Pro Revisited: A Case Study of Old English*

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ABSTRACT
The aim of this paper is to examine pro with respect to the absence of that-t effects in Old English (OE). We suggest that only nonargument pro exists in OE (except in its earliest stage (cf. Pintzuk & Kroch, 1985)).

The that-t effects are superficially absent in syntactic long movement in OE as well as in Italian, Hebrew, etc. This fact can be accounted for in terms of movement from a VP-internal position, as proposed by Rizzi (1982), provided that we revise the pro module assumed there along the lines pursued in Rizzi (1986).

Casting this account in the recent framework of base-generating the external argument within V-projection, we may conclude that sentences in OE optionally have the specifier position of INFL.

Finally, we present some evidence that INFL precedes VP in OE, allowing for V2 in embedded clauses with complementizers. This ties in nicely with our account of absence of the that-t effect in OE.

1. Introduction
A new hypothesis about θ-marking has been proposed recently which claims that not only the internal argument(s) of the predicate but its external argument are assigned θ-roles within V-projection (henceforth, “the subject-under-V\textsuperscript{max} hypothesis”). Cf. Kuroda (1986), Bennis (1986), Fukui (1986), Koopman & Sportiche (1988), Weerman (1989), etc. Given this hypothesis, θ-roles will be assigned strictly under
sisterhood.

The hypothesis can be summarized as in (1a) and illustrated by (1b).

1. a. \(\theta\)-roles are assigned within \(V^{\text{max}}\) under strict sisterhood.
   b. Present-Day English (PE)

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IP
\hline
NP^\downarrow
\hline
I
\hline
VP
\hline
NP^*
\hline
V \rightarrow \theta_1
\hline
V' (or VP)
\hline
NP^*
\hline
\hline
\hline
\hline
A broken line indicates movement.
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Thus, the \(NP^\downarrow\) position is always, and the \(NP^*\) position may be, a \(\theta\)-position, while the \(NP^\uparrow\) position is always a \(\overline{\theta}\)-position.

If this hypothesis is correct, we might entertain the possibility that some sentences in some languages may lack the \(NP^\uparrow\) position in (1b). We will investigate this possibility with regard to Old English (OE) in light of the pro module (cf. Rizzi, 1986).

In this paper, we will retain the label “NP” for convenience sake, avoiding “DP”. This does not mean that we reject “the DP hypothesis”. In the following text all the instances of “NP” may be replaced by “DP” with no consequences.

2. 1. Some sentences in OE lack overt NPs in the \(NP^\uparrow\) position as in (2) and (3):

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(2) a. Gif he nære swutelice hreoflig, wære \(\phi\) ðonne be his dome clæne geteald. ‘If he were not manifestly leprous, should \(he\) then by his judgment be accounted clean.’ Homl. Th.i.124,7.

b. Gif \(\phi\) on Frigedæg, geÐunrað, ðonne ... ‘If (it) on Friday thunders, then ...’ Archiv CXX, 46,9-11. [Visser (1970:4)]

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(3) a. Me hingrode *φ*, ... ‘Me hungered (*it*)’ Homl. ii. 108,4.

b. *ðæm mæg ben φ suiðe raðe geholpen*, ‘them can be very quickly helped’ Ælfred, C.P.225,22. [Visser (1973: 2112)]

c. God is *φ* *ðæt man Drihtne andette*. ‘Good is (*it*) that one (to) Lord give-praise.’ Libr. Psalm. (ed. Thorpe) 91,1.

(2a) is a case of an overt argument missing and (2b) a case of an overt quasi-argument (of a weather-type predicate) missing. Cases like (2a) are rare and those like (2b) are extremely rare, virtually restricted to verse. Usually, personal pronouns are found in the subject position indicated by the symbol “*φ*” in (2).

On the other hand, cases of impersonal constructions in (3) with the overt NP subject missing are common in OE: (3a) involves an impersonal verb, (3b) a passivized verb, and (3c) an extraposed clause. Forms like those in (2) and (3) might suggest that OE has pro in the governed subject position. We will look into this possibility in some of the following sections.

2.2. Rizzi (1982, Ch.4) shows that the possibility of long extraction of the subject in Italian is associated with the three properties in (4).

(4) a. Null subjects in tensed clauses (e.g., e verrà. ‘Will come.’)

b. Free inversion of subject (e.g., e verrà Gianni. ‘Will come Gianni.’)

c. Apparent absence of *that*-t effects (e.g., (5a) below)

Rizzi suggests that in a null subject language (NSL) like Italian the subject is postposed to a position properly governed by the verb, for example, a VP-adjunction site, leaving an empty category (EC) behind (cf. (4 b )), and then undergoes long extraction, resulting in the apparent absence of *that*-t effects (cf. (4c)). The EC in subject position will be licensed by the same device that licenses null subjects in tensed clauses (cf. (4a)).

Thus, (5a) derives as indicated in (5b), movements ① and ② taking place in this order.

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(5) a. Chi credi che verrà?
   'Who do you believe that will come?'

b. \( \text{Chi}_j [S \text{ credi} [\text{che} [S \text{ e I} \text{ VP verrà} e_j]]] \)

Let us modify Rizzi's (1982) theory and assume that ECs are freely assigned binding features \([±a]\) and \([±p]\) at S-structure and that all the unwanted ECs will be later excluded by interaction of principles of UG. Under these assumptions the preverbal EC in (5b) can only be \( \text{pro} \): PRO would be ruled out by conditions (A) and (B) of the Binding Theory (BT), being in a governed position, and an NP-trace and a variable would be excluded by the ECP, if the position occupied by the EC is not properly governed, as is quite likely.\(^1\) Here pro is licit, since Italian is an NSL.

Italian does exhibit that-\(t\) effects, as is clear from scope interpretation of a quantifier-like negative element \(\text{nessuno}\), much as in French (Kayne, 1984, Ch. 2). Consider (6a) with \(\text{nessuno}\) in subject position, which has only the narrow scope reading (i.e., its scope is the embedded clause), and (6b) with \(\text{nessuno}\) in object position, which allows the wide scope reading of \(\text{nessuno}\).

(6) a. Non pretendo che nessuno sia arrestato.
   'I do not require that nobody be arrested.'

b. Non pretendo che _ sia arrestato nessuno.
   'I do not require that be arrested anybody.'

Adopting May's (1985) account of scope interpretation of quantifiers, the logical forms of (6a) and (6b) under the wide scope interpretation of \(\text{nessuno}\) would be something like (7a) and (7b), respectively.

(7) a. \( [S \text{ nessuno}_i [S \text{ non pretendo} [S \text{ che} [S \text{ t}_i \text{ sia arrestato}]]]] \)

b. \( [S \text{ nessuno}_i [S \text{ non pretendo} [S \text{ che} [S \text{ pro} \text{ sia arrestato} t_i]]]] \)

While \( t_i \) in (7b) satisfies the ECP, \( t_i \) in (7a) violates it (in the case of subjunctive clauses (May, 1985, Ch. 5)), which explains the facts about possibilities of wide scope reading of \(\text{nessuno}\) in (6a) and (6b). See — 32 —
2.3. We will consider the possibility of extending this analysis of Italian to OE. In order to do this we must first establish the underlying phrase structure of OE. It is an SOV language like German, Dutch, Frisian, etc., and exhibits Verb Second (V2) phenomena typical of Germanic languages, as is well-known (Koster, 1975; Koopman, 1984; Toman, 1984; Haider & Prinzhorn, 1985; Hellan & Christensen, 1986; Bennis, 1986; van Kemenade, 1987; Weerman, 1989; etc.). We assume that V2 arises through verb-attracting C (and I) allowing XPs in general in its specifier position.

Thus, in OE the finite verb \((V_f)\) appears in the second position in clauses without a complementizer, while it typically occurs at the end of the clause with a complementizer. These facts can be captured by a somewhat standard account of moving a finite verb to C, only if C is unfilled and moving an element out of IP to the specifier position of C under a Barriers-type clause analysis (cf. Chomsky, 1986), which produces the V2 effect.

But even in clauses introduced by a complementizer, \(V_f\) often occurs in the second position, as in (8):

\[(8)\]

a. Pæt gold getacnode pæt he is soð Cyning. ‘The gold betokened that he is (a) true King.’ Homl.i.116,8f.

b. hé understød pæt Crist is æg-hwær [AP andweard] þurh godcundynsse ‘he understood that Christ is everywhere present, through (his) divine nature’ Homl.i.126,30f.

This suggests that INFL (I) precedes VP in the underlying structure of OE and that V may raise to I or I may lower to V in finite clauses with a complementizer (resulting in \(V_f\)). The trace left behind by lowered I is not problematic, though not properly governed at S-structure. Cf. Chomsky (1989) and Rizzi (1990).

Under the “clause-final I” analysis (8b) would require extraposition
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of AP as well as PP, etc. This is suspect, because extraposition of AP (plus NP) is unknown in well-studied languages, though heavy-NP shift is well-known. For further evidence for the pre-VP position of I, see §4.2.

Thus, the OE clause structure may be diagramed as in (9):

(9) The underlying structure of an OE clause:

Broken lines indicate movement: ① feeds ①, and ①, ②, and ③ apply independently. ① applies only if C is not filled. (cf. note 6)

This position for I accounts for V2 phenomena in embedded clauses introduced by a complementizer, where the specifier position of I is filled by PP, AdvP, etc. as well as NP (e.g. Homl.i.226,20f.; Homl.ii.88, 14f.; etc.).

One might think that the phenomena justify the hypothesis that C may select CP in OE: [C C CP]. This is suspect, since this structure predicts selection of a C by another C and hence the existence of a sequence of complementizers (*pe/pe/pe/hwæder + pe/pe/pe/hwæder) or a complementizer plus a wh-question (*hwæder + hwæder + hwæder + hwæder + hwæder + hwæder + hwæder) in OE, all false predictions.

Let us extend Rizzi's analysis of Italian to OE. Starting with (4c), we observe the apparent absence of that-t effects in OE as well. This is
illustrated by (10a) and (10b).

(10) a. Ac hwæt sægst du donne ðæt _ sie forcuðre donne sio ungesceadwisnes? ‘But what say you that _ is wickeder than foolishness?’ Boeth.36,8 [Allen, 1977]

b. ... for his fulan forligre, ðe he georne wiste ðæt _ Gode andsæte was ‘for his foul adultery, which he well knew that _ hateful to God was’ Homl.i.484,14f.

While cases of the type represented by (10b) are attested in Homl. (e.g. Homl.i.464,9-11; i.614,23f. besides (10b)), no case of the type of (10a) is found in Homl. For the significance of this fact, see note 3 and our discussion in the text below.

Secondly, OE has cases of ‘subject inversion’ (i.e. (4b)):

(11) a. We habbað hwæðere pa bysne on halgum bocum, ðæt mot se ðe wile mid soðum læecercæfte his lichaman getemprian ‘We have, nevertheless, examples in holy books, that may he who will with true leechcraft his body cure’ Homl.i.474,33-35.

b. Min ádlige cneow is yfele gehæfd, ðæt ne mihte nán læceçwyrht awiht geliðian ‘My diseased knee is sorely afflicted so that may not no medicine aught relieve’ Homl.ii.134,32f.

c. swa swa Moyses be ðam awrát, ðæt ne sceolde ateorian ðæt Iudeiske cynecynn ‘as Moses wrote about him, That should not decay the royal Jewish race’ Homl.i.82,1f.

d. Swa we sceolon eac, gif bið an ure geferena on sumre earfoðyssse ‘So we should also, if is one of our fellows in any distress’ Homl.i.274,9f.

Other examples involving ðy las ðe ‘lest (that)’ (Homl.i.38,3-6), after pan ðe ‘after (that)’ (Homl.i.90,13f.), swa swa ‘as’ (Homl.i.312,21 f., etc.), ponne ‘(conjunctive) when’ (Homl.ii.560,19), a relative pronoun followed by the overt complementizer ðe (Homl.ii.410,6f.) as clause introducers, are also attested.

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In (11a) the underlined subject *se ðe wile* in the embedded clause is 'postposed to' (or rather, base-generated in, as we will argue later) a post-verb position (i.e. after the verb *mot* 'may'). Similarly, in (11b), (11c) and (11d) the underscored subject is 'postposed'. Since C is occupied by a complementizer *ðæt* in (11a, b, c) and perhaps by *gif* in (11d), V_f must be in the INFL position, not in C, in the embedded clause in (11a, b, c, d). Hence the relevant clause of (11a) and that of (11c) have (12a) and (12c) as their respective S-structures.

(12) a.

\[ \text{Diagram of sentence structure} \]
We assume with van Kemenade (1987) that in OE a negative *ne* (excluding its conjunctive use) is cliticized to V, since it always immediately precedes V. In (12c) V (Projection)-Raising (Haegeman & Riemsdijk, 1986) has applied to Chomsky-adjoin the verb \( V_1 \) inside CP* to a higher verb \( \Omega \) and then the complex verb thus formed (including *ne*) has raised to I.

In OE VP is head-last and IP is, we assume, head-first. Thus V assigns Case to the left and I assigns Case either to the right or to the left, i.e. freely assigns Case regardless of direction. Cf. §4.1. with respect to (8).

In (12a) I assigns Nom (inative) rightward to NP*, which is lexically governed by \( V_1 \) under I or \( \Omega \). Hence ‘long-distance’ extraction of an element occupying the NP* position will be licit with respect to the ECP. Hence the property of (4c) in OE may receive the same explanation as in Italian.²

In order to maintain that \( \Omega \) governs NP* in (12a), we may adopt the
framework of Chomsky (1986) with regard to government, assuming à la May (1985) that $\text{VP}^\wedge$ and $\text{VP}^*$ do not constitute two separate categories but represent two segments of one and the same category "VP". Hence V-raising to I is unproblematical, crossing one maximal category "VP". The same account extends to (12c).

One might object to our analysis of (12) on the grounds that the word order of "complementizer + Vf + subject NP ..." in embedded clauses is not so common as in matrix clauses.

This may be partially accounted for by the fact that I typically lowers to V, giving rise to a clause-final Vf in such embedded clauses. Hence, embedded clauses of the form "complementizer + subject NP + [\text{VP} \ldots \text{Vf}]" may well be cases of ‘subject inversion’ with the subject occupying the NP* position. Such cases are abundant in OE.

This point reminds us of cases like (10b), where Vf is clause-final. As noted in our discussion there, cases like (10b) are not uncommon, while cases like (10a), which would require the existence of verb-initial embedded clauses under the assumption of extraction from the NP* position, are comparatively rare.

Finally, consider the property of (4a) with regard to OE. As we have seen in §2.1., argument pro (cf. (2a)) and quasi-argument pro (cf. (2b)) are marginal. It is safe to assume that they are not licensed in OE, except in Early OE (cf. Pintzuk & Kroch, 1985: 99), in light of the fact that the most clearly marked (i.e. through inflection) second person singular (indicative) form of the verb always requires the subject pronoun $\text{pu} \ '\text{thou}'$.

In Rizzi’s (1982) theory null subject (4a) and subject inversion (4b) are connected: the EC left behind by the postposed subject is licensed by the rich Agr in an NSL. The absence of argument and quasi-argument pro in OE is incompatible with this theory.

But the pro module developed by Rizzi (1986) will accommodate the case of OE on the basis of distinguishing “formal licensing” of pro from its “recovery”. Since sentences like (3a), (3b) and (3c) with no overt
expletive subject are common in OE, we may assume that expletive pro is licensed in OE. An EC left behind by subject ‘postposing’ then is expletive pro, which might be licensed as in §3.2. But see our revision in §4.1.

3. The Pro Module

3.1. We will discuss Rizzi’s (1986) theory. Unlike PE, Italian allows the position of a null NP governed by V. The EC in such a position functions in two ways: (i) it functions as an argument with arbitrary interpretation, occupying either the object position of the verb or the subject position of its small clause complement or (ii) it functions as an expletive in the subject position of the small clause.

Showing that pro fills this governed position, Rizzi suggests that we must distinguish formal licensing of pro from recovery of the content of pro. That is, pro is formally licensed by being governed and Case-marked by a member of the licensing class \(X^0\), which varies with languages. He suggests that \(X^0 = \{\text{INFL}, V\}\) in Italian, \(X^0 = \{V, P\}\) in French, while the class is empty in PE. INFL licenses the subject pro, and V the direct object pro and the pro subject of a small clause, through Case-marking.

He then proposes that pro, if thus licensed, may serve as (i) a referential argument, (ii) a quasi-argument or (iii) a nonargument (= expletive), depending on the set of \(\phi\)-features recovered: if both person and number are recovered, pro may serve in any of the above three functions; if only number is recovered, it may function as a quasi-argument or nonargument; and if none is recovered, then it may only function as a nonargument.

Features are recovered by the convention (13):

(13) Let X be the licensing head of an occurrence of pro; then pro has the grammatical specification of the features on X coindexed with it.

The subject NP will be coindexed with Agr under I' and the object NP
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will be coindexed with a slot in the $\theta$-grid as in (14):

(14) $\text{pro}_i \text{Agr}_i \quad \text{V} \quad \text{pro}_j \quad (<...> \text{is a } \theta$-grid)

$<... \theta_j>$

An arbitrary reading for a verb-governed pro arises through application of a rule which says:

(15) Assign arb (i.e. a set of features [ + Human, + Generic, ± Plural], ...) to the direct object $\theta$-role.

By dots in (15) we indicate that arb also includes default specification of person and gender. (15) is subject to an affectedness constraint: the direct object must be directly or indirectly “acted upon” by the subject and undergo some modification of its physical or psychological state in order for (15) to apply.

Thus, pro in object position receives arb interpretation through (15), while pro in the subject position of a small clause normally fails to receive arb interpretation, since (15) cannot apply to the subject $\theta$-role. However, a reanalysis process optionally applies in infinitival and small clause constructions, reanalyzing the combination of the matrix verb and the predicate of its complement clause as a complex verb and the subject of the complement as the object of the complex verb.

This process applies to causative verbs (e.g. rendere ‘make’), perception verbs (e.g. vedere ‘see’) and epistemic verbs (e.g. ritenere ‘believe’). When this process applies and then the rule (15) applies (subject to the affectedness constraint, which restricts arb interpretation to cases of causative verbs), even the subject pro of a small clause as well as an infinitival clause may receive arb interpretation.

3.2. Returning to the question of licensing of pro in OE raised at the end of §2.3., we suggest in view of Rizzi’s theory of the pro module that the licensing class $X^0$ in OE includes INFL with ‘inert’ Agr, whose person and number specification cannot be employed to recover the content of pro. Hence only the nonargument (expletive) use of pro is possible for the pro subject in finite clauses (i.e. clauses with Agr) in
OE.

In OE a verb is also a licenser as in Italian. Thus, we find cases of pro in object position as a controller:\(^5\)

(16)  a. þæt Drihten hete tuwa pro\(_i\) [PRO\(_i\) awurpan net on fix-noðe] ‘that the Lord twice commanded (people) (to) cast the net in fishing.’ Homl.ii.290,6f.
   b. þa het se casere pro\(_i\) [PRO\(_i\) hine aræræn] ‘Then the emperor commanded (people) (to) raise him’ Homl.i.426,4.
   c. se þe bitt pro\(_i\) [PRO\(_i\) aræræn his sunu] ‘who bids (people) raise his son’ Homl.ii.182,18.

Pro in object position, licensed by the matrix verb through Case-marking, receives \(*ab\) interpretation, which can be accounted for in terms of (13) and (15). This pro may be replaced by an overt lexical NP with definite reference (cf. Oshima, 1980 : 9f.) :

(17)  a. he het his leode\(_i\) [PRO\(_i\) cuman] ‘he commanded his people (to) come’ Homl.ii.474,20.
   b. He bæd him\(_i\) [PRO\(_i\) hlafas wyrcan] ‘he bade him make loaves’ Cd.228 [Bosworth-Toller]

OE allows expletive pro in the subject position of an argument small clause (SC), as predicted by Rizzi’s theory.

(18)  Ic læte [SC pro riht ...p se þe þone hearm geworhte, þ se þone hearm gebete] ‘I consider (it) right ... that the one who did the harm should make amends for the harm.’ Ancient Laws (Thorpe) i.418,4 [Visser, 1970 : 477]

Such a subject position is Case-marked and hence licensed by the matrix verb, but it is not \(\theta\)-marked by the verb, hence not subject to the rule (15). Thus, a pro in this position lacks person and number and may function only as an expletive. We will return to this in §4.1.

A pro with arbitrary reference also occupies this subject position, which is accounted for in terms of the reanalysis process discussed in §3.1., much as in Italian, except that even perception verbs allow arbitrary pro in this position. This suggests that the affectedness
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constraint does not hold in OE. Hence the 'unaffected' subject of the complement to a perception verb, reanalyzed as the direct object of the newly formed complex verb as in (20), as well as the 'affected' subject of the complement to a causative verb, so reanalyzed as in (19) (laetan is ambiguous between 'allow' and 'make'), receives arb interpretation.


(20) a. ðe se halga Benedictus [IP pro his sawle to heofenan ferian] geseah ‘(at the time) that the holy Benedict saw (people, i.e. angels) carry his soul to heaven’ Homl.ii.186, 3f.

b. se halga wer ... geseah [IP pro ðære ylcan mynecene his sweoster sawle lædan to heofenan ...] ‘the holy man ... saw (people) lead the soul of the same mynchen, his sister, to heaven ...’ Homl.ii.184,15ff.

c. Gif hwilc gelæred man þas race oferræde, oððe [IP pro rædan] gehyre ‘If any learned man read over this narrative or hear (people) read (it)’ Homl.ii.460,4f.

d. Þonne ðu gehyrst [IP pro nemnan þone Fæder] ‘When thou hearest (people) name the Father,’ Homl.i.284,10.

Cases like (19) and (20) but with an overt NP in place of pro are abundant in OE texts: e.g. Homl.ii.594,1f.; ii.416,27f. for laetan ‘let/make’; Homl.ii.442,21 for don ‘cause’; and Homl.i.48,10f.; ii.518,2; ii.534,1 for geseon ‘see’; Homl.ii.518,8 for gehyran ‘hear’, among others. See also (23) and (24).

4. OE and the Subject-under-V^{max} Hypothesis

4.1. Let us cast the above findings about OE in the subject-under-V^{max} framework discussed in §1.6 Under this hypothesis the underscored subject NP in each of the relevant clauses in (11) has not lowered from the NP^{^}\ position to the NP^{*} position in (12) but is base-generated in situ. Thus, the NP^{^}\ position may not exist in the clauses.
Suppose that INFL assigns Case either to the right or to the left in OE, as suggested in §2.3. The subject NP may remain in its D-structure position, if INFL assigns Case to the right. Then the NP\(^\wedge\) position need not exist in (12a) and (12c). So extraction in (10) is from the D-structure subject position, the NP\(^*\) position.

In the embedded clause of (8a) and (8b) the subject has raised from the NP\(^*\) position to the NP\(^\wedge\) position, where it receives Case from INFL, which assigns it to the left. In PE INFL assigns Case only to the left. Therefore, the subject must raise to NP\(^\wedge\).\(^7\)

The extended portion of the Extended Projection Principle, i.e. the subject requirement, will then hold of the NP\(^*\) position. Now the expletive pro in (3a, b, c) is base-generated in the NP\(^*\) position and remains there at S-structure or may have raised to the NP\(^\wedge\).

This is plausible in light of a case like (21) in PE:

\[(21) \text{ We consider } \left[ \text{AP } \ast (it) \left[ \text{AP possible } \left[ \text{CP that ...} \right] \right] \right] \]

The expletive *it* is obligatory in (21), since PE lacks a pro licenser (cf. §3.1.). We may conclude that expletive pro in (18) is similarly obligatory. Note that the ‘VP adjunction’ structure of IP in (9) (and (1b)) mimics the ‘XP adjunction’ structure of a small clause in (18) and (21).

In this framework, the subject postposes from NP*, not from NP\(^\wedge\), in Italian. Since long extraction is from NP*, I assigns Case both to the right and to the left in Italian, too. Under these assumptions the property of (4b), i.e. free inversion of the subject, will not be related to the possibility of long extraction of the subject in languages like Italian. Rather, the possibility of direct Case assignment to NP* will be so related.

4. 2. As further evidence for our pre-VP position for I in OE, consider the ‘uninflected infinitive’ complement of perception verbs like geseon ‘see’. We suggest that their complement is an IP with null [-Tense] INFL in pre-VP position. The evidence for our claim that [-Tense] INFL in OE is (or may be) null concerns the bare uninflected infinitive
Consider the following:

(22) a. [CP [IP \text{PRO}_{arb} [I \text{Cidan on swefnum}]]] ceapes eacan getacnap. ‘(To) Chide in dreams betokens increase of trade.’ Leechdoms (Cockayne) iii.208,3.

b. me ðyrste, and ge [VP mei [CP [IP \text{PRO}_{i} drincan]]] ne sealdon] ‘I was thirsty, and ye did not give me to drink.’ Homl.ii.108,20f.

c. Hat proi [CPi [IP \text{PRO}_{i} in gan [CPi [IP \text{PRO}_{i} seon sibbegedriht]]]] ‘Bid (people) come in (to) see my company of kinsmen’ Beow.386.

In (22a) the conclusion that the embedded clause contains I and PRO (both inside IP in CP) seems inescapable: if the clause were a small clause without I, its subject would be governed by matrix I (and the embedded verb\(^8\)) under the standard assumptions about government and could not be PRO, which is needed for interpretation through control theory. Note that only bare infinitive clauses occur in subject position, not to-infinitive clauses, in OE.

In (22b) one can reach the same conclusion from similar considerations: if the embedded clause were a small clause, its subject would be governed by the matrix verb sealdon (and the embedded verb) and could not be PRO again. The same holds of (22c) with regard to its CP\(_1\) and CP\(_2\) as well as of (16) and (17).

Under these assumptions, the relevant clauses (i.e. IP*) in (23) involve movement of a verb into [−Tense] INFL, while those in (24) involve movement of the subject from the NP* position to the NP\(^\uparrow\) position as well.

(23) a. [CP \text{ða} [C \text{geseah}_{j} [IP hé t_{j} [IP_{i} \text{sittan}_{i}]] [VP sumne then saw he sit a mannan [VP æt toll-setl t_{i}]]] t_{j}]]

man(ACC) at toll-seat

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‘then he saw a man sit in the toll-seat’ Homl.ii.468,8f.

b. [CP Da [C geseah [IP hé [IP• [I swymman] [VP scealfran then saw he swim divers [VP on flode ti]]]]]  
  on stream

‘Then he saw divers swim(ming) on the stream’ Homl.ii. 
516,6.

(24) a. he gesawe [IP• mannes bearn [I standan] [VP t k [VP æt he saw man’s son stand at Godes swyóran ]]]  
  God’s right

‘he saw the Son of man standing at God’s right hand’ Homl.i.48,10f.

b. Hé geseah [VP IP• pone deofol [I standan] [VP t j [VP he saw the devil (Acc) stand swiðe gehende ti]]]ti]  
  very near

‘He saw the devil standing very near at hand’ Homl.ii.  
518,2.

(For more examples see our listing at the end of §3.2.)

Raising of a verb into I can be motivated by the natural assumption that the null [−Tense] element in OE is an affix, which must be incorporated into an independent word (e.g. a verb).9 Incidentally, cases of a perception verb (e.g. geseon, gehyran) taking its infinitival clause with the clause-final embedded verb are attested (e.g. Homl.ii. 186,3f. (= (20 a )) ; ii.534,1). Here the null [−Tense] INFL has lowered to V. As for non-raising of V to I in infinitivals in PE, we may assume that to, a [−Tense] element in PE, is not an affix and resists
such incorporation.

French and Italian also have such a null element in I as well as Icelandic and Swedish. French *de* and Italian *di* in infinitival clauses are complementizers like English *for* (cf. Kayne, 1984, Ch. 5) and so are Icelandic *að* and Swedish *att* (cf. Platzack, 1986).

We speculate that historically, the OE null [—Tense] element was replaced by its later counterpart *to*, as evidenced by a rise in the use of *to*-infinitive in ME and ModE; e.g., *I saw her corral lips to moue*; *Who heard me to deny it?* (Shakespeare). This use is retained in passive perception verbs in PE: *She was seen to leave*. We suggest that these cases all involve an IP complement with [—Tense] INFL (null in OE and *to* in ME/ModE).

Notice that the problematical hypothesis that V2-like phenomena in complementizer-introduced embedded clauses are explainable in terms of C selecting CP, even if it were viable, would not generalize to (24) and hence fails again. If we adhered to the same line of analysis for similar V2-like phenomena in (24), we would be forced to claim that perception verbs select CP here.

This is incorrect in view of the fact that these verbs in the sense of physical perception never allow for a complementizer in the infinitival complement with the accusative subject, and more importantly, that the accusative Case would not be assigned to the subject across the CP barrier in (23) and (24).

Under our assumptions about I (i.e. its pre-VP position, etc.) the sentences of (23) and (24) receive a natural account, given the assumption that the Case assigned by (the trace of) *V* to the NP^ position of its complement IP may be transferred to the NP* position of the IP in cases like (23).

Another piece of evidence for the pre-VP position of INFL in OE comes from examples like (16a) and (16c), where the embedded verb is best taken to have raised to pre-VP INFL in the PF component (cf. notes 8 and 9 for raising in PF).
Participial clauses will provide still further evidence for the INFL position, if we assume that -ende in OE is a [−Tense] element, something like -ing in PE (cf. Reuland, 1983)

(25) a. ... and geseah ðær fæower ormæte fyr atende
    and saw there four immense fires kindling
    ‘... and saw (people) kindling four immense fires there’
    Homl.ii.338,5f.

    b. ... geseah ðær ðry weras standende him gehende
    saw there three men standing him near
    ‘... saw three men standing near him there’ Ælfric, Saints’ Lives 127,18 [Visser, 1973: 2342]

The embedded verb perhaps remains in its D-structure position in (25a), while it has raised to pre-VP INFL in (25b).

5. Concluding Remarks

Note that our analysis of the OE clause structure in terms of pre-VP INFL under the subject-under-V\textsuperscript{max} hypothesis accounts for V2 in embedded clauses with complementizers as well as the apparent lack of the that-t effect in OE, assuming that I can assign Case to the right so that the subject may remain in NP\* at S-structure or undergo long movement from NP\* (hence no that-t effect). We claim that C selects only IP, not CP, in OE.

Icelandic has pre-VP I and exhibits V2 in such embedded clauses (Thráínsson, 1985) and the lack of that-t effects (Weerman, 1989). Icelandic may resemble OE with C selecting IP (optionally).

Yiddish is similar to OE in having pre-VP I and V2 in such embedded clauses. In fact, Diesing (1988) proposes an analysis similar to ours, claiming that C in Yiddish selects only IP, not CP. The question of the that-t effect is irrelevant in Yiddish despite appearances to the contrary, since even short movement of the subject from the NP\^ position (cf. “I don’t know who has come”) is disallowed in Yiddish. Cf. Diesing
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(1988).

PE has pre-VP I but shows that-t effects. This is due to the fact that I assigns Case only to the left so that the subject must raise from NP* to NP^- for Case, excluding other XP's from NP^-, which also accounts for absence of V2 in embedded clauses in PE.

Dutch has post-VP I, which assigns Case to the left. Predictably, it has no that-t effect nor V2 in such embedded clauses, assuming that C selects only IP, not CP, in Dutch.

Our analysis may extend to Kashmiri, a non-Germanic OV language with V2 (cf. Hook and Manaster-Ramer, 1985), in which if clauses and relative clauses are V-final but subject and object clauses with complementizers and because clauses are V2. This fact may be explained by positing pre-VP I and VP-final V as in OE. Perhaps some complementizers require V-to-I and others forbid it, thus forcing I-to-V, unlike OE, in which V-to-I is optional.

NOTES

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1) Proper government (antecedent government) will not hold here, if we assume à la Pollock (1989) that I' dominates AgrP, which in turn dominates VP. AgrP will then be a barrier to government of the preverbal EC by the postverbal EC in (5 b) even under Chomsky's (1986) framework.

2) Bennis (1986) and Weerman (1989) try to account for this property in terms of OE being an OV language. Yet some VO languages, i.e. Icelandic and Faroese, do exhibit the property. Van Kemenade (1987) attributes it
to V2 languages. However, such V2 languages as Danish, Norwegian and Swedish do not have it. So we might as well start afresh as regards this question.

3) In (12a) \( V \) cannot (properly) govern the NP\(^*\) position (witness *that*-effects in PE, etc.). The same holds of (12c).

One might think that in a structure like (12a) \( V \) under I may properly govern NP\(^*\) and hence allow long extraction of the subject in OE. This story applies only to cases like (10a), not those like (10 b), where the embedded verb stays put with I lowering to V (resulting in \( V \_wae \)). In a case like (10 b) at least, it is \( O \) that is responsible for the long extraction.

4) Shlonsky (1987) modifies Rizzi's (1986) analysis, claiming that expletive pro of subject inversion is subject to the same licensing conditions as argument pro on the basis of Hebrew 'facts'.

However, Grewendorf (1989: 162ff.) shows that Shlonsky's arguments are not convincing and his approach cannot be sustained.

5) The evidence adduced by Rizzi (1986) for concluding that Italian has argument pro of arbitrary interpretation in object position is fourfold: it can act (i) as a controller, (ii) as a binder (iii) as a subject of predication for adjunct and argument small clauses, and (iv) the null object option is productive.

In the case of OE, evidence about control is easily obtainable as presented in the text. But evidence about binding is hard to come by, since there are no clear instances of anaphors in OE. 'Reflexive' pronouns in OE are clearly not anaphors, as they are not subject to the condition (A) of the BT:

\[
(i) \quad \text{Gif se oxa spyrnð ongean ȷa gåde, hit dereð him sylfum 'If the ox spurneth against the goad, it hurteth himself.' Homl.i.390,10.}
\]

For evidence about a subject of predication for argument small clauses, see (18) in the text below. Other evidence is not easily available.

6) We follow Koopman & Sportiche (1988) in adjoining the thematic subject to VP at D-structure (cf. (9)). See Rizzi (1990, note 11) for further evidence for this. As for OE-internal evidence, we suggest that lower VP must accommodate an adjunct in the specifier position of V as in (9). Gardner (1971: 64) notes a pre-object position for an 'adverb': *æt we ne lufian to swipe æt 'that we do not love too much that' (Bl 70.10). This
forces the subject to be generated outside lower VP.

One might think that the VP over VP structure in (9) leads to multiple subjects. But such possibilities will arise if we assume phrase structure rules like "VP → NP VP". Under the current assumptions D-structure is not generated by phrase structure rules but projected partly from lexicon by the Projection Principle and partly from the extended portion of the Extended Projection Principle (the subject requirement) in conformity with X-bar theory.

Assuming that the subject requirement may apply only once per XP (cf. small clauses), there will be no possibility of multiple subjects. As for Japanese, we might say that this VP adjunction site allows for a 'general subject', while other 'subjects' may occur under lower VP (e.g. in V'-adjunction sites) — multiple subjects. Cf. Fukui (1986).

7) The NP^ (i.e. specifier) position is guaranteed by X-bar theory and hence available as an option but not always required. Unless the element in this position is licensed, the structure containing it is excluded. In (10a, b), if NP^ is present, and the subject raises from NP* to NP^ (assuming that Move-α applies freely, in principle) and undergoes long movement, then the resulting structure violates the ECP and is excluded. But if NP^ is absent (hence no problem of licensing the element in this position) and the subject undergoes long movement from NP*, there will be no problem. This is how (10a, b) arise.

That is, that-t effects do exist in some realizations of some constructions in OE but are not observable, because there always exist corresponding forms, which escape the effects. This is a null hypothesis, requiring no new theoretical apparatus.

Note that NP^ is potentially a Case position, since INFL optionally assigns Case to the left (as well as to the right) in OE. Thus, NP*-NP^ movement is, in effect, forced by the Case Filter, when Case is assigned to the left. (PE has only this possibility and the movement is always obligatory, in effect.) So this movement in OE observes the Chain Condition (Chomsky, 1986: 63), being from a 0-position to a Case position, when Case is assigned to the left. Otherwise it violates the condition and is ruled out.

8) Notice that the embedded subject PRO must raise from the NP* position to the NP^ position in syntax to escape from the government domain of the
embedded verb *cidan*, i.e. VP₁, in (22a):

\[
\text{(i) } \left[ \text{CP } \left[ \text{TP } \left[ \text{NP}^\wedge \left[ \text{I } \left[ \text{VP}, \text{NP}^\star \left[ \text{VP} \text{ PP } \text{cidan} \right] \right] \right] \right] \right] \right]
\]

The same is true of (22b) and (22c).

PRO, even when thus raised, will not be licensed unless at S-structure (and LF) the embedded verb stays put in its D-structure position, since the BT holds at S-structure (and LF). The verb then raises to I in the S-structure-PF mapping. This raising is licit under the standard assumption that the BT does not hold at PF. Cf. note 9.

9) It is not necessary that a verb raise to I in syntax. Alternatively, raising may take place in PF, since it is natural to assume that this incorporation requirement is a morphological condition at PF. This latter possibility will account for cases like the embedded CP of (22a), CP₂ of (22c), etc., where the infinitive apparently occupies INFL. If the verb raised to I in syntax, then it would govern PRO in the NP^ position and violate the conditions (A) and (B) of the BT at S-structure and LF. Cf. note 8.

Note that we assume that incorporation is not subject to any adjacency condition, suggesting that the verb raises to I across some intervening material in the examples in (23) and (24). This assumption is supported by Baker’s (1988) abundant examples about incorporation: e.g., Noun Incorporation in languages like Mohawk (pp. 48, 81ff.), Oneida (pp. 96ff.), etc.; Verb Incorporation in languages like Chichewa (pp. 47ff., 148ff.), etc.; and Preposition Incorporation in languages like Chichewa (pp. 229ff.), Chamorro (p. 237), etc. Also in PE: He [i has_i] [NegP not [VP [v t_i]left]].

10) In cases like (23) the embedded subject remains in the NP^ position, which is presumably not governed, and hence cannot be assigned Case, by the matrix verb. We suggest that the NP^ position of the embedded sentence, which is governed and assigned Case by the matrix verb, is occupied by an expletive pro. Cf. note 7.

The pro needs Case for formal licensing. Once licensed, this expletive pro can transfer Case to the lexical NP in NP^* at S-structure, since it does not need Case at PF unlike lexical *there*, because it is not lexical (the Case Filter), nor does it need Case at LF, because it lacks a θ-role (the Visibility Condition).

Note that in OE only the subject may raise to NP^ in infinitival clauses (*unlike* finite clauses), because their subject must move to, or have exple-
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tive pro in, the position to which the higher verb can assign Case.

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