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Author(s): Nancy Wiegand

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CREATING COMPLEX SENTENCE STRUCTURE

Nancy Wiegand
Stanford University

While it is well known that new morphological markers of syntactic relations often come from what were earlier free forms, (Givón 1979, Bynon 1982), the sources of new syntactic structure have been less well documented. This has been especially true in the case of innovations in complex sentence structure. In the case of relative clauses in the history of English, for example, considerable attention has been focused on charting the changes in clause introductory forms. How we got the structure of antecedent followed by pronoun or complementizer followed by an embedded relative clause is another question. This structure has been assumed to have remained constant throughout the history of English, and in fact from an even earlier stage of Germanic. The origin of verbal complements with that has received slightly more attention, principally because the form is transparently the demonstrative pronoun, and speculation on the strategy behind its use is that much easier. It has been assumed, however, that Old English þaet ('that') complements to verbs are found in the earliest stages of the language more or less fully fledged, and that therefore there is no evidence on which to do internal reconstruction and so no way to give any substance to our speculations.

Such a lack of documentary evidence of the earliest stages of the development of these complex sentence types has remained a problem in the study of languages with a fairly continuous history. It has made it harder to investigate what is involved in the process of grammaticalization, in cases where it would seem that a discourse strategy has given rise to new syntax. Sankoff and Brown's 1976 study of the Tok Pisin relative marker ia reports one case in which evidence of the process is reconstructable from the record. But this was chiefly possible because the data was from an emerging creole, a situation in which there was no old syntactic strategy for the new structure to replace. In the case of already established languages, where the development in question antedates the historical record, and where the new syntactic strategy replaces an old one, it is simply a much rarer occasion when we can detect the evidence of new structure being created. In this paper, I will argue that despite this drawback, there is sufficient evidence about the OE clause-introductory particle þe to reconstruct the strategy by which it was used to create a new way to form complex sentence structure.

The scarcity of evidence for structural innovation was a major factor behind the traditional interpretation of the creation of complex sentence structure as a process a language goes through only once in its history. As G. W. Small puts it:

- 1) It may be laid down as a general principle that in the progress of language parataxis precedes hypotaxis. (1924:125).

According to this view, the development of complex structure took place in three stages.

- 2) parataxis: 2 independent sentences juxtaposed.
- partial hypotaxis: inclusion in one or both sentences of a morpheme indicating the nature of the relation.
- hypotaxis: main and dependent clauses, with alteration or loss of meaning of the connective morpheme.

The earliest periods of a language were thought to be characterized by a tendency toward parataxis, or expression of related propositions in independent but juxtaposed sentences. The hypotactic stage, in which the second clause is dependent, was thought to arise as that clause was felt more and more to modify the first in some way. It was interpreted as a sign of departure from pure parataxis when a marker appeared to indicate more specifically the nature of the relation. The true hypotactic stage was characterized by an alteration, or sometimes a loss, of the fundamental meaning of the particle (Paul 1909:144ff) -- what we would today call grammaticalization. Complex sentences in which one or both clauses showed a particle whose function was a connective one but whose original meaning had not yet been completely bleached were thought to represent a half-way point between para- and hypotaxis, giving a feeling of a degree of subordination.

There are several difficulties with such a characterization. First, it depends crucially on an initial stage at which both propositions were expressed as sentences, in a particular order in the text. With many adverbial relations, however, the order of clauses in a complex sentence is most often the reverse of that which occurs when the relation has to be inferred from mere juxtaposition. In Modern English (3), for example, a temporal connection is implied because the order of mention of the events is taken as indicating their order of occurrence. Yet in a temporal complex sentence with after, the order of mention is usually reversed. The synchronic strategy for forming this sort of complex sentence often involves a different organization of information at the clausal level, as well as the addition of a morpheme expressing the nature of the relation.

- 3) The party ended. Jane left.
 Jane left after the party ended.

Second, within the framework of traditional grammar it is difficult to characterize more precisely the nature of the mechanism involved in the departure from parataxis -- i.e., what is meant by saying that the second clause was felt more and more to modify the first, by the concept of modification, and by degree of subordination.

Current work on syntactic change which considers the semantics and communicative function of structures as well as their syntactic form has produced a framework which provides a way out of these difficulties. In his book On Understanding Grammar (1979), Talmy Givón proposed a cyclic characterization of the general historical development of languages, whereby.

- 4) discourse > syntax > morphology > morphophonemics
 (Givón 1979:209) > zero

Of the first phase in this cycle, he says:

- 5) At least at their present stage, it seems, human languages keep renovating their syntax via syntacticizing discourse. (Givón 1979:232)

There are two insights here that are crucial to understanding the creation of subordinate structure. The first is that the initiation of the process comes out of discourse strategies for organizing information in a connected text. In other words, we are not tied to an account which necessarily starts from the juxtaposition of already grammaticalized units of structure. The second insight is that the process is a cyclic one, freeing us from the idea that the paratactic stage is limited to the original period of a language.

The kind of complex sentences I am concerned with here are those involving two full, tensed clauses, and where one plays a certain semantic role within the matrix clause defined by the other. From the semantic point of view, what we have in this type of construction is two situations expressed in a complex proposition. One, which I will call the 'described' situation, consists minimally of a certain event or static state, and some appropriate number of participants. This is the proposition expressed alone in a simple sentence or as the main, or matrix, clause in a complex one. The other situation, which I will refer to as the 'evaluative' situation, also consists of an event or state and its participants. The difference lies in its function. While the described situation sets the scene, by describing an event and participants which are relevant to the main line of discourse, the evaluating situation is used to identify the referent of, or characterize the relevance of, some aspect of the described situation. Aspects of the described situation which are most typically in need of evaluation are:

- 6) a participant
 the spatial location of the event/a participant
 the temporal location of the event/a participant
 the rational status of the event in the external world
 (i.e., as cause or effect)
 the rational status of the event within the discourse
 (e.g., concessives, conditionals)

This way of viewing this type of complex sentence, as well as the notion of restrictive modification as evaluation in a situation, are based on work done within the framework of situation semantics (Larson 1983). The insight here is that one can construct an (evaluation) situation on the basis of what is known from the context of the discourse. That situation can then be used to characterize some aspect of the main discourse situation, when they share a common entity or spatial/temporal location, or when the evaluation situation is the point of reference in a relation (e.g., temporal or causal sequence) which involves both. Now, there are various ways to implement this strategy when organizing information in a discourse. One can rely on knowledge of the world, shared special knowledge, or information mentioned or inferable from previous discourse. This can be done without any explicit indication, or by semantic strategies such as repetition, anaphora, or ostension to the external world. Complex sentences of the type being discussed here can be considered grammaticalizations of this strategy. They are means of expressing the information within one syntactic unit. Relative clauses (7) can be seen as syntacticizations of the use of one situation to characterize a participant in another. The other sentences in (7) show syntactic strategies in Modern English for use of an evaluating situation to characterize other aspects of the described situation.

- 7) The woman who/that wore a white dress left the party.
 (participant)
 Jane left the party when the band stopped playing.
 (temporal location of event)
 The month when Jane was in London passed by quickly.
 (temporal location of participant)
 Jane left the party because the band stopped playing.
 (rational status of event)
 Though the band was still playing, Jane left the party.
 (rational status of event)

Incorporating the syntactic expression of two situations into one complex structural unit poses a problem of linearization. In these modern English sentences, the clause which is semantically subordinate is embedded in a phrase following its head. The antecedent and relative clause form a complex NP, the subordinating conjunction and its clause form a complex PP, and so on. With the

exception of extraposed relative clauses, this has been the major syntactic strategy for incorporating evaluative clauses into complex sentences since late Middle English. From OE on, there have been many changes in the forms used to mark the various types of subordinate clauses, and also in the number of introductory forms possible. But it has been assumed by most that the structural strategy used in the earliest stages of the language was the same as that of Modern English. Ruth Armentrout, for example, in her study of the development of subordinate conjunctions, maintains:

- 8) With regard to adverb clauses and the conjunctions that introduce them, the syntax of Modern English is much the same as that of Old and Middle English.
(Armentrout 1978:v)

In the remainder of this paper I will show that this is not the case. OE in fact shows evidence of an additional strategy, which involves the clause-introductory particle þe. This form has been a thorn in the side of linguists for over a century, because it has never quite fit very comfortably into anyone's system of syntactic categories. Traditional descriptions usually call it a relative pronoun or particle; studies done in more current frameworks simply assign it more or less by default to the category complementizer. Most writers are aware of at least some grounds for dissatisfaction with these treatments. Once we have developed an adequate treatment of þe, including a way to generalize over all its uses, a little internal reconstruction can be done to argue that its clauses were originally adjoined to their matrix clause, and only gradually incorporated into the main clause structure by means of embedding.

OE has two sentence initial particles which introduce tensed clauses whose semantic content is definite and specific: þaet, 'that', and þe, whose translation I'll leave open for the moment.

- 9) þaet, 'that' þe, ?

Þaet is basically the complementizer for indirect speech and desires, a function which is still a property of its ModE reflex that.

- 10) Onthere saede þaet sio scir hatte Halgoland.
O. said that that region was called Helgeland.
(Orosius 19:9)

"Onthere said that the region was called Helgeland."

It contrasts with hwæþer, 'whether', which introduces complements of which some aspect is open to question.

- 11) He fraegn hwaeper neo aenigne nusl inne haefdon.
 He asked whether they any Eucharist within had.
 (Bede 106)

"He asked whether they had any Eucharist in the house."

Unlike its ModE counterpart, however, the OE paet appears only very infrequently as a complementizer in relatives or complements to nouns (Wiegand forthcoming). In these constructions, as well as in several others without exact counterparts in ModE, the particle pe is used.

I have argued elsewhere (Wiegand 1983 and forthcoming) that both the relative pronoun analysis and one in which pe is simply called a complementizer fall short of an explanatory account of the OE system. Let me here briefly review the claims made by these analyses and the reasons for rejecting them, before I discuss a more general account.

Some linguists working in the traditional grammar framework (Quirk and Wrenn 1957, Carkeet 1976) analyzed pe as a relative pronoun, because its most frequent use was in relative clauses, and because the category of relative pronoun was a familiar one. De is used in two out of the three major types of OE relative clauses. In some it appears alone, as in (12), and others it is used following a form of the inflected demonstrative pronoun, as in (13).

- 12) Se bat waes geworht of priddan healfre hyde
 That boat was made of three half hides

pe hi on foron. (Chronicle 891, 82:22)
 PART they in went.

"The boat that they set out in was made of two and a half hides."

- 13) & he waes se eahtepa cyning se pe
 and he was that eighth king that PART

 Bretwalda waes. (Chronicle 827, 60:25)
 Bretwalda was.

"And he was the eighth king who was chief king of Britain."

Other linguists, working in both traditional and generative frameworks, (Erickson 1977, Reddick 1981, Allen 1980) found fault with this analysis, basically for two reasons. First, they noted that pe fails to show much positive indication of pronominal status. Unlike the OE demonstrative pronouns, it does not inflect

for gender, number or case. And when the relative gap is the object of a preposition, that preposition is obligatorily pied piped with demonstratives, but stranded with be. These arguments are similar to those made by both traditional and later linguists against pronominal status for ModE that in relatives. Secondly, they attached significance to the frequent appearance of be in constructions not usually analyzed as relatives in the strict sense. Most notable among these are constructions in which a sentence introduced by be is used in conjunction with a preceding adverbial PP (14) or NP (15), giving these phrases a connective function.

- 14) & paer Romane swiþost for paem besierde waeron
and there Romans chiefly for that ensnared were

be him þaet land uncupre waes þonne hit
PART them that land more unknown was than it

Somnitum waere. (Orosius 120:27)
Samnites-dat were.

"And there the Romans were ensnared chiefly
because of that, that the land was more unknown
to them than it was to the Samnites."

- 15) Se... forþferde by geare be sio
That-masc died that-instr year PART the

sunne apiestrode. (Chronicle 885, 78:25)
sun darkened

"He died in the year that the sun was eclipsed."

These of course are unlike relatives in that there is no dependency relation between the main clause demonstrative pronoun or lexical noun and a gap in the lower clause. Instead, there is a coreference relation between the antecedent and the whole lower clause, as in Modern English the fact that sentences.

In the last decade, a number of studies using current syntactic frameworks (Erickson 1977, Armentrout 1978, Reddick 1981, Allen 1980) have focused their attention on the structure and origin of the NP and PP connectives, of the type illustrated in (14) and (15), and the issue of the proper treatment of be was revived. In most of these studies, the basic line of argument is this: since be, for the reasons given above, cannot be considered a pronoun, and since it occurs in some constructions where ModE has the complementizer that, it must therefore be a complementizer. This simple complementizer analysis is in fact an improvement, since it makes more defensible claims about what other forms be stands in paradigmatic relation with. Nevertheless, in this case

negative evidence, and dependence on the theory as developed so far, do not take us far enough. The simple complementizer analysis fails to account for two very important aspects of the data: first, the fact that be co-occurs with the other complementizers paet and hwaeber, and second, that it occurs in a number of constructions which are neither relatives nor noun complements and which, if they appear in ModE, are not always introduced by a complementizer. The simple complementizer analysis needs to be refined in order to provide both an account of the function of be which is general enough to cover all its uses, and a means of distinguishing this particle from the verbal complementizer paet.

Let's turn now to the two other kinds of evidence about the function of be. First, there is its different syntactic behavior. The other complementizers were illustrated above in (10) and (11). While these two are in complementary distribution with each other, be can co-occur with either of them, as shown in (16) and (17).

- 16) Gesege...hwaeber be betere pince...hwaeber
Say which-of-two you-dat better seems whether

be pu hi forseo... be pu gebide hwonne hi
PART you them reject PART you continue until they

be sorgiendne forlaeten. (Boethius 20:28)
you grieving abandon.

"Say which of the two seems better to you...whether
you should reject them...(or) you should continue
until they abandon you grieving."

- 17) Genog sweetol þ is paet te forþy sint gode men
enough clear that is that PART for-that are good men

goode be hi god gemetap. (Boethius 106:33)
good PART they good discover.

"It is clear enough that for this reason good men are
good, that they discover goodness."

(18) shows the more common version of (17), where be has been cliticized onto paet, producing an alternate form of that complementizer.

- 18) pu wast paette butan þissum tolum nan cyning his
you know that without these tools no king his

craeft ne maeg cyþan. (Boethius 40:18)
strength neg. can make known.

"You know that without these tools no king can make his strength known."

Now, we can look at the category complementizer as having two basic defining properties: in OE as in ModE, members of this category mark the clause as a constituent within the matrix S, and they distinguish clause types on the basis of semantic content. Daet complements are definite and specific, hwaerber complements have some aspect left open to question. The fact that be co-occurs with them strongly suggests that it has some different or additional function. Though it is also possible that the defining properties of complementizers are here seen distributed between the two forms, the fact that use of baet and hwaerber alone is much more frequent makes this unlikely.

The other source of evidence about be is its use in a range of other constructions, most of which have not been considered in previous attempts to discern the function of be. Some of these appear quite frequently in the texts, while others are rare. All however are recognized OE uses, in so far as they are mentioned in Bosworth-Toller or in specialized studies of constructions with similar meanings. All of these are discussed in detail in Wiegand (forthcoming), including those whose meaning has previously been disputed or obscure. This analysis is very complex, and can only be given a brief sketch here.

The normal complementizer in OE comparatives is bonne "than", but there is an alternative construction which uses be.

- 19) Ne hine mon ne maeg bon eb on him
neg. him one neg. can than-that more-easily on him

geniman be mon maeg þa sunnan awendan of hiera stede.
effect PART one can the sun turn from its place.
(Boethius 46:19)

"One can no more readily have an effect on him than one can turn the sun from its fixed place."

In (19), a comparative relation is asserted by the phrase bon eb, "more easily than that", which consists of a demonstrative pronoun and an adverb in the comparative degree. The be S gives the standard of comparison and seems to provide the reference of bon. This gives the sentence the appearance of being the same type of construction as in the NP and PP connectives, where a demonstrative also referred to an entire lower clause. We might be content to analyze the be S here as a noun complement, were it not for the existence of comparatives like (20).

- 20) He wolde þaet þa folc him by swiþor
He wished that the people him than-that more-readily

to buge be he haefde hiera ealdhlaforðes sunu
to submit PART ne had their old lord-gen son

on his gewearde. (Orosius 143:32)
in his power

"He wished that the people would submit to him more readily when/after/because he had the old lord's son in his power."

Here we have exactly the same syntax, but the be S is not the standard of comparison. Instead the reference of the comparative phrase by swiðor "more readily than that" is to an expected situation set up by or assumed from the previous discourse. The be S gives the way in which the current situation differs. We can translate be as "when", "after", or "because", but it should be emphasized that there is no explicit indication within this subordinate clause of the type of relation that is being asserted. Instead, in both (19) and (20), the comparative phrase indicates that the described situation stands in a particular rational relation. The be S expresses another situation which is necessary to complete our understanding of the comparative relation.

In (21) and (22), the be S is again used to evaluate, or qualify, the situation set up by the main clause. The difference is that here there is no explicit indication within the main clause of the nature of the relation -- i.e., of what element or feature is being qualified. Instead we must rely on the content of the clauses, as well as the context of the utterance.

- 21) þa wifmen bysmredan hiora weras be hie fleon woldon.
the women ridiculed their men PART they flee wished.
(Orosius 2:5)

"The women ridiculed their men when/after/because they [the men] wished to flee."

In (21), content and context make it clear that the situation with the men wishing to flee is certainly antecedent to, and probably the cause of, the situation in which the women are ridiculing. So the be S qualifies the temporal status of the main clause, and perhaps its rational status.

In (22), the be S again gives the reference point by which we evaluate a relation which the main clause stands in.

- 22) 7 hie þa þrie dælas on þreo tonemdon: Asiam,
and they the three parts in three named Asia

7 Europem, 7 Affricam; þeah be sume men saegden
and Europe and Africa though PART some men said

paet paer nare buton twegen daelas....(Orosius 8:4)
that there weren't but two parts.

"And they named the three parts by three names:
Asia, and Europe, and Africa, though some men said
that there were only two parts."

In this case, however, the concessive nature of that relation is indicated by use in addition of another morpheme, the adv/conj peah "though". In (23), the pe S qualifies the location of an element within the main clause situation.

- 23) ponne cymeþ ilfing eastan in Estmere of paem mere
then comes Elbing east-obl in E. from the lake

pe Truso standeþ in stape. (Orosius 20:9)
PART T. stands on shore.

"Then the Elbing comes from the east into Eastmere,
from the lake where Truso stands on the shore."

How then can we generalize over all these various uses? The simple complementizer analysis was based on looking at only relatives and noun complements. Allen (1980) suggested that since both of these constructions involve an [NP S] structure and a co-referential relation between upper and lower clauses, pe could be characterized as the relative complementizer, with "relative" used in the looser sense defined by these two properties -- one configurational, the other semantic. But when we look at the uses in (16) - (23), we see that each lacks one or both of these properties. Most have no co-referential relation between the clauses, and only (16) and (17) could be argued to have an [NP S] structure.

In fact, initially the most striking fact about this group is the diversity of both internal syntactic structure and semantic content of the subordinate clause. We are used to thinking of relative clauses and adverbial subordinate clauses as two very different types of structure. But herein lies the difficulty with the relative and relative complementizer analyses. They are looking at too local a phenomenon.

When we step back and look for a more abstract level at which all these pe S's might share some property, we can see that they give information which has a common discourse function. In all cases pe introduces a clause which expresses a situation used to evaluate some aspect of the described situation. Relatives and noun complements give information needed to identify or further characterize a participant in the situation. Other pe S's restrict the temporal or local properties of the situation itself or of a participant. Still others supply a reference point by which we can evaluate an adverbial relation asserted as true of the main clause

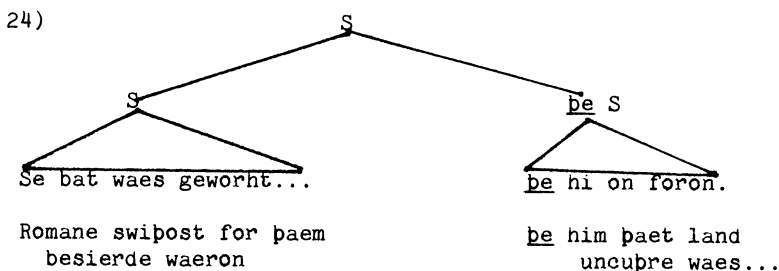
situation -- be it comparative, causal, or concessive. In other words, be does not so much characterize the semantic content of its clause, but rather its position in semantic structure. This gives us the answer to our first question about be -- the generalization behind the use of the same form in this particular subset of subordinate clauses. It also gives us the means to distinguish use of this form from the use of paet. Syntactically, paet clauses are subjects or direct objects. On the functional level, paet introduces clauses which are not evaluative of the main clause situation but are themselves participants in it.

Now that this common function has been established as the basis for generalizing over the set of be clauses synchronically, we can return to the diachronic picture. As we established earlier, there are many ways above the syntactic level to incorporate information about an evaluating situation into the discourse. We can take this synchronic characterization as the syntacticized reflex of this discourse function. The etymology of be is a matter of much dispute. The two most probable origins are as an old locative, meaning 'there', (cf. OED 'the particle (conj., adv), relative pronoun') or as an oblique (probably instrumental) form of the demonstrative, meaning 'by that' (Small 1926). Either etymology is consistent with the hypothesis that be originally indexed the existence of a proposition as relevant in considering the described situation. Through its demonstrative and perhaps case properties, it juxtaposes its proposition by the side of the main clause proposition, and thus indicates its secondary, or subordinate, status in semantic structure.

This gives us the functional and semantic strategy by which these evaluative situations came to be expressed in be S's. We have still to elucidate the linearization problem. Given a clause with such functional and semantic properties, by what principle was it originally ordered in the complex structure? On the one hand, languages such as OE which have some constraints on word order in simple sentences can be argued to show a linearization principle by which modifiers and heads are kept together -- dependencies are marked by juxtaposition. This is an instance of what Croft (1983) calls the principle of phrasal unity. At least below the level of the phrase, OE shows definite syntactic restrictions on the order of elements. On the other hand, the semantic strategy behind the use of be to mark clauses with this particular discourse function appears to require the juxtaposition of the two clauses as wholes in order to indicate their relative semantic status.

Three facts about the syntax of complex sentences with be can help to elucidate how this problem was solved. The first is that in all cases, even relatives, they usually appear in sentence-final position. Secondly, when there is an explicit marker of the relation in the main clause -- e.g., the antecedent in relatives, or the PP in the adverbial connectives -- that element can appear within the main clause and separated from the be clause (cf. 12 and 14). Finally, when the be S does appear in something other than

final position, it must always follow such an explicit relation marker. It is never found initially or medially on its own. Now, we are used to thinking of sentence final complement clauses from the point of view of generative accounts of ModE, in which they are extraposed. But the facts of OE point in the other direction. The only way the historical development makes sense is to argue that these clauses were first adjoined to the end of the sentence, in a manner familiar from discussions of such structures in Walpiri and other Australian languages by Hale (1976) and Larson (1983), and because such juxtaposition was part of the means of indicating the semantic relation between the clauses. An example structure for examples (12) and (14) is given in (24).



This would mean, however, that some degree of tension would exist in the OE system between this semantically motivated linearization and the principle of phrasal unity. The fact that we find instances in OE in which the be S is unambiguously embedded under a head shows that this principle was the stronger one.

This interpretation of the development in OE makes possible a revised view of the development of complex sentence structure. The initial stage of the progression was one in which the language had the discourse strategy of modification by use of an evaluative situation, and two linearization principles. The next step was to utilize the form be as a semantic way of characterizing the discourse function of evaluation, and to use juxtaposition as the linearization strategy. At this point, the be S must be considered semantically subordinate, but the syntactic dependency exists only between the two clauses, not between modifier and head. This stage represents the first phase of Givón's progression, in which a pragmatic strategy has been syntacticized. The final stage is the incorporation of the be clause into a phrase with its head, where such an overt element exists. At this point, there is both a semantic and a syntactic dependency between the elements. And to the extent that the be form comes to be interpreted as a marker of the syntactic dependency rather than the semantic relation of the clauses, it has been grammaticalized. This final stage represents the second phase of Givón's cycle, and the beginning of the syntactic strategy for marking subordinate status that is utilized almost exclusively in the later stages of the language.

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