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Missing arguments in earlier English clause structures[*]

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Abstract

The purpose of this paper is to account for missing arguments in impersonal constructions in earlier English. Having examined all the proposals for accounting for the missing arguments in line with the discussion of such arguments in early child English, we saw that all of them had potential problems. I proposed a new view that the missing arguments were not missing, but simply did not exist in a given argument structure from the beginning, because the early clause is completely thematically constructed. Only arguments which are required by the meaning of the predicate have to be syntactically realized.

1 Introduction

In this paper we will discuss the so-called missing arguments in earlier English (EE) and show that they are not 'missing' but simply do not exist in the given argument structure from the beginning. In doing so, we will clarify the nature of early clause structure, which is different from that of Present-day English (PE). More precisely, the overall structure of EE, especially Old English (OE), is lexical-thematic and the clause is the projection of I, IP. That is, we assume that EE clauses lack the functional categories, IP, DP and CP. The above assertion comes from the comparison of earlier English and early child English. Just as early child grammar lacks functional categories, so does earlier English. Consequently, not a few characteristics associated with the lack of functional categories are observed in both. Here we will concentrate on impersonal constructions in which external arguments, subjects, are always missing.

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2 Missing arguments in earlier English

In earlier English we find many examples in which subjects are missing. Subjectless constructions like impersonal constructions were frequently used from the OE to Middle English (ME) period. An impersonal construction is one whose verb takes the third person singular inflection, no matter what NP arguments are present, and which lacks a nominative NP:

(1) a. norþan sniwde
from the north snowed
'snow came from the north'
(Seafarer 31)

b. Siððan him hingrode
afterwards him (dat.) hungered
'afterwards he hungered'
(Ælfric's Catholic Homilies I 166/12)

c. him ofhreow þæs mannes
him was sorry the man (gen.)
'he was sorry for the man'
(Ælfric's Catholic Homilies I 192/16)

d. him (dat.) gelicade hire (gen.) þeawas
'he was pleased with their customs'
(The Anglo-Saxon Chronicle D 201/32)

That is, verbs in earlier English had the potential for subjectless use, whereas no verb in PE may be used without a subject in ordinary declarative clauses. Our first task is to clarify the nature of this missing argument. Before doing this, it would be of much help to turn to early child English and show that this missing-arguments phenomenon is also observed there. In the next section, we will take up early child language.

3 Missing arguments in early child English

One of the striking characteristics of early child language is that certain obligatory constituents of the adult sentences are missing from the child's counterpart. In particular, the phenomenon of missing subject characterizes child speech across languages, regardless of whether the corresponding adult speech allows null subjects:

(2) a. I want candy (adult)
b. Want candy (child)

The child utterance (2b) lacks a subject argument in the subject position of the verb *want*. A number of linguists have discussed missing arguments in child speech. There are four theoretical possibilities regarding the exact nature of the missing arguments:

(3) a. Missing arguments are traces.
b. Missing arguments are pro.
c. Missing arguments are PRO.
d. Missing arguments are null NP.

The first possibility, that the missing arguments are traces, is rejected because no movement is involved in the derivation of the sentence. Hyams (1986, 1987a, 1987b, 1988, 1989) asserts that missing arguments should be analysed as a pro, a non-overt pronominal which is also observed in adult Italian. Pro is licensed by AGRs under Spec-Head agreement. That is, pro is licensed by a functional category. Hence, if pro occurs in early child English, it follows that child grammar has an established I-system, a functional category.

There are many problems with this account, however. Languages such as Chinese, Japanese and Korean allow null subjects, in spite of the fact that they lack AGR entirely. Huang (1984) proposes that pro is possible either in languages with rich agreement or no agreement at all. However, there are languages that lack overt AGR and still cannot be pro-drop languages (see Platzack, 1987). Furthermore, Hyams fails to give any explanation of how the content of pro is recovered. Rizzi (1986) proposes that the content of pro is recovered through the rich agreement specification. However Tsimpli (1992) proves that this is not tenable. In the null-subject examples spoken by Greek children there is a lack of agreement between the agreement features on the verb and null subjects. This would be a violation of the identification requirement mentioned above. Hence she

concludes that null subjects cannot be pro and that an AGR element should be assumed to be attached to the verb instead of projecting its own X-bar structure.

Tsimpli (1992) claims that null subjects in early child speech can only be PRO. Because the clause structure of early child language consists simply of the maximal projection of the verb and its arguments, the SPEC position of VP is an ungoverned position and PRO can occur in that position. However, as she admits, this conclusion raises a problem. If PRO is not controlled, i.e. it has no antecedent, it has an arbitrary interpretation in adult speech. In child speech, however, null subjects have a referential interpretation, although they do not have antecedents. The content of PRO can easily be recovered from the context. She tries to solve this problem by assuming that obligatory PRO also has a governing category, since it is subject to Binding Principle A. What determines the governing category is AGR, a functional category. Because child language lacks functional categories, PRO does not have a governing category. Then, a child tries to find an antecedent in a discourse context.

The fourth possibility is that missing arguments are NPs which are phonologically null, as Radford (1990) suggests. According to him, the null NP analysis would be consistent with the assertion that all nominals in early child English have the status of simple lexical NPs, unlike the status of functional DPs of their adult counterparts. Then, null NPs as well as overt NPs would be free to occur in any argument position in any sentence, because there are no functional licensing conditions (e.g. I-conditions). The content of this null NP is pragmatically determined.

One might object that this analysis is rather unnatural because it allows the free use of empty nominals. It violates principles of Universal Grammar which constrain the distribution of empty categories. However, there are a few precedents in adult grammars for the free use of null nominals: viz. Chinese and Japanese. Fukui (1995) argues that Japanese lacks DP and IP.[1] It has no determiners and nominals are never inflected for case. Moreover, there are no agreement inflections, either. Japanese is also a pro-drop language. Hence, if the missing arguments in Japanese are null nominals, it follows that they are free of functional constraints on their licensing and identification in adult language. This is indeed the case in Japanese. In Japanese we can find precisely the same free use of null nominals as in early child English. This null NP analysis is not unnatural. Although this null NP analysis seems promising, Radford says that it might be rejected because it violates fundamental principles of Universal Grammar. It might be suggested that Universal Grammar only permits functional categories (DP or CP) to be null

[1]He suggests that Japanese has a defective I which contains no agreement features.

arguments, not lexical categories like NP, and always requires them to be subject to functional licensing/identification conditions.

If all the proposals analysing missing arguments as constituents syntactically projected in the form of an empty category of some sort are potentially problematic, what if we suppose that those missing arguments are literally missing from the syntax? This hypothesis might seem implausible, but if we invoke the lexical saturation of theta roles proposal of Rizzi (1986: 508-509), it is tenable. According to him there are two ways in which the theta roles assigned by a predicate can be saturated; (i) syntactically , or (ii) lexically. If a certain theta role is syntactically saturated, it is projected into the syntactic structure as an explicit argument, and then it may take the form of an empty category which is subject to syntactic constraints. On the other hand, if a given theta role is lexically saturated, it remains implicit, without being projected into the syntax. There are complex idiosyncratic restrictions on which verbs have theta roles susceptible to only syntactic saturation. Some verbs can allow both types of saturation, and for others only syntactic saturation is possible. Thus children will overgeneralize both mechanisms, allowing theta roles to be freely saturated either lexically, or syntactically. Hence, arguments can be either explicit or implicit, that is, 'missing'.

This approach can easily explain why missing arguments are not subject to syntactic constraints. Since they are never projected into the syntax, it follows that they cannot in principle be subject to syntactic constraints. This approach is compatible with the assertion that early child grammars are purely lexical in nature. Moreover, it is consistent with Universal Grammar. Since Universal Grammar specifies that explicit null arguments are universally functional categories, languages which are purely lexical in nature cannot in principle have explicit null arguments. The conclusion is that missing arguments are lexically saturated unprojected (i.e. syntactically unrepresented) implicit arguments. One corollary of this is that early child grammars have no syntactically projected empty nominals (e.g. no null (pro)nominals, and no variables). This analysis suggests that in the earliest multiword speech produced by children (typically between 20-23 months of age), only syntactically projected arguments surface overtly. There remains an objection to this analysis from a semantic point of view. Implicit arguments are assumed to have arbitrary reference, while children's missing arguments almost always have definite reference.

Having examined the four possibilities covering the nature of missing arguments, we saw that all approaches had some theoretical defects. Hence we looked at a final proposal that missing arguments are implicit arguments. We keep the solution to this problem open here. However, we will propose later that there is another possibility for missing

arguments in EE. They are not even implicit arguments: they simply do not exist in the argument structure in that theta roles are not assigned by a predicate from the beginning.

4 The status of early child clauses

In the previous sections, we have seen that early child grammars often lack subject arguments. Now we are in a position to formulate the clause structure of early child language.

In adult grammars clauses have the status of IPs, that is, maximal projection of a functional head I constituent. On the other hand, the sentential structure of early child speech consists of the X-bar projections of any of the lexical categories like N, V, A, or P. What is relevant to us here is the clause, which consists of the projection of V, VP.

5 Missing arguments in earlier English

Let us return to the examples of EE. According to the discussion of the previous section, there are four plausible possibilities for EE missing arguments: traces, pro, PRO and null NPs. We again propose a fifth possibility: missing arguments do not exist in a given argument structure from the beginning. Before discussing these possibilities, it is necessary to clarify the use of the term 'impersonal' in the literature. The term 'impersonal construction' has often been used in an ambiguous way by linguists. For example, even if the clause has a personal argument, the construction may be classified as impersonal:

(4)	þam	cynge	licodon	peran	(Jespersen 1927:11.21)
	the	king	liked	pears	

This sentence is a famous made-up example which is used in order to explain the reanalysis process in which a former object became a subject. This sentence has a nominative argument and there is an agreement between this NP and the verb. The crucial point of this reanalysis is that certain arguments formerly realized as non-subjects come to be realized as subjects of the verb. The given sentence is not a subjectless construction. However, other researchers use the term 'impersonal' to designate subjectless constructions in which there are no nominative NPs agreeing with verbs. The constructions with which we are mainly concerned here are such subjectless constructions

in which the verb has the third person singular form and there is no nominative NP controlling verb concord. We shall sometimes refer to them as 'impersonal' in this paper.

The missing arguments we are turning to now should also be differentiated from one other type of missing argument. We divide the missing argument constructions of EE into two types: (i) non-existence of the arguments from the beginning, and (ii), elision, as in (5) and (6):

(5) As for the defendant [he] was pardonyd of hys lyfe
(Gregory's Chronicle 202)

(6) se æðeling þæt þa sceawode, ...ø cwæð þæt...
'the prince then looked at it, and [he] said that...'
(King Alfred's Orosius (ed. by Sweet) 54/29-30)

In (5) the third person pronoun is elided, and the reference is easily recovered from the antecedent in the same sentence. In (6) two clauses which have the same subject are co-ordinated, and the second subject is elided as in PE. The interpretation of the omitted arguments is often recovered not from the same clause or sentence but from the discourse or extralinguistic context, and in most cases, the missing arguments have definite reference. They are recovered from an antecedent in the same clause, the same sentence, or from the discourse, or even from the extralinguistic context easily. Of relevance to us is the construction type (i) illustrated by (1); i.e. where no nominative argument is present. Is there any possibility that the missing subjects in (1) are PRO, pro, or implicit arguments? The answer is *no*.

Missing arguments in EE lack definite reference; hence they cannot be pro. They cannot even be PRO. If we try to recover the missing subjects, we cannot. There is no antecedent or controller in the same linguistic or extralinguistic context. For example, in a sentence like (1a) it is impossible to pick out an agent who causes the situation in which snow is falling. In a sentence like (1d), although the cause of the pleasure is shown in the genitive NP *hire þeawas*, there is no agent which is supposed to occur in the subject position. The dative NP *him* is not an agent at all, but is in a situation where he feels some pleasure, irrespective of his intention. *Him* is not a syntactic subject, either. Some might say that the genitive NP expressing the cause of the pleasure functioned as the subject semantically. However, I suspect that it is not a syntactic subject.

Likewise, there is no possibility of its being an implicit argument, since an implicit argument almost always has arbitrary interpretation just like 'anyone'. However, in

impersonal subjectless constructions such subjects are never even implicitly expressed. Needless to say, there is no possibility of its being a trace, since no movement is involved.

6 On impersonal constructions

We have shown that EE clause structures had the potential for subjectless constructions and have rejected four possibilities for missing arguments. Before proposing our own hypothesis for the construction, let's look through the previous studies of 'impersonal' constructions.

Many historical researchers have been deeply concerned with the impersonal constructions, although there has been no agreement among them about even what the impersonal constructions are. Two streams have been dominant so far; one involving reanalysis, one not. The former is van der Gaaf's (1904) and Jespersen's (1927) idea that non-subject NPs of impersonal constructions were reanalysed as subjects in the ME period under the pressure of the fixed SVO word order. Thus, changes in word order are the ultimate cause of reanalysis. The process of reanalysis is shown below using the repeated example:

(7) a. þam cynge licodon peran
dative plural nominative plural

b. the king likeden peares

c. the king liked pears

d. he liked pears

In (7a), according to Jespersen, the NP *peran* is unambiguously the subject, since there is agreement between the verb and the NP. Thus (7a) is an OVS order. In (7b) the dative case on the initial NP is lost, but it is still an OVS sentence because of the plural ending of the verb. (7d) is an unambiguous example of an SVO sentence thanks to its pronoun form *he*. The (7c) stage can be analysed either as OVS or as SVO, with the latter becoming the more natural analysis under the influence of the rigidification of SVO word order. This stage shows how the reanalysis of the impersonal constructions came about.

This syntactic shift is accompanied by a semantic shift. The verb has undergone a change of meaning from 'cause pleasure to someone' to 'receive pleasure from someone/something'. Jespersen regards the OVS sentence as the original impersonal construction. In this case, 'impersonal' means that the subject, although it is present, is not a human being and it does not mean that the construction is subjectless. Briefly, the object of the impersonal verb which lost its case marker was confused as the subject under the pressure of fixing SVO word order.

The question arises why an OE speaker used 'him/hine hyngreþ = he is hungry' with the animate NP in the dative or accusative instead of 'he hyngreþ' and an ME speaker preferred the latter construction with the animate NP in the nominative. Jespersen (1927) suggested that the greater interest in human beings than in things caused the name of the person to be placed before the verb. However, the question why ME people took more interest in person than in things remains. Tripp (1978) attempted a psychological explanation for the demise of the impersonal construction. He argues that "the loss of the impersonal constructions correlates with the rise of the modern ego-centered personality" and "ambiguous forms and reanalysis, and SVO pattern pressure cannot be used to explain the loss of impersonal constructions". These are all results of "the same psychological force". "These changes occur in the face of the same Renaissance rationalism". Although this explanation is intriguing, it is arbitrary.

This reanalysis, which is adopted by Lightfoot (1979) and many other researchers, poses a number of problems. First, as we have mentioned before, the above example is a made up one. As Allen (1986a: 396-7) and others point out, the (7a) type sentence, although it does occur in OE, is very rare. Allen says that she finds no evidence that this stage ever actually existed with the verb *like*. Second, those who adopt this reanalysis theory assume that in OE the basic word order is SOV, so the underlying structure of (7a) is the following:

(8)	peran	[$_{VP}$	þam cynge	licodon]
	subject		object	verb

A rule of NP postposing moved the subject peran to the final post-verbal position. In the ME period in which the canonical word order is SVO, the underlying structure was:

(9)	peares	[$_{VP}$	likeden	the king]
	subject		verb	object

A surface sentence like (7c) could be derived from (9) by NP postposing of *pears* followed by NP preposing of *the king*. Such a derivation is overly complex or rather too opaque. According to the Transparency Principle of Lightfoot (1979), if the derivation of a certain construction exceeds a certain degree of complexity, reanalysis will occur to solve the structural opacity.

This reanalysis has been objected to theoretically by many scholars. Under this analysis, the NP moved away from a subject position leaves a trace. This trace is replaced by another NP moved from VP in (7c):

(10) a.

(S)	O	V	S
t_i	O	V	S_i

b.

(S)	V	O	S
t_i	V	O	S_i
O_j	V	t_j	S_i

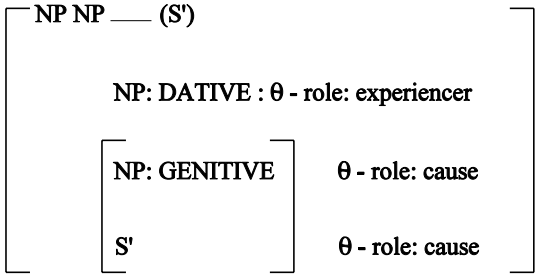
These movements violate syntactic principles, such as the theta criterion and the ECP.

Lightfoot admits that this analysis is not sustainable in Lightfoot (1981) since it violates the Trace Erasure Principle, by which the trace of a moved NP can only be erased by a designated morpheme like expletive *there* or *it*. In his revised explanation, he says that the language learner who had SVO as his canonical word order, analyses (7c) as base generated SVO. This syntactic reanalysis involved a semantic shift from a causative meaning ('cause pleasure to') to a receptive meaning ('receive pleasure from'). However, this new revised formulation does not solve the problem. The derivation of the (a) construction is still problematic, because of the ECP, as we have pointed out before. Furthermore, Lightfoot's analysis falsely predicts that one speaker would never use the verb in question in both senses, i.e. with a causative meaning and with a receptive meaning (see Fischer and van der Leek (1983:342-3)). However, Chaucer, for example, sometimes uses sentences such as 'it likes her = it pleases her', and at other times sentences like 'she likes it'. A more serious defect of this analysis is that it cannot account for the fact that many impersonal verbs could occur in 'personal' constructions in which the experiencer NP is in the nominative not in the dative in OE.

Fischer and van der Leek (1983 : 337) criticize the reanalysis theory. Rather than assuming with Jespersen and others that the semantic shift occurred in tandem with the syntactic shift , they say that in OE both meanings 'causative and receptive' existed side by side, systematically associated with different syntactic constructions. The loss of the

impersonal constructions did not involve a change in the meaning of the verb but instead the loss of one of the two meanings and the loss of one of the constructions. According to them, OE impersonal verbs are two-place predicates, with an experiencer and a cause argument. The experiencer is typically an animate NP and in the dative, the cause is either an NP typically in the genitive or a clause but not both. The lexical entry for an OE impersonal verb is as follows (S' indicates a that-clause):

(11)



This single entry accounts for all the constructions. Members of the class of impersonal verbs optionally assign the lexical case specified in their lexical entries, while non-impersonal verbs obligatorily assign the lexical case for which their entries are marked. When NP arguments receive lexical case from the verb, it derives the impersonal construction like (1c) which is repeated below:

(12) him ofhreow þæs mannes (Ælfric's Catholic Homilies I 192/16)
dative genitive

If the verb does not assign the lexical case Genitive to a cause NP, this NP undergoes NP movement into the subject position and structural nominative case is assigned. This process derives the following pattern (gloss is from Denison 1993:63):

(13) NP(cause) NP(experiencer) V(causative)
nominative dative

(14) þa ofhreow ðam munece þæs hreoflian mægenleast
dative nominative
'then brought pity to the monk the leper's feebleness'
(Ælfric's Catholic Homilies I 23.336.10)

If the experiencer NP does not receive lexical case from the verb, this NP moves into the subject position and receives structural nominative case from Tense. This derives the following pattern:

(15) P(experiencer) NP(cause) V(receptive)
nominative genitive

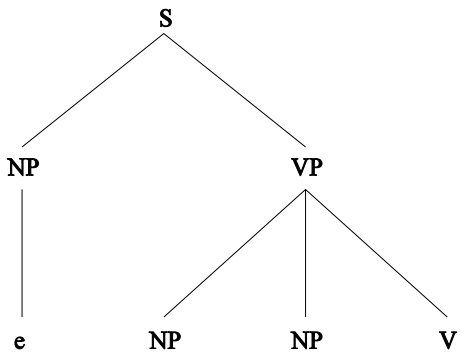
(16) se mæsse-preost þæs mannes ofhreow
nominative genitive
'the priest felt pity because of the man'
(Ælfric's Lives of Saints II 26.262)

This analysis is in sharp contrast with the traditional account, according to which the pattern of (11) or (13) was basic in OE and was reanalysed as pattern (15). Instead, all the three patterns co-existed side by side already in OE.

The 'single entry' approach relies on an optional lexical case assigning system in earlier English. In late ME the English language lost its ability to assign lexical case in the base due to the breakdown of the morphological case system. This change greatly affected the impersonal constructions. In PE case-assigning categories cannot assign more than one case through government. Only one of the two NPs that impersonal verbs subcategorized for in OE/ME can receive case from its verb. The impersonal verb can no longer accommodate two NP arguments. This means that the pattern (11) was no longer sustainable and consequently impersonal constructions like (12) were lost, while the patterns (13) and (15) survived.

The analysis of Fischer and van der Leek has some merits. First, they assume that the OE impersonal clause is essentially a subjectless construction, since there is no θ-role available for a subject NP. The underlying structure for OE impersonal constructions is the following:

(17)



The two internal NPs are unordered with respect to each other. The pattern (11) is an OOV pattern. Second, they associate the semantic difference with syntactically different structures. When the verb has a receptive meaning, it implies that a theta-role suitable for a subject NP is available.

However, serious problems remain. Their single entry cannot deal with impersonal constructions in which there is no NP argument or in which there is only one NP argument such as (1a) and (18):

(18) Gyt me tweonað
'I am still in doubt' (The gloss is from Denison 1993 :68)
(Ælfric's Catholic Homilies I.4.72.30)

In their single entry system, at least one NP argument must be projected in the impersonal construction. Also, why do the OE impersonal verbs optionally assign lexical case? What decides when the same verb assigns only one case to NP and assigns two cases in another instance?

Fischer and van der Leek (1987) devised a new theory of the semantic basis of case assignment in order to account for the impersonal constructions, criticizing earlier accounts including their own. In their new approach, the lexical entry of a verb only specifies the possible theta-roles associated with it, (and whether these theta-roles are actually assigned by the verb). The NPs involved in the impersonal constructions can have one of three different statuses: subjective (sister to a tensed INFL and in the nominative form), objective (sister to V and in the accusative form), or adverbial (sister to V or P and in the genitive or dative form). Adverbial NPs are not arguments of a verb and therefore

do not receive their theta-role from the verb. They are not participants in the impersonal constructions. Their theta-roles are inherently associated with their surface case forms dative or genitive.

Their new approach can deal with the situation which could not be dealt with before, i.e. impersonal constructions with no NP arguments or one NP argument. However, for the loss of the impersonal constructions, they went back to a reanalysis account. The change in word order from SOV to SVO caused a change in the directionality of government from left to right. The decay of case inflections caused the loss of dative or genitive case on NPs. These two factors caused a change in the lexical entry of the verbs from an impersonal type to a transitive type. Although their new approach may be fruitful, it is regrettable that they appealed to the once discarded theory.

7 My hypothesis

We have looked at previous discussions of impersonal constructions and have shown that none of the explanations works. Here we will discuss the issue from a different point of view.

Why did earlier English and early child English clauses have the potential for subjectless use, while PE clauses have no such potential? Since there is no possibility of missing arguments being empty categories or implicit arguments, we must search for a new possibility. Although many proposals have been made so far, there seems to be not much difference among them in that in each the subject positions are projected even though they are not filled by overt elements. I propose that unlike in PE the subject positions were not always projected in EE. As a result, the whole nature of EE should be different from that of PE and therefore the main principles working in EE might be different. I will now examine this proposal in some detail.

My hypothesis is the following: just as the whole nature of early child language is lexical-thematic, so too is earlier English. Only arguments which are required by the meaning of the predicate have to be syntactically realized; so the subject position was not always guaranteed. If an argument which should carry the agentive theta role is not required by a given predicate, the subject which should appears in the nominative case need not be realized. Hence, the subject position need not be projected. The impersonal construction is one instance of this situation.

Let us consider the semantics of impersonal constructions once again. As we touched on before and McCawley (1976) suggests, the impersonal construction expresses a

situation in which a human being is unvolitionally/unself-controllably involved. That is to say, there is no agent who is to receive the nominative case in the semantic-based case system (see Osawa 1994). The most typical example is provided by a weather verb like *snow* or *rain*, etc. There is neither agent nor experiencer in the situation where it rains or snows. As Fischer and van der Leek (1987) suggest, there is no participant involved in the situation. Therefore, there is no argument involved in the lexical entry of the verb. Gaaf (1904) enumerates the verbs which can occur in the impersonal constructions, and they are shown below according to the classification by McCawley (1976:194):

(19) a. *non-intentional sensory and mental expressions*
þyncan 'seem', mætan 'dream'

b. *emotional experiences*
eglian 'be in trouble', hreowan 'feel sorrow'

c. *physical and biological experiences*
hyngrian 'be hungry', þyrstan 'be thirsty'

d. *need/duty/obligation*
neden 'be necessary'

e. *(inalienable) possession/existence*
lakken 'be wanting'

f. *happenstance*
gebyrian 'happen'

If the experiencer appears as the only participant in the situation, it is realized by the dative. In the semantic based case-system, the theta role 'experiencer' is systematically associated with the dative case.

How can we explain the existence of personal constructions using the same verb in OE? Here again, the semantic based account is available. The verbs used in the personal constructions have different meanings from those of the verbs used impersonally. Impersonal verbs have the causative meaning where no agent is involved, while the personal verbs have the receptive meaning in which the person behaves somehow like an agent. Hence, apparently similar verbs take different syntactic structures according to

their different meanings: that is, both meanings existed side by side. Therefore what happened was not the reanalysis of one construction based on the people's confusion.

The proposal I have made here has significant implications for the grammatical system of EE. First, it follows that there was no extended projection principle in EE: the syntactic structure of EE is completely thematically determined. Secondly, the notion of subject was not established semantically and syntactically at the earliest stage of English and perhaps not even at some later stages. In the next section, we will continue the discussion of this proposal further.

8 PE clause structure and EE clause structure

8.1 PE clause structure

Here we discuss the difference in clause structure between PE and EE. First, we will see how the sentence structure of PE is determined, invoking Haegeman (1994) and other literature. One of the most important principle concerned here is the Projection Principle. The Projection Principle says that syntactic structure is determined by lexical information. The lexical information concerned here is the thematic structure of the predicate, i.e. the number and types of arguments which the predicate takes. The arguments are the participants minimally involved in the activity or state expressed by the predicate. The argument structure of the verb derived from its meaning determines which elements of a certain verb are obligatory. The semantic relations between the verb and its arguments are referred to in terms of thematic roles or theta roles. Arguments require thematic roles. For example, the verb *kill* would be given the lexical representation (20):

(20) kill : verb [Agent Patient]

How many arguments are required and what theta roles are assigned are specified in the lexical representation of a given verb. However, which NP arguments are realized as the subject or object is not determined by the lexical representation. There is only a loose correlation between theta-roles and syntactic functions such as subjects or objects. For example, if there is an argument with the theta role [agent], it will often be realized as a sentence subject with nominative case:

(21) Maigret killed Poirot.
agent patient

However, consider the following examples:

(22) The ball rolled towards the pigsty.
theme goal

(23) She was hit.
patient

(24) I believe him to have killed John.

The argument with the theta role 'theme' can function as the subject in (22): in (23) nominative case is assigned to the patient of the action, not the agent, and the patient is the subject; and in (24) the semantic agent of the action is assigned accusative.

It is not clear which NP argument should be realized as subject of the sentence and what determines this. Nevertheless, the subject position of a sentence must always be filled, i.e. sentences, or rather clauses, must have subjects. This structural requirement is not specific to individual lexical items, but it is a general grammatical property of all clauses. Independently of the argument structure of the main predicate, it is a general property of sentences that they must have subjects. This is known as the Extended Projection Principle (EPP). Given this, it is not implausible to say that in PE lexical information only partially determines syntactic structure.

According to Burzio's generalization, not all predicates have an external argument. A verb which lacks an external argument fails to assign accusative case. A verb which fails to assign accusative case fails to theta-mark an external argument. This type of verb includes raising verbs, passive verbs and unaccusative verbs. But in PE, the subject position must still exist. Why is this so? It is not due to lexical reasons, or to semantic reasons; the only reason is a structural one.

The EPP is a principle regulating syntactic structure which applies at all levels of syntactic representation: clauses must have subject, ([Spec, IP]) positions at all syntactic levels. However, the subject requirement is derived from a deep-seated principle which requires the syntactic saturation (or discharge) of obligatory functional features (see Radford 1990:236). Case features obligatorily assigned by a case assigner (in the case of nominative case this is the functional head I) must be syntactically saturated (i.e.

discharged onto an appropriate constituent projected into the syntactic structure of the sentence). If there is no argument to receive those discharged features, a dummy subject or expletive is necessary to receive them:

(25) a. It is easy to read this book
b. *Is easy to read this book

(26) a. I don't consider [it easy to read this book]
b. *I don't consider [safe to leave]

We might assume that the subject 'it' is required in these example in order to receive the nominative case discharged by 'is' in (25), and the objective case discharged by 'consider' in (26). Looked at from this point of view, there is no 'subject requirement' in adult grammars of English — merely a requirement for certain functional properties (in this instance, case properties) to be discharged onto an appropriate syntactically projected constituent. But if subjects are required in the syntactic structure of sentences like (25) and (26) merely to satisfy case requirements, then it follows that there would be no such requirement for clauses to have syntactically projected subjects in a caseless language. The existence of a functional head I is essential for the subject requirement. Thus, the EPP imposes the condition that the [Spec, IP] position must be generated, although this position need not be filled by overt elements. In that case expletive elements which are non-arguments with no theta roles are required to fill in this subject position.

One more important system which sustains the EPP is the system of structural case. In PE, there are two kinds of abstract case: structural case and inherent case. Structural cases, nominative and accusative, are not associated with thematic roles. They are dependent on purely structural relations. The structural relation 'government' is a sufficient condition for structural case-marking. Structural cases are assigned by V, P, and tensed I. Nominative case is assigned automatically by I to a position which is structurally determined and must be discharged onto an appropriate constituent projected into the syntax.

Hence, our earlier assertion that the information from the lexicon only partially determines the syntactic structure is confirmed. Structural case is blind to thematic relations.

8.2 EE clause structures

We have seen how clauses are constructed in PE. The argument structure and the theta grid of the predicate determine the minimal composition of a sentence. However, information from the lexicon only partially determines the syntactic representation. Thanks to the established syntactic case system which is not sensitive to thematic relations, the subject position is required just as the locus for the saturation of functional categories (case in this instance). Therefore, all clauses have subject positions.

On the other hand, in EE since the overall structure is lexical-thematic in nature, the syntactic structure is completely lexically determined. Only arguments which are required by the meaning of a predicate must be syntactically realized. A constituent was licensed to occur in a given A-position only if it was assigned an appropriate theta role. Only theta marking was a licensing condition for a constituent. All A-positions in EE are theta-positions. There is no EPP. In order for the EPP to be established, the structural case assigning system and the existence of functional categories are both necessary. Both are lacking in EE.

We have already observed that PE has a syntactic case assigning system. Structural cases, which are not associated with thematic roles, are assigned depending on purely structural relations. This kind of syntactic case system is absent from EE. In OE all the cases were sensitive to thematic roles. There is no distinction between inherent case and structural case, as all the cases are inherent lexical ones. Morphological case likewise was closely related to the thematic roles of NP arguments. Concerning the second condition, we have assumed throughout the paper that there were no functional projections in the very earliest stage of English.

The clause structure of EE is the VP. The clause consists of the maximal projections of the verb and its arguments. There were no functional projections: no IPs, or TPs, no AGRSs, no DPs, and no CPs. There were no asymmetries between subjects or external arguments and objects or internal arguments. All the arguments are internal and there was no difference in status between arguments; they are all required by the predicate depending on its meaning. If the meaning of the predicate does not require an agent, which should be realized as a nominative NP, the clause structure of a given verb lacks the nominative argument NP. This is called a subjectless construction. It follows that a subject is not necessary a priori. Indeed, the requirement that all sentences should have subjects is a later development. I don't go further into this problem here, but I wish to claim that the external argument, or subject requirement, is the result of the historical

maturation of functional categories. The appearance of IPs, or AGRS categories make the subject position obligatory.

My hypothesis nicely solves all the problems involved in the impersonal constructions. First, it deals with constructions containing no NP argument as well as those with fewer than two arguments, because the *raison d'être* of arguments is their association with the meaning of the predicate verb. Hence, if the semantic functions of arguments are compatible with the meaning of a predicate verb, additional arguments are possible.

Secondly, it explains why the apparent same verbs could occur in personal constructions. Syntactic structures are based on the meanings of the predicate verbs, and those verbs have different meanings. Thirdly, my analysis is based on a change in the case system from a semantically based case assigning system to a syntactically based case assigning system. So, we do not have to resort to *ad hoc* explanations such as the optional case assigning of impersonal verbs. Fourthly, my analysis does not resort to the intriguing but rather arbitrary explanation using human psychology, or introducing Renaissance rationalism. It is very difficult to give a plausible explanation for why all the people in ME came to confuse one construction as another at the same time.

Lastly, the most important thing is that my hypothesis shows that the change of impersonal constructions was within the norms of changes in the whole clause structure of EE. The impersonal construction was not a deviation from the norm. It was an example of ordinary syntactic realization. All the facts about the demise of impersonal constructions match with the whole diachronic change. Thanks to the rise of functional categories, the clause structure of English changed from VP to IP or AGRP. The emergence of functional categories provides the clause with a landing site outside VP, and one of the internal arguments can be realized as the external argument to receive the case feature discharged by I. The process by which a subject requirement became established can be described as the externalization of internal arguments.

9 Conclusion

In this paper, I have taken up the issue of impersonal constructions in EE. I have looked at several possibilities for accounting for the missing arguments which occurred in these constructions in line with the discussion of such arguments in early child language. Observing that all the proposals had potential problems, I proposed a new view of the impersonal construction. The missing arguments were not 'missing', they did not exist in a given argument structure from the beginning. Since earlier English is lexical-thematic

in nature, only arguments which are required by the meaning of the predicate can be syntactically realized; if an argument which should carry the agentive theta role is not required by a given predicate, the subject which would appear with nominative case need not be realized. The impersonal construction is one instance of this situation, because it has no argument which has an agentive theta role to be realized by a nominative NP. In EE, morphological case is closely related with the theta roles.

If the clause is completely thematically constructed, it follows that the subject position is not always projected in the syntactic structure. The notion 'subject' is neither semantically nor syntactically necessary a priori. The requirement that clauses have a subject was due to the later emergence of functional categories and changes in the case system.

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