

Lightfoot, D.W. 1976.   XXX In Christie, W. (ed.) *Current Progress in Historical Linguistics.* 22-5. Amsterdam: North Holland.

Lightfoot, D.W. 1979. *Principles of Diachronic Syntax.* Cambridge: Cambridge University Press.

Lord, C. 1973. Serial verbs in transition. *Studies in African Linguistics* 4.269-96.

Lord, C. 1976. Evidence for syntactic reanalysis: From verb to complementizer in Kwa. In S. Steever, C. Walker, and S. Mufwene, eds*.) Papers from the Parasession on Diachronic Syntax.* 179-191. Chicago: Chicago Linguistic Society.

Mei, T. 1990. Tang-Song chuzhishi de laiyuan (The origin of the disposal construction during the Tang and Song dynasties). *Zhongguo yuwen* 3. 191-216.

McWhorter, J. 1997*. Towards a New Model of Creole Genesis.* New York: Peter Lang.

Paul, W. 1999. Proxy categories in phrase structure theory and the Chinese VP. Ms, EHESS-CNRS, Paris.

Peyraube, A. 1985. Les structures en 'ba' en chinois mediéval et moderne. *Cahiers de linguistique Asie Oriental* 14. 193-213.

Peyraube, A. 1986. Shuangbin jiegou cong handai zhi tangdaide lishi fazhan (The historical developments of double object constructions from the Han to the Tang dynasty). *Zhongguo Yuwen* 3.204-16.

Peyrabue, A. 1996. Recent issues in Chinese historical syntax. In C.-T.J. Huang and Y.-H. Li, eds*. New Horizons in Chinese linguistics.* 161-213. Dordrecht: Kluwer.

Peyraube, A. and Wiebusch, T. 1995. Problems relating to a history of different copulas in Ancient Chinese. ….

Roberts, I. 1997. Directionality and word order change in the history of English. In

    A. van Kemenade and N. Vincent, eds. *Parameters of morphosyntactic change*.

    397-426. Cambridge: Cambridge University Press.

Ross, C. 1991.   Coverbs and category distinctions in Mandarin Chinese. *Journal of*

    Chinese Linguistics 19. 79-115.

Ross, J.R. 1967. *Constraints on Variables in Syntax*. Ph.D. dissertation, MIT. Pub. 1986

    as *Infinite Syntax!,* Hillsdale, N.J.: Erlbaum.

Stockwell, R.P. 1976. Reply to Lightfoot. In Christie, W. (ed.) *Current Progress in*

    Historical Linguistics. 32-4. Amsterdam: North Holland.

 Sun, C. 1996. *Word-Order Change and Grammaticalization in the History of Chinese*.

    Stanford: Stanford University Press.

Sybesma, R. 1992. *Causatives and Accomplishments: The Case of Chinese* ba.

    Dordrecht: Holland Institute of Generative Linguistics.

Takahashi, Chioko. 1997. Object shift in Chinese: the *ba*-construction meets

    the Minimalist Program. MS. Yale University.

Visser, F.Th. 1966 *An Historical Syntax of the English Language*. Vol. 2. Leiden: E.J.

    Brill.

Wang, L. 1958. *Hanyu shi gao* (zhong). Beijing: Kexue chubanshe.

Warner, A. 1982. *Complementation in Middle English and the Methodology of Historical*

    Syntax. University Park, PA: The Pennsylvania State University Press.

Zou, K. 1993. The syntax of the Chinese BA construction. *Linguistics* 31. 715-36.