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Syntax and semantics in the history of Chinese

I

The philosophy of language comes in three varieties.

1. The functionalist's view: linguistic forms are instruments used to convey meaningful elements. This is the basis of European structuralism.
2. The formalist's view: linguistic forms are abstract structures which can be filled with meaningful elements. This is the basis of generative grammar.
3. The parasitologist's view: linguistic forms are vehicles for the reproduction of meaningful elements. This is the view which I advocated twelve years ago in a Festschrift (1985).

In a formalist's theory of language, syntax necessarily deals with relations between formal elements in abstract structures. In a functionalist's theory of language, syntax is an ambiguous concept: it deals either with relations between formal elements used to convey meanings or with the formal expression of relations between meaningful elements. In the theoretical framework to which I subscribe, syntax deals with relations between meanings which can be reproduced through formal expression. The syntax of formal elements is futile in this conception because one cannot know a tree by the shadow it casts on the wall of a cave.

The starting-point adopted here has important consequences for the nature of syntactic research. In his discussion of nexus and the birth of syntax, Jeroen Wiedenhof adduces the following examples (1996: 141f.):

- (1) 山水
shān shuǐ
mountain water
'mountains and rivers'
- (2) 山水
shān shuǐ
mountain water
'water from the mountains'

While the formal relations between *shān* and *shuǐ* in (1) and (2) are limited to their relative positions in time and perhaps in prosodic arrangement (l.c.), the relations between their meanings belong to a number of different types. Wiedenhof notes that (1) *shān shuǐ* 'mountains and rivers' differs from *shuǐ shān* 'water and mountains' in "highlighting the visual appearance of the mountains and rivers" and is therefore a set expression designating 'natural scenery or landscape of mountains and rivers'. The meaning of (2) *shān shuǐ*

‘water from the mountains’ is again quite different because the expression “refers to water, not to mountains” (Wiedenhof, l.c.). Here the referent of *shān* ‘mountains’ differs from the referent of *shuǐ* ‘water’ but distinguishes the latter from those referents of *shuǐ* ‘water’ which are not referents of *shān shuǐ* ‘water from the mountains’. Thus, we arrive at three different meanings of *shān shuǐ*:

- (1a) There is an entity X which consists of P and Q; P is the referent of *shān* and Q is the referent of *shuǐ*.
- (1b) There is an entity X of which P and Q are visible parts; P is the referent of *shān* and Q is the referent of *shuǐ*.
- (2a) There is an entity X which is identical with Q and qualified by P; Q is the referent of *shuǐ* and P is a virtual (imagined) referent of *shān*.

As Wiedenhof points out, the latter meaning “represents a conceptual advancement”: syntax “provides a means to apply existing signs to new ends” (l.c.).

Consider now the following examples:

- (3) 高山
gāo shān
high mountain
‘high mountains’
- (4) 山高
shān gāo
mountain high
‘the mountain is high’

The relation between the meanings of *gāo* and *shān* in (3) *gāo shān* ‘high mountains’ differs from the relation between those of *shān* and *shuǐ* in (2) *shān shuǐ* ‘water from the mountains’ in two respects. Firstly, the property of being high is carried by the same referent as the property of being a mountain. Secondly, the property of being high presupposes the property of being a mountain in the referent. Thus, we arrive at the following meaning:

- (3a) There is an entity X which is identical with Q and qualified by P; Q is the referent of *shān* and P is the (set of) feature(s) *gāo* carried by Q.

The virtual referent P of *shān* in (2a) is replaced by the abstraction P of *gāo* in (3a). The latter meaning is more complex because the height of the mountains in (3) *gāo shān* ‘high mountains’ does not exist without the mountains whereas the mountains in (2) *shān shuǐ* ‘water from the mountains’ can exist without the water.

The meaning of (4) *shān gāo* ‘the mountain is high’ differs from that of (3) *gāo shān* ‘high mountains’ in the presence of a temporal dimension (cf. Wiedenhof 1996: 146). Apart from the mountain which is high, the

expression (4) *shān gāo* conjures up in the mind the thought of a situation where the mountain is high (cf. Ebeling 1978: 231). The meaning can therefore be described as follows:

- (4a) There is a situation E where P carries the (set of) feature(s) Q; P is the referent of *shān* and Q is the (set of) feature(s) *gāo*.

A situation can be defined as an entity with a temporal dimension.

Finally, we have to consider the following example (cf. Wiedenhof 1996: 147):

- (5) 高
gāo
high
'it is high'

The meaning of (5) *gāo* differs from that of (4) *shān gāo* in the absence of the mountain:

- (5a) There is a situation E where an entity X carries the (set of) feature(s) *gāo*.

II

Against the background of the theoretical framework outlined here I would now like to reconsider Chaofen Sun's analysis of grammaticalization in the history of Chinese. Sun adduces the following examples illustrating the development of *bǎ* from a full-fledged lexical verb meaning 'to hold' through a preverbal object marker into a grammaticalized preposition marking high transitivity (1996: 59-75).

- (6) 左手把其袖
zuó-shǒu bǎ qí xiù
left-hand hold his sleeve
'the left hand holds his sleeve'
- (6a) There is a situation E where P is holding Q; P is the referent of *zuó-shǒu* and Q is the referent of *qí xiù*.
- (7) 醉把花看益自傷
zuì bǎ huā kàn yì zì shāng
drunk hold flower watch more self hurt
'drunk, I look at the flower by holding it, even more broken-hearted'
- (7a) There is a situation E where an entity X [...] is holding P and looking at Q [...]; P is the referent of *huā* and Q is identical with P.
- (8) 莫把杭州刺史欺
mò bǎ hángzhōu cìshǐ qī

NEG BA Hángzhōu magistrate deceive
'do not deceive the magistrate of Hangzhou'

- (8a) There never is a situation E where an entity X deceives P; P is the referent of *hángzhōu cìshǐ*.

In the latter example the meaning 'to hold' has been lost.

The development of the *bǎ* construction is correlated with the history of the Chinese passive marker *bèi*, which developed from a full verb meaning 'to receive'.

- (9) 被水寒之害
bèi shuǐ hán zhī hài

receive water cold REL damage
'receive damage from flood and cold'

- (9a) There is a situation E where an entity X receives the (set of) feature(s) Q, viz. X being damaged by P; P is the referent of *shuǐ hán* and Q is the referent of *hài*.

- (10) 常被老元偷格律
cháng bèi lǎo yuán tōu gé-lǜ

often PASS old Yuán steal rhyme-scheme
'my prosodic scheme was frequently stolen by Old Yuán'

- (10a) There is often a situation E where an entity X is affected by P stealing Q; P is the referent of *lǎo yuán* and Q is the referent of *gé-lǜ*.

- (11) 獨坐堂上，夜被刺死
dú zuò táng shàng, yè bèi cì-sǐ

alone sit hall up, night PASS stab-die
'sitting alone in the hall, he was stabbed to death at night'

- (11a) There is at night a situation E where an entity X [...] is stabbed and dies.

- (12) 被火燒死
bèi huǒ shāo-sǐ

PASS fire burn-die
'he was burned to death by fire'

- (12a) There is a situation E where an entity X is burned by P and dies; P is the referent of *huǒ*.

In (9) the subject of the event receives the damage as if it were an object; in (10) he is affected by an event in which he is neither the actor nor the object; in (11) and (12) he is the object of the event.

While *bèi* turned into an actor marker, *bǎ* developed into a preverbal object marker:

- (13) 若把白衣輕易脫
ruò bǎ bái-yī qīngyì tuō

if BA white-clothes easy undress
'if one takes off the white dress easily'

(13a) If there is a situation E where an entity X takes off P with ease; P is the referent of *bái-yī*.

(14) 把他堂印將去
bǎ tā tángyìn jiāng qù
BA his seal take go
'take away his seal'

(14a) There is a situation E where an entity X takes P and goes; P is the referent of *tā tángyìn*.

This development leads to the full grammaticalization of *bǎ* in modern Mandarin:

(15) 我把那本書給了他
wǒ bǎ nài-běn shū gěi le tā
me BA DEM-CL book give PFV him
'I gave him the book'

(15a) There is a situation E where I carry the (set of) feature(s) Q, viz. having given P to him; P is the referent of *nài-běn shū* and Q is the referent of *gěi le*.

Here *bǎ* has lost its verbal character, as is clear from the fact that it cannot replace the verb *ná* 'to take' in the following sentence:

(16) 我拿了一本書
wǒ ná le yī-běn shū
me take PFV one-CL book
'I took a book'

(16a) There is a situation E where I carry the (set of) feature(s) P, viz. having taken Q; P is the referent of *ná le* and Q is the referent of *yī-běn shū*.

(17) 我拿那本書給了他
wǒ ná nài-běn shū gěi le tā
me take DEM-CL book give PFV him
'I gave him the book'

(17a) There is a situation E where I carry the (sets of) features P and R, viz. taking Q and having given it to him; P is the referent of *ná*, Q is the referent of *nài-běn shū*, and R is the referent of *gěi le*.

While *ná* has the valences 'taking' and 'taken', *bǎ* has the valences 'having an object' and 'being an object'. The essential point is that there is no direct syntactic relation between *wǒ* and *bǎ* in example (15), where the first valence of *bǎ* is filled by 'giving' and the second by 'book'.

In conclusion, *bǎ* developed from a full-fledged lexical verb through a serial verb construction into a grammaticalized marker of high transitivity. The development involves the following reanalysis of the *bǎ* N V sequence:

1. There is a situation E where an entity X holds N.
2. There is a situation E where an entity X holds N and carries the (set of) feature(s) V which may affect N.
3. There is a situation E where an entity X carries the (set of) feature(s) V which affect N.

The temporal dimension of the situation E shifts from X holding N to X carrying the (set of) feature(s) V and is lost in *bǎ*, which thereby loses its verbal character.

III

Sun derives the suffixal aspect marker *le* ‘perfective’ from the verb *liǎo* ‘to complete’ and the sentential clitic expressing perfect aspect *le* ‘currently relevant state’ from the verb *lái* ‘to come’ (1996: 82-103). Consider the following examples:

(18) 我吃了飯了
wǒ chī le fàn le

me eat PFV food CRS
‘I have eaten’

(18a) There is a situation E resulting from a prior situation F where I carry the (set of) feature(s) P, viz. having eaten Q; P is the referent of *chī le* and Q is the referent of *fàn*.

(19) 吃飯了
chī fàn le

eat food CRS
‘I ate’

(19a) There is a situation E resulting from a prior situation F where an entity X carries the (set of) feature(s) P, viz. eating Q; P is the referent of *chī* and Q is the referent of *fàn*.

(20) 我不吃飯了
wǒ bù chī fàn le

me NEG eat food CRS
‘I will not eat (now)’

(20a) There is a situation E resulting from a prior (imagined) situation F where I do not carry the (set of) feature(s) P, viz. eating Q; P is the referent of *chī* and Q is the referent of *fàn*.

It is difficult to omit the sentential clitic in example (18) because this would suggest the absence of a currently relevant situation resulting from the event which is denoted by *chī le fàn* ‘(someone) ate’, so that “the sentence does not sound like a completed statement” (Sun 1996: 84). This can be remedied by

adding an anchor which renders the situation resulting from the prior event currently relevant:

(21) 我吃了飯去
wǒ chī le fàn qù

me eat PFV food go

‘I will eat before going’

(21a) There is a situation E where I carry the (sets of) features P and R, viz. having eaten Q and going; P is the referent of *chī le*, Q is the referent of *fàn*, and R is the referent of *qù*.

In the sentences (15) and (17) cited above the anchor is provided by *tā* having the book and in sentence (16) by *shū* being in my possession. In the following examples there is no such anchor. It follows from the analysis that (23) ??*wǒ chī le fàn* sounds worse than (22) ?*chī le fàn* as a statement (cf. Sun 1996: 83, 89).

(22) 吃了飯
chī le fàn

eat PFV food

(22a) There is a situation E with an entity X carrying the (set of) feature(s) P, viz. having eaten Q; P is the referent of *chī le* and Q is the referent of *fàn*.

(23) 我吃了飯
wǒ chī le fàn

me eat PFV food

(23a) There is a situation E with me carrying the (set of) feature(s) P, viz. having eaten Q; P is the referent of *chī le* and Q is the referent of *fàn*.

As in the case of *bǎ*, the temporal dimension shifted away from the verb ‘to complete’ and the direct syntactic relation with the original actor was lost. The resulting monovalent atemporal meaning ‘completed’ of the suffix *le* is carried by the referent of the (set of) feature(s) denoted by the preceding verb, e.g. *chī le*, where the eating is finished.

Sun argues that the sentential clitic *le* ‘currently relevant state’ (cf. Li & Thompson 1981: 238-300) partly represents earlier *le ye*, with *le* from *liǎo* ‘to complete’ and *ye* being an earlier perfect marker:

(24) 喫飯了也
chī fàn liǎo ye
eat food complete CRS
‘(one) finished eating’

(24a) There is a situation E resulting from a prior situation F where an entity X carries the (sets of) features P and R, viz. eating Q and finishing P; P

is the referent of *chī*, Q is the referent of *fàn*, and R is the referent of *liǎo*.

- (25) 喫了酒也
chī le jiǔ ye
eat PFV wine CRS
'(one) has drunk (some) wine'
- (25a) There is a situation E resulting from a prior situation F where an entity X carries the (set of) feature(s) P, viz. having drunk Q; P is the referent of *chī le* and Q is the referent of *jiǔ*.

Another source of the sentential perfect marker *le* is the verb *lái* 'to come':

- (26) 將店主打死來
jiāng diàn-zhǔ dá-sǐ lái
take store-owner hit-dead CRS
'(someone) has beaten the store-owner to death'
- (26a) There is a situation E resulting from a prior situation F where an entity X carries the (set of) feature(s) Q, viz. beating P resulting in P carrying the (set of) feature(s) R; P is the referent of *diàn-zhǔ*, Q is the referent of *dǎ*, and R is the referent of *sǐ*.
- (27) 是我打殺人來
shì wǒ dǎ-shā rén lái
be me hit-kill person CRS
'I have killed someone'
- (27a) There is a situation E resulting from a prior situation F where it is the case that I carry the set of features P, viz. hitting and killing Q; P is the referent of *dǎ-shā* and Q is the referent of *rén*.

It appears that *lái* replaced *yě* as a perfect marker and became *le* as a result of phonological reduction. According to Sun (1996: 102), the following sentence became ambiguous when the grammaticalized reflexes of *liǎo* 'to complete' and *lái* 'to come' merged as *le*:

- (28) 吃飯了
chī fàn le
eat food LE
'I have eaten' or 'it is time to eat'

This seems improbable to me because the perfective aspect marker *le* had become a suffix between the 10th and 14th centuries (Sun 1996: 95f.) whereas *lái* replaced *yě* as a sentential perfect marker in the 15th century (Sun 1996: 99f., cf. table 4.1 on page 102), perhaps under the influence of the third Ming emperor, who moved the capital from the south to Beijing (Sun 1996: 103). My analysis of sentence (28) is the following:

(28a) = (19a) There is a situation E resulting from a prior situation F where an entity X carries the (set of) feature(s) P, viz. eating Q; P is the referent of *chī* and Q is the referent of *fàn*.

The ambiguity in the reading of (28) results from the real or imagined character of the prior situation F: the eating may either have taken place before E or have been imagined so as to become relevant at the time of E, see also example (20) above. It follows that the sentential clitic *le* must indeed be derived from *lái* ‘to come’, not from *le ye*. The semantic development can be analyzed as follows.

(29) 來
lái
come

(29a) There is a situation E where an entity X carries the (set of) feature(s) *lái*.

(30) 了
le
CRS

(30a) There is a situation E resulting from a prior (real or imagined) situation F where an entity X carries a (set of) feature(s) Y.

Unlike *bǎ* and suffixal *le*, the sentential clitic *le* did not lose its temporal dimension when the direct syntactic relation with the original actor was lost. This suggests the following reanalysis:

1. There is a situation E where an entity X is coming.
2. There is a situation E where an entity X carries the (sets of) features Y and ‘coming’.
3. There is a situation E which is coming into being as a result of a situation F where an entity X carries the (set of) feature(s) Y.
4. There is a situation E resulting from a prior situation F.

While the first valence of *bǎ* is filled by ‘giving’ in example (15) and the only valence of suffixal *le* is filled by the preceding verb, the meaning ‘coming’ of *lái* became bivalent ‘resulting from’ when its temporal dimension was separated from the temporal dimension of X carrying the (set of) feature(s) Y, the two new valences being filled by E and F.

IV

The history of *de* can be analyzed along similar lines (cf. Sun 1996: 112-161 and Wiedenhof 1995: 20-61). I shall refrain from presenting a full account here and limit myself to a short outline.

It appears that *de* developed from a full lexical verb meaning ‘to obtain’, then ‘to attain’, ‘to be possible’, into a modal auxiliary ‘can’, with shift of its temporal dimension and loss of its verbal character ‘resulting in’, then into a subordinating clitic ‘specifying’, linking two clauses. The shift of the temporal dimension can be illustrated with the following examples:

- (31) 尋得入門
xún de rù mén
 find possible enter door
 ‘one can find and enter the door’
- (31a) There is a situation E where it is possible that an entity X carries the (sets of) features P and Q, viz. finding R and entering R; P is the referent of *xún*, Q is the referent of *rù*, and R is the referent of *mén*.
- (31b) There is a situation E where an entity X carries the (set of) feature(s) P, viz. finding R, resulting in X carrying the (set of) feature(s) Q, viz. entering R; P is the referent of *xún*, Q is the referent of *rù*, and R is the referent of *mén*.
- (32) 我今天看得完這本書
wǒ jīntiān kàn de wán zhè-běn shū
 me today read DE finish DEM-CL book
 ‘I can finish reading this book today’
- (32a) Today there is a situation E where I carry the (set of) feature(s) P, viz. reading R, resulting in me carrying the (set of) feature(s) Q, viz. finishing R; P is the referent of *kàn*, Q is the referent of *wán*, and R is the referent of *zhè-běn shū*.
- (32b) Today there is a situation E where I carry the (set of) feature(s) Q, viz. finishing R, specified by a situation F where I carry the (set of) feature(s) P, viz. reading R; P is the referent of *kàn*, Q is the referent of *wán*, and R is the referent of *zhè-běn shū*.
- (33) 他跑得快
tā pǎo de kuài
 he run DE fast
 ‘he can run fast’ or ‘he runs fast’
- (33a) There is a situation E where he carries the (set of) feature(s) P resulting in him carrying the (set of) feature(s) Q; P is the referent of *pǎo* and Q is the referent of *kuài*.
- (33b) There is a situation E where he carries the (set of) feature(s) Q specified by a situation F where he carries the (set of) feature(s) P; P is the referent of *pǎo* and Q is the referent of *kuài*.
- (34) 他跑得不快
tā pǎo de bu kuài
 he run DE NEG fast
 ‘he does not run fast’
- (34a) There is a situation E where he does not carry the (set of) feature(s) Q specified by a situation F where he carries the (set of) feature(s) P; P is the referent of *pǎo* and Q is the referent of *kuài*.
- (35) 他跑不快

tā pǎo bu kuài
he run NEG fast
'he cannot run fast'

- (35a) There is a situation E where he is qualified by the (set of) feature(s) P and does not carry the (set of) feature(s) Q; P is the referent of *pǎo* and Q is the referent of *kuài*.

The difference between the two readings of (33) results from the real or imagined character of his running, not from the difference between the meanings (33a) and (33b). The semantic difference between the sentences (34) and (35) may be compared with Ebeling's distinction between temporal gradation and temporal limitation (1978: 301-339, cf. Kortlandt 1980).

In the theoretical framework exemplified here, the development of syntactic meanings through loss, shift and split of meaningful elements in the reproduction of the semantic code bears a strong resemblance to the imperfect transmission of genetic information in biological evolution. The formal expression of syntactic relations between meaningful elements can be compared with the molecular succession in chains of proteins which ensures the transfer of hereditary messages from one generation to the next. As McNeill pointed out twenty years ago, "the slow processes of evolution presumably apply to human societies and their symbolic systems as much as to human bodies, so that when logic cannot decide, survival eventually will" (1976: 8).

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