Tense and binding in perception verb complements

1. Introduction

Norwegian has since the late 80's been one of the standard languages for exemplification of reflexive binding, and does with a handful of other languages belong to the core cases around which different binding theories are built. This is a natural fall-out of the extensive ground work by Hellan (1988, 1991), from which virtually all examples in the literature of Norwegian reflexive binding are taken. There has recently been a renewed interest in the 'peripheral' use of reflexive binding in Norwegian – cases where the reflexives are in a non-complementary distribution with non-reflexive pronouns (examples of such research is Strahan 2001, 2003, Lødrup 2007b, 2008).

This paper will be a new and different contribution to the peripheral use of reflexives in Norwegian, in that a different dialect with a different pattern for the distribution of the reflexive in its peripheral use will be outlined. In short, the dialect under investigation allows the simple reflexive *seg* 'self' to be bound out of the local clause when embedded under a matrix verb of perception. I will show in this paper that these embedded finite clauses are tenseless. Following the movement theory of reflexive binding and the movement theory of 'restructuring', I argue that the embedded tense in these complements raises to the matrix clause. By the general rules of incorporating head movement, moving the tense to the matrix clause will take the embedded reflexive with it, and thus allow it to be locally bound in the higher clause.

This paper is organized as follows. Section 2 outlines the phenomenon long-distance binding. Section 3 gives an overview of the distribution of reflexives in Norwegian (3.1) and provides the data showing that the reflexive *seg* can be bound long-distance when the matrix verb is a perception verb (3.2). Section 4 addresses in nearer detail the theory of binding (4.1), and a proposal is given for how long-distance binding in Norwegian can be accounted for (4.3). Section 5 provides the main bulk of evidence for the tenselessness of the finite clauses embedded under perception verbs. Section 6 extends the same explanation to the embedded complement of the verb for 'dream'. Section 7 shows that the same generalization established for finite clauses extends to non-finite clauses. Section 8 concludes the paper.

Finally, there are two appendices. The first argues that the theory of *Agree* applied to binding suffers empirical difficulties and cannot provide an explanation to why binding and tense are connected, problems a movement approach to binding does not have. The second appendix discusses the independent evidence for 'restructuring' in Norwegian.

2. Long-distance binding

By 'reflexive binding' I refer to what is generally known as Chomsky's binding condition A (Chomsky 1981:188, 1986:166, Chomsky and Lasnik 1993:549):

Binding condition A:

(1) An anaphor must be bound in a local domain

Following the standard definitions of 'bound' and 'local domain', condition A can be more sharply defined as in (2) (cf. Chomsky 1981:184, 188, 1986:164, 169, Chomsky and Lasnik 1993:548, 552):

(2) An anaphor must be c-commanded by a coindexed antecedent in its governing category

Given that both government and coindexation are notions that have been dispensed with since Chomsky 1993 (1993:7, 39, 1995:228), it will be necessary to return to a discussion of binding theory. This appears in section 4 of this paper. For the time being, it will suffice to note that it is relatively uncontroversial in Chomskian syntax that a finite clause serves as the barrier for what could possibly be considered a local domain.[1]

There are nevertheless several well-known cases where reflexives are bound by an antecedent outside the finite clause they appear in. The following common examples taken from Chinese and Icelandic will illustrate such a behavior of reflexives:

Chinese
(3) Zhangsan$_i$ renwei [Lisi$_j$ zhidao [Wangwu$_k$ xihuan ziji$_{i/j/k}$]]
Zhangsan think Lisi know Wangwu like self
'Zhangsan thinks that Lisi knows that Wangwu likes him/himself' (Cole and Sung 1994:355)

Icelandic
(4) Jón$_i$ segir [að María elski sig$_i$]
John says that Mary loves (subj.) self
'John says that Mary loves him' (Sigurðsson 1990:310)

In (3), the reflexive *ziji* can be bound in its local domain by *Wangwu* in accordance with condition A. At the same time, though, the reflexive is free to be bound by either higher subject – *Zhangsan* or *Lisi* – both outside the local domain of the reflexive, and in apparent violation of binding condition A.

In the Icelandic example (4), the reflexive *sig* is bound from outside its local finite clause by the matrix subject *Jón*, parallel to how the Chinese reflexive *ziji* is bound by a higher subject in (3). Finally, consider (5), an example from a Norwegian dialect different from the one treated in this paper:

Norwegian
(5) Ho$_i$ truddj [at dæmm bestannjdi tænnkt på sæ$_i$]
She believed that they always thought on self
'She believed that they always thought of her' (Moshagen and Trosterud 1990:50)

[1] There are numerous approaches where either 'the local domain' or binding condition A as a whole are redefined. An illustrative example of a radical redefinition of 'the local domain' is where what constitutes this domain is freely parameterized even beyond the finite clause (Manzini and Wexler 1987, cf. Huang 2000:110ff., Büring 2005:65ff.). It would not only take us too far a field to discuss the many alternative definitions to binding condition A, but it would be largely anachronistic, since the theory of binding followed in section 4 does not employ any binding conditions as such.

Just as in the Icelandic example in (4), the reflexive *sæ* is in a finite subordinate clause, but is nevertheless bound by the matrix subject *ho*.

Cases such as (3)-(5), where a reflexive is bound by an antecedent *outside* the local domain, are generally termed 'long-distance binding'. As a practical definition, we have long-distance binding whenever reflexive binding obtains in violation of binding condition A. Although condition A will be dispensed with in the discussion on binding theory in section 4, I will still use the term 'long-distance binding' according to this definition. This is not only in accordance with the traditional use of this term in the literature, but it is also a practical short cut for what probably is a multi-facetted phenomenon.

3. Norwegian reflexives

It has been mentioned already that the language under investigation in this paper is a dialect of Norwegian, specifically the dialect spoken in the town of Askim in south-east Norway.[2] I will generally use the term 'Norwegian' when referring to this dialect. There is no previous literature on the syntax of this dialect, and the term 'Norwegian' in cited literature is generally used with an implication that it refers to the Norwegian language as a whole, presumably including the dialect in this paper.

3.1. The general distribution of reflexives

Norwegian has a rather intricate system of reflexive pronouns when compared to English, as they come in simple, complex and possessive variants, and generally in complementary distribution. The focus of this paper is the 3. person reflexive *seg* 'self', which carries no distinction for number or gender, only person. For the sake of completion, the following section will concisely describe the distribution of all reflexives in Norwegian.

Outside the 3. person, the personal pronoun takes on the role as a reflexive. The distribution in (6) will exemplify how there is a distinct reflexive pronoun only for 3. person:

[2] I am a native speaker of this dialect, and to ensure the highest degree of dialect consistency, my prime informants have been myself and my nuclear family. Virtually all judgments have been conducted through comparisons between minimal pair sentences. The level of grammaticality indicated by the symbols * and ? is therefore *relative* and not absolute. As a result, a sentence marked as ? in section 3.2 is not necessarily better than a sentence marked ?? in section 7, since these sentences have not been compared with each other. Since absolute judgments are not relevant to the discussion in this paper, I will not address this issue further.

(6)	1.sg.	Han	ser	*meg*	Jeg	vasker	*meg*
	2.sg.	Han	ser	*deg*	Du	vasker	*deg*
	3.sg.m.	Han_i	ser	han_j	Han	vasker	*seg*
	3.sg.f.	Han	ser	*ho*	Ho	vasker	*seg*
	1.pl.	Han	ser	*oss*	Vi	vasker	*oss*
	2.pl.	Han	ser	*dere*	Dere	vasker	*dere*
	3.pl	Han	ser	*døm*	Døm	vasker	*seg*
		He	sees	me/you etc.	I/you etc.	wash	myself/yourself etc.

Both the personal pronouns functioning as reflexives and the distinct 3. person reflexive *seg* come in their simple forms exemplified in (6) and in complex forms, where the element *sjøl* 'self' is added to the simple form. The distribution between the simple forms and the complex forms is complementary, as shown in (7) and (8):

(7) Han hygger seg (*sjøl)
He enjoys self self
'He enjoys himself'

(8) Han kritiserer seg *(sjøl)
He criticizes self self
'He criticizes himself'

As the argument of a verb, the simple reflexive *seg* appears if the verb is 'inherently reflexive', a term used to describe a verb that needs to take, and can only take, a reflexive as its internal argument. The verb *hygge* 'enjoy' in (7) is an inherently reflexive verb. It cannot appear without an overt internal argument (9), nor take any other internal argument than a coreferring reflexive (10):

(9) *Han hygger
He enjoys

(10) *Han hygger det
He enjoys it

The complex reflexive *seg sjøl*, on the other hand, can occur only with regular transitive verbs, as *kritisere* 'criticize' in (8). The verb can thus not be intransitive (11), but is free to take any non-reflexive internal argument (12):

(11) *Han kritiserer
He criticizes

(12) Han kritiserer det
He criticizes it

There are a number of homonymic verbs in Norwegian that are inherently reflexive and regular transitives, and this gives the superficial impression that the distribution of the

simple reflexive *seg* and the complex reflexive *seg sjøl* is not in complementary distribution. Although sometimes subtle, the distinction in meaning between an inherently reflexive and a regular transitive is generally clear-cut, exemplified by *slå* 'hit' and *kløppe* 'cut' in (13) and (14):

(13) Inherently reflexive
Han slo seg
He hit self
'He hurt himself'

Transitive
Han slo seg sjøl
He hit self self
'He hit himself'

(14) Inherently reflexive
Han kløppa seg
He cut self
'He got a haircut'

Transitive
Han kløppa seg sjøl
He cut self self
'He cut his own hair'

I will return to a nearer theoretical discussion of the distinction between inherently reflexive verbs and regular transitive verbs in section 4.

Reflexives are not only arguments of verbs, but also of prepositions. Also in this position we find simple and complex forms of *seg*. It seems best to me to analyze the distribution of *seg* and *seg sjøl* in PPs as equivalent to the distribution of *seg* and *seg sjøl* as the argument of the verb. Parallel to the distribution above, there are prepositions that together with the verb form an inherent reflexive predicate (15), a regular transitive predicate (16), or homonymic between the two (17):

(15) Han legger på seg (*sjøl)
He lays on self self
'He puts on weight'

(16) Han tenker på seg *(sjøl)
He thinks on self self
'He thinks of himself'

(17) Inherently reflexive
Han så rundt seg
He saw around self
'He looked around'

Transitive
Han så rundt seg sjøl
He saw around self self
'He looked around himself'

A clear indication that the distribution of the simple *seg* and the complex *seg sjøl* in PPs is parallel to the distribution in VPs is that the PPs taking the simple *seg* cannot take any other argument, cf. (18) and (19) versus (20) and (21):

(18) *Han legger på hunden
He lays on the-dog
'He puts weight on the dog'

(19) *Han så rundt meg[3]
He saw around me
'He looked around me'

(20) Han tenker på meg
He thinks on me
'He thinks of me'

(21) Han så rundt huset
He saw around the-house
'He looked around the house'

This line of approach for the distribution of *seg* and *seg sjøl* in PPs is reminiscent of Hellan 1988:69, 128f., and it is consistent with the theory of binding that will be outlined in section 4.[4]

Finally, Norwegian reflexives also come in a possessive variant. Parallel to the distribution of the simple reflexives, only the 3. person possessive reflexive *sin* 'self's' is distinct from the possessive pronoun, as seen below in (22):

(22)									
	1.sg.	Han	tok	hatten	*min*	Jeg	tok	hatten	*min*
	2.sg.	Han	tok	hatten	*din*	Du	tok	hatten	*din*
	3.sg.m.	Han_i	tok	hatten	$hans_j$	Han	tok	hatten	*sin*
	3.sg.f.	Han	tok	hatten	*hennes*	Ho	tok	hatten	*sin*
	1.pl.	Han	tok	hatten	*vår*	Vi	tok	hatten	*vår*
	2.pl.	Han	tok	hatten	*deres*	Dere	tok	hatten	*deres*
	3.pl	Han	tok	hatten	*dømmes*	Døm	tok	hatten	*sin*
		He	took	the-hat	my/your etc.	I/you etc.	took	the-hat	my/your etc.

A frequent use of *sin* that is tacitly excluded from all treatments of Norwegian reflexives is its function as a free standing possessive morpheme for any 3. person pronoun or DP (glossed as 'POSS.'):

(23) Den er han sin
That is he POSS.
'That is his'

(24) Politikerne sine lønninger er høye
The-politicians POSS. (pl.) salaries are high
'The politicians' salaries are high'

[3] A non-reflexive argument is impossible here under the relevant reading. Cf. the contrast in (i) versus (ii):
(i) Han så rundt seg og lurte på hva han ville gjøra
'He looked around and wondered what he would do'
(ii) *Han så rundt meg og lurte på hva han ville gjøra
'He looked around me and wondered what he would do'

[4] For a largely different analysis, cf. Lødrup 2007a.

This usage of *sin* is not constrained by any binding principles and should be considered as a homonym with the possessive reflexive *sin*. No other possessive pronoun can take on a similar function (25), nor can *sin* be used in this function for non-3. person DPs (26):[5]

(25) *Den er jeg min
That is I my
(26) *Den er jeg sin
That is I POSS.
'That is mine'

Returning to the possessive reflexive *sin*, it is either implicitly or explicitly (as in Hellan 1988:62, 1991:31) assumed that *sin* has the same binding domain and undergoes the same binding conditions as the non-possessive simple reflexive *seg*. As a result, it is common to see examples with the possessive *sin* being used as evidence for the distribution of reflexives in general (as in Hellan 1988:74f., Faarlund, Lie and Vannebo 1997:1164ff., Lødrup 2008:15). There is, however, good evidence for *sin* being distributed differently from *seg* in the Norwegian dialect under investigation here. Strahan (2003:89) has further convincingly shown in a quantitative judgment study on Norwegian dialects that "there is a definite division in the binding domains of *seg* and *sin* across nearly all sentence pairs". For that reason, it will not be necessary to go into nearer detail how *sin* is distributed in Norwegian, since there is no cogent reason to a priori assume that *sin* and *seg* behave identically. The possessive reflexive *sin* is consequently entirely excluded from the data in this paper.

3.2 Long-distance binding of *seg*

Following the discussion in section 2, I will discuss the possibility of having the reflexive *seg* in a finite subordinate clause be bound by an antecedent in a higher clause. Hellan (1988:84) claims that such cases do not exist: "there can be no finite clause such that the binder of a **seg**-reflexive is outside it and the reflexive is inside it". This firm claim is nevertheless moderated by adding that such configurations are "occasionally used" in "casual speech" (1988:85). The fact that such cases do exist is nevertheless not returned to in his work or given an analysis within Hellan's binding model, and only Hellan's

[5] In other Norwegian dialects, *sin* can seemingly redundantly follow any possessive, including the possessive reflexive *sin* (the examples are from web searches):
(iii) Christine – bloggen min sin
Christine – the-blog my POSS.
'Christine – my blog'

(iv) Hva skriver man i sin sin aller første blogg?
What writes one in self's POSS. of-all first blog
'What does one write in one's first blog ever?'

(v) Vår sin virksomhet skal preges av integritet i forhold til medlemmer
Our POSS. enterprise shall be- by integrity in relation to members
characterized
'Our enterprise will be characterized by integrity with respect to members'

initial firm claim is found in cross-linguistic treatments of reflexives (Dalrymple 1993:31, Safir 2004:13, 166, Büring 2005:67f., Reuland 2006c:90)

Moshagen and Trosterud 1990 show that Hellan's broad claim about the non-existence of long-distance binding does not hold universally in Norwegian. They point out that long-distance binding of *seg* is well documented in the literature on Norwegian dialects, as in (5), repeated below in (27). To this they also add new data from a north-western dialect, as in (28):

(27) Ho$_i$ truddj [at dæmm bestannjdi tænnkt på sæ$_i$]
She believed that they always thought on self
'She believed that they always thought of her'

(28) Han$_i$ va rædd [at dæm skull flir åt sæ$_i$]
He was afraid that they should laugh at self
'He was afraid that they would laugh at him'

More examples of long-distance binding in Norwegian have since been added by Faarlund, Lie and Vannebo 1997:1161, Strahan 2001, 2003 and Lødrup 2008. One example from Strahan (2003:151) will serve as an illustration:

(29) Anne$_i$ skulle ønske [at Tor likte sæi$_i$]
Anne should wish that Thor liked self
'Anne wished that Thor liked her'

This paper will add more examples of long-distance binding of *seg* from the Askim dialect. As is the case with virtually any language with long-distance binding of reflexives, the binding of *seg* is not unrestricted. The conditional factor that will be highlighted in this section is nevertheless different from what is reported in the literature for other Norwegian dialects, and to my knowledge it is also different from any pattern reported so far from languages with long-distance binding.

Various factors have been posited as being paramount in licensing long-distance binding in other Norwegian dialects, such as logophoricity (Moshagen and Trosterud 1990, Strahan 2001), animcay of the local subject (Lødrup 2008), factivity of the matrix verb (cf. Strahan 2003:89ff.), and whether the reflexive is possessive or not (see section 3.1). Although there is no denial that there is some variety with respect to the factors involved in long-distance binding in Askim Norwegian as well, this paper will highlight one parameter of the matrix clause that has a consistent effect on the possibility of long-distance binding. This parameter amounts simply to whether the matrix verb is a perception verb or not. The relevance of the matrix verb can be exemplified through (30), which lists a number of sentences differing only in what the matrix verb is. They all select for finite *that*-clauses:

(30a) *Reven$_i$ sa [at noen jakta på seg$_i$]
(b) *Reven$_i$ trudde [at noen jakta på seg$_i$]
(c) *Reven$_i$ frykta [at noen jakta på seg$_i$]
(d) ?Reven$_i$ hørte [at noen jakta på seg$_i$]
(e) ?Reven$_i$ så [at noen jakta på seg$_i$]
(f) ?Reven$_i$ lukta [at noen jakta på seg$_i$]
The-fox V that someone chased on self
sa 'said', *trudde* 'believed', *frykta* 'feared', *hørte* 'heard', *så* 'saw', *lukta* 'smelled'

'The fox V-ed that someone was hunting him'

There is a clear contrast in acceptability between the sentences in (30a)-(30c) and (30d)-(30f), and a consistent factor that distinguishes these two groups is that the matrix verbs in (30d)-(30f) are perception verbs (*hear*, *see*, *smell*), whereas the verbs in (30a)-(30d) are not: *say* is a verb of speech (a declarative verb), *believe* is a verb of thought (an epistemic verb), and *fear* is a psych-verb. This effect of perception verbs is naturally not limited to the example in (30). Example (31) includes a different matrix subject and a different complement clause, and example (32) shows that the same generalization holds for the perception verb *kjenne* 'sense, feel':

(31a) *Per$_i$ sa [at noen snakka om seg$_i$]
Peter said that someone talked about self
'Peter said that someone talked about him'

(31b) ?Per$_i$ hørte [at noen snakka om seg$_i$]
Peter heard that someone talked about self
'Peter heard that someone talked about him'

(32a) *Per$_i$ sa [at noen la et håndkle rundt seg$_i$]
Peter said that someone laid a towel around self
'Peter said that someone put a towel around him'

(32b) ?Per$_i$ kjente [at noen la et håndkle rundt seg$_i$]
Peter felt that someone laid a towel around self
'Peter felt that someone put a towel around him'

Another consistent difference between the licensers and non-licensers of long-distance binding in (30)-(32) is that the licensers, perception verbs, are all factives, whereas the non-licensers are not. It is questionable, however, if it is factivity itself that allows the long-distance binding in the complements of perception verbs. First, although non-perception factives sometimes seem to license a reflexive in their complements, they are often clearly degraded compared to perception verbs, as seen in the following example:

(33a) *~??Per$_i$ likte [at noen la et håndkle rundt seg$_i$]
Peter liked that someone laid a towel around self
'Peter enjoyed that someone put a towel around him'

(33b) ?Per$_i$ kjente [at noen la et håndkle rundt seg$_i$]
Peter felt that someone laid a towel around self
'Peter felt that someone put a towel around him'

Secondly, matrix negation effectively blocks long-distance binding for non-perception factives, but not for perception verbs. In the following example (34), the sentences are virtually equally good without matrix negation, but clearly not with negation:

(34b) *~??Per$_i$ skjønte ikke [at noen sto bak seg$_i$]
Peter realized not that someone stood behind self
'Peter did not realize that someone stood behind him'

(34c) ?Per$_i$ hørte ikke [at noen sto bak seg$_i$]
Peter heard not that someone stood behind self
'Peter did not hear that someone stood behind him'

Although factivity does play a role in licensing long-distance reflexives in Askim Norwegian,[6] it shows an inconsistent behavior in that factives are sometimes felt to be equivalent to perception verbs in acceptability, but sometimes degraded to them. Furthermore, the idea that factivity itself licenses the reflexives is contradicted by the fact that matrix negation clearly affects the ability of factives to do so, an effect that does not occur with perception verbs.

There is consequently a need to explain what makes perception verbs special, and this will be the task in the remainder of this paper. Any further investigation of long-distance binding under factive verbs will not be undertaken here.

As the preceding examples have shown, cases of accepted long-distance binding out of finite clauses are marked with one question mark ? This practice is chosen to indicate the fact that all of these sentences are felt to be degraded compared to their equivalents with a regular non-reflexive pronoun, as in (35) and (36):

(35a) ?Per$_i$ hørte [at noen snakka om seg$_i$]
Peter heard that someone talked about self

[6] A similar conclusion can readily be drawn from Strahan's quantitative judgment statistics (2003:91). She shows that a long-distance bound reflexive in a finite complement clause of a matrix factive verb has an acceptance rate of 61%, as opposed to 9% for non-factives. Several caveats need to be taken for this study, though: a) No distinction is made between factive perception verbs and factive non-perception verbs, b) No distinction is made between a possessive reflexive *sin* and a non-possessive reflexive *seg* (in spite of her own conclusion that *seg* and *sin* have different binding domains (2003:89)), c) Cases where a reflexive is bound locally by PRO are treated as being bound long-distance (cf. examples in 2003:74). In spite of these reservations, there is quite likely a reality behind these numbers revealing that factives do play a role in licensing long-distance reflexives. For reasons unclear to me, Strahan nevertheless concludes that factivity "is not relevant to L[ong]D[istance]R[reflexives] in Norwegian" (2003:92).

(35b) Per$_i$ hørte [at noen snakka om 'n$_i$]
Peter heard that someone talked about him
'Peter heard that someone talked about him'

(36a) ?Reven$_i$ hørte [at noen jakta på seg$_i$]
The-fox heard that someone chased on self

(36b) Reven$_i$ hørte [at noen jakta på 'n$_i$]
The-fox heard that someone chased on him
'The fox heard that someone was hunting him'

This does not indicate that the variants with the reflexives are not occasionally uttered without any feeling of degraded acceptability by either the speaker or the listener. In the setting of being asked for grammaticality judgments, on the other hand, these sentences will invariably be dispreferred to their equivalents with non-reflexive pronouns.

All the examples of long-distance binding in this paper will only show the simple reflexive *seg*. The complex reflexive *seg sjøl* cannot be bound long-distance, *irrespective* of the complementary distribution of *seg* and *seg sjøl* in local binding cases. To illustrate this example, take the predicates *snakke om* 'talk about' and *jakte på* 'hunt' in (35) and (36). These predicates consisting of a verb plus a preposition pattern like the example *tenke på* 'think of' in section 3.1. These are therefore 'transitive' predicates and must select the complex reflexive *seg sjøl* when bound locally:

(37) Noen$_i$ snakka om seg$_i$ *(sjøl)
Someone talked about self self
'Someone talked about themselves'

(38) Noen$_i$ jakta på seg$_i$ *(sjøl)
Someone chased on self self
'Someone hunted themselves'

When (37) and (38) are embedded under a matrix perception verb, on the other hand, the complex *seg sjøl* cannot be interpreted as coreferent with the matrix subject (39a, 40a). The simple reflexive *seg* cannot be interpreted as coreferent with the local subject by virtue of (37) and (38), as seen in (39b) and (40b):

(39a) Han$_i$ hørte [at noen$_j$ snakka om seg$_{*i/j}$ sjøl]
He heard that someone talked about self self

(39b) Han$_i$ hørte [at noen$_j$ snakka om seg$_{?i/*j}$]
He heard that someone talked about self

(40a) Han$_i$ hørte [at noen$_j$ jakta på seg$_{*i/j}$ sjøl]
He heard that someone chased on self self

(40b) Han$_i$ hørte [at noen$_j$ jakta på seg$_{?i/*j}$]
He heard that someone chased on self

The inability of the complex reflexive to be bound long-distance in Norwegian follows therefore Pica's generalization, which states that only simple reflexives have this quality (Pica 1987:485).

The data in (30)-(32) makes the prediction that the verb for the fifth sense, taste, will allow a reflexive *seg* in a finite complement. I have, however, not been able to construct an example that satisfies all the requirements necessary for *seg* to be bound long-distance, and which at the same time gives a pragmatically felicitous utterance.[7]

3.3 *seg* as the complement of a verb

All the examples of long-distance binding of *seg* in Askim Norwegian in the previous sections have involved the reflexive *seg* inside a PP, summarized in (41):

(41)	V		P	Refl.	
	jakta		på	seg	'hunted'
	snakka		om	seg	'talked about'
	la	(NP)	rundt	seg	'put (NP) around'
	sto		bak	seg	'stood behind'

As the argument of a verb, *seg* cannot be bound out of a finite clause, even when the matrix verb is a licenser for long-distance binding in other cases, such as perception verbs:

(42) *Gjenferdet$_i$ så [at ingen kunne se seg$_i$]
The-ghost saw that no one could see self
'The ghost saw that no one could see him'

(43) *Per$_i$ hørte [at noen erta seg$_i$]
Peter heard that someone mocked self
'Peter heard that someone mocked him'

[7] The two necessary conditions are the following. First, the reflexive needs to be inside a PP (I will return to this issue in 3.3). Second, the subject of the finite *that*-clause needs to be of a certain type in order to avoid what is called *the nominal blocking effect* in the literature on long-distance binding. It is well known that certain intervening nominals might block a binding relationship between a binder and a reflexive (cf. Cole, Hermon and Huang 2001:xxxvff. for a general discussion). The intervening subject *noen* 'someone' in (30)-(32) is not the only nominal that is permeable to long-distance binding in Askim Norwegian, but it groups with other indefinites such as *ingen* 'no one' and *andre* 'others' in consistently being more permeable than other subjects. Since choosing other intervening subjects might block any long-distance binding from occurring, the effect of matrix perception verbs would not be detectable under such conditions. I will not discuss the blocking effect in Askim Norwegian in this paper, but will choose whichever nominal that will not block the long-distance binding of *seg* from obtaining.

This pattern is strongly reminiscent of what is found in Dutch and German, where the simple reflexives *zich* (Dutch) and *sich* (German) can be bound out of a non-finite clause of a matrix perception verb if the reflexive is in a PP (44), but not if the reflexive is the argument of the embedded verb (45) (Reuland 2006c:91ff.):

(44a) Jaan$_i$ hoorde Marie een lied voor zich$_i$ fluiten
(b) Johann$_i$ hörte Maria ein Lied für sich$_i$ pfeifen
John heard Mary a song for self whistle
'John heard Mary whistle a song for him'

(45a) *Jaan$_i$ hoorde Marie zich$_i$ verwensen
(b) *Johann$_i$ hörte Maria sich$_i$ verwünschen
John heard Mary self curse
'John heard Mary curse him'

As there is no obvious solution to why this should be the case in Dutch and German (cf. Reuland 2006c:101), I will not try to develop a tweak of binding theory to explain these facts in this paper. It suffices for my purposes to note that this is a structural contrast that independently needs to be accounted for in any model of binding theory. Whatever the reason for this contrast is, it holds for Dutch, German, and now also Norwegian.

3.4 Summary of the Norwegian facts

Section 3 has outlined the possibilities of having the reflexive *seg* bound long-distance out of a finite clause. The examples have shown that such a binding relation is licit if the clause is the complement of a perception verb (*see*, *hear*, *smell*, *feel*), but not if it is the complement of any other non-factive propositional verb (*say*, *believe*, *think*, *fear*). Other factives seem to fall somewhere in between these two extremes. The focus of this paper will consequently be to propose an explanation for why long-distance binding is consistently better in complements of perception verbs than elsewhere.

4. Binding theory

Before any theoretical and structural account of the binding facts in section 3 for Norwegian can be given, it is a prerequisite that I am entirely clear and consistent in *which* theory of binding I will assume as the underlying premise. Given that binding has been at the center of attention since Chomsky 1981, there are naturally a wide range of different approaches to binding in order to account for the ever increasing body of descriptive facts (cf. Huang 2000 and Büring 2005). One of the key contributors to the understanding of binding has been Eric Reuland, who has consistently been publishing on the syntactic nature of the basic binding facts, both before and after the advent of Chomsky's minimalist framework (Chomsky 1995), with the two fundamental papers Reinhart and Reuland 1993 and Reuland 2001a as perhaps the most important contributions. I will adopt Reuland's approach to binding for this paper, especially focusing on Reuland 2001a, where a binding model is built entirely within a minimalist framework stripped of notions such as government and coindexation (cf. section 2 of this

paper). The following section will therefore give a short summary of this binding model, which will be assumed for the remainder of this paper.

4.1 Binding through movement – Reuland 2001a

Taking Chomsky's binding theory as expressed in Chomsky 1981 and 1986 (see references in section 2) as a point of departure, Reuland highlights two fundamental problems. First, the binding conditions as such are arbitrary, since they do not naturally follow from any other basic properties of the grammar (2001a:441). The second problem emerges from the change of framework. A key notion in Chomsky's minimalist framework is the *inclusiveness condition*. It states that "any structure formed by the computation is constituted of elements already present in the lexical items selected for N[umeration]; no new objects are added in the course of computation apart from rearrangements of lexical properties (in particular, no indices [...])" (Chomsky 1995:228). Since indices are crucially needed in the classic binding conditions (see (2)), it follows that the fundamentals of binding must be reevaluated within the minimalist framework in such a way that indices are no longer needed (2001a:440).

One way of reaching that requirement is to let the binding conditions apply at LF, and develop a model where coreference can be obtained without the use of indices (Chomsky and Lasnik 1993:551, Chomsky 1993:37ff.). Reuland emphasizes two basic properties of reflexive binding which indicate that it does not take place at LF.

The first property is *locality* (2001a:440ff.). The classic case of binding at LF, variable binding, is not constrained by locality conditions, whereas reflexive binding is. And reversely, since pronouns can be bound variables, it does not follow without extra stipulation that they cannot be bound variables in a local configuration.

The other property hinges on the first, and relates to the morphosyntactic choice of bound variables (2001a:450). Again, since both pronouns and reflexives can be bound variables, a logical representation like (46) should in principle have two equally good morphosyntactic representations ((47a) and (47b)):

(46) Oscar λx (x felt (x slide away))

Dutch

(47a)	Oscar$_i$	voelde	zich$_i$	wegglijden
	Oscar	felt	self	slide away

(47b)	*Oscar$_i$	voelde	hem$_i$	wegglijden
	Oscar	felt	him	slide away

'Oscar felt himself slide away'

Since (47b) is ungrammatical, it follows that the choice between the two must rely on the morphosyntactic difference between the reflexive *zich* and the pronoun *hem* – a difference that is located in narrow syntax, and not at LF.

Since the locality constraints on reflexive binding bear a strong resemblance to the constraints on movement (cf. Reuland and Koster 1991:6, Chomsky and Lasnik 1993:553f.), Reuland seeks to derive the properties of the binding conditions through the

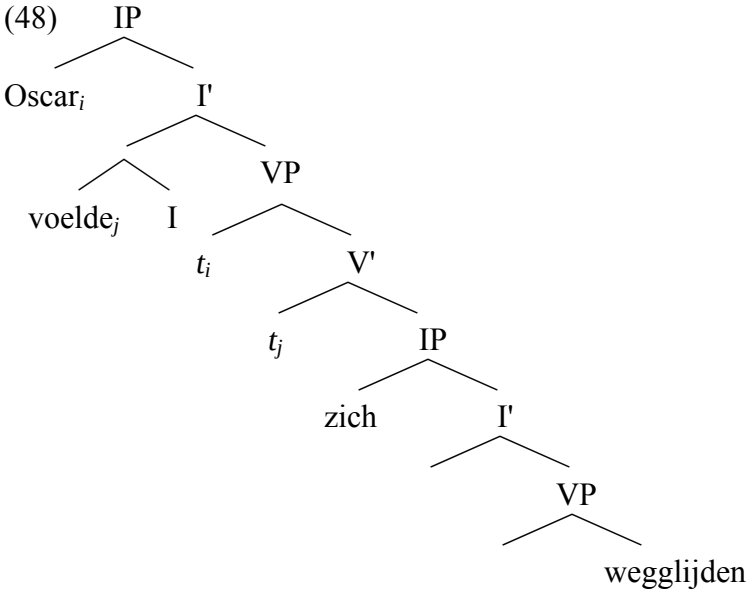
independently motivated operations of movement and feature checking within the minimalist framework of Chomsky 1995 (2001a:453).

I cannot go into excruciating details of how numerous facets of binding are accounted for in Reuland 2001a. It will suffice to illustrate a few basic cases:

a) The ECM construction in (47a) above
b) A standard SVO sentence of the kind 'John defended himself'
c) A standard sentence with the reflexive in a PP, of the kind 'John talked about himself'

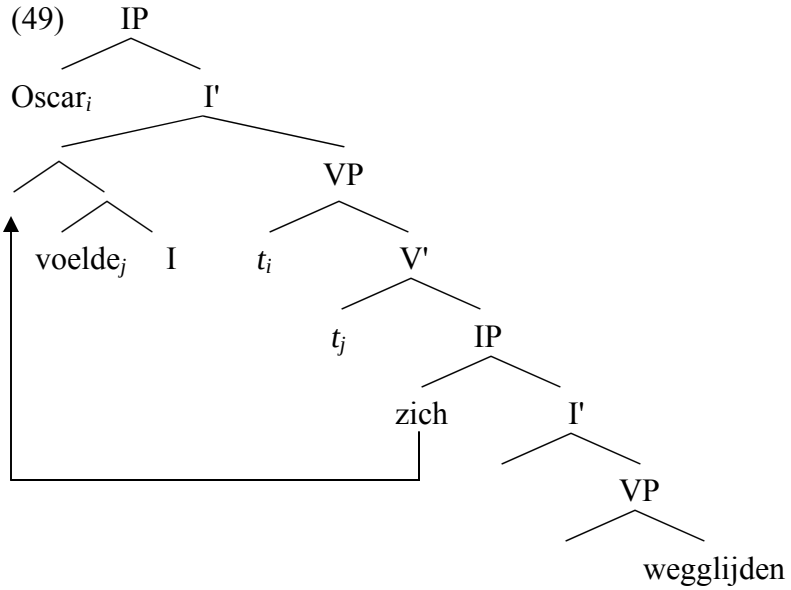
Reuland exemplifies reflexive binding both for the cases where the raising of V to I is overt, and where the same raising is covert (2001a:455ff., 462ff.). I will use the overt V-to-I example below, but the same procedure is assumed for both cases. Following the raising of the subject to spec-IP and the verb to I, the structure of (47a) looks like in (48) (2001a:455):

(48)



In an ECM-construction as (48), the lower subject *zich* is not assigned case by the embedded I. Following the movement procedures outlined in Chomsky 1995:304, *zich* raises covertly to the V-I complex to get its case features checked off:

(49)



The movement operation of *zich* in (49) establishes a dependency relation between the two copies that Reuland calls a *chain* (2001a:458). This *zich*-chain is by virtue of being in a spec-head relation with the subject *Oscar* in a checking configuration with the subject (cf. Chomsky 1993:10ff.). The φ-features of *zich* are consequently checked, deleted and recovered by the subject *Oscar* (for details I refer to Reuland 2001a:456ff.). This checking relation is called a *Chain*.

The result of these processes is that the subject *Oscar* and *zich* form a *Chain*, and the copies of *zich* form a *chain*. Reuland calls the relation between *Chain* and *chain* a *CHAIN*, and argues that this is a sufficient configurational description for what is generally called 'reflexive binding'. A reflexive is coreferent with and bound by an antecedent simply by being in a CHAIN relation with it. An important argument in Reuland's model is that the notion of *CHAIN* comes for free, since all its properties are independently present in narrow syntax (2001a:461).

It follows from this discussion that (47b), repeated below, is ruled out by the fact that the pronoun *hem* does not form a CHAIN with the subject.

(47b) *Oscar$_i$ voelde hem$_i$ wegglijden
Oscar felt him slide away
'Oscar felt himself slide away'

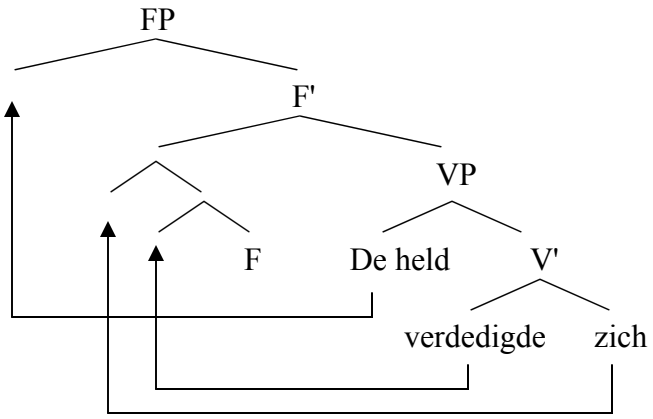
Adhering to the inclusiveness condition, the reason must lie in the feature makeup of the pronoun *hem*. As Reuland argues (2001a:458f.), *hem* is in contrast to the reflexive *zich* specified for number. Number is a φ-feature that cannot be deleted and recovered from the subject without violating the principle of *recoverability of deletion* (cf. Chomsky and Lasnik 1993:522). As such, no CHAIN can be established between the subject *Oscar* and the pronoun *hem*. The choice of (47a) with a CHAIN relation over (47b) without such a relation follows from a principle of economy, which states that a CHAIN is a less costly operation (for details see Reuland 2001a:470ff.).

Reuland does not discuss a regular SVO construction, but it is nevertheless clear from the discussion in 2001a:460 how a Dutch sentence like (50) is derived:

(50) De held$_i$ verdedigde zich$_i$
The hero defended self
'The hero defended himself'

Reuland assumes a functional projection F that attracts both the verb and the object, as well as the subject to spec-FP:

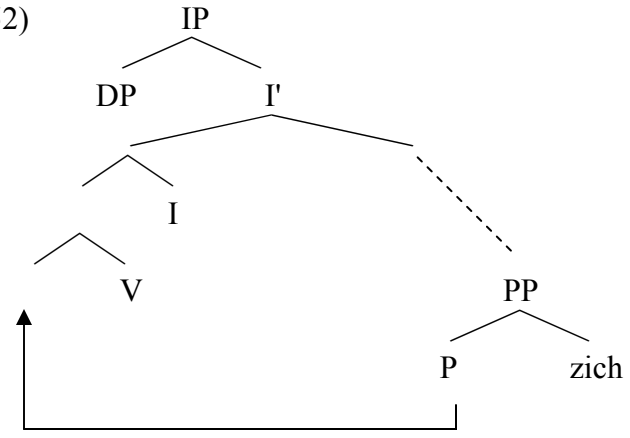
(51)



In (51), the *zich*-chain will be in a checking configuration with the subject in spec-FP, and consequently establish a CHAIN between the subject and the reflexive. Since object raising is independently needed in syntactic theory to account for object shift, it will not be important for my purposes here to translate Reuland's FP into alternative models using other projections (such as AgrOP or *v*P) for attracting the object. For the sake of exhibition, I will use Reuland's original presentation.

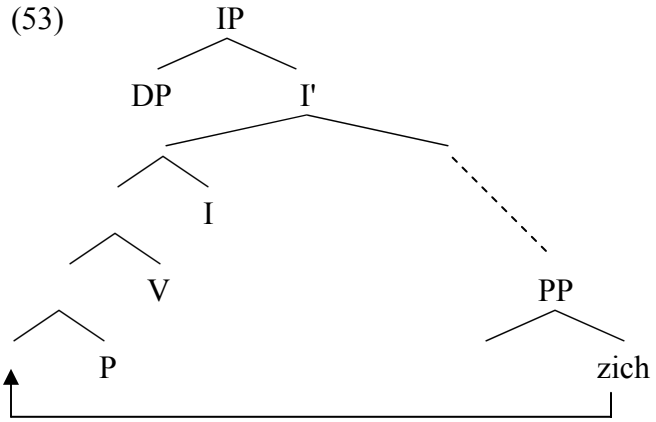
The last structure from Reuland's paper that I will exemplify is a sentence where the reflexive is inside a PP. There are two longer footnote discussions of how a CHAIN is established between the antecedent and the reflexive in a PP (2001a:453, 461f.). He argues based on German data that a syntactic dependency between V and P exists, from which he assumes a covert P-to-V movement. Given that V independently moves to I, as seen in (48), P consequently moves to the V-I complex:

(52)



The preposition will attract its complement, and the resulting movement of *zich* will establish a *zich*-chain:

(53)



The *zich*-chain is now in a checking configuration with the subject in spec-IP, and a CHAIN is thus formed between the subject and the reflexive.

The final elaboration in Reuland's derivation of the binding principles is how to account for the distribution of simple and complex reflexives, for which the traditional binding conditions have nothing to say. An example of a simple versus a complex reflexive is the difference between Norwegian *seg* and *seg sjøl*, exemplified in section 3.2. As shown there, the simple reflexives are used for predicates that are inherently reflexive:

(54) Per_i skammer seg_i
Peter shames self
'Peter is ashamed'

In the semantics, this is mapped into 'Peter λx (x shames x)'. Since 'shame' is a one-place predicate, its arity is maintained at the semantic level. For a two-place predicate like 'hate', on the other hand, a semantic mapping 'Peter λx (x hates x)' would violate the arity of 'hate', since the two-place predicate status of 'hate' has been reduced to a one-place predicate at the semantic level. The role of *sjøl* is thus to 'save' the argument structure of the predicate:

(55) *Per_i hater seg_i Per_i hater seg_i sjøl
Peter hates self Peter hates self self
'Peter hates himself'

At the semantic level, the element *sjøl* introduces a function *f* applied to *x*, i.e. 'Peter λx (x hates f(x))'. The two-place predicate nature of the predicate 'hate' is preserved by the introduction of the function *f*. I refer to the original article for a discussion on how ||f(x)|| is semantically distinguishable from ||x||, but nevertheless able to approximate it in its interpretation (2001a:481ff.).

Reuland does not discuss predicates with prepositions, but as pointed out in section 3.1, the same analysis should be applicable for all predicates alike, exemplified in (56) and (57) with the inherently reflexive predicate *legge på* 'put on weight' and the transitive *tenke på* 'think of':

(56) Per$_i$ legger på seg$_i$
Peter lays on self
'Peter puts on weight' Peter λx (x puts on x)

(57) Per$_i$ tenker på seg$_i$ sjøl
Peter thinks on self self
'Peter thinks of himself' Peter λx (x thinks of f(x))

The predicate in (56) is a one-place predicate, whereas the predicate in (57) is a two-place predicate. To preserve the arity of *tenke på* 'think of', *sjøl* is introduced to provide the predicate with a second argument. Whether the predicate has a preposition or not should be irrelevant for the semantic interpretation of the predicate, and this model is able to capture this intuition.

4.2 Structural binding vs. logophoricity

In addition to the canonical reflexive binding cases, whether it be characterized by descriptive binding conditions (see section 2) or through a movement/checking operation (as in Reuland 2001a), there is a use of reflexives that belongs to the domain of *logophoricity*. This notion usually escapes any attempt of a rigorous definition, and one usually refers back to Clements' descriptive characterization "the antecedent [of a logophoric pronoun] designates the individual or individuals whose words or thoughts are transmitted in the reportive context in which the logophoric pronoun occurs" (1975:172), a characterization sometimes reduced to a requirement that the logophoric pronoun is within the *perspective* of its antecedent (Hellan 1991:28, 33, Reinhart and Reuland 1991:316, Reuland 2001a:446). In several languages, the logophoric pronouns are the same as the reflexive pronouns. Reuland argues that reflexive pronouns are in principle free to receive a logophoric interpretation. By an economy principle, a logophoric use of reflexives is blocked if the reflexive can form a CHAIN relation with its antecedent. In other words, a reflexive is 'logophorically bound' by an antecedent only if there can be no CHAIN relation between the reflexive and the antecedent (Reuland 2001a:466f., 2006b:11f.).

It follows from this model that the long-distance binding of *seg* in Norwegian is structurally bound only if there can be a CHAIN relation between the reflexive and the matrix subject. If such a relation cannot be formed, then the use of *seg* outlined in section 3.2 must be logophorically driven. Reuland and Koster (1991:23f., Reuland 2006c:96) make the strong claim that reflexives in finite clauses cannot be structurally bound from outside its clause – these cases fall under logophoric binding. The natural question is then whether the long-distance binding in Norwegian is in fact logophoric binding and not structural binding.

The obvious answer to this question is that Norwegian long-distance binding is not logophorically driven. As seen in the examples in 3.2, the canonical licensers of logophoricity – verbs of speech, verbs of thought, and psych-verbs – do not allow the reflexive *seg* in their complements in Norwegian. As that section shows, the licensers of long-distance bound *seg* in this dialect are perception verbs. In his cross-linguistic treatment of licensers of logophoric pronouns, Culy finds no languages with logophors in the complements of perception verbs. Reversely, he finds no logophoric languages that disallow logophors in the complements of verbs of speech and thought, but does find a few that explicitly disallow them in the complements of perception verbs (1994:1061).

Such complements are rarely discussed or exemplified in literature dealing with logophoric reflexives, but I am aware of two reflexive-logophoric languages where it has been noted that long-distance reflexives are infelicitous in complements of perception verbs, namely Icelandic (Sigurðsson 1990:333, Thráinsson 2007:489f.) and North-West Norwegian (Strahan 2001:163), but none to the contrary.

The pattern in Norwegian seems thus to be the 'reverse' of what we find in languages with logophoricity. Non-locally bound reflexives are not allowed in complements of verbs for speech, thought or mental states – precisely where they are allowed in logophoric languages. Reversely, non-locally bound reflexives are allowed in complements of perception verbs – precisely where they are not allowed in logophoric languages. At first sight, this suggests the possibility to interpret the long-distance bound *seg* as an 'anti-logophor'. An anti-logophoric reflexive would be a reflexive that is coreferent with its antecedent as long as no CHAIN relation between the two can be established, *and* as long as no 'perspective relation' between the two holds in the discourse.

As pointed out by Maling 1984:232, passivizing a verb of speech will also change its ability to let the subject hold the perspective of the proposition (cf. also Sigurðsson 1990:336, Reuland 2006a:547). This has the prediction for Icelandic with its logophoric reflexive (58) that the complement of a passive cannot contain a long-distance bound reflexive – a prediction that holds (59):

(58) Jón$_i$ sagði Pétri [að ég elskaði sig$_i$]
John told Peter that I loved self
'John told Peter that I loved him'

(59) *Pétri$_i$ var sagt [að ég elskaði sig$_i$]
Peter was told that I loved self
'Peter was told that I loved him'

Since the reflexive *sig* is ungrammatical in (59) because it is not in a 'perspective relation' with its antecedent, one would predict that a passive construction similar to (59) is good in Norwegian if *seg* is 'anti-logophoric'. An equivalent structure of (59) is, however, clearly degraded to a sentence with a matrix perception verb:

(60) *Per$_i$ blei fortalt [at noen snakka om seg$_i$]
Peter was told that someone talked about self
'Peter was told that someone talked about him'

(61) ?Per$_i$ hørte [at noen snakka om seg$_i$]
Peter heard that someone talked about self
'Peter heard that someone talked about him'

Based on the fact that Norwegian *seg* is not licensed in the complement of either logophoric licensers or passivized logophoric licensers, I conclude that *seg* is neither a logophor nor an anti-logophor. Within the framework of Reuland 2001a, this requires *seg* to be in a CHAIN relation with its matrix binder, even though they are in different clauses. The question to be addressed in the next section is *how* such a CHAIN relation can obtain in complements of perception verbs.

4.3 Non-local binding and verb raising – towards a solution

In Icelandic, there is an important distinction between finite and non-finite complement clauses. Non-locally bound reflexives in finite complement clauses are logophorically, and not structurally, bound (cf. (58)-(59)). In non-finite complements, on the other hand, the situation is reversed: non-locally bound reflexives must be structurally bound. A lack of structural binding out of a non-finite clause cannot be compensated by a logophoric relation between the antecedent and the reflexive (Reuland 2006a:548f.). As predicted then, a passivized verb of speech does license a reflexive in its complement, as long as the complement is non-finite, in contrast with (59):

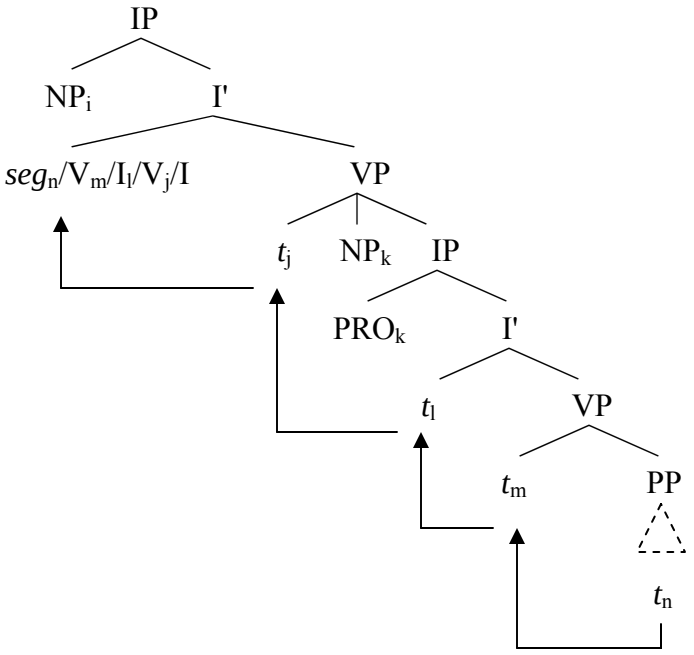
(62) María$_i$ var sögð [hafa látið [mig þvo sér$_i$]]
Mary was said have (inf.) made me wash (inf.) self
'Mary was said to have made me wash her'

It is a non-trivial matter, however, how the reflexive in a non-finite clause ends up being in a structural CHAIN relation with the matrix subject, a relation Reuland and Koster call 'medium-distance binding' (1991:23f.). Within the movement approach outlined in Reuland 2001a, the reflexive can end up in such a relation only if it moves up to the matrix clause. Given the assumption that both the verb and the reflexive head-move to I, as outlined in section 4.1, it follows that the reflexive can be bound by a matrix subject only if I undergoes further movement to the matrix I. This is exactly what Reinhart and Reuland (1991:302ff.) propose in order to account for the 'medium-distance binding' in (63), a Norwegian object control example from Hellan 1988:73:

(63) Jon$_i$ bad oss snakke om seg$_i$
John asked us talk about self
'John asked us to talk about him'

The structure for (63) is illustrated in (64) (I have retained the structure from Reinhart and Reuland 1991:304, although it can easily be translated into a modern framework):

(64)



In (64), the embedded reflexive *seg* (marked with subscript $_n$) raises in its local clause according to the procedure outlined in nearer detail in section 4.1. As an independent process, the embedded verb (marked with subscript $_m$) raises out of its local clause to head-adjoin to I in the matrix clause. By the general rules of head movement and head incorporation (Baker 1988:72ff., 363ff.), this verb raising will take the embedded reflexive *seg* along with it to the matrix I. In this position, the reflexive will be in a checking configuration with the matrix subject, and consequently be bound by it (as explained above in 4.1). As such, the non-local binding is merely "a by-product of attracting a larger constituent than just the anaphor" (Reuland 2006c:97).

The missing part in this analysis is a nearer account of the process that raises the embedded verb to the matrix verb. In the original proposal in Reinhart and Reuland 1991, the process is not accounted for, but takes on many names, such as 'predicate-raising', 'restructuring' and 'verb raising'. This suggestion is further adhered to in Reuland 2001b:355 and Reuland 2006c:97ff. In the latter, though, it is emphasized that "One may still wonder, though, what triggers such generalized verb raising".

In the following, I will assume that verb raising is the process crucially underlying interclausal reflexive binding in Norwegian. It will therefore be necessary to show that the necessary properties for this verb raising to take place are present in exactly the same structures where long-distance binding occurs. Section 5 will outline the theory of verb raising in nearer detail, and show that this process does take place in certain finite complement clauses in Norwegian.

5. Verb raising under 'restructuring'

An analysis involving raising of the verb in a complement clause to the matrix clause has been the predominant proposal to account for a variety of phenomena that are grouped together under the term 'restructuring'. Although restructuring encapsulates a range of phenomena, what they all share "is that processes and dependencies that are normally

limited to a single clause, can, where the higher predicate is of a particular type, take place across clause boundaries" (Roberts 1997:423). For this reason restructuring is also commonly called 'clause union', by which it is understood that a structure with two clauses at some point in the derivation 'unite' the two clauses. For the sake of tradition, I will continue to use 'restructuring' as a term for these processes, without necessarily adhering to the structural explanation first associated with this term (i.e. Rizzi 1976).

One reoccurring 'process or dependency' of the complement clause that takes place across the clause boundary relates to the morphosyntactic behavior of the argument of the verb of the complement clause. To illustrate this, cf. example (65) from Italian (Cinque 2006:11):

(65) Lo volveo vedere
Him I wanted see
'I wanted to see him'

In (65), *lo* is a clitic pronoun that is interpreted as the argument of the lower verb *vedere* 'see', but it is morphosyntactically cliticized to the higher verb *volveo* as if *lo* were the argument of it. This phenomenon is therefore called 'clitic climbing'. Another example can be seen in (66) from German (Wurmbrand 2001:19f.):

(66) dass der Traktor zu reparieren versucht wurde
that the tractor (nom.) to repair tried was
'that they tried to repair the tractor'

In (66), *der Traktor* is interpreted as the argument of the embedded verb *zu reparieren*, but morphosyntactically, it appears in the nominative case because of the passivization of the matrix verb *versuchen* 'try', as if *der Traktor* were the argument of the matrix verb.

The long-distance binding cases in Norwegian are similar to restructuring in this respect. The reflexive *seg* is interpreted as the argument of the embedded verb, but morphosyntactically, it is realized as if it were in a local relation with the subject of the matrix verb (cf. section 4.1).

As mentioned above, a standard way of accounting for these phenomena has been to posit an overt or covert movement of the embedded verb to the matrix verb (Zushi 2001:33ff., Wurmbrand 2001:12f., 122ff., 2006:312f, 318ff., Wiklund 2007:164 and the many references therein). I follow the original idea in Reinhart and Reuland 1991 in positing a covert movement of the embedded verb for non-local binding in Norwegian. Whether this movement is a V-to-V or T-to-T movement (cf. Wurmbrand loc.cit.) is not crucial for my analysis. I follow the classic analysis by Guéron, Bennis and Hoekstra (Guéron and Hoekstra 1988:52, 73, Bennis and Hoekstra 1989:24) in assuming that the verb head V must relate to the tense head T in order to receive a tense interpretation. Within a movement approach, this amounts to V moving to T, cf. Bennis and Hoekstra 1989:25, Wurmbrand 2001:126, 2006:313. Since V independently moves to T overtly in Norwegian matrix clauses, it follows that V-to-V or T-to-T amounts to the same for my purposes.

5.1 Verb raising, tenselessness and finiteness

In the literature on restructuring, a consensus has emerged that there is one necessary prerequisite for restructuring to take place: the restructuring clause must be tenseless (Wurmbrand 2001:79ff., 91f., 2006:313, 321, Wiklund 2007:57f.). As shown by Stowell (1982:562f.), Landau (2000:57, 2004:836), Wurmbrand (2001:62ff.), and Wiklund (2007:38f.), tense does not necessarily correlate with morphological finiteness. What they show is that an infinitival, although lacking morphological tense, can nevertheless be 'semantically tensed'. As mentioned above, the standard claim in the literature is that only infinitivals that are semantically tenseless can undergo restructuring.

Given that tense and finiteness not necessarily correlate, we expect that their mutual mismatch is bidirectional, meaning that morphologically finite forms can be tenseless. That such forms indeed exist is convincingly shown to be the case in the Balkan languages (cf. Varlokosta and Hornstein 1992:515f., Krapova 2001:117f., Landau 2004:831ff., Radišić 2006:9).

In the literature on restructuring, it is nevertheless taken for granted that no restructuring effects can take place in finite complement clauses. It is usually not discussed within the verb raising theory why the finite status of the clause should have this impact. The reason has instead been laid on the complementizer in C. The assumption in this proposal is that an overt complementizer, which usually correlates with finiteness, blocks the verb raising from occurring (cf. Wurmbrand 2001:128f.).

It has been shown, however, that these correlations do not hold across the board. To start with the notion that restructuring cannot occur with finite clauses, Guasti shows in her study of perception and causative verbs that finite complement clauses of perception verbs in Romance and Balkan languages behave similarly to non-finite restructuring clauses (1993:141ff.). Although no explicit tests for restructuring effects are given for perception verb complements, she shows that in Arbëresh, restructuring does take place in the finite subjunctive complements of matrix causatives (1993:66ff.). As an example, she shows that a cliticized argument of the embedded verb must also be cliticized to the matrix verb, parallel to clitic climbing exemplified in (65) above. This is illustrated in (67) below (SP is the gloss for the Arbëresh subjunctive particle *të*):[8]

[8] The dative clitic for 'him' in the matrix clause is a result of the 'clitic doubling' process in Balkan languages, whereby an object DP is also cliticized to the pre-verbal position. In Arbëresh, this occurs only with dative DPs, as exemplified in (vi):

(vi) Maria i fjet studentit
Mary him (dat.) speaks student (dat.)
'Mary speaks to the student'

The accusative clitic for 'it' in the matrix clause of (67) is caused by a different phenomenon (≈ clitic climbing), since it can only take place when the accusative object in the complement clause is also a clitic:

(vii) Maria i bon të ghojirnj ghibrin ghajarellit
Mary him (dat.) makes SP reads book (acc.) child (dat.)
'Mary makes the child read the book'

In (vii), the embedded accusative object *ghibrin* will not cause an accusative clitic *e* in the matrix clause, since *ghibrin* itself is not a clitic, whereas in (67), the cliticized embedded accusative object *e* triggers an

(67) Maria ja bon t'e ghojirnj ghajarellit
Maria him (dat.)-it (acc.) makes SP-it (acc.) reads child (dat.)
'Maria makes the child read it'

Terzi (1996:284ff.) shows further that in the Italian dialect Salentino, clitic climbing can occur out of both non-finite (68) and finite complement clauses (69), as long as there is no overt complementizer (70):

(68) Maryu la poti kkattari
Mary it can buy (inf.)
'Mary can buy it'

(69) Karlu lu voli kkatta
Charles it wants (3.sg.) buys (3.sg.)
'Charles wants to buy it'

(70) *Lu voggyu ku kkattu
It want (1.sg.) C buy (1.sg.)
'I want to buy it'

As Terzi points out (1996:286), that restructuring occurs with finite clauses "should indeed be expected given that no analysis has so far been able to rule it out in a principled manner".

For the second proposed correlation between the lack of an overt complementizer and restructuring, Progovac shows that in Serbo-Croatian, certain matrix verbs (corresponding to restructuring verb in other languages) allow clitic climbing out of their finite complement clauses despite the presence of the overt complementizer *da* (1993:119), analyzed by Terzi as a restructuring effect on a par with Romance clitic climbing (1996:289f.):[9]

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accusative clitic *e* (which combined with the dative clitic *i* becomes *ja*) in the matrix clause. I am grateful to Giuseppina Turano for providing me with these examples.

[9] Progovac further shows that the complement clauses of verbs like *želeti* 'wish' are transparent also for negative polarity items and topic preposing (1993:117f.). She suggests an analysis where this transparency is caused by complement clause reduction at LF (1993:123). Since an alternative proposal to account for restructuring has been to posit reduced clauses (cf. Wurmbrand 2001:10f.), Progovac' analysis ultimately comes down to the same as Terzi's, although Terzi posits the competing analysis of verb/tense raising as the cause of restructuring.

The Serbo-Croatian data are somewhat complicated by the fact that the language appears to have two distinct complementizers *da*, shown by the (marginal) possibility of having them both occur in the same complement clause (Vrzić 1996:308f., Radišić 2006:13). Whether it is the higher or the lower *da* that appears in the complement of verbs such as *želeti* 'wish' is not clear. Vrzić 1996:304ff. assumes the lower based on Progovac' data, but Vrzić' own data for *wh*-movement (1996:294f.) shows that the *da* in the complement of *želeti* behaves like the higher complementizer *da* and not like the "modal complementizer" *da*. Progovac 1993 and Terzi 1996 both take the *da* in the complement of *želeti* to be the same as the complementizer *da* in other subordinate clauses (i.e. the higher *da*).

(71) ?Milan ga želi da vidi
Milan him wishes (3.sg.) C sees (3.sg.)
'Milan wishes to see him'

Parallel examples to (71) are also given by Radišić (2006:7f.):

(72) Deca je pokušavaju da čitaju
Children it try (3.pl.) C read (3.pl.)
'The children are trying to read it'

Finally, an argument against an overt complementizer blocking restructuring comes from Scandinavian. In these languages, mainly exemplified through Swedish in Wiklund 2007, there is a phenomenon by which a tenseless verb in a complement clause takes on the morphological finiteness of certain matrix verbs (73) (Wiklund 2007:1):

(73) Han försökte o skrev ett brev
He tried (past) C wrote (past) a letter
'He tried to write a letter'

As seen in (73), this verb copying, which Wiklund argues at length is a restructuring effect (2007:86ff.), occurs freely across what Wiklund analyzes as a complementizer *o* (2007:71ff.).

It will not be denied that in the languages most heavily investigated for restructuring phenomena, standard Romance and continental Germanic languages, restructuring seems to be impossible with finite clauses. Since restructuring can only happen in tenseless clauses, this correlation is probably a consequence of the fact that these languages do not exhibit tenseless finite clauses in the first place. As this section shows, once one begins to look at similar phenomena in other European languages (non-standard Romance, Balkan languages, Scandinavian), the impossibility of restructuring occurring with finite clauses is no longer present. How strong the correlation between restructuring effects and morphological non-finiteness is can only be answered through a larger cross-linguistic study. Since the facts in this section show that there is no a priori reason to assume that finiteness and restructuring are incompatible, the assumption that Norwegian exhibits verb raising in the cases under investigation remains. In the following sections, I will show that the complement clauses of perception verbs have the required properties for this verb raising to take place.

5.2 Complements of perception verbs are tenseless

As mentioned in section 5.1, the only consistent parameter in restructuring seems to be tenselessness in the restructuring complement. Given the claim in 4.3 and 5.1 that the finite complements of perception verbs have undergone restructuring, it necessarily predicts that these finite complements are tenseless, in spite of their morphological finite verbal forms. This section will show that this prediction holds: the finite complement clauses of perception verbs in Norwegian *are* in fact tenseless.

Much research has focused on non-finite complement clauses of perception verbs, and the fact that these complements are tenseless (cf. Felser 1999:38f., 158ff.). Although a similar scrutiny of the finite complement clauses of perception verbs is lacking, there are several examples from the literature showing that the tense interpretation of these finite complements is different from other finite complements. In section 5.2.1, I will highlight these examples before showing that the noted phenomenon is even more strongly present in Norwegian. In the next sections, the conclusion that these finite complements are tenseless is further backed by their unique behavior with respect to overt tense morphology and temporal interpretation.

5.2.1 Sequence of tense and simultaneous readings

The tense interpretation of a complement clause is to some extent dependent on the matrix tense. As an example, cf. (74):

(74) John said that Mary was pregnant

In (74), the tense interpretation of the complement verb *was* cannot be that it is in the future with respect to the matrix verb *said*. With the classic terminology from Enç 1987:635, this means that a complement clause with past tense morphology cannot, generally speaking, have a *forward-shifted* reading. This becomes evident by the use of time adverbials in (75):

(75) *John said in 1995 that Mary was pregnant in 1997

This clausal dependency does not occur in clauses that are not complements of the matrix verb (Enç 1987:638). This can be illustrated with a relative clause in (76), which can easily receive a forward-shifted reading (77):

(76) John spoke to the man who was crying
(77) Yesterday, John spoke to the man who was crying this morning

Returning to the complement clause in (74) with past tense morphology, the fact that the interpretation of the complement is ambiguous with respect to its tense interpretation has received a great deal of attention. The indirect speech report in (74) can in fact be the representation of two distinct direct speech quotes, shown in (74a) and (74b):

(74) John said that Mary was pregnant
(74a) John said: “Mary is pregnant”
(74b) John said: “Mary was pregnant”

With the terminology from Enç 1987:635, (74a) exhibits a *simultaneous reading*, and (74b) a *past-shifted* reading. Since the tense interpretation in (74b) involves an interpretation of the morphological past as a temporal past, it is as such expected and is basically not in need of a specific explanation. The ‘unexpected’ case is (74a), where the

past morphology in the complement clause is not interpreted as denoting a time before the matrix tense.

Since Abusch (1988:2f.) demonstrated that embedded morphological past tense under certain conditions does not express precedence with respect to anything, a common approach to explain the simultaneous reading in (74a) is that the complement clause under simultaneous readings is tenseless, and that it as a result takes on the temporal interpretation of the matrix clause, yielding simultaneity between the matrix and the complement clause.[10] There is a great variety of theories to account for why the clause is tenseless in the first place (an overview of these theories are given in Kusumoto 1999:48ff. and Khomitsevich 2007:58ff.). I will not go into this aspect of the phenomenon in this paper, but will simply take it as a fact that finite complement clauses can be tenseless. With respect to the fact that these tenseless forms show up with morphological past tense, I follow the traditional view, both in pre-generative and generative grammar, that the embedded verb takes on morphological past through a copying or agreement relation with the matrix past (cf. Jespersen 1954:152, Ross 1967:333, 1986:198, Comrie 1985:114, Kusumoto 1999:64). The case of simultaneous reading in a past-under-past construction is generally known as *sequence of tense*, or SOT, and I will refer to it as such in the following discussion.

The examples of SOT have so far been taken from English, where there is one noted condition for SOT to occur: the embedded clause must denote a state, and not an event (Enç 1987:635). As an example, cf. (78) and (79):

(78) John believed that Mary was pregnant
(79) John believed that Mary won the race

In (78), the complement clause denotes a state, 'be pregnant', whereas the complement clause in (79) denotes an event, 'win a race'. Following the condition for SOT mentioned above, SOT can occur in (78), but not in (79):

(78) John believed that Mary was pregnant
(78a) John believed: /Mary is pregnant/ (simultaneous reading)
(78b) John believed: /Mary was pregnant/ (past-shifted reading)

(79) John believed that Mary won the race
(79a) *John believed: /Mary wins the race/ (simultaneous reading not available)
(79b) John believed: /Mary won the race/ (past-shifted reading)

As noted by Barbara Partee (Kusumoto 1999:101), this condition is suspended when the matrix verb is a perception verb, as illustrated in (80):

[10] The term being given for tenselessness in these cases has been various, such as 'null tense' (Ogihara 1995:674), 'no tense' (von Stechow 1995:367), 'zero tense' (Kratzer 1998:101), 'vacuous tense' (Kusumoto 1999:82), 'unvalued tense' (Khomitsevich 2007:106) etc. There are naturally some crucial differences in the details behind these terms. I will not go into these details here.

(80) John saw that Mary won the race
(80a) John saw: /Mary wins the race/ (simultaneous reading)
(80b) John saw: /Mary won the race/ (past-shifted reading)

As seen in (80a), SOT occurs even if the complement clause denotes an event. Following the generalization that SOT is a result of a tenseless complement clause, this means that in English, perception verbs can select tenseless finite clauses in situations where other verbs cannot, as seen with *believe* in (79).

SOT does not exist in all languages. Languages that are usually mentioned as lacking this phenomenon are Russian and Hebrew (cf. Enç 1987:636). This can be straight forwardly illustrated with the Russian and Hebrew equivalent of (74):

Russian:
(81) Ivan skazal chto Masha byla beremenna
John said that Mary was pregnant
(81a) *John said: "Mary is pregnant" (simultaneous reading not available)
(81b) John said: "Mary was pregnant" (past-shifted reading)

Hebrew:
(82) Dan amar she-Dina hayta be-herayon
Dan said that-Dina was in-pregnancy
(82a) *Dan said: "Dina is pregnant" (simultaneous reading not available)
(82b) Dan said: "Dina was pregnant" (past-shifted reading)

As (81a) and (82a) show, a morphological past embedded under a matrix past cannot receive a simultaneous interpretation. As has been noted several times in the literature for Russian, however, SOT does arise when the clause is embedded under a perception verb (Boeck 1957:209f., 1958:214, Costello 1961:495, Barentsen 1996:20ff., 24, Altshuler 2004, Khomitsevich 2007:90ff.):

(83) Ivan uvidel chto Masha byla beremenna
John saw that Mary was pregnant
(83a) John saw: /Mary is pregnant/ (simultaneous reading)
(83b) John saw: /Mary was pregnant/ (past-shifted reading)

Sharvit (2003:673) claims in a footnote that in Hebrew, "a past-under-past sentence may sometimes receive a nonpast reading when the embedding verb is factive". Although no examples are provided, my data shows that this claim is true only when the factive verb is a perception verb:

(84) Dan ra'a she-Dina hayta be-herayon
Dan saw that-Dina was in-pregnancy
(84a) Dan saw: /Dina is pregnant/ (simultaneous reading)
(84b) Dan saw: /Dina was pregnant/ (past-shifted reading)

When the embedding verb is non-perception factive, SOT cannot obtain:

(85) Dan shaxax she-Dina hayta be-herayon
Dan forgot that-Dina was in-pregnancy
(85a) *Dan forgot: /Dina is pregnant/ (simultaneous reading not available)
(85b) Dan forgot: /Dina was pregnant/ (past-shifted reading)

The data from Russian and Hebrew show us again that perception verbs are able to select tenseless finite clauses in situations where other verbs cannot. The final language outside Norwegian I will give examples from in this section is Chinese. As is well known, Chinese does not possess tense morphology as such, but is nevertheless capable of expressing tense through the use of aspectual markers. One of these markers is the perfect marker *le*. When *le* is in an embedded complement clause, it modifies the embedded verb in the same way as past tense morphology does in other languages, as illustrated in (86) (the example is constructed based on an original sentence in Lin 2003:284):

(86) Zhangsan shuo Lisi chi le yi tiao she
Zhangsan say Lisi eat PERF. one CLASS. snake
(86a) *Zhangsan said: "Lisi eats a snake" (simultaneous reading not available)
(86b) Zhangsan said: "Lisi ate a snake" (past-shifted reading)

The relevant observation in (86) is that *le* cannot be interpreted as 'tenseless' in the complement clause (86a), and as a result, only a past-shifted reading of the embedded clause is possible (86b). Once again, however, when the matrix verb is a perception verb, the same embedded clause becomes tenseless. Unlike the languages we have looked at so far in this section, Chinese does not allow a past-shifted reading of these perception verb constructions. The simultaneous reading becomes obligatory (Lin 2003:284):

(87) Zhangsan kanjian Lisi chi le yi tiao she
Zhangsan see Lisi eat PERF. one CLASS. snake
(87a) Zhangsan saw: /Lisi eats a snake/ (simultaneous reading)
(87b) *Zhangsan saw: /Lisi ate a snake/ (past-shifted reading not available)

In sum, we have seen in English, Russian, Hebrew and Chinese that perception verbs are exceptionally able to select tenseless finite complement clauses. It is therefore time to show that this common effect is equally present in Norwegian.

Norwegian is generally speaking like English when it comes to SOT, except it applies to stative (88) and eventive (89) embedded predicates alike:

(88) Per sa at Kari var med barn
Peter said that Kate was with child
(88a) Peter said: "Kate is pregnant" (simultaneous reading)
(88b) Peter said: "Kate was pregnant" (past-shifted reading)

(89) Per sa at Kari åt ei pølse
Peter said that Kate ate a sausage
(89a) Peter said: "Kate eats a sausage" (simultaneous reading)
(89b) Peter said: "Kate ate a sausage" (past-shifted reading)

The effect of matrix perception verbs in Norwegian is similar to what we saw in Chinese in (87). With a matrix perception verb, the SOT reading becomes mandatory:

(90) Per så at Kari var med barn
Peter saw that Kate was with child
(90a) Peter saw: /Kate is pregnant/ (simultaneous reading)
(90b) *Peter saw: /Kate was pregnant/ (past-shifted reading not available)

(91) Per så at Kari åt ei pølse
Peter saw that Kate ate a sausage
(91a) Peter saw: /Kate eats a sausage/ (simultaneous reading)
(91b) *Peter saw: /Kate ate a sausage/ (past-shifted reading not available)

It is well known from English that many speakers cannot get a past-shifted reading in past-under-past constructions unless it is forced by adverbs (cf. Ogihara 1995:668, Kusumoto 1999:48). The adverbs employed in these tests are temporal adverbs such as *today*, *tomorrow*, *on Tuesday* etc. Using this approach for the sentences in (90) and (91) does not give felicitous readings in Norwegian:

(92) *I dag så Per at Kari var med barn i fjord
Today saw Peter that Kate was with child last year
'Today Peter saw that Kate was pregnant last year'

(93) *Per så i stad at Kari åt ei pølse i går
Peter saw a little while ago that Kate ate a sausage yesterday

These facts from Norwegian lead to the conclusion that the complements of perception verbs are obligatorily tenseless, since a past-shifted reading does not occur, not even with the help of sentential time adverbs. I will return to such adverbs in section 5.2.3, so it will suffice for the time being to note that the infelicity of (92) and (93) follows from the claim that such adverbs cannot modify tenseless clauses (cf. Wurmbrand 2001:74).

One important property of perception verbs is essential to mention in this context, namely that they are lexically ambiguous between *direct* perception and *indirect* perception (cf. Guasti 1993:150, Felser 1999:2). As it is simply a fact of the world that the past cannot be directly perceived (cf. Barentsen 1996:24, Khomitsevich 2007:93), it follows that the past-shifted readings in English (80b), Russian (83b) and Hebrew (84b) have a matrix verb of *indirect* perception. It would nevertheless be far from trivial to assign the effects of perception verbs noted in this section to such meta-grammatical properties,[11] as there is no obvious reason why speakers of Norwegian do not get

[11] Barbara Partee (in Lin 2003:308) suggests in order to explain the effect of perception verbs in Chinese noted in (87) that "the constraint associated with verbs like *kanjian* 'see' is possibly cognitive rather than

ambiguity between direct and indirect perception readings in (90) and (91), whereas speakers of Russian and Hebrew easily do in (83) and (84), unless these differences were a part of the grammar of these languages.[12]

The ideal test case would nevertheless be one where there is no possible interference from the nature of perception. In the next section, I will show that perception verbs do select tenseless finite complements in constructions where there is no possible conflict between the grammatical construction and the nature of perception.

5.2.2 Double access reading

In English, temporal simultaneity with respect to an embedding past verb can be expressed through other means than (74) – a past-under-past construction:

(74) John said that Mary was pregnant

English also allows a present-under-past construction. In a similar fashion to (74), the embedded proposition in (94) is interpreted as simultaneous with the matrix verb (94a):

(94) John said that Mary is pregnant
(94a) John said: "Mary is pregnant" (simultaneous reading)

What is special about a present-under-past construction is that the simultaneity of the proposition, in this case Mary's pregnancy, holds not only at the time of John's utterance,

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linguistic", (also Giorgi 2006:1031). Given recent human advancement, however, it seems clear that the special behavior of perception verbs has been *grammatically* encoded. A case where grammar and cognition are in conflict can be seen in (viii):

(viii) John saw Sirius A explode

With the background knowledge that Sirius A is more than eight light years away from us, we have no cognitive difficulties understanding that the explosion is prior to the seeing. Since, however, a non-finite complement of a perception verb not only must be tenseless and simultaneous with the matrix verb, but also forces the matrix perception verb to be unambiguously *direct* perception (Felser 1999:2f.), there is no way for the grammatical construction in (viii) to express the time relation that we nevertheless cognitively understand.

[12] Norwegian nevertheless exhibits indirect perception verbs. Such a reading occurs easily in situations where this would be the more natural interpretation regardless of the time relations. An illustration is seen in (ix):

(ix) Legen så i journalen at Kari var gravid
The-doctor saw in the-journal that Kate was pregnant
'The doctor saw in the medical records that Kate was pregnant'

In (ix), *så* 'saw' has an indirect perception reading, and the complement clause is now ambiguous between a simultaneous and past-shifted reading. The indirect perception reading in (ix) is default under any time relation between the matrix and the complement clause, as seen in (x) and in the English translation:

(x) Legen ser i journalen at Kari er gravid
The-doctor sees in the-journal that Kate is pregnant
'The doctor sees in the medical records that Kate is pregnant'

but also at the time of the utterance of the whole sentence itself. In plain words, for (94) to be a felicitous utterance, Mary had to be pregnant when John said she was, and she still needs to be pregnant when (94) is uttered. Since present tense is taken to express simultaneity (cf. Enç 1987:642, Stowell 2007:446), this means that the present tense of the embedded clause is 'accessed twice', once to express simultaneity with the matrix verb, and a second time to express simultaneity with the utterance time (Enç 1987:636f.). For that reason, this phenomenon is called *double access reading* (DAR).

DAR is strictly a grammatical rule. While some languages like English exhibit DAR, other languages, like Russian, do not. In Russian, present tense embedded under matrix past tense is evaluated only with respect to the matrix verb, and not to the utterance time. (95) is a felicitous sentence in Russian irrespective of whether Basil still loves Mary or not:

(95) Ivan skazal chto Vasja lubit Mashu
John said that Basil loves Mary

Returning to Norwegian, it once again pairs with English in having the DAR phenomenon, as illustrated in (96):

(96) Per sa at Kari er gravid
Peter said that Kate is pregnant

Just like in English, (96) can only mean that Kate was pregnant when Peter said so, and she is still pregnant at the utterance time of (96). Parallel to the cases with SOT illustrated in (90) and (91), DAR is in Norwegian equally present in stative (96) and eventive (97) predicates:

(97) Per sa at ho eter ei pølse
Peter said that she eats a sausage
'Peter said that she is eating a sausage'

Just as in (96), (97) must mean that she was eating a sausage when Peter said so, and she is still eating it at the time of the utterance of (97). The question now is what happens when a present tense is embedded under a matrix perception verb with past tense. In English, these sentences are grammatical, and they have a regular DAR:

(98) John saw that Mary is pregnant

In parallel to (94), (98) is felicitous only if Mary was pregnant when John saw her, and she is still pregnant at the utterance time of (98). The present tense *is* is therefore interpreted and accessed twice. In Norwegian, however, present tense cannot be embedded under a past matrix verb of perception, neither for statives (99) nor eventives (100):[13]

[13] One exception to this generalization is that complement clauses of so-called "universal temporal validity" (Comrie 1986:285) are allowed to surface with the present tense under a perception verb, as in (xi) below:

(99) *Per så at Kari er gravid
Peter saw that Kate is pregnant

(100) *Per så at ho eter ei pølse
Peter saw that she eats a sausage
'Peter saw that she is eating a sausage'[14]

Unlike the exceptional behavior of SOT under perception verbs discussed in 5.2.1, it is not possible to claim that the ungrammaticality and lack of DAR in (99) and (100) follow from the nature of perception or cognitive aspects. To take (99) as an example, it does not contradict the nature of perception that Peter visually perceived Kate's pregnancy at some point in the past, and that the pregnancy is still present at the time of the utterance of (99). Since there nevertheless is a sharp grammaticality distinction between (99) and the minimal pair sentence in (96), the reason for the ungrammaticality of (99) and (100) must be purely grammatical.

Following the conclusion from section 5.2.1 that perception verbs select tenseless finite clauses in Norwegian, the ungrammaticality of present-under-past in perception verb constructions follows as a natural consequence. Assuming the standard theory that present tense denotes simultaneity, sentences like (99) and (100) are ruled out simply because the morphological present tense in the complement is not 'empty', but is the marker for semantic simultaneity. Even though this would not create any uninterpretable instances of temporal relations, it is overruled by the grammatical requirement that verbs of direct perception select tenseless complements.[15]

If we return to SOT for a moment, it should be noted that another approach to explain a simultaneous reading in a past-under-past construction has been to claim that the embedded past tense is *morphologically* past, but *semantically* present (this is the traditional view argued against in Enç 1987, but renewed and defended in Stowell 2007). Unless a crucial distinction is made between simultaneity and tenselessness, however, as I do in this section, the fact that (99) and (100) are ungrammatical cannot receive an explanation that unifies it with the SOT facts noted in section 5.2.1. An approach of this

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(xi) Han så at jorda er rund
He saw that the-earth is round

Such cases are well-known for either exceptionally allowing or strongly preferring the present tense in many languages (cf. Comrie 1986:285, Khomitsevich 2007:98ff.). Following Khomitsevich 2007:101f., this effect is probably tightly related to Ogihara's observation in Japanese that the otherwise firm generalizations of temporal relations between clauses are weakened when the complement clause is a true proposition, suggesting that "the embedded clause is somehow moved in the syntax and is interpreted independently of the matrix clause tense" (1999:334). It lies outside the scope of this paper to discuss this problem further.

[14] For a real English example of DAR with a progressive present embedded under a matrix past verb of perception, cf. Howard Dean's comment "We even saw that he [John McCain] is trying to harass Barack Obama about [...]".

[15] The present tense cannot be tenseless when embedded under a matrix past tense, since tenseless finite verbs copy (or agree with) the tense morphology of the matrix verb (cf. section 5.2.1). Since the matrix verb in (99) and (100) is past, the morphological present tense on the embedded tenseless verbs would have no source to be copied from.

kind must say that the obligatory SOT in Norwegian (90) and (91) follows from a principle that direct perception verbs must select semantic present in their complements, but this requires an additional stipulation that this semantic present cannot be coupled with morphological present, in order to explain (99) and (100) – not mentioning that such a rule seems largely arbitrary in nature. By claiming that perception verbs select tenseless complements, as I do, both the SOT facts noted in the previous section and the DAR facts in this section fall out as natural consequences.

5.2.3 Temporal adverbs

As already touched upon in 5.2.1 above, there is a group of adverbs variously called 'sentential', 'time', 'temporal' or 'indexical' adverbs such as *yesterday*, *today*, *tomorrow*, *a while ago*, *on Tuesday*, *tonight* etc. The term 'sentential' refers to the fact that these adverbs generally modify a sentential clause, 'time' and 'temporal' refer to the inherent meaning of these adverbs, and 'indexical adverb' emphasizes the connection with indexical pronouns in that both expressions are defined by their non-linguistic context (cf. Kaplan 1989:489ff.).[16]

Temporal adverbs are standardly used as a diagnostics for tenselessness in clausal complements, either to show tenselessness in infinitival complements (Landau 2000:57, Wurmbrand 2001:74, Wiklund 2007:38f.), or tenselessness in finite complements (Varlokosta and Hornstein 1992:516, Krapova 2001:117, Landau 2004:831ff., Radišić 2006:9).

The test is to let a temporal adverb in the complement clause contradict either the tense morphology or another temporal adverb in the matrix clause. If the temporal contradiction gives a felicitous reading, it is taken as evidence for there being separate tenses in the matrix and complement clause, allowing them both to be modified by different means. As an example, take (101):

(101) John said this morning that he caught a fish yesterday

In (101), the temporal adverbs *this morning* and *yesterday* contradict each other, yet (101) is felicitous. This shows that *yesterday* modifies the complement clause alone – it does not scope over the matrix clause. With the assumption that a temporal adverb cannot modify a clause without tense, (101) is taken as evidence that the complement clause has semantic tense (in addition to the morphological tense of *caught*).

If the contradiction between the complement and the matrix clause gives an infelicitous reading, there is evidence for the complement clause being without tense. Since the classic example of a tenseless clause is a non-finite complement of a perception verb (see section 5.2.1), the temporal adverb test employed for such a construction should give an infelicitous reading.

[16] To illustrate the connection between the different indexical expressions, take the classic indexical 1.sg. pronoun 'I'. Its reference and content depend exclusively on the non-linguistic context. 'I' can only refer to the speaker, and no additional information is needed (I am abstracting away from the fact that exceptions to this, which Kaplan calls 'monsters' (1989:511), have been demonstrated to exist in some languages). Just like with indexical pronouns as 'I' and 'you', where the reference and content are given by the presence of the speaker, the time adverbs 'today' and 'tomorrow' get their reference and content by the utterance time of the speaker.

(102) Yesterday, John saw Mary kiss Bill (*two days ago)/(*today)/(*tomorrow)

In (102), the temporal adverb in the complement clause cannot contradict the temporal adverb in the matrix clause. Since the complement is tenseless, the embedded adverb can be interpreted only if it takes matrix scope. When it does, however, it contradicts the already present matrix adverb *yesterday*, and this contradiction cannot be resolved. The temporal adverb test therefore correctly predicts that (102) should be impossible.

In order to show that the distinction between (101) and (102) is due to the semantic tense of the complement clause and not the finite morphology, compare (103) and (104), both having a non-finite complement:

(103) This morning, John planned to leave tomorrow
(104) This morning, John tried to leave (*yesterday)/(*tomorrow)

In (103), the embedded adverb *tomorrow* is allowed to contradict the matrix adverb, so *tomorrow* modifies only the complement clause, which therefore has tense, despite its non-finite morphology. In (104), on the other hand, the embedded adverb cannot contradict the matrix adverb, irrespective of it being past or future. The complement of *try*, a classic restructuring verb, is therefore tenseless.

Also without any temporal adverb in the matrix clause, the adverb test can be used to test for tense in the complement clause by letting an embedded adverb contradict the tense morphology of the matrix clause:

(105) John saw Mary kiss Bill (yesterday)/(*tomorrow)
(106) John planned to leave (yesterday)/(tomorrow)
(107) John tried to leave (yesterday)/(*tomorrow)

Since past morphology of a matrix verb denotes a temporal past, an embedded adverb *tomorrow* will necessarily contradict the tense of the matrix clause. The sentences in (105)-(107) thus agree with the evidence from (102)-(104) that the non-finite complement of *see* and *try* are tenseless, whereas the complement of *plan* has tense.

Returning now to Norwegian, I will show that the finite complement clauses of perception verbs are tenseless by using the temporal adverb test, just as the same test has been used to show that certain finite complement clauses in the Balkan languages are tenseless (see the references above). Using the same complement 'that it rained', which can plausibly be the complement of both perception and non-perception verbs, (108) shows that a temporal adverb in the complement clause is allowed to contradict the tense of the matrix clause for non-perception verbs, but not for perception verbs:

(108a)	I dag	sa	Per	[at	det	regna	i fjord]
(b)	I dag	visste	Per	[at	det	regna	i fjord]
(c)	I dag	huska	Per	[at	det	regna	i fjord]
(d)	I dag	frykta	Per	[at	det	regna	i fjord]
(e)	I dag	så	Per	[at	det	regna	(*i fjord)]
(f)	I dag	hørte	Per	[at	det	regna	(*i fjord)]
(g)	I dag	kjente	Per	[at	det	regna	(*i fjord)]
	Today	V	Peter	that	it	rained	last year

sa 'said', *visste* 'knew', *huska* 'remembered', *frykta* 'feared', *så* 'saw', *hørte* 'heard', *kjente* 'felt'

The standard test of temporal adverbs thus shows that the finite complements of matrix perception verbs are tenseless.

5.2.4 Conclusion

The binding facts in section 3.2 showed that a reflexive can be bound long-distance when embedded in a complement of a perception verb. Following a suggestion by Reinhart and Reuland for 'medium-distance' binding, I propose that long-distance binding is possible when the tense of the complement has raised to the matrix tense. Tense raising is a standard approach to account for a variety of phenomena grouped together as 'restructuring'. Long-distance binding in Norwegian is therefore another effect of restructuring. A necessary condition for restructuring to take place is that the embedded clause is tenseless. The current proposal therefore predicts that the finite complements of matrix perception verbs are tenseless.

In section 5.2, I have shown through three different phenomena that these complements in fact are tenseless. Within the phenomenon of SOT, we saw that perception verbs, unlike any other matrix verb, force their complements to have a simultaneous reading, commonly analyzed as caused by tenselessness. For DAR, we saw that only perception verbs ban present tense clauses embedded under a matrix past, which naturally follows from the fact that present morphology denotes semantic simultaneity, and not tenselessness. Thirdly, by using the classic test for tenselessness – temporal adverbs – we see that a finite clause embedded under a perception verb cannot have a temporal adverb contradicting the tense of the matrix clause, whereas other matrix verbs allow it.

5.2.5 SOT and binding

Similar to English, the strongly preferred reading of any past-under-past construction in Norwegian is an SOT reading, also in cases such as (88) and (89). If SOT is a consequence of a tenseless clause, and Norwegian long-distance binding occurs out of tenseless finite clauses, this seems to predict that Norwegian allows the reflexive *seg* to be bound long-distance out of any embedded clause that allows an SOT reading. As should be clear from section 3.2, this is not the case. To illustrate this, cf. example (31), repeated below:

(31a) *Per$_i$ sa [at noen snakka om seg$_i$]
Peter said that someone talked about self
'Peter said that someone talked about him'

(31b) ?Per$_i$ hørte [at noen snakka om seg$_i$]
Peter heard that someone talked about self
'Peter heard that someone talked about him'

In both (31a) and (31b), the default temporal reading of the embedded clause is SOT. The crucial difference between (31a) and (31b) is, however, that a past-shifted reading can obtain in (31a), but not in (31b) (cf. section 5.2.1 and 5.2.3). Somehow the licensing of the embedded reflexive is sensitive to this very distinction – whether the tenselessness of the complement clause is optional or obligatory.

This situation can be likened to the interpretation of pronouns and reflexives. Whereas pronouns are free to be interpreted as free or bound variables, the bound reading is generally preferred when possible. Reflexives, on the other hand, are obligatorily bound. In a similar fashion, complements of non-perception verbs are free to be interpreted as tensed or tenseless, with a preferred tenseless reading. The complement of perception verbs, on the other hand, is obligatorily tenseless.

The choice between a free or a bound reading of a pronoun takes place in logical syntax, whereas the obligatory bound reading of a reflexive is caused by operations in narrow syntax (see section 4.1). Analogous with this distinction, I suggest that the optional simultaneous interpretation of an embedded clause takes place in logical syntax, while the obligatory tenseless interpretation of an embedded clause is due to the properties and behavior of the clause in narrow syntax.

That the optional SOT reading of a clause embedded under verbs such as 'say' takes place in logical syntax is not a new idea, it is in fact one of the standard proposals in the literature (cf. Ogihara 1995:673ff., Abusch 1997:12ff.).[17] That some clauses might have an obligatory SOT reading is hardly mentioned in the literature, but to judge from section 5.2.2, it is a valid assumption that there is a formal syntactic selectional restriction for perception verbs in Norwegian that they must select clauses without tense values, and it is conceptually preferable to posit that selectional restrictions for syntactic features such as tense values are located in narrow syntax.

That SOT might be the effect of either a bound reading in logical syntax or a binding operation in narrow syntax, depending on the properties of the SOT in question, is also not novel. Khomitsevich argues that SOT as it appears in English is caused by 'binding' in narrow syntax (2007:104ff.), whereas SOT in Russian takes place in logical syntax (2007:65ff., 97).

Nothing new needs to be said for the SOT effect in Norwegian embedded clauses with matrix non-perception verbs ((88) and (89)), as it behaves just like English SOT, for which a variety of theories have been proposed in the literature. What needs to be pointed out is that if it is correct that the optional SOT in these cases takes place in logical syntax, while the obligatory SOT is a result of the derivation in narrow syntax, then it

[17] Others propose that these SOT readings are caused by operations in narrow syntax (cf. Enç 1987:646, 2004:207f., Kratzer 1998:101). Yet others take no firm position in this question (e.g. von Stechow 1995, Stowell 2007).

automatically follows that the strucutural long-distance binding of *seg* in Norwegian can be sensitive to narrow syntax SOT. This becomes a natural consequence since it was concluded in section 4.1 that reflexive binding takes place in narrow syntax. As such, it is expected to interplay with other operations in narrow syntax, but not with interpretations that occur only after the syntactic derivation has been sent to the interfaces.

In conclusion, that long-distance binding of *seg* in Norwegian is sensitive to the distinction between optional and obligatory tenseless complements can be taken as independent evidence that the obligatory tenseless complements of perception verbs have been selected as such through purely syntactic operations.

6. Tense and binding in complements of *dream*

Many languages that grammatically encode evidentiality group the verb for 'dream' together with other verbs for direct perception (cf. Aikhenvald 2003:22, 2004:344ff.). As Aikhenvald phrases it, "The activity of dreaming is thus treated 'as a kind of subconscious visual experience'" (2004:345). Another way of conceptualizing the similarity between *dream* and other perception verbs is too treat *dream* as the perception of the 'dream world', whereas *see, hear, feel* etc. together constitute the perception of the 'real world'.

What makes the verb for 'dream' especially interesting in this context is that it groups with perception verbs in being about perception, but differs from them in not being a factive verb (Simons 2007:1036, Uli Sauerland p.c.).[18] This section will show that *dream* is similar to perception verbs in the relevant aspects of tense, and that it licenses long-distance binding out of its finite complement as perception verbs do.

6.1 Tense in the complement of *dream*

In section 5.2.1, we saw that perception verbs exhibit a special behavior with respect to SOT. We saw that in English, only perception verbs allow SOT for eventive complements. In languages where SOT is generally said not to exist, such as Russian and Hebrew, SOT nevertheless appears in complements of perception verbs. Finally, we saw that in Chinese, SOT is simply obligatory in a perception verb complement.

To start with English, the observed effect of a matrix perception verb was that it allows SOT in an eventive complement, something other verbs do not, as seen in the repeated examples (79) and (80) below:

(79) John believed that Mary won the race
(79a) *John believed: /Mary wins the race/ (simultaneous reading not available)
(79b) John believed: /Mary won the race/ (past-shifted reading)

[18] Some (Lakoff 1973:692f., Yule 1996:29) have treated *dream* as a counter-factive, which presupposes that its complement is false. I admit that I fail to see how such an analysis can be correct. It has lately been common to avoid the issue altogether by classifying it as a 'fiction verb', without discussing its relation to factivity (cf. Farkas 1992).

(80) John saw that Mary won the race
(80a) John saw: /Mary wins the race/ (simultaneous reading)
(80b) John saw: /Mary won the race/ (past-shifted reading)

Giorgi and Pianesi (2001:41f.) further show that the same exception occurs in complement clauses of *dream*, illustrated in (109):

(109) John dreamed that Mary won the race
(109a) John dreamed: /Mary wins the race/
(109b) John dreamed: /Mary won the race/

Then, we observed in the non-SOT languages Russian and Hebrew that SOT does occur in clauses embedded under perception verbs, as illustrated in the repeated examples (83) and (84):

Russian
(83) Ivan uvidel chto Masha byla beremenna
John saw that Mary was pregnant
(83a) John saw: /Mary is pregnant/ (simultaneous reading)
(83b) John saw: /Mary was pregnant/ (past-shifted reading)

Hebrew
(84) Dan ra'a she-Dina hayta be-herayon
Dan saw that-Dina was in-pregnancy
(84a) Dan saw: /Dina is pregnant/ (simultaneous reading)
(84b) Dan saw: /Dina was pregnant/ (past-shifted reading)

Russian does not have a verb for 'dream', but in Hebrew, exactly the same phenomenon occurs with *dream* as for perception verbs, in that SOT is also allowed there:

(110) Dan xalam she-Dina hayta be-herayon
Dan dreamed that-Dina was in-pregnancy
(110a) Dan dreamed: /Dina is pregnant/ (simultaneous reading)
(110b) Dan dreamed: /Dina was pregnant/ (past-shifted reading)

This Hebrew example offers naturally additional support to the claim in 5.2.1 that the possibility of SOT in Hebrew is not linked to factivity, as claimed by Sharvit.

Finishing the cross-linguistic survey once again with Chinese, we saw there that SOT is impossible in the complement of a verb like 'say' (86), but obligatory in the complement of a perception verb (87):

(86) Zhangsan shuo Lisi chi le yi tiao she
Zhangsan say Lisi eat PERF. one CLASS. snake
(86a) *Zhangsan said: "Lisi eats a snake" (simultaneous reading not available)
(86b) Zhangsan said: "Lisi ate a snake" (past-shifted reading)

(87) Zhangsan kanjian Lisi chi le yi tiao she
Zhangsan see Lisi eat PERF. one CLASS. snake
(87a) Zhangsan saw: /Lisi eats a snake/ (simultaneous reading)
(87b) *Zhangsan saw: /Lisi ate a snake/ (past-shifted reading not available)

As is expected by now, the complement clause of *dream* behaves similarly to the complement of *kanjian* 'see'. A past-shifted reading in (111) is clearly degraded according to my informants:

(111) Zhangsan mengdao Lisi chi le yi tiao she
Zhangsan dream Lisi eat PERF. one CLASS. snake
(111a) Zhangsan dreamed: /Lisi eats a snake/ (simultaneous reading)
(111b) ??Zhangsan dreamed: /Lisi ate a snake/ (past-shifted reading)

In Norwegian, we saw in 5.2.1 that past-shifting is allowed for all complements of non-perception verbs, but not for complements of perception verbs:

(88) Per sa at Kari var med barn
Peter said that Kate was with child
(88a) Peter said: "Kate is pregnant" (simultaneous reading)
(88b) Peter said: "Kate was pregnant" (past-shifted reading)

(89) Per sa at Kari åt ei pølse
Peter said that Kate ate a sausage
(89a) Peter said: "Kate eats a sausage" (simultaneous reading)
(89b) Peter said: "Kate ate a sausage" (past-shifted reading)

(90) Per så at Kari var med barn
Peter saw that Kate was with child
(90a) Peter saw: /Kate is pregnant/ (simultaneous reading)
(90b) *Peter saw: /Kate was pregnant/ (past-shifted reading not available)

(91) Per så at Kari åt ei pølse
Peter saw that Kate ate a sausage
(91a) Peter saw: /Kate eats a sausage/ (simultaneous reading)
(91b) *Peter saw: /Kate ate a sausage/ (past-shifted reading not available)

Once again, the verb for 'dream' matches the perception verbs in that the past-shifted reading cannot obtain:

(112) Per drømte at Kari åt ei pølse
Peter dreamed that Kate ate a sausage
(112a) Peter dreamed: /Kate eats a sausage/ (Simultaneous reading)
(112b) *Peter dreamed: /Kate ate a sausage/ (Past-shifted reading not available)

(113) Per drømte at Kari var med barn
Peter dreamed that Kate was with child
(113a) Peter dreamed: /Kate is pregnant/ (Simultaneous reading)
(113b) *Peter dreamed: /Kate was pregnant/ (Past-shifted reading not available)

Following the analysis of SOT in section 5.2.1, these facts point to the conclusion that the verb for 'dream' is similar to the perception verbs in selecting tenseless finite complements.

I will now move on to the classic test for tenselessness – the use of temporal adverbs to create conflicting tense interpretations. Unlike perception verbs, the verb for 'dream' does allow a conflicting temporal adverb in its complement, although these cases are slightly degraded:

(114) ?I natt drømte jeg at jeg dro på ferie i fjord
Tonight dreamed I that I went on vacation last year
'Last night, I dreamed that I went on vacation last year'

(115) ?I natt drømte jeg [at jeg ikke møtte opp til eksamen i går]
Tonight dreamed I that I not met up to the-exam yesterday
'Last night, I dreamed that I didn't show up for the exam yesterday'

This is at first glance surprising if the complement of *dream* is tenseless. It is important to realize, however, that this tense conflict is only a charade. Although *last night* and *last year/yesterday* conflict in time with regard to the real world, they would denote the same time in the dream world and hence not contradict each other. In other words, in the person's dream, *last year* actually takes place at the same time as the real world's *last night*. There are two pieces of evidence supporting the claim that the tense conflict in the examples above is not 'real'.

First, in spite of the conflicting temporal adverbs in (114) and (115), there is no past-shifting involved, as already pointed out in the SOT discussion above. That is, the vacation in (114) and the exam in (115) are not prior to the dreaming or at some previous point in the dream – they are taking place as simultaneous events with the dreaming.

The second piece of evidence comes from the fact that the complement of *dream* also allows an apparent forward-shifting:

(116) ?Jeg drømte i natt [at jeg strøyk på prøva i morra]
I dreamed tonight that I struck on the-test tomorrow
'I dreamed last night that I failed the test tomorrow'

As discussed in 5.2.1, complement clauses embedded under a matrix clause do not allow forward-shifting. It is clearly not an attractable solution to propose that the complement of the verb *dream* is exceptionally allowed to have independent tense and exhibit forward-shifting. This behavior would on the other hand be expected if we assume the explanation for the tense conflict above, namely that the conflict is only an apparent one, due to the special semantics involved with the verb *dream*. As such, the type of tense conflict in (116) with a conflicting future adverb in the complement is an argument in

favor of it being tenseless rather than a counter-argument, since we otherwise would need to revise the theory of complement tense as a whole.

A final observation that emphasizes the connection between perception verbs and the verb for 'dream' relates to the structure of their embedded clauses. As has been seen repeatedly in this paper for English, perception verbs can select not only finite clauses, but also bare infinitival clauses, meaning an infinitive without an infinitive marker, as seen in (117):

(117a) John saw that the player scored a goal
(117b) John saw the player score a goal

Exactly the same occurs in Norwegian, where the perception verbs *se* 'see', *høre* 'hear' and *kjenne* 'feel, sense' regularly select bare infinitival clauses as ECM verbs:

(118a) Jeg så at det brant
I saw that it burned

(118b) Jeg så det brenne
I saw it burn

With regard to the embedded verb, there is no distinction in meaning or temporal interpretation, a natural result of the facts laid out in section 5.2 that the finite complements of perception verbs are tenseless. *drømme* 'dream' is a verb that cannot select any other clause than a full finite clause, as exemplified numerous times in this section. In spite of this fact, constructed sentences with *drømme* behaving like an ECM verb selecting a bare infinitive clause are quite acceptable both to me and my informants:

(119) Jeg drømte Vegard Ulvang vinne et løp
I dreamed Vegard Ulvang win a race
'I dreamed that Vegard Ulvang won a race'

(120) Jeg drømte kirkeklokkene ringe
I dreamed the-church bells ring
'I dreamed that the church bells were ringing'

What is noteworthy about this behavior is that this is entirely impossible with any other verb otherwise selecting a finite clause, such as *si* 'say', *tru* 'believe', *veta* 'know', *gløme* 'forget', *frykte* 'fear' etc. Although I will not enter a theoretical discussion about this phenomenon, it seems clear that the judgment of (119) and (120) above as acceptable is a generalization from the fact that the perception verbs *se* 'see', *høre* 'hear' and *kjenne* 'feel, sense' can select both tenseless finite and tenseless non-finite clauses. Since *drømme* 'dream' is another, and to my knowledge the only other, verb that selects a tenseless finite clause in Norwegian, speakers are ready to allow the possibility for *drømme* to select a tenseless non-finite clause as well, in analogy with the pattern from perception verbs.

All taken together, the behavior of the complement clauses of *drømme* 'dream' with respect to SOT, tense interpretation and clausal structure shows that it behaves just like a perception verb. This is of course not surprising given the strong connection that exists between *dream* and perception, as underlined at the beginning of this section. It was concluded in section 5.2 that the behavior of perception verbs constitute evidence that their finite complements are tenseless, so by extension, the finite complement of *drømme* 'dream' is also tenseless.

6.2 Binding in the complement of *dream*

Since I make a crucial link between tenseless clauses and long-distance binding, the conclusion that the verb for 'dream' selects tenseless clauses in Norwegian makes the prediction that the same verb will license long-distance binding in its complement. This prediction holds true, as can be seen in the following examples:

(121a) *Reven$_i$ sa at noen jakta på seg$_i$
The-fox said that someone chased on self
'The fox said that someone was chasing/hunting him'

(121b) ?Reven$_i$ drømte at noen jakta på seg$_i$
The-fox dreamed that someone chased on self
'The fox dreamed that someone was chasing/hunting him'

(122a) *Hunden$_i$ trudde at noen leika med seg$_i$
The-dog believed that someone played with self
'The dog believed that someone was playing with him'

(122b) ?Hunden$_i$ drømte at noen leika med seg$_i$
The-dog dreamed that someone played with self
'The dog dreamed that someone was playing with him'

7. Tense and binding in non-finite clauses

The traditional approach to non-local binding in Norwegian has focused on the morphological finiteness of the embedded clauses, establishing the generalization that *seg* can be bound out of a non-finite clause, but not out of a finite clause (Hellan 1988:84, 1991:31). The previous sections have shown that non-local binding in Askim Norwegian is highly sensitive to the semantic tense of the embedded clause, seemingly unrelated to the finite status of the clause.

Since also non-finite clauses can be tensed or tenseless respectively (see the references in 5.1), the sensitivity for tense in Askim Norwegian binding naturally makes the prediction that non-local binding out of an infinitival clause is sensitive to the tense status of the infinitive. This section will show that this prediction holds. Infinitival clauses with tense are consistently worse with a non-locally bound *seg* than infinitival clauses that are tenseless.

In order to detect non-local binding out of infinitival clauses, the matrix verbs must necessarily be ECM or object control verbs. In a subject raising or subject control environment, an embedded *seg* would be bound by the higher subject simply by virtue of being bound by the coreferential local subject (whether this is a 'trace' or 'PRO'), as seen below in (123) and (124):

Subject raising
(123) Per_i ser ut til t_i å kikke rundt seg_i
Peter sees out to to peak around self
'Peter seems to look around himself'

Subject control
(124) Per_i risikerer PRO_i å få et tre over seg_i
Peter risks to get a tree over self
'Peter runs the risk of getting a tree over himself'

Based on the list of infinitives in Wiklund (2007:48, 53, 56, 63), the relevant infinitive-selecting verbs in Norwegian are the following:

(1) Selecting tensed clauses:	*be* 'ask', *beordre* 'order', *anbefale* 'recommend', *oppfordre* 'recommend' (Object control)
(2) Selecting tenseless clauses	*få* 'get', *se* 'see', *høre* 'hear', *kjenne* 'feel' (ECM) *la* 'let', *hjelpe* 'help', *tvinge* 'force', *lære* 'teach' (Object control)

The prediction borne out from the proposal in this paper is that clauses selected by the verbs in (2) will allow a non-locally bound reflexive *seg* to a higher degree than clauses selected by the verbs in (1).

The verbs in (1) and (2) are not equal in all aspects other than tense, though. As has been emphasized already, some are object control verbs, and some are ECM verbs. In addition, some select a bare infinitive, other select a non-bare infinitive, and others select a non-bare infinitive preceded by the preposition *til* 'to'. To demonstrate that Askim Norwegian is sensitive to the tense of these embedded clauses with respect to binding, I will start out by comparing sentences that have the same clausal structure in their complements, but differ only with respect to their semantic tense.[19]

From group (1), only the object control verb *be* 'ask, tell' selects a bare infinitive. In group (2), *la* 'let' is the only object control verb selecting a bare infinitive. When the embedded clause contains a non-locally bound *seg*, the sentence with *be* 'ask' is considered worse than the one with *la* 'let', as can be seen in the following example:

[19] The preferred selection of *hjelpe* in Askim Norwegian is having the preposition *med* 'with' plus a non-bare infinitive. Although *hjelpe* with only a non-bare or even a bare infinitive is possible, they are only marginally so. Since *hjelpe* would be the only verb selecting the preposition *med* 'with', it is excluded from the following comparisons since it cannot be ruled out that any judgment in favor or disfavor of a sentence with *hjelpe* is caused by this unique behavior.

(125a) *Lærerenᵢ ba elevene stå bak segᵢ
The-teacher told the-students stand behind self
'The teacher told the students to stand behind him'

(125b) ??Lærerenᵢ lot elevene stå bak segᵢ
The-teacher let the-students stand behind self
'The teacher let the students stand behind him'

anbefale 'recommend' is the only verb in group (1) that selects a non-bare infinitive, whereas *lære* 'teach' is the only object control verb from group (2) with a non-bare infinitive. Also in this case, the verb from group (2) is somewhat more acceptable than *anbefale* 'recommend' from group (1):

(126a) *Farenᵢ anbefalte barna å lytte til segᵢ
The-father recommended the-children to listen to self
'The father recommended the children to listen to him'

(126b) ??Farenᵢ lærte barna å lytte til segᵢ
The-father taught the-children to listen to self
'The father taught the children to listen to him'

The last two verbs from group (1), *beordre* 'order' and *oppfordre* 'recommend, encourage' select the preposition *til* 'to' plus a non-bare infinitive. From group (2), only *tvinge* 'force' is an object control verb with this property. The following par compares *beordre* with *tvinge*:

(127a) *Lærerenᵢ beordra elevene til å stå bak segᵢ
The-teacher ordered the-students to to stand behind self
'The teacher ordered the students to stand behind him'

(127b) ?Lærerenᵢ tvang elevene til å stå bak segᵢ
The-teacher forced the-students to to stand behind self
'The teacher forced the students to stand behind him'

The ECM verb *få* 'get' in group (2) also selects *til* + non-bare infinitive. Since there are no ECM verbs in group (1), I will need to compare *få* with the object control verb *oppfordre* in group (1) in order to let *få* be compared with anything at all:

(128a) *Lærerenᵢ oppfordra elevene til å gi hjemmeleksene til segᵢ
The-teacher encouraged the-students to to give the-homework to self
'The teacher encouraged the students to give the homework to him'

(128b) ??Lærerenᵢ fekk elevene til å gi hjemmeleksene til segᵢ
The-teacher got the-students to to give the-homework to self
'The teacher got the students to give the homework to him'

The last three ECM verbs in group (2) are the perception verbs. As mentioned in section 6.1, they all select bare infinitives. Since there are no ECM verbs in group (1), and *be* 'ask' is the only verb in that group that selects a bare infinitive, a comparison between *be* and perception verbs is the closest we can get to a minimal pair between a tensed and a tenseless non-finite clause involving perception verbs. As is expected by now, a non-locally bound *seg* in a tenseless clause selected by perception verbs are judged to be considerably better than the equivalent with *be* 'ask, tell':

(129a) *Læreren_i ba elevene stå bak seg_i
The-teacher told the-students stand behind self
'The teacher told the students to stand behind him'

(129b) Læreren_i så elevene stå bak seg_i
The-teacher saw the-students stand behind self
'The teacher saw the students stand behind him'

(130a) ??Per_i ba noen stå bak seg_i
Peter told someone stand behind self
'Peter told someone to stand behind him'

(130b) Per_i hørte noen stå bak seg_i
Peter heard someone stand behind self
'Peter heard someone stand behind him'

(131a) *Han_i ba noen kile seg_i
He told someone tickle self
'He asked someone to tickle him'

(131b) ?Han_i kjente noen kile seg_i
He felt someone tickle self
'He felt someone tickling him'

All the examples in this section have shown that verbs selecting a tenseless infinitive (group 2) allow *seg* to be bound out of the embedded clause to a higher, sometimes considerably higher, degree than the verbs selecting a tensed infinitive (group 1). These facts confirm therefore the prediction that was born out from the previous sections, namely that long-distance binding of *seg* in Askim Norwegian is licensed in tenseless complements, whether they be finite or non-finite.

8. Conclusion

The Norwegian data in this paper has shown that both finite and non-finite complement clauses of perception verbs allow non-local binding of the reflexive *seg* to a higher degree than the equivalent clauses of non-perception verbs. In some way or another, these clauses must have a different property than other clauses. By employing several tests for

tense, I have shown that the complement clauses of perception verbs are different in being *tenseless*.

I have followed the movement approach to reflexive binding, where it is argued that the reflexive moves to the tense projection, where it is in a local configuration with its binder (the subject). It follows that in long-distance binding, the embedded reflexive must have moved to the matrix clause together with the embedded tense.

The link between tenseless complements and long-distance binding in Norwegian is captured within this movement approach, as it has been independently argued that there is a T-to-T movement of the embedded tense in precisely tenseless complements.

Tying non-local binding of *seg* with the tenselessness of the complement clause makes the prediction that also matrix non-perception verbs can license *seg* in their complements, as long as they select tenseless clauses. In the last two sections, I have shown that this prediction is indeed borne out.

9. Appendix 1: Binding without movement

Starting with Lebeaux 1983:726f. and Chomsky 1986:175f., a popular approach to account for binding has been to propose covert movement of the reflexive to the local domain of the binder. Especially in the literature dealing with structural long-distance binding, reflexive movement has been the standard approach.[20] Chomsky proposes within his early minimalist framework that movement operations happen to check off syntactic features, either through movement of syntactic objects (1993:28ff.) or formal features (1995:230f., 360ff.). Reuland 2001a establishes in a principled manner how Chomsky's theories of feature checking through movement can account for binding. It is this theory I have taken as a basis in this paper.

In Chomsky 2000:123 and subsequent papers, Chomsky seeks to replace the idea that feature checking can take place through movement of formal features with the operation *Agree*. In *Agree*, a syntactic item with an unvalued feature α scans the domain it c-commands to find another item with α valued in order to agree with it. The searching syntactic item is called a *probe*, and the target a *goal*. With *Agree*, the goal checks off the unvalued feature of the probe without any movement taking place. For further details I refer to Chomsky 2000:122ff., 2001:4ff.

Irrespective of whether *Agree* is theoretically and empirically more adequate than a movement analysis (see Lasnik 2002 for a discussion), it is now a standard approach within Chomskian syntax to account for various phenomena with *Agree*. Binding is no exception. Reuland (2005:510f.) lays out the basic idea for how binding can be accounted for with *Agree* rather than movement, and a more substantial account for binding with *Agree* is found in Heinat 2006.

It is a natural question if the Norwegian binding facts laid out in this paper can be accounted for with *Agree* as proposed in Reuland 2005 and Heinat 2006 rather than with movement as in Reinhart and Reuland 1991 and Reuland 2001a. This section will address this issue.

[20] Cf. Pica 1987:490f., Battistella 1989:987, Cole and Sung 1994:356, Cole, Hermon and Huang 2001:xxxviiiff., Safir 2004:159ff.

9.1 Binding across phases

With the introduction of *phases* and the notion of impenetrability of phases (PIC),[21] it is a non-trivial matter how structural long-distance binding can take place at all without movement. Structural long-distance binding without movement would by its very definition enter an *Agree* relation across phases, which by the PIC should be ruled out. Although the problem of 'dependencies across phases' is sought resolved in Khomitsevich 2007:104ff. by expanding on Reuland's (2005:511) idea of 'feature dependency extensions', it is still according to Khomitsevich incompatible with Chomsky's phase theory (2007:106):

> Note that this modification is not compatible with the strictest interpretation of phase theory: however, this is a very general problem that arises in theories of anaphora resolution: although a phase is supposed to be sent off to the interfaces and made unavailable to the further computation, pronominal elements inside it still have to be accessible if their interpretation depends in elements in higher phases.

In order to solve this dilemma, it is necessary to either return to a movement analysis of reflexives, or revise the theory of phases.

9.2 Binding in double object constructions

Another argument in favor of reflexive movement is valid irrespective of the validity of phases: One of the hallmarks of the theory of reflexive movement is that it without further stipulation accounts for the fact that reflexives, especially simple reflexives that can be bound long-distance, as a rule are subject-oriented.[22] This is often illustrated with a double object construction, where the reflexive is bound by the subject and not the closer c-commanding object. This is also the case in Askim Norwegian, as exemplified below:[23]

(132) Han_i sendte kongen_j et bilde av $\text{seg}_{i/*j}$
He sent the-king a picture of self
'He sent the king a picture of himself'

(133) Han_i ga kongen_j et bilde av $\text{seg}_{i/*j}$
He gave the-king a picture of self
'He gave the king a picture of himself'

The double object configuration is highly relevant for the long-distance binding cases discussed in this paper, since they share the fact that a deeply embedded reflexive 'skips' a closer c-commanding DP in the search for an antecedent. In the double object

[21] According to Chomsky, CP and *v*P are phases. I will not go into a discussion of phases or the PIC here, see Chomsky 2000:106ff. and 2001:11ff.
[22] Cf. Chomsky 1986:174f., Pica 1987:487f., Battistella 1989:988, 993, Reinhart and Reuland 1991:301f., Cole and Sung 1994:359ff., Cole, Hermon and Huang 2001:xxxv, Safir 2004:161, Büring 2005:58f.
[23] For the subject-orienthood of *seg* in Norwegian, see Hellan 1988:73f., 77ff., Dalrymple 1993:31, Safir 2004:13, 67.

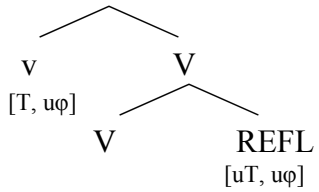
construction, it skips the object and targets the subject, whereas in long-distance binding, it skips the local subject and targets the matrix subject. I will return to this issue in section 9.3.2.

With an *Agree* approach, the double object construction poses a major problem. Following Reuland's approach with object shift (2005:511), the reflexive is predicted to be left without a binder. In Heinat's model, where DPs are allowed to probe (2006:21ff.), the prediction is that the closest DP that can enter a φ-feature agree relation with the reflexive will bind it, and thus predict *object* orientation as a rule.

To illustrate how these are the unwanted predictions for Reuland 2005 and Heinat 2006, it is necessary to first point out that both Reuland and Heinat follow Pesetsky and Torrego's modification of Chomsky's *Agree* (Reuland 2005:510, Heinat 2006:107ff.). According to Pesetsky and Torrego, an unvalued feature α will probe and agree with an unvalued feature α on the goal (2007:268f.), whereas in Chomsky's model, *Agree* can only take place when the goal has a valued feature α (2001:3).

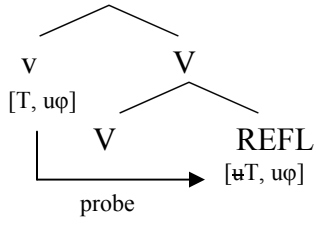
Following Pesetsky and Torrego's feature valuation system and their own view that reflexives are unvalued for φ-features (2005:510, 2006:83), Reuland and Heinat propose the following uncontroversial structure for a sentence with a reflexive before the subject is merged in spec-*v*:[24]

(134)



In (134), the unvalued φ-feature [uφ] on *v* makes it probe. It agrees with [uφ] on the reflexive, and values the unvalued T feature as a consequence of the Agree relation (cf. Pesetsky and Torrego 2001:361):

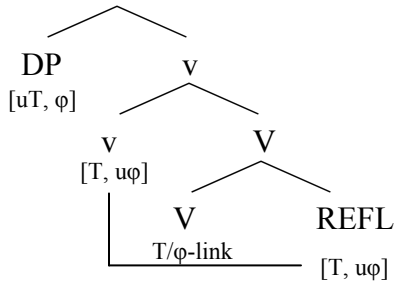
(135)



[24] Valued features are unmarked, unvalued features are marked 'u'.

In Pesetsky and Torrego's model, the agree relation between *v* and REFL has resulted in *v* and REFL sharing the feature they have agreed on (2007:268f.). Following Reuland (2005:510), I will call a shared feature as a result of agreement a *link*. Then the subject is merged in spec-*v*:

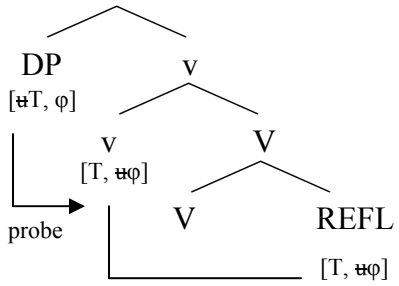
(136)



9.2.1 Heinat 2006

In Heinat's model, where phrases probe, the unvalued [uT] will make the subject probe. It finds the valued T feature in v-REFL and agrees with it. Since the subject carries a valued φ-feature, this will value the [uφ] on v-REFL:

(137)



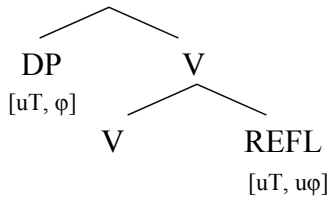
The reflexive's φ-features have now been valued by the subject, and as a consequence, it is interpreted as a bound variable (2006:104).

The question now is how this procedure works under a double object construction as in (132) and (133) above. For this exposition, I use Chomsky's widely assumed 'light verb' version of the 'Larsonian shell' (cf. Larson 1988:342ff., Chomsky 1995:315, Hornstein, Nunes and Grohmann 2005:96ff.), where the indirect object in the specifier position c-commands the direct object in the complement position (cf. Adger 2003:130f., Beck and Johnson 2004:101ff.),[25] an analysis also adopted for Scandinavian double

[25] I am largely ignoring the question whether there is any transformational relation between the double object construction and the ditransitive construction with a prepositional phrase. For this exposition, I am following Holmberg and Platzack (1995:194), Beck and Johnson 2004, and Heinat (2006:41ff., 126f.) in assuming that in a double object construction, the indirect object is *base generated* in the specifier position c-commanding the direct object in the complement position. For arguments against a transformational relation, see ibid. and references therein. For a summary of literature related to this issue, see Emonds and Whitney 2006.

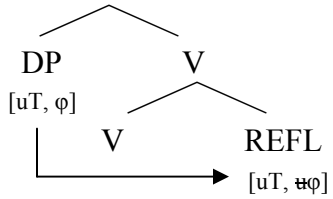
object constructions (Holmberg and Platzack 1995:190ff., Heinat 2006:126f.). In such a construction, the indirect object is merged to the structure before *v* is:

(138)



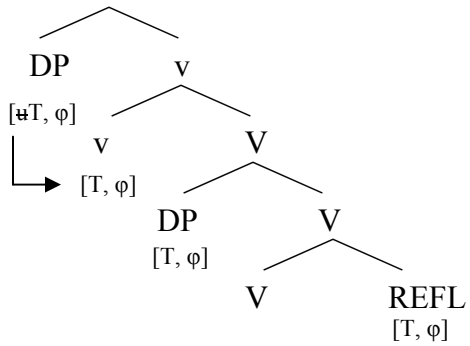
Since phrases probe in Heinat's model, the indirect object will by virtue of its unvalued T-feature probe and agree with the reflexive:

(139)



Since the indirect object carries valued φ-features, it will value the reflexive, which consequently should be interpreted as coreferent with the indirect object. At the time when the subject is merged to the structure, it cannot provide the reflexive with φ-features, and as a result it will not bind it:

(140)



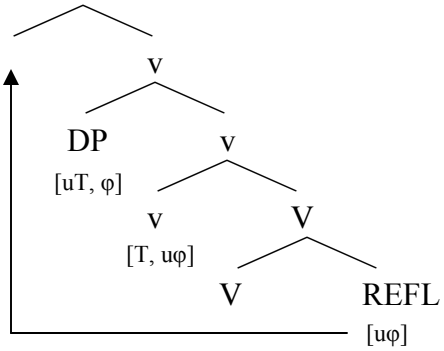
This model therefore incorrectly predicts that reflexives as a rule are *object* oriented, and will not be bound by subjects in constructions with an intervening object. It is clear that this problem emerges as a result of having the indirect object probe and agree with the reflexive. Since it is the unvalued T-feature on the DP that makes it probe, Heinat seeks to avoid the unwanted prediction of not allowing the subject to bind in double object constructions by proposing that the indirect object can be merged to the structure either

without a T-feature altogether, or with an already valued T-feature, both to prevent the DP from probing (2006:128), but admits that this analysis is "problematic" (2006:129).

9.2.2 Reuland 2005

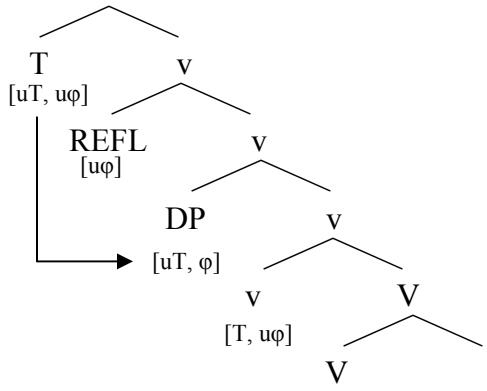
Moving on to Reuland 2005, he differs from Heinat in that he follows Chomsky's original claim that only heads probe (Chomsky 2000:101, Pesetsky and Torrego 2007:265). At the stage of (136) above, then, the subject does not probe, and the reflexive has yet to get its φ-features valued. Instead, Reuland lets an EPP-feature on *v* raise the reflexive to its specifier (2005:511):[26]

(141)



The T head is then merged to the structure. It has an unvalued T-feature, which makes it probe and agree with [uT] on the subject, establishing a T-link:

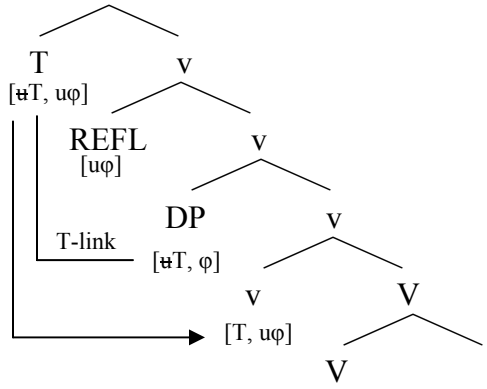
(142)



[26] Reuland does not mention the T-feature on the reflexive, which I take to mean that he assumes it has none. The reflexive is therefore marked here as only having unvalued φ-features.

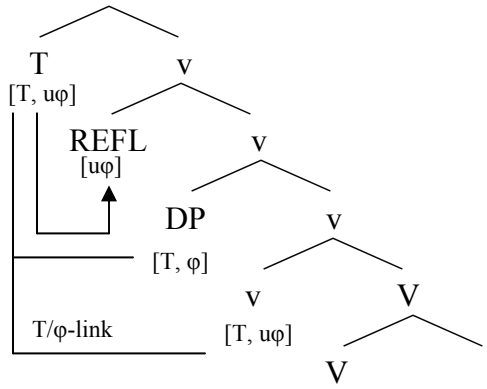
Since the T-feature in the T-link is still unvalued, T probes again and agrees with the valued T-feature on *v*, which values the T-link:

(143)



The T-link, or 'T-dependency' in T-DP-*v* 'extends' here to a φ-feature dependency (2005:511). It is unclear to me exactly what kind of operation 'feature extension' is, but an any rate, this extension will establish a φ-link in T-DP-*v*.[27] Since T also has unvalued φ-features, T probes and agrees with [uφ] on the reflexive:

(144)

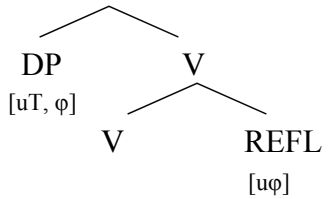


As a result of these probings, there is a φ-link in T-REFL-DP-*v*. Since the subject DP has valued φ-features, it will replace all the unvalued φ-features in the φ-link with its valued features, crucially including the reflexive. After this process, the 'instructions for interpretation' are now the same for the reflexive as for the φ-features of the subject, resulting in 'binding'.

Let us now see how this derivation would proceed in a double object construction as illustrated above. As we saw above in (138), the indirect object is merged in spec-V before *v* is merged:

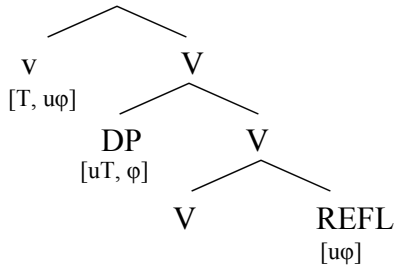
[27] The necessity for this extension is brought forth by the need to avoid the φ-features on *v* to remain unvalued (2005:511).

(145)



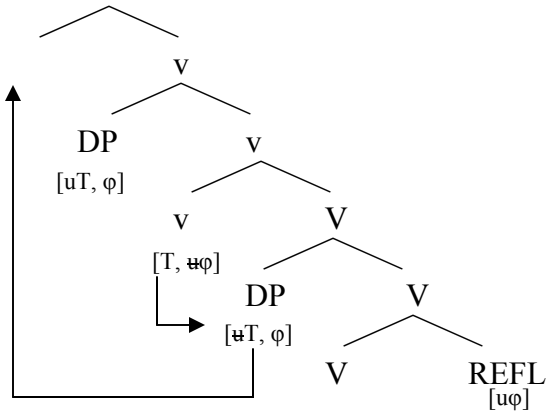
Since phrases do not probe in Reuland's model, nothing happens until *v* is merged:

(146)



Not only will the unvalued φ-features on *v* make it probe and agree with the indirect object, but *v*'s EPP feature will also probe, agree and consequently raise the indirect object to its specifier:

(147)



The rest of the derivation follows in a similar fashion to what has been described above. The crucial difference between the double object construction in (147) and the construction in (141/144) is that the reflexive has not been a goal for any probe, hence it will not enter any link with items higher up the structure. As a result, it is left hanging and will not get its φ-features valued, incorrectly predicting that a derivation with a double object construction with a reflexive as the direct object will crash.

Unlike Heinat, who needs the indirect object to be inactive as a probe when the subject binds the reflexive, Reuland's model needs the indirect object to be inactive as a

goal, at least for *v*'s EPP-feature and presumably also for its unvalued φ-features, resulting in *v* targeting the reflexive instead of the indirect object. A language like English poses an additional problem for Reuland's model, since the c-commanding indirect object is able to bind the reflexive, which in Reuland's *Agree* approach would require there to be a feature link between the indirect object and the reflexive, and at the same time preventing a link between the subject and the reflexive to be valued by the subject's φ-features. These problems are far from trivial. Since Reuland does not address them in his paper, I will not discuss here to what extent certain stipulations are possible and what the theoretical and empirical costs of these stipulations would be.

9.3 Long-distance binding by feature extension

As mentioned in section 9.1, it is not immediately obvious how the features of a reflexive can be valued across clausal (or phase) boundaries without movement. As the Norwegian data in this paper has shown, one factor greatly contributing to the possibility of such long-distance binding is the tense of the complement clause. Disregarding the problems noted above that *Agree* poses for binding, the question becomes if *Agree* can capture the link between tenseless complements and long-distance binding in the same way as movement can.

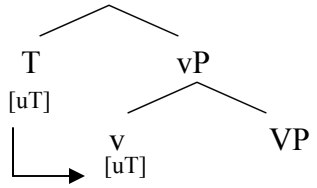
An *Agree* approach to tenseless complements in SOT is laid out in Khomitsevich 2007. She builds on the *Agree* model developed in Reuland 2005 and Pesetsky and Torrego 2007 (Khomitsevic 2007:48), and it will therefore serve as the best point of departure to see if an *Agree* model for binding and an *Agree* model for tenseless complements can be combined to explain the Norwegian facts in this paper.

9.3.1 SOT by feature extension – Khomitsevich 2007

In order to explain the tenselessness of the complement clause in SOT constructions, Khomitsevich assumes that *v* has entered the derivation with an unvalued T-feature (2007:106). In the course of the derivation, this T-feature on *v* in the complement clause is valued by the valued T-feature on *v* in the matrix clause. Since the matrix verb and the complement verb now share their T-feature, they are interpreted as being simultaneous (2007:107). I will now illustrate how this derivation proceeds.

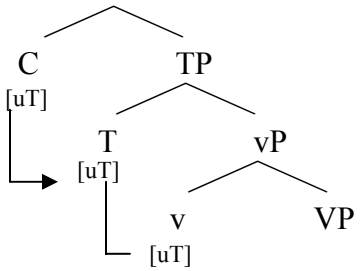
At the point when T is merged to the structure, the unvalued T-feature on T will probe and agree with the unvalued T-feature on *v* (the subject DP is omitted in the illustration):

(148)



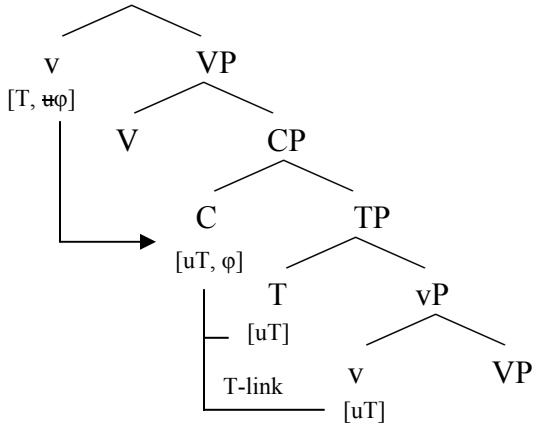
Then C is merged. Its unvalued T-feature will probe and agree with the T-link in T-*v*:

(149)



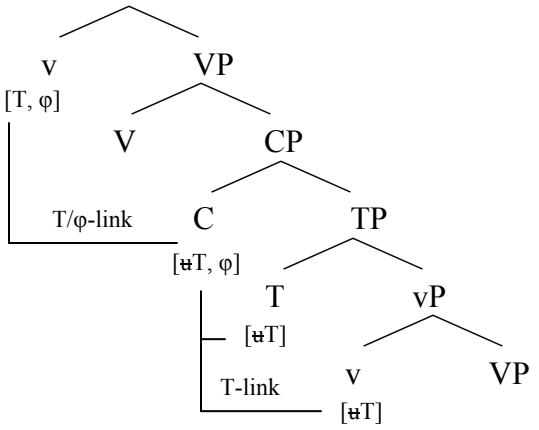
Then the matrix V and *v* are merged with C. According to Khomitsevich, "[CP] is then attracted by the v head to value v's object agreement φ-features. Thus, an agree relation between v and C is established" (2007:106), which means that C at the time of the merger of matrix *v* carries valued φ-features (cf. Pesetsky and Torrego 2001:384):

(150)



Following the valuation system in Pesetsky and Torrego (2001:361), the valued T-feature on matrix *v* should by *v*'s probing value [uT] on C and consequently the T-link in C-T-*v*. Although Khomitsevich follows Pesetsky and Torrego elsewhere, here she invokes Reuland's 'feature extension' and claims that the 'φ-feature dependency' in *v*-C extends to a 'T-feature dependency', and first then *v* can agree with and value C's T-feature:

(151)



9.3.2 Long-distance binding

The question now is if the linking established in (151) by the probing in (148)-(150) can help to explain how a reflexive in the VP complement of the subordinate clause can receive valuation of its φ-features from the matrix clause. There are several reasons to believe that it cannot.

First it is important to emphasize that the probing and agree relations in (148)-(151) will take place regardless what the value of the embedded *v* is. Whether or not *v* has a value for its T-feature will not affect the probing activity of items higher up the structure. There will consequently *always* be a continuous feature linking between the matrix *v* and the subordinate *v*. Since a 'link' from the embedded clause to the matrix clause would always be present, these feature extensions will not be able to explain why a matrix valuation of the φ-features on the embedded reflexive in Norwegian should be sensitive to the value of the T-feature on the embedded *v*. In other words, there does not seem to be anything in Khomitsevich' *Agree* system that will make perception verbs special in a way that can be relevant to an embedded reflexive.

Another problem is how to ensure that the embedded reflexive does not get its φ-features valued until it is probed by the matrix subject. Not only does the reflexive need to escape evaluation of the local subject, but also of the probing embedded C, which in Pesetsky and Torrego's and Khomitsevich' feature system is endowed with valued φ-features.

It is exactly a construction with an embedded reflexive valued by the matrix subject that Heinat (2006:124) tries to rule out in a principled manner by claiming that "if there is an intervening DP [...], the matrix subject will never be able to Agree with [...] [the] reflexive", although he concedes that the supposedly ungrammatical Swedish example is accepted by some of his Swedish speakers (2006:123). Interestingly, the example he tries to rule out, but some of his informants nevertheless allow, is an ECM construction with a matrix perception verb, a construction that is generally deemed acceptable also in Norwegian (see section 7):

(152) *Lisa$_i$ såg Bart slå sej$_i$
Lisa saw Bart hurt self

Remember that long-distance binding in Norwegian and binding out of non-finite clauses in Icelandic is structural binding, and not logophoric binding (see section 4.2). And yet, in both of these languages, there are just such constructions where either the higher or the lower subject can bind the embedded reflexive, in clear violation with Heinat's principle:

Icelandic
(153) Pétur$_i$ bað Jón$_j$ um að PRO$_j$ raka sig$_{i/j}$
Peter asked John for to shave self
'Peter asked John to shave him/himself' (Thráinsson 2007:474)

Norwegian
(154) Per$_i$ kjente at noen$_j$ la et håndkle rundt seg$_{i/j}$
Peter felt that someone laid a towel around self
'Peter felt that someone put a towel around him/themselves'

It is not possible in the *Agree* model to let the reflexive be valued by a probe in the subordinate clause first, and then all over again by a probe in the matrix clause. This follows from the *Agree* stipulation that once the features of a goal have been checked, the goal becomes *inactive*, i.e. it has no longer the status as a goal in the following derivation of the sentence, as explicitly stated in Chomsky 2004:115:

> P[robe] and G[oal] must be *active*: once their features are checked and deleted, these elements can no longer enter into the Agree relation; the Case-checked subject of a finite clause, for example, cannot check uninterpretable features of the next higher phase head or raise to this position.

Under the reading where the higher subject is the binder, (153) and (154) would consequently require extra stipulations in order to prevent the embedded subject from probing, in a parallel fashion to Heinat's suggestion to optionally deprive indirect objects of their probing status (se 9.2.1).

In the movement approach to feature checking, on the other hand, nothing prevents a reflexive from being valued in both the lower and the higher clause. Chomsky and Lasnik establish a "UG principle of *recoverability of deletion*, which requires that no information be lost by the operation" (1993:522, Chomsky 1995:280). This principle is adhered to in Reuland's theory of binding (2001a:454ff.) in order to explain why a locally bound pronoun loses to a locally bound reflexive (2001a:458f.).

To take the Norwegian sentence in (154) as an example, the embedded reflexive *seg* will by the binding procedure outlined in section 4.1 be bound by the local subject *noen* 'someone'. Furthermore, it has been established in this paper that there is an independent movement of the embedded verb to the matrix T, a movement that raises the embedded reflexive with it by incorporation. The reflexive has at this point had all its φ-features checked, deleted and recovered by the local subject, but it finds itself again in a checking configuration with a DP by being in a spec-head relation with the matrix subject. Since all the φ-features of the reflexive are recovered from the embedded subject, no information will be lost if the reflexive again has its φ-features deleted and recovered, now by the matrix subject. All the information present in the derivation has been retained,

since the reflexive will not have lost any φ-features that are not present elsewhere in the structure.

Since the reflexive by a checking procedure with the local subject will be endowed with a full set of interpretable φ-features, the derivation will not crash even if it does not enter a second feature checking with the matrix subject (cf. Chomsky 1995:278, 285). The choice between a lower and a higher binder is consequently left to pragmatics. If a coreference between the reflexive and the matrix subject is the pragmatically more salient reading, the derivation proceeds as described above. If a coreference between the local subject and the reflexive is more salient, the reflexive does not get its φ-features deleted and recovered by the higher subject, as this would not be a syntactically required operation.

9.4 Summary

This appendix has outlined some recent approaches to binding and tenseless complements, all within Chomsky's current framework of feature checking through *Agree* rather than feature checking through movement. As I have demonstrated, binding without movement poses several problems that can be summed up as follows:

- Reflexives in situ would need to be accessible for interpretation across phase boundaries, in violation of the PIC
- Reflexives in situ cannot without extra stipulations be bound by the subject in double object constructions
- Reflexives in situ that are structurally long-distance bound need to escape the evaluation of elements with valued φ-features in the local clause

Additionally, when the *Agree* approach to binding is coupled with an *Agree* approach to clausal tenselessness, there does not seem to be any obvious reason why the two should interact, whereas this link is automatically captured in a movement approach.

10. Appendix 2: Restructuring in Norwegian

Although there is no a priori reason to expect other restructuring effects to occur in Norwegian,[28] it would nevertheless be supportive of the claim in this paper that non-local binding out of tenseless clauses is a restructuring effect that there were independent reasons to believe that the language exhibits restructuring. One such case was already alluded to in section 5.1, where a Scandinavian verb copying phenomenon was illustrated, repeated in (155) below:

Jämtland Swedish

(155)	Han	försökte	o	skrev	ett	brev	
	He	tried (past)	C	wrote (past)	a	letter	

'He tried to write a letter'

[28] Cf. also Wiklund "Considering the fact that restructuring effects, not restructuring/clause union per se, are dependent on language specific factors, the absence of the above transparency effects [long NP-movement, auxiliary change, clitic climbing, long-distance scrambling, long passive] in Swedish is not surprising" (2007:87).

In (155), the tenseless verb *skriva* 'write' in the complement clause has copied the past morphological finiteness of its embedding verb *försöka* 'try'. Note that the copied element is the morphosyntactic feature *past*, and not any phonological past ending, evident in the different manifestations of past tense for *försöka*, which is an ending *-te*, and *skriva*, which is internal vowel mutation.

In languages investigated for restructuring, it is generally found to be optional (Rizzi 1982:1f., Progovac 1993:119, Wurmbrand 2001:179ff.). In parallel with this observation, the Scandinavian verb copying is also optional, as illustrated by Wiklund (2007:5):

(156a) Han började o skrev dikter
He began (past) C wrote (past) poems

(156b) Han började o skriva dikter
He began (past) C write (inf.) poems
'He began to write poems'

In (156a), the embedded tenseless verb has undergone restructuring and copied *past* from the matrix verb, while in (156b), this restructuring has not taken place, and the embedded verb surfaces in its 'expected' infinitival form. Crucially, (156a) and (156b) are equivalent structures, without any difference in meaning between them.

Given the extensive recent treatment in Wiklund 2007, I will not repeat the discussion of Scandinavian verb copying here, but will merely summarize the main conclusions:

1) Verb copying is analyzed as a restructuring effect mainly based on two facts (2007:87ff.). First, the matrix verbs that trigger verb copying in Scandinavian matches the matrix verbs that trigger restructuring in other languages. Second, both Scandinavian verb copying and restructuring occur only with *tenseless* complement clauses.
2) Wiklund concludes that "restructuring arises via tense (or INFL) raising" (2007:164), but nevertheless tries to recast this notion with an *Agree* approach (2007:162ff.). This attempt does admittedly not succeed, and she argues that we are facing a "real problem".
3) Scandinavian dialects differ with respect to the extent of verb copying. Some dialects (like Wiklund's Jämtland Swedish) exhibit copying of the imperative, the present, the past, and the perfect. Other dialects exhibit 'partial copying', in that only the imperative and the perfect are copied.

Conclusion 1) and 2) are of course in perfect agreement with the claims made in this paper with regard to restructuring being the cause of non-local binding in Askim Norwegian. When it comes to the dialectal difference explained in 3), Askim Norwegian is a 'partial copying' language, as can be seen in the following examples:[29]

[29] I remain agnostic about the syntactic nature of *å* in Norwegian. For the sake of consistency, I gloss it as 'C' in compliance with Wiklund 2007.

(157a) Ikke gidd å gjør det
Not bother (imp.) C do (imp.) it
'Don't bother to do it!'

(157b) *Jeg gidder ikke å gjør det
I bother (pres.) not C does (pres.) it

(157c) *Jeg gadd ikke å gjorde det
I bothered (past) not C did (past) it

(157d) Jeg har ikke giddi å gjort det
I have not bothered (perf.) C done (perf.) it
'I don't bother/didn't bother/haven't bothered to do it'

gidde 'bother' selects a non-finite tenseless complement. The verb copying process consequently allows the embedded verb to take on the morphological finiteness of the *gidde*. In Askim Norwegian, this only takes place with the imperative (157a) and perfect form (157d), and not with the present and past form (157b, c). In the latter cases, the only permitted form of the embedded verb is the infinitive *gjøra*.

When the matrix verb selects a non-finite tensed complement, on the other hand, no verb copying can take place at all, as illustrated with *forvente* 'expect below:

(158a) *Forvent å betal mye for det
Expect (imp.) C pay (imp.) much for it
'Expect to pay a lot for it!'

(158b) *Jeg forventer å betaler mye for det
I expect (pres.) C pay (pres.) much for it

(158c) *Jeg forventa å betalte mye for det
I expected (past) C paid (past) much for it

(158b) *Jeg har forventa å betalt mye for det
I have expected (perf.) C paid (perf.) much for it
'I expect/expected/have expected to pay a lot for it'

The only acceptable form of the embedded verb in (158) is the infinitive form *betale*.

Wurmbrand (2001:265ff.) discusses at length the fact that many verbs seem to fall somewhere in between being restructuring verbs or non-restructuring verbs, in that they allow for many transparency effects to take place, but not all. She refers to this phenomenon as "graded (non)-restructuring". Wiklund (2007:88) proposes that the 'partial copying' phenomenon in Scandinavian dialects is an effect of graded restructuring. This cut is also argued to be present within any dialect that allows copying of all forms. In other words, when a Jämtland Swedish verb as *pröva* 'try' triggers

copying of present and past forms, it is full restructuring. When *pröva* triggers copying of imperative and perfect forms, it is graded restructuring. Her analysis of the difference between present/past copying and imperative/perfect copying is coherent, since it is tailored to Jämtland Swedish. The same explanation does not carry over to Askim Norwegian, as I will show next.

As evidence that there is some crucial underlying difference causing present/past and imperative/perfect to split into these two groups, Wiklund highlights the different behavior of the so-called T-adverbs *alltid* 'always', *aldrig* 'never' and the negation. She shows that in her Jämtland Swedish, these elements cannot occur in bare infinitival clauses, thereby concluding that these clauses lack a T-domain. In Askim Norwegian, however, both T-adverbs and negation are fine with bare infinitives. To ensure that the following examples are comparable to Wiklund's (2007:75), the matrix main verb is in the perfect form:

(159) Jeg har latt 'n alltid få lov til det
I have let (perf.) him always get (inf.) permission to it
'I have always let him do it'

(160) Jeg har sett mange stormenn ikke greie det
I have seen (perf.) many great men not manage (inf.) it
'I have seen many great men not be able to do it'

Since the following conclusions and analyses by Wiklund (2007:75ff., 84f., 157ff.) are based on the fact that this is *not* possible in Jämtland Swedish, it follows that the ultimate analysis of how partial copying is different from 'full' copying (2007:157ff.) is probably not correct, at least it does not carry over to Askim Norwegian.

That Jämtland Swedish and Askim Norwegian really are different in this regard is nicely illustrated by how verb copying is licensed in complements of perception verbs. Since perception verbs select tenseless infinitival clauses (see section 7 and Wiklund 2007:63f.), it is expected that they allow verb copying. In Jämtland Swedish, however, this is surprisingly absent, even for partial copying (Wiklund 2007:63f., 83f.). In Askim Norwegian, on the other hand, the partial copying process takes place as expected:

(161) Jeg har hørt deg syngi før
I have heard (perf.) you sung (perf.) before
'I have heard you sing before'

(162) Jeg har sett deg skrivi mye rart
I have seen (perf.) you written (perf.) much strange
'I have seen you write many strange things'

Wiklund's conclusion in 1) above that Scandinavian verb copying is an effect of restructuring is descriptively convincing. There is, however, need for more research to establish why some Scandinavian dialects prohibit this copying to take place in all verb forms. Wiklund's attempt to tie this fact to the presence or nature of the embedded T does

not seem to give the general answer to this question, as her conclusion in this matter is based on facts that do not hold for all verb-copying dialects outside Jämtland Swedish.

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