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# THE POSITION OF THE VERB IN SCANDINAVIAN INFINITIVES: IN V° OR IN C° BUT NOT IN I°

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### 1. Introduction

### 1.1 Infinitival verb movement to C°

Icelandic is the only Scandinavian language in which the verb always moves past negation and sentence adverbials in embedded clauses. We shall take this as evidence that Icelandic as opposed to the other Scandinavian languages has V°-to-I° movement, following e.g. Kosmeijer (1986), Holmberg & Platzack (1990:101), Rohrbacher (1994:30-69), and Vikner (1994a:118-127, 1994b:ch. 5). If we assume that negation and sentence adverbials mark the left edge of VP (they could be adjoined to VP or to TP or they could be in TP-spec), the following embedded questions clearly show that the verb has to move to I° in Icelandic and remain in V° in Swedish:

							<u>C°</u>	IPsp	<u>I°</u>	Adv	<u>v°</u>			
(1)	Ic.	a.	*Ég	spurði	af hv	verju	<u>hefði</u>	Helg	i	oft		lesi	ð þes	sa bók
		ь.	Ég	spurði	af hv	verju	I	Helg	i <u>hefð</u>	<u>i</u> oft		lesi	ð þes	sa bók
		c.	*Ég	spurði	af hv	verju	I I	Helg	i	oft	<u>hefô</u>	i lesi	ð þes	sa bók
			I	asked	why		(had)	Helg.	i (had	) ofter	n (had	) read	thi.	s book
										(fror	n Vikner	(1994a)	127, (15	5))
							<u>C°</u>	IPsp	<u>I°</u>	<u>Adv</u>	٧°			
(2)	Sw.	a.	*Jag	frågad	le var	för	<u>hade</u>	Helge		ofta		läst	denna	bok
		ь.	??Jag	frågad	le var	för		Helge	<u>hade</u>	ofta		läst	denna	bok
		c.	Jag	frågad	le var	för		Helge		ofta	hade	läst	denna	bok
			I	asked	why	,	(had)	Helge	(had)	often	(had)	read	this	book

In the references cited above, the difference between (1) and (2) is linked to the difference between the strong agreement in Icelandic and the weak one in the other Scandinavian languages, as witnessed by the inflectional paradigms<sup>1</sup>:

<sup>1</sup>For more discussion of Faroese, see e.g. Rohrbacher (1994:48,130), Vikner (1994a:123-125, 1994b:sec. 5.3.3) and references cited there.

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(3) throw, infinitive and present indicative:

· .	Icelandic	Farcese	Swedish				
Inf.	kasta	kasta	kasta				
Sg. 1 <sup>st</sup> 2nd 3rd	ég kasta þú kastar hann kastar	eg kasti tú kastar hann kastar	jag kastar du kastar han kastar				
P1. 1 <sup>st</sup> 2nd 3 <sup>rd</sup>	við köstum þið kastið þeir kasta	vit kasta tit kasta tey kasta	vi kastar ni kastar de kastar				

In the light of the above, it is particularly interesting to notice that a parallel difference seems to exist between Icelandic and the other Scandinavian languages in a construction where there is no agreement inflection to be found on the moved verb: In control infinitives, the verb also leaves VP in Icelandic.

						1003	ekki		bókina
(4)	Ic.	a.	Maria	loraol	20	10.50	ekki	lesa	bókina
		ь.	*Maria	loraoi	40	(read)	not	(read)	book-the
			María	promised	20	(read)		•	(from Sigurðsson (1989:50, (3a, 4a))

(5) Ic. Þess vegna fullyrðir Pétur ... Therefore claimed Pétur ...

				- 6 -		hugsað	um	foreldra	sina
a.		аŌ	<u>hafa</u>	OIL		huges		foreldra	вína
ь	*	аð		oft	hata	nugsao	un		hia
υ.		to	(have)	often	(have)	thought	about	parents	1115

In the other Scandinavian languages, the verb has to remain inside VP in such constructions:

(6)	Sw.a. b.	*Maria lovade att <u>läsa</u> inte boken Maria lovade att inte <u>läsa</u> boken Maria promised to ((read) not (read) book÷the ((6b) based on Holmberg (1986:154, (46b))
(7)	Sw.	Därför påstod Peter sig Therefore claimed Peter REFL
	a. b.	* att <u>ha</u> ofta tänkt på sina föräldrar att ofta <u>ha</u> tänkt på sina föräldrar to (have) often (have) thought about his parents

Even French, which like Icelandic has V°-to-I° movement in finite clauses (cf. Emonds (1978), Pollock (1989)), does not have movement in this kind of infinitivals:<sup>2</sup>

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(8) Fr. a. \*Marie a promis de (ne) <u>lire</u> pas le livre
 b. Marie a promis de (ne) pas <u>lire</u> le livre
 Marie has promised to (read) not (read) the book

Most earlier analyses of Icelandic control infinitives, including Thráinsson (1984:253-254, 1986a:247, 1986b:254), Holmberg (1986:156, (52)), Hornstein (1989:217), Sigurðsson (1989:50), Sigurjónsdóttir (1989:38), Rögnvaldsson & Thráinsson (1990:19), all assume that the infinitive moves from V° to I°. Thráinsson (1993:191) suggests that the infinitive is in T° rather than in I°, but to some extent this suggestion is parallel to the other analyses, insofar as it is assumed that the subject is case checked in TP-spec rather than in IP-spec (which in turn is where the topic occurs).

In this paper, we shall agree that the infinitive does indeed leave V°, but we would also like to propose that it moves not only to I° but one more step, to C°. In other words, we suggest that the verb in (4a) and (5a) undergoes V°-to-I°-to-C° movement, as opposed to the finite verb in the embedded question, cf. the ungrammaticality of (1a). This analysis presupposes that there are two CPs in (4a) and (5a): The higher C° contains  $a\partial$  'to', the lower contains the infinitive *lesa*, 'read':<sup>3</sup>

(9) Ic. María lofaði [CP [Cº að] [CP [Cº lesa] ekki bókina ]] María promised to read not book-the

The advantage of this approach is that we are able to maintain the insight that no independent V°-to-I° movement (as opposed to V°-to-I° movement as part of V°-to-I°-to-C° movement) may take place when there is nothing in I° to attract the verb, i.e. where no verbal inflection is base-generated in I°.

### 1.2 Optional verb movement to C° in embedded clauses

At first glance, we might seem to find ourselves with a paradox on our hands: Whereas we hold  $V^{\circ}$ -to- $I^{\circ}$ -to- $C^{\circ}$  movement to be obligatory in Icelandic control infinitivals, we have to admit that the  $V^{\circ}$ -to- $I^{\circ}$ -to- $C^{\circ}$  movement may be optional in finite embedded clauses across the Germanic languages. What is optional in such finite embedded clauses, however, is not actually whether or not the verb moves, but rather whether or not there is an empty  $C^{\circ}$  for it to move into.

<sup>&</sup>lt;sup>2</sup>For the particular situation concerning the position of infinitival auxiliaries, see Pollock (1989:373-383).

<sup>&</sup>lt;sup>3</sup>The CP-recursion analysis has been advocated for the analysis of embedded finite V2-clauses in Frisian by deHaan & Weerman (1986:86), in Swedish by Holmberg (1986:110) and by Platzack (1986a:225), in English by Rizzi & Roberts (1989:22) and Authier (1992), in Danish and Frisian by latridou & Kroch (1992), and in all of the above by Vikner (1994a, 1994b:ch. 4).

In our view, this analysis does not differ crucially from the analyses, where a (different) functional projection intervenes between CP and IP: The head of this projection is labelled Agr1° in Roberts (1993), F° (for focus) in Tsimpli (1990), T° (for topic) in Müller & Sternefeld (1993:485), and AgrC° in Shlonsky (1992a,b).

(10)	Da. a	Vived [ <sub>CP</sub> at We know that	<sub>CP</sub> Helge <sub>i</sub> har <sub>j</sub> [ <sub>IP</sub> t <sub>i</sub> Helge has	ikke t <sub>j</sub> læst bogen ]]} not read book-the
	b	Vived ( <sub>CP</sub> at Weknow that	[ <sub>lP</sub> Helge Helge	ikke <u>har</u> læst bogen ]] not has read book-the
(11)	Ge. a	Wir wissen We know	[ <sub>CP</sub> Helge <sub>i</sub> <u>hat</u> j [ <sub>1P</sub> t <sub>i</sub> Helge has	das Buch gelesen t <sub>j</sub> ]] the book read
	ь	Wir wissen We know	[ <sub>CP</sub> daß [ <sub>1P</sub> He that He	lge das Buch gelesen <u>hat</u> ]] <i>lge the book read has</i>

If the relevant  $C^{\circ}$  is forced to exist (and if it is empty at D-structure), as is the case in embedded topicalisations, then the movement of the finite verb has to take place:

(12)	Da.	a. b.	Vi *Vi We	ved ( <sub>CP</sub> ved ( <sub>CP</sub> know	at at tha	ίςρ ίςρ t	denne denne this	bog <sub>i</sub> bog <sub>i</sub> book	<u>har</u> j (has	[ip [ip ]	Helge Helge <i>Helge</i>	ikke ikke not	t <sub>j</sub> <u>har</u> (has)	læst læst read	t <sub>i</sub> ]]] t <sub>i</sub> ]]]
(13)	Ge.	a. b.	Wir *Wir We	wissen wissen know	( <sub>СР</sub> ( <sub>СР</sub>	dieses dieses this	Buch Buch book	i (hat	j [1P [1P s)	Helq Helq <i>Helq</i>	ge t <sub>i</sub> ge t <sub>i</sub> ge	gelese gelese read	en t <sub>j</sub> en <u>hat</u> (ha:	)) )) s)	

Below, we will try to show that the relevant (extra) C° must exist in the Icelandic control infinitives, where movement takes place (section 2), and that this C° cannot exist in other Icelandic infinitives (section 3) nor in control infinitives in other languages (section 4). But first we will discuss V°-to-I°-to-C° movement in finite embedded clauses in Icelandic, in order to see that the question of whether a particular subject control verb is a bridge verb is irrelevant for Icelandic but not for the other Scandinavian languages nor for e.g. French.

## 1.3 Embedded clauses are always V2 in Icelandic

Although embedded V2 thus may be found in Danish, (10) and (12), and in German, (11) and (13), it is only possible when the matrix expression is a so-called bridge verb.<sup>4</sup> Compare the Danish (10a) and (12a) to (14a,c) below and the German (11a) and (13a) to (15a,c) below:

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(14)

(14)	Da.		Det It	var u was u	uvent unexp	et, ecte	 d										
		a. b.	* 	<u>C°</u> at at <i>that</i>	<u>CPsp</u> Helgo (Helg	<u>C</u> e <u>ha</u> ge)()	<u>avde</u> had)	<b>IPsp</b> Helge (Helge	<u>1°</u> )	<u>Adv</u> oft oft oft	e e en	<u>v°</u> havde (had)	læn læn rea	st st	den den <i>this</i>	her her <i>h</i> ere	bog bog book
		c.	*:	<u>C°</u> at	<u>CPsp</u> den	her	bog	<u>C°</u> <u>havde</u>	<u>IP:</u> Hel	ip 1 Ige	<u>r °</u>	<u>Ad</u> of	<u>v 1</u> te	<u>/°</u>	ſ	æst	
		d. e.	* *	at at <i>that</i>	den den <i>this</i>	her her here	bog bog bool	(had)	Hel Hel <i>Hel</i>	.ge <u> </u> .ge .ge (	hav (ha	de of of d) of	te te <u>t</u> ten (	iav ha	l r <u>de</u> l rd) r	æst æst ead	
(15)	Ge.		Es w It w	ar un vas un	erwan expec	tet, ted		, ,		5			·				
		a. b.	* 	<u>C°</u> (daß) daß that	<u>CP</u> Hel	ge .ge (lge)		<u>C°</u> <u>hatte</u> (had)	<u>IPs</u> Hel ( <i>He</i>	ge lge)	d: di ti	ieses ieses h <i>is</i>	Buch Buch book	g g r	elese elese ead	n n <u>hat</u> (ha	te d)
		c. d.	* *	(daß) (daß) that	die die <i>thi</i>	888 888 .S	Buch Buch book	<u>hatte</u> (had)	Hel Hel <i>Hel</i>	ge ge ge				g g r	elese elese ead	n n <u>hat</u> <i>(ha</i>	<u>te</u> d)

The possibility of embedded V2 in Danish and German is dependent on the lexical properties of the matrix verb. Furthermore, embedded V2 requires CP-recursion in Danish and most other Germanic languages, though not in German.

In Icelandic (and Yiddish), on the other hand, embedded V2 is possible (and in fact obligatory) even in those cases where it would not be allowed in the other Germanic languages (i.e. when the matrix verb is not a bridge verb):

(16)	Ic.		Það It	var ó was u	vænt, nexpe	cted	(c• a t	nð } that	•••							
		a.		<u>CPsp</u> Helgi	<u>C°</u> sky	<u>ldi</u>	<u>IPs</u>	<u>p 1°</u>	<u>Adv</u> oft	<u>۷°</u>		hafa	lesid	b þe:	ssa	bók
		ь.	*	(Hela	i)/eH	an 1 d i	Hel (He	gi Jai)	oft	<u>sk</u>	<u>yldi</u>	hafa	lesid	b þe	вва	bók
				(nerg.	2)(5)	Juiu)	(	191)	orten	( 5.	10010)	nave	reau	Ln.	15	DOOK
				CPsp		<u>C°</u>		IPsp	<u>1°</u>		<u>Adv</u>	<u>v°</u>				
		c.	•.••	þ <b>essa</b>	bók	skyle	<u> 11</u>	Helgi			oft		ł	afa	les	sið
		d.	* • • •	þessa	bók			Helgi	skyld	i	oft		h	afa	les	sið
		e.	*	þ <b>essa</b>	bók			Helgi			oft	<u>skylc</u>	<u>li</u> ł	afa	les	sið
				this	book	(shou	11d)	Helgi	(shou.	1d)	often	(shou	1d) h	ave	rea	ıd
											(from	Vikner	(1994a	126.0	(20))	

In other words, as opposed to all the other Germanic languages, the possibility of embedded V2 does not depend on lexical properties of the matrix verb in Icelandic (and Yiddish). In Vikner (1994b:sec. 5.5), it is suggested that the combination of three properties is necessary and sufficient to trigger general embedded V2 (i.e. general CPrecursion):

<sup>&</sup>lt;sup>4</sup>For further discussion, see e.g. Iatridou & Kroch (1992:4-7, 17-19) and Vikner (1994a:133-135) and references cited there.

(17) a. V2 (excluding English, French, ...) b. V-O basic order (excluding German, Dutch, ...) c. V°-to-I° movement (excluding Danish, Faroese, Swedish, ...)

As we saw in (1) above, there is one context in Icelandic (and Yiddish) which never allows V2: embedded questions, which thus provides the evidence for V°-to-I° movement independent of V2:

(18)	Ic.		Êg sp	ourði ···									
			1 as	skea									
		а.	*	<u>CPsp</u> af hverju	<u>C°</u> <u>hefði</u>	<u>IPsp</u> Helgi	<u>1°</u>	<u>Adv</u> oft	<u>V°</u>	lesi	) þessa	a bók	
		ь.		af hverju		Helgi	<u>hefði</u>	oft		lesid	) þessa	a bok	
		c۰	*	af hverju		Helgi		oft	<u>hefo</u> i	lesid	pess	a DOK	
			• • •	why	(had)	Helgi	(had)	ofter	n (had)	read	this	DOOK	
				CPsp	<u>C°</u>	CPsp		<u>c°</u>	IPsp	<u>1°</u>	Adv	<u>v °</u>	
		d.	*	af hverju	<u>hefði</u>	þessa	bók		Helgi		oft		lesiö
		е.	??	af hverju		þessa	bók	<u>hefði</u>	Helgi		oft		lesiö
		f.	*	af hverju		þessa	bók		Helgi	<u>hefði</u>	oft	•	lesið
		α.	*	af hverju		þessa	bók		Helgi		oft	<u>hefði</u>	lesið
				why	(had)	this	book	(had)	Helgi	(had)	often	(had)	read

As we claimed above that CP-recursion is generally available in Icelandic, we have to find an independent reason for the ungrammaticality of (18d-g). This independent reason could be that the A-bar-movement of *af hverju* 'why' would have to cross an A-bar specifier position with which it is not coindexed, viz. *bessa bók* 'this book' in the lower CP-spec, which constitutes a violation of relativised minimality (cf. Rizzi (1990:7), Vikner (1994b:sec. 2.2)). In the barriers framework of Chomsky (1986), the movement of *af hverju* 'why' would have to cross a IP and CP in one step, which would make CP a barrier (Chomsky (1986:36-37)).<sup>5</sup>

As for the less than complete ungrammaticality of (18c), it might be an effect of (18e) violating less constraints than the other options: (18d-g) all violate relativised minimality, but in addition, (18d,f,g) also violate the following constraints: The top  $\mathbb{C}^\circ$  in (18) is selected by the matrix verb as the head of an embedded question, which means that even at D-structure it is equipped with the feature [+wh]. If the finite verb subsequently moves into this (higher)  $\mathbb{C}^\circ$ , this feature will be deleted, which is a violation of the projection principle, which accounts for the ungrammaticality of (18a,d) (cf. also Rizzi & Roberts (1989:18) and Vikner (1994b:sec. 3.3.2)). (18f,g) are also ruled out as violations of V2, i.e. here the finite verb could have moved into a truly empty  $\mathbb{C}^\circ$ , but it does not. (18g) (like (18c)) is furthermore also ruled out as a violation of V\*-to-1° movement, a finite verb may not stay in V° in Icelandic (cf. also Roberts (1993:267), Rohrbacher (1994b:sec. 3.3.2)).

If the extracted element is changed from the adjunct *af hverju* 'why' to the argument *hvað* 'what', as in (i), (18e) should become less ungrammatical. This is not borne out, the judgments remain exactly the same:

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In this section, we argued that, as opposed to all the other Germanic languages, the possibility of embedded V2 does not depend on lexical properties of the matrix verb in Icelandic (and Yiddish). As we want to suggest in this paper that all Icelandic control infinitives are cases of CP-recursion, it is important to establish that CP-recursion is generally available in Icelandic, irrespective of whether the matrix verb is taken to be a bridge verb or not. This is important because not all subject control verbs are bridge verbs: Of the verbs that allow infinitival complements with subject-controlled PRO as well as finite complements, some allow embedded V2 (e.g. *promise, claim, decide*) and some do not (e.g. *demand, regret*) in those Germanic languages where embedded V2 is only possible under bridge verbs (i.e. outside Icelandic and Yiddish).

For every language except Icelandic, two questions have to be answered: Why is the Icelandic word order ruled out? How does PRO then avoid being governed? The above considerations provide at least a partial answer to the first question (cf. also footnote 11): The reason why the Icelandic word order in control infinitives is not found with any control verbs in French or Italian nor with non-bridge control verbs in Swedish, Danish, Norwegian or English is that these verbs do not allow CP-recursion.

### 2. Ruling out the alternative analyses of Icelandic "að"

Let us start by making explicit our background assumptions. We follow Chomsky (1981:60, 191), and much subsequent work, in taking PRO to be impossible in governed positions. We combine this with Kayne's (1991:667) proposal that infinitival markers, such as Icelandic *að*, French *de*, and English *to* are among those elements that cannot govern PRO. Further, we will adopt the by-now commonplace "Derived Subjects Hypothesis," which claims that the D-structure position of subjects is within VP. Finally, we assume that whatever is responsible for guaranteeing that overt subjects are moved into their surface position also forces PRO to leave its D-structure position. Thus, for instance, if overt subjects must move to Specifier of AgrP in order to check Case,

(i)	Ic.	Ég spurði
		<u>CPsp</u> <u>C°</u> <u>IPsp</u> <u>I°</u> <u>Adv</u> <u>V°</u>
	а.	* hvað <u>hefði</u> Helgi oft lesið í skólanum
	b.	hvað Helgi <u>hefði</u> oft lesið í skólanum
	с.	* hvað Helgi oft <u>hefði</u> lesið í skólanum
		why (had) Helgi (had) often (had) read this book
		CPSp C <sup>o</sup> CPSp C <sup>o</sup> TPsp I <sup>o</sup> adv V <sup>o</sup>
	d.	* hvað hefði í skólanum Helgi oft logið
	<u>.</u>	22 have find a second in the second s
	е.	rr hvao i skolanum <u>neroi</u> Heigi oft lesio
	f.	* hvað í skólanum Helgi <u>hefði</u> oft lesið
	g.	* hvað í skólanum Helgi oft <u>hefði</u> lesið
		why {had} this book (had) Helgi (had) often (had) read

We have no account to offer here, but can only point out that the data concerning extraction in embedded V2 contexts in Icelandic is notoriously difficult, cf. e.g. Vikner & Schwartz (1992:sec. 3.4 and 3.5) and references cited there.

<sup>&</sup>lt;sup>5</sup>Two remarks concerning (18e) are in order at this point, as we have to admit that the analysis in the text makes two incorrect predictions: that (18e) should be completely ungrammatical, and that it should improve if the extracted element is changed from an adjunct to an argument.

thereby passing the Case Filter, we will assume that PRO too raises to the Specifier of the highest IP within infinitival clauses to satisfy the Case Filter (here we are thus following Sigurosson (1989:183-192, 1991:328-339), Chomsky & Lasnik (1993:561), and Thráinsson (1993:206).

These assumptions combine to ensure that PRO is driven into the highest Specifier position of infinitives, and that this position cannot be governed, even by infinitival markers. It is this avoidance of government by an infinitival marker that we will show is responsible for the obligatory CP recursion in Icelandic infinitival clauses.

# 2.1 Why must CP-recursion take place?

Why does CP-recursion have to take place? Why is it not possible to have just one  $\mathbb{C}^{\circ}$ , containing  $a\delta$ , and to leave the infinitive in  $V^{\circ}$ , as in (19a,b)?

Pétur lofaði Jóni ···· (19) Is. ` Pétur promised Jón-D ••••

a. b.	*	( <sub>СР</sub> { <sub>СР</sub>	e PRO	að að to	( 1P	PRO t	þó þó after-all	( vp ( vp	fara fara go	til til <i>to</i>	London London London	á morgun]]] á morgun]]] tomorrow
				20			arter arr		9-	• -		

In (19a) PRO would be governed by að; IP is not a barrier, because of its "defective character", cf. e.g. Chomsky (1986:15).

In (19b) PRO would be governed by lofaði 'promised'; CP is not a barrier, because it is L-marked by lofaði, cf. Chomsky (1986:13).

In other words, as no version without CP-recursion is possible, CP-recursion has to take place.

# 2.2 Why must the infinitive move to C°?

Even given CP-recursion, what forces the infinitive to move?

Pétur lofaði Jóni ... (20) Is. Pétur promised Jón-D ...

> [vp fara til London á morgun]]]] a. \*... {<sub>CP</sub> aô [<sub>CP</sub> e e [<sub>1P</sub> PRO þó ‴ [vp fara til London á morgun]]]] b. \*... (<sub>CP</sub> ao (<sub>CP</sub> PRO e (<sub>IP</sub> t þó after-all go to London tomorrow ... to

In (20a,b)  $a\delta$  'to' would be in the higher C°, the infinitive in V°, but the lower  $C^{\circ}$  would be completely empty (it would neither contain any lexical/audible element, nor the feature [+wh] as in (1b)/(18b) and (2c) above). This is an impossible situation, because a completely empty  $C^{\circ}$  always attracts the verb. Whatever the reason for this is, it is the same as the general reason for V2.

If this line of argumentation is correct, this would then further show that  $V_2$ is not caused by tense- or agreement-features in C°, given that infinitives have neither tense nor agreement. The fact that Danish at and Norwegian d, English to and German zu (and in our view also Swedish att) do not have to move to C<sup>o</sup>, cf. e.g. (45) below, shows, however, that V2 may be caused by verb-specific features in C<sup>o</sup>.

# 2.3 If the infinitive moves to C°, why is topicalisation not possible?

Given CP-recursion, cf. 2.1, and given that the infinitive has to move, cf. 2.2, why is it not possible for a topicalised element to occur between  $a\delta$  and the infinitive, i.e. in the lower CP-spec?

If there was a topicalised element in the lower CP-spec, PRO would have to be in IP-spec, and then PRO would be governed by the infinitive in  $\mathbb{C}^{\circ}$ , (21a,b):

(21) Ic. Pétur lofaði Jóni ... Pétur promised Jón-D ...

a.	* • • •	( <sub>CP</sub>	аð	( CP	á morgun	fara	(IP	PRO	рб	til	London	11
b.	*	( <sub>CP</sub>	аð	( CP	til London	fara	[ I P	PRO	þð			á morgun]]
c.	• • •	( <sub>CP</sub>	аŌ	( CP	PRO	fara	ί <sub>IP</sub>	t	рб	til	London	á morgun]]
			to			qo			after-all	to	London	tomorrow

PRO cannot occur in IP-spec, regardless of whether C° contains að or the infinitive, because IP cannot be a barrier, as argued in section 2.1. Nor can PRO occur in the higher CP-spec, as it would be governed by the matrix verb.<sup>6</sup>

PRO therefore has to occur in the lower CP-spec. The lower CP is a barrier, because it is neither IP nor is it L-marked, cf. that the lower CP is only the sister of a complementiser, not of a theta-assigner.<sup>7</sup>

- (i) Ic. a. Hvernig lofaðir þú að búa alltaf grænmetið til? promised you to prepare always vegetable-the PRT? How
  - b. Hvernig lofaði Pétur Jóni að fara til London á morgun? How promised Pétur Jón-D to go to London tomorrow?
  - c. Með hvaða flugvél lofaði Pétur Jóni að fara til London? With which airplane promised Pétur Jón-D to go to London?
  - d. Hvenær lofaði Pétur Jóni að fara til London? When promised Pétur Jón-D to go to London?

<sup>&</sup>lt;sup>6</sup>The higher CP-spec may not contain a topicalised element either, but this is a different phenomenon: The specifier of an overt (non-verbal) C° may never contain an overt element, although a trace is allowed. This also holds for finite clauses across the Germanic and the Romance languages. As far as we know, no satisfying account for this has ever been suggested.

<sup>&</sup>lt;sup>7</sup>This analysis makes the incorrect prediction that extractions out of such infinitives should be impossible. The examples in (ia-e) are almost completely acceptable in the relevant reading, i.e. with the extracted element interpreted as related to the embedded infinitive. In (ia,b,d) the other reading, with the extracted element related to the matrix clause, is fully acceptable, in (ic,e) it is ruled out for reasons of incompatibility with the matrix predicate or tense:

### 3. Icelandic Infinitives which are not Control: No CP-Level at all

The next question is why verb movement in Icelandic infinitives is limited to control infinitives. We want to suggest that the reason is that other infinitives do not have a C<sup> $\circ$ </sup> at all.<sup>8</sup>

Holmberg (1986:156), Sigurðsson (1989:50), Sigurjónsdóttir (1989:23), and Thráinsson (1986a:257) all point out that in such constructions, the infinitive cannot precede the negation or a sentential adverbial. However, as shown by Sigurðsson (1989:85-86), it is actually not possible to have a negation or a sentential adverbial anywhere to the left of the object of the infinitival verb in any of the four following types of infinitival constructions.

Exceptional case marking:

(22)	Ic.	а. b.	*Pétur *Pétur	hafði hafði	taliō taliō	Maríu Maríu	hafa	ekki ekki	hafa	vaskað vaskað	upp upp	diskana diskana
		c.	Pétur Pétur	hafði <i>had</i>	talið <i>believed</i>	Maríu María-A	(have)	лоt	hafa (have)	vaskað washed	upp up c	diskana <i>lishes-th</i> e

Raising:

# (23) Ic. a. \*María hafði virst ekki hafa vaskað upp diskana b. \*María hafði virst hafa ekki vaskað upp diskana c. María hafði virst hafa vaskað upp diskana María had seemed (have) not (have) washed up dishes-the

(24) Ic. a. \*Mér hafði virst María
 b. \*Mér hafði virst María hafa
 c. Mér hafði virst María
 hafa vaskað upp diskana
 c. Mér hafði virst María
 hafa vaskað upp diskana
 Me-D had seemed María-N (have) not (have) washed up dishes-the

Causatives with let:

- (25) Ic. a. \*Pétur hafði látið Maríu
   ekki vaska upp diskana
   b. \*Pétur hafði látið Maríu
   vaska
   ekki
   upp diskana
  - c. Pétur hafði látið Maríu vaska upp diskana Pétur had let María-A (wash) not (wash) up diskes-the
  - e. Á morgun lofaði Pétur Jóni að fara til London Tomorrow promised Pétur Jón-D to go to London

One way of making our analysis compatible with these facts could be to adapt the analysis suggested in Rizzi (1991, 1992:109), under which CP-spec may turn into an A-position if occupied by the subject in a V2-construction. This derives from a definition of A-positions as all positions which either receive a thematic role or are construed with agreement. CP-spec counts as being construed with agreement when it contains a subject which agrees with a verb in  $\mathbb{C}^{\circ}$ . It might be a problem is that the verb which occurs in  $\mathbb{C}^{\circ}$  in our cases is an infinitive, i.e. a verb that does not show any overt agreement.

<sup>8</sup>In this paper, we do not discuss modal verbs, but we assume that in all the languages discussed, the complements of modal verbs are VPs (cf. e.g. Thráinsson & Vikner (1993:sec. 4.1)). For discussions of the particular properties of Icelandic modal verbs, some of which require the presence of the infinitival marked *að* in their complement, see. e.g. Thráinsson (1986a, 1993) and Thráinsson & Vikner (1993). Perception verbs:

(26) IC. a. \*Pétur hafði séð Maríu rækilega vaska upp diskana
 b. \*Pétur hafði séð Maríu vaska rækilega upp diskana
 c. Pétur hafði séð Maríu vaska upp diskana rækilega
 Pétur had seen María-A (wash) carefully (wash) up dishes (caref.)

Consequently, the question whether or not the infinitive moves cannot be answered, as there is no way to find out.

This leaves us with a different unanswered question, namely how come it is possible in Danish to have a negation in e.g. a raising constructions, (27), when this is not possible in the exactly parallel construction in Icelandic, (28)-(29):<sup>9</sup>

(27)	Da. a. Marie ser ud til <u>ikke</u> at være i godt humør b. Marie ser ud til at være i godt humør Marie sees out to (=seems) (not) to be in good mood	
(28)	Ic. a. *María hafði virst <u>ekki</u> vera í goðu skapi b. *María hafði virst vera <u>ekki</u> í goðu skapi c. María hafði virst vera í goðu skapi María had seemed (be) not (be) in good mood	
(29)	Ic. a. *Mér hafði virst María <u>ekki</u> vera í goðu skapi b. *Mér hafði virst María vera <u>ekki</u> í goðu skapi c. Mér hafði virst María vera í goðu skapi Me-D had seemed María-N (be) not (be) in good mood	

One possible answer might be that the infinitival clauses selected by raising verbs are only VPs in Icelandic but TPs or IPs in Danish, and that the relevant adverbial/negation must be adjoined to TP or in TP-spec.

# 4. The difference between the Icelandic infinitival marker and the ones in Swedish and French

We have suggested in the previous sections that control infinitives in Icelandic require CP-recursion and therefore obligatory movement of the verb past negation, in order to create a position for PRO in which it will escape government. In particular, by creating a CP boundary between PRO and a complementiser, CP-recursion creates a structure in which PRO can elude government by this complementiser. The fact that CP-recursion is not forced in the control infinitives of Norwegian and Danish then follows from the fact that these languages do not have a complementiser associated with non-finite clauses: the Danish and Norwegian infinitival markers are not in C<sup>o</sup> (cf. section 4.3 below). In general, therefore, our proposal pairs the obligatoriness of CP-recursion in infinitival clauses with the presence of the

<sup>&</sup>lt;sup>9</sup>In all of (22)-(26) and (28)-(29), Icelandic *ekki* 'not' can be exchanged for *aldrei* 'never' or *oft* 'often', and in (27) Danish *ikke* 'not' for *aldrig* 'never' or *ofte* 'often', with no consequences for the grammaticality status of any of the examples.

infinitival marker in C° in infinitival clauses. It is widely believed, however, that there are languages which have infinitival markers in C° but for which we nevertheless would not want to conclude that CP-recursion is obligatory. French *de* and Italian *di*, for instance, have been argued to be in C° (cf. Kayne (1991:667-668) and references there), and yet the obligatory movement of the infinitival verb that we are taking to be indicative of CP-recursion is absent in these languages. As for Scandinavian, Platzack (1986a) argues that *att* is in C° in the control infinitives of Swedish, thereby grouping Swedish with Icelandic. And yet Swedish control infinitives lack verb movement<sup>10</sup>, just as its mainland Scandinavian neighbours do, cf. (6) (repeated here as (30)):

(30) Sw. a. \*Maria lovade att läsa inte boken .
 b. Maria lovade att inte läsa boken Maria promised to (read) not (read) book-the

In this section we take up these apparently problematic cases. We begin by sketching two strategies that might appear promising for explaining away the apparent counterexamples of the Swedish and French infinitival markers, but which we believe fail.<sup>11</sup> We then turn to a suggestion which we believe succeeds; in section 4.3 we argue that Swedish *att* is, in fact, not in C°, and in section 4.4 we will argue that French makes use of a mechanism (not found in Germanic) that protects PRO from government.

<sup>&</sup>lt;sup>10</sup>Cecilia Falk (p.c.) points out that there is no verb movement in Old Swedish control infinitives, as seen by the infinitivals following the negations in (i) and (ii):

(i)	os.	Siunda	är	at	ei	bryta	skriptamal
•		Sin	is	to	not	make(?)	confession
						(from Et	fornsvenskt legendarium, 1276-1307, Stephens (1847:166))
(11)	05	En af:	E tł	ıem	hafe	dhe lovat	t aldrigh <u>äta</u> köt um löghordagin

One of them had promised never eat meat on Saturdays (from Jäneckenbocken, 1385, Klemming (1877:119)

In terms of our analysis, the fact that the verb stays inside VP must mean that PRO is in IP-spec and has not moved to CP-spec, which leaves open two questions:

The first is how PRO can avoid being governed by at in (i). The answer could be whatever it is for Modern Swedish, i.e. either that at does not count as a governor (cf. section 4.1 below), that at is in CP-spec (section 4.2) or that at is in l' (section 4.3). We have not been able to check whether the argumentation concerning modern Swedish in sections 4.1-4.3 might hold for Old Swedish. It would be particularly interesting to know whether Old Swedish at was possible in ECM-constructions and in raising constructions. Our analysis would lead us to expect the answer to be yes, as it is for modern Swedish (cf. section 4.3 below).

The second question left open by (i) and (ii), how PRO can avoid being governed by the matrix verb, will be discussed in footnote 11.

A different kind of complication is presented by 16<sup>th</sup> century Danish, which, according to Falk & Torp (1900:299-300), could have the modern Icelandic word order with auxiliaries and the modern (and old) Swedish word order when no auxiliaries were present.

<sup>11</sup>We will thus be concerned below with explaining why (30b) is not ruled out. As for the impossibility of (30a) (also in Danish and Norwegian), we will simply have to say that control verbs subcategorise for the infinitival marker in a particular position, which is 1° in Swedish and V° in Danish and Norwegian (cf. section 4.3). In other words, the Icelandic word order, (30a), is ruled out in all cases in Swedish, Danish, Norwegian and English by the infinitival marker occurring in 1° or in V°. The empty C° does not attract the infinitival marker, but only verbs. The infinitival verb, however, cannot move across the infinitival marker, because of the Head Movement Constraint (cf. e.g. Chomsky (1986:71), Rizzi (1990:11), Vikner (1994b:sec. 2.4).

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### 4.1 Deletion of the infinitival marker in C°

Let us begin by concentrating on the difference between Swedish and Icelandic with respect to CP-recursion. If we grant that in both languages, the infinitival marker is in  $\mathbb{C}^{\circ}$ , then we must search for another factor that distinguishes Icelandic from Swedish which might allow PRO to survive in Swedish control infinitives without CPrecursion, which would then have the following structure:

(31) Sw. Maria lovade [c att] [IP PRO inte läsa boken ] Maria promised to not read book-the

One salient difference that has the right characteristics is complementiser deletion. The Icelandic infinitival marker, *að*, cannot delete, but the Swedish infinitival marker, *att*, may:

(32)	a.	Sw.	Maria	lovade	att	PRO	läsa	artikeln
	ь.	Sw.	Maria	lovade		PRO	läsa	artikeln
	c.	Ic.	María	lofaði	að	PRO	lesa	greinina
	d.	Ic.	*María	lofaði		PRO	lesa	greinina
			Maria	promised	to		read	article-the
								((32a,b) based on Holmberg (1990:238, (3b)))

If we suppose that complementiser deletion is simply absent from Icelandic, but present in Swedish either at S-structure or LF, then complementiser deletion will be able to rescue PRO from government by a complementiser in Swedish where only CP-recursion can in Icelandic. In those cases where C° is filled at S-structure, we might conjecture that complementiser deletion will apply at LF. Supposing that the anti-government requirement on PRO need be satisfied only at LF, we then predict that Swedish control infinitives can both have *att* in C° (at S-structure) and fail to invoke CP-recursion in just those cases where *att* can delete at LF.

This analysis would then have Swedish display at LF what surfaces in English infinitivals:

(33) En. a. \*Sally wants [cp for [ip PRO to go]] b. Sally wants [cp [ip PRO to go]]

In lieu of CP-recursion, English here exploits the possibility of *for*-deletion to rescue PRO from government.

One immediate difficulty for this view is that it requires an account of the difference between the phenomena illustrated by (33) in English and (32a,b) in Swedish. As (33a) indicates, we cannot allow the anti-government requirement to be satisfied at LF in English, as the strategy being explored here would require of the Swedish (32a). If LF Complementiser Deletion were sufficient, then it should be possible to create an LF from (33a) by Complementiser Deletion that would be identical to the grammatical (33b), incorrectly predicting (33a) to be acceptable.

Another difficulty for this account is that it would require positing

complementiser deletion at LF in configurations where, judging from S-structure conditions on complementiser deletion, we would not expect it to be possible. For example, as in English, complementiser deletion is blocked in Swedish in CPs that are complements to nouns, and yet it is possible to find an infinitival clauses in this position in Swedish:

III SWEUISN: (34) Sw. a. Att Christian saknade förmåga att skämmas, visste hon b. \*Att Christian saknade förmåga skämmas, visste hon That Christian lacked ability (to) be-ashamed, knew she ((34a) from Hulthén (1944:279))

Similarly, it is not possible to find complementiser deletion overtly in CPs that are complements to adjectives in Swedish. Yet, once again, it is possible to find an infinitival in this positions:

(35) Sw. a. Sigyn var alls inte ovillig att svara b. \*Sigyn var alls inte ovillig svara Sigyn was at-all not unwilling (to) answer ((35a) from Hulthén (1944:276))

The same difficulty reemerges in Romance. Just as in Swedish, complementisers are unable to delete from the clausal complements to nouns, but infinitival clausal complements to nouns and adjectives can host PRO subjects:

(36)	Fr. It.	a. b. c. d.	Jean *Jean Gianni *Gianni <i>Jean</i>	a a ha ha <i>has</i>	peur peur paura paura fear	de di (to)	ma ma pe pe mi	inquer inquer erdere erdere iss	le le il il the	train train treno treno <i>train</i>	
(37)	Fr. It.	a. b. c. d.	Jean *Jean Gianni *Gianni <i>Jean</i>	est est è è <i>is</i>	capab capab capac capac able	le de le e di e (t	o)	parler parler parlar parlar speak	r 1 re 1 re 1 re 1 E	'anglais 'anglais 'inglese 'inglese <i>nglish</i>	:

Because we can see no reason why the conditions on complementiser deletion should differ at S-structure and LF, we will abandon this solution to the problem that Swedish and French infinitives pose. PRO can exist in the infinitives of these languages even<sup>6</sup> n contexts where the infinitive marker is unable to delete. Thus, these languages must exploit another means of protecting PRO from government by these infinitival markers. 4.2 The infinitival marker is in CP-Spec

# 4.2.1 Kayne (1991) on French "de" and Italian "di"

In Kayne (1984), it was argued that the French infinitival marker de 'to' is in C° (cf. (8) above), as opposed to English to, which is in I°. Four supporting arguments are given: 1. de is impossible in raising (its presence would cause a *that-trace* violation (1984:106)); 2. de is impossible in ECM (also *that-trace* violation (1984:107, 111)); 3. de must precede negation, (1984:108), and 4. de is not compatible with a *wh*-element in CP-spec (explained by the so-called "doubly filled Comp filter" (1984:105)).

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To Kayne (1991:667), de cannot possibly be in C<sup>o</sup>, as it would govern PRO in IP-spec. To avoid losing the above generalisations, Kayne (1991:668) suggests that de is in CP-spec. This also gives a better account for the fourth property, the incompatibility with a wh-element in CP-spec:

(38)	a.	Fr.	*Jean	cherche	quelqu'un	avec	qui	de	parler
	b.	Fr.	Jean	cherche	quelqu'un	avec	qui		parler
	c.	It.	*Gianni	cerca	qualcuno	con	cui	di	parlare
	d.	It.	Gianni	cerca	qualcuno	con	cui		parlare
			John	looks-for	someone	with	whom	(to)	talk
						(	(based o	on Kay	ne (1984:105, (9), (10), (20), (21)))

### de/di and avec qui/con cui could not both be in CP-spec.

It seems to us, however, that the assumption that de/di is in CP-spec is rather problematic. One problem is that adjunct extractions out of control infinitivals are predicted to be impossible as CP-spec is already filled by de/di, i.e. the infinitival constructions, (39), would be expected to behave like wh-islands, (40). This is not borne out:

(39)	а. b.	Fr. It.	<u>Comment</u> i Comei	as hai	-tu	pro pro	mis messo	(CP	<u>t</u> i ti	de di	cuire cucina	are	les la	légu verd	mes ura	$\frac{t_i}{t_i}$
			How	have	(you)	pro	mised			to	cook		the	vege	tables	?
(40)	a. b.	Fr. It.	* <u>Comment</u> i * <u>Come</u> i How	voudi vorre would	rais esti 1 <sup>1</sup> (1	tu you)	savoi sapei know	ir ( :e (	CP CP	quo che wha:	ij cosaj t	cui cuc coc	inar inar	tj etj	<u>t</u> i]? <u>t</u> i]? 2	

We therefore abandon an account that relies on the hypothesis that de/di nevertheless are in CP-spec (The question how PRO in IP-Spec can then escape government from de/di in  $\mathbb{C}^{\circ}$  will be discussed in section 4.4 below). In the following subsection we shall see that the same argumentation holds for Swedish.

### 4.2.2 The consequences of Kayne (1991) for Swedish "att"

Kayne (1991:677, fn 75) suggests that Icelandic *að* (in control infinitives) could either be in C<sup>o</sup>, in which case the infinitive would have to be adjoined to I-bar to protect PRO from being governed (parallel to what Kayne (1991:673) assumes for Italian), or it could be in CP-spec (for arguments against the latter option, cf. Thráinsson (1993:192-196)). Swedish control *att*, however, would have to be in CP-spec, as the verb

clearly does not move anywhere, hence if att were in C°, nothing would protect PRO in IP-spec from being governed by att in C°.

However, as discussed above for the French and Italian (39) and (40), adjunct-extractions out of control infinitivals would be predicted to be impossible as CP-spec is already filled (by *att*), i.e. the infinitival construction, (41a), would be expected to behave like a *wh*-island, (41b), which is not borne out:

(41) Sw. a. På vilket sätt, har du lovat

 $[_{CP} \underline{t}_i \text{ att tillaga grönsakerna } \underline{t}_i]?$ In which way have you promised to cook vegetables-the ?

b. \*<u>På vilket sätt</u>; skulle du vilja veta [<sub>CP</sub> vilka grönsaker<sub>j</sub> han har tillagat t<sub>j</sub> <u>t</u><sub>i</sub>]? In which way should you want (to) know which vegetables he has cooked ?

Furthermore, if att is in CP-spec, what would stop the infinitive from moving to C<sup> $\circ$ </sup>?

(42) Sw. a. Maria lovade [CP att [C\* ] [IP PRO inte läsa boken ]] b. \*Maria lovade [CP att [C\* läsa ] [IP PRO inte boken ]] Maria promised to (read) not (read) book-the

Finally, in infinitival relative clauses, CP-spec would have to contain both *att* and an empty operator (cf. that the French version of (43) cannot contain *de*, but *à*):

Data like (43a) also present a very serious problem for the approach in section 4.1: Here also *att* may not be deleted. PRO would therefore have to be governed at all levels, leaving us without an account for the difference between Swedish and Icelandic.

# 4.3 Swedish "att" is in I°

We believe that the French and Swedish cases have separate solutions. In this section, we sketch our proposal for Swedish.

The structure in (31) above, with *att* in  $\mathbb{C}$ , is the one which is generally assumed, cf. e.g. Platzack (1986b:123), Holmberg (1986:154), Beukema & den Dikken (1989:66) and Sigurðsson (1989:52). We would like to suggest, however, that Swedish *att* is in I° rather than in  $\mathbb{C}$ :

(44) Sw. Maria lovade [<sub>1P</sub> PRO [<sub>1</sub>. att] inte läsa boken ] Maria promised to not read book-the If this were so, att could never govern PRO, as PRO is in IP-spec.<sup>12</sup>

As one argument for *att* being in C°, it is often pointed out that it occurs to the left of negation and sentence adverbials<sup>13</sup>. This however only shows that it is higher than Danish *at* or Norwegian a, i.e. that it is either in I° or in C°:

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<sup>12</sup>Another question is then why PRO is not governed by the matrix verb in (44) (or in the Danish and Norwegian (45b,c)). We would like to suggest the existence of an empty CP-level in these examples, caused by control verbs selecting CPs rather than IPs.

Notice that the very same possibility has to be impossible in (19b). An empty extra CP-level would also be able to protect PRO in the lower CP-spec from government by the matrix verb, incorrectly predicting it to be grammatical:

(i) Is. \*Pétur lofaði Jóni

[ <sub>CP</sub> e e [ <sub>CP</sub> PRO að [ <sub>1P</sub> t Pétur promised Jón-D	рб	fara	til	London	á morgun)	]]
to	after-all	ao	to	London	tomorrow	

As *lofa* 'promise' is already selecting a CP in (19b) (i.e. the version of (i) with only one CP), there is no justification for introducing an extra empty CP-level.

In other words, whereas in the Swedish/Danish/Norwegian (44) and (45), an empty CP-level is licensed by *promise* selecting a CP and not an IP, an **extra** empty CP-level is not licensed in the Icelandic (19b)/(i), because the selectional specifications of *promise* is satisfied also without this empty CP level (both in (19b) and in (i) *promise* is selecting a CP).

<sup>13</sup>Earlier analyses, e.g. Platzack (1986b:125) and Holmberg (1986:155) take Danish *at* or Norwegian a to be in 1°, but the fact that *at* and a must follow negation (and also sentence adverbials, cf. below) shows that such an analysis cannot be maintained, given that negation is now commonly assumed to occur to the right of 1° (cf. among many others Holmberg & Platzack (1990:97), based on Emonds (1978), Kosmeijer (1986), and Pollock (1989)).

Notice that the fact that Danish *at* or Norwegian  $\Delta$  are preceded not only by negation but also by sentence adverbials furthermore makes it impossible to argue that  $at/\Delta$  are placed in T<sup>°</sup> in an analysis where 1° is split into AgrS<sup>°</sup> and T<sup>°</sup> (cf. Pollock (1989), Belletti (1990) and Chomsky (1991)). The reason is that whereas the position relative to negation is crucial for the difference between occurrence in AgrS<sup>°</sup> and occurrence in T<sup>°</sup>, the sentence adverbial is what allows us to determine whether an element occurs in T<sup>°</sup> or in V<sup>°</sup>, cf.

							<u>T°</u>	<u>Adv</u>	<u>v°</u>	
(i)	En.	a.	I	believe	John	to		often	sound	sarcastic
		ь.	*I	believe	John	to	sound	often		sarcastic
		c.	I	believe	John	to		often	be	sarcastic
		d.	(?) <sub>I</sub>	believe	John	to	be	often		sarcastic
					,					(from Pollock (1989:382, (39a-d))

That at/a appears lower than T° is clear from the fact that they have to follow sentence adverbials like often:

						<u>T°</u>	<u>Adv</u>			
(ii)	Da.	a.	Marie	har	lovet		ofte	at	vande	blomsterne
		b.	<pre>??Marie</pre>	har	lovet	at	ofte		vande	blomsterne
			Marie	has	promised	(to)	often	(to)	water	flowers-the

However, it is unlikely that the assumptions about ordering ( $I^\circ$  - negation -  $T^\circ$  - sentence adverbial - VP) made in Pollock (1989), Belletti (1990) and Chomsky (1991) carry directly over to Danish (and the other Scandinavian languages). As pointed out by Hansen (1980:58), among others, negation follows rather than precedes the sentence adverbial(s) in Danish. It follows from this that  $I^\circ$  and  $T^\circ$  (or alternatively  $T^\circ$  and  $V^\circ$ ) cannot be kept apart by appealing to the position of negation and sentence adverbials.

(45)	Sw. Da.	а. b.	Maria Marie	lovade lovede	<u>att</u>	inte ikke	at	läsa læse	boken bogen
	No.	c.	Marie <i>Maria</i>	lovet promised	(to)	ikke not	<u>å</u> (to)	lese read	boken book-the
								(b	ased on Holmberg (1986:154, (46b-d)))

As a second argument for *att* being in C<sup>o</sup>, it is pointed out that it is impossible to have *att* e.g. in ECM and in raising constructions (cf. e.g. Platzack (1986b:127). It would however appear that this is not uniformly the case. According to Hulthén (1944:248), Holmberg (1986:159) and Platzack (1986b:135, fn2) *att* is also possible here, at least in colloquial Swedish and in various dialects.

When *att* occurs in ECM constructions, it cannot be in C°, as Holmberg (1986:159) points out, because it follows the embedded subject:

(46)	Sw.	a.	Jag	anser		Peter	<u>att</u>	vara	dum
		ь.	*Jag	anser	<u>att</u>	Peter		vara	dum
			I	consider	(to)	Peter	(to)	be	stupid
									(based on Holmberg (1986:159, (61b)))

Furthermore, att has to be in I° rather than further down, as it precedes the negation:

(47) Sw. a. Han måste anse Peter att inte vara lika klok som jag
 b. \*Han måste anse Peter inte att vara lika klok som jag
 He must consider Peter (to) not (to) be as clever as I

When *att* occurs in a raising construction like (49a), which is the raising counterpart of (48a), it is not immediately clear whether it precedes or follows IP-spec, as IP-spec only contains a trace.

(48) Sw. a. Det var inte långt ifrån att hon blev antagen b. Det var inte långt ifrån hon blev antagen It was not far from that she was admitted ((48a) from Gunnarson (1989:2, (3)))

(49) Sw. a. Hon; var inte långt ifrån t; <u>att</u> bli antagen b. \*Hon; var inte långt ifrån t; bli antagen She was not far from to be admitted ((49a) from Gunnarson (1989:1, (1)))

However, also in raising examples like (49a), *att* has to be in I°. Otherwise we would expect a *that-trace* violation, i.e. we would expect the movement of the subject from IP-spec of the embedded clause (cf. (48a)) into the matrix clause to be impossible. However, as opposed to Icelandic, Swedish does show *that-trace* effects, indicating that *att* in (49a) is not in C°, whereas *att* in (50b) is:

(50) a. Ic. Hver, sagoir bú ao t, hefoi komio ?
b. Sw. \*Vem, sa du att t, hade kommit?
Who said you that had come ? (from Holmberg (1986:123, (127)))

We thus conclude that att in Swedish control infinitival is in I°.

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### 4.4 French PRO is lower than IP-spec

We still have to provide an analysis of the infinitival markers de and di in French and Italian. It's clear that CP-recursion is not required in these infinitives, and yet we do not feel that there is evidence suggesting that these elements are anywhere but in C°. In particular, the data from Kayne (1984) discussed in section 4.2.1 suggest that de and di are part of the C-projection. And, as also discussed in section 4.2.1, the absence of island effects suggests that they are not in CP-spec, which leaves only C°.

We would like to suggest that the difference between French and Icelandic, and the rest of Germanic, is the position of PRO. Recall that one of the two features of Icelandic that force CP-recursion in infinitival clauses is that PRO is driven from its D-structure (VP-internal) position into the specifier of the highest functional projection. There, for it to escape government by the complementiser, CP-recursion must be invoked. We suggest that in French, by contrast, PRO is not forced to move into the specifier of the highest functional projection, and that as a result it is possible for a complementiser to be present in non-finite clauses without invoking CP-recursion.

That this is a feature which distinguishes French from the Scandinavian languages and English is suggested by the relative freedom with which French (and even more so, the other Romance languages) allows postverbal subjects. That postverbal subjects in Romance are lower than preverbal ones is generally acknowledged to be responsible for their greater freedom of extraction. In particular, the possibility of postverbal subjects to be extracted across a complementiser is credited to their being governed by the main verb (cf. e.g. Rizzi (1982:146-148)). In modern terms, this can be seen as a consequence of postverbal subjects remaining in a VP-spec (to the right of V-bar) (cf. Giorgi & Longobardi (1991:172), Koopman & Sportiche (1991), etc.). Thus, if we assume, following Pollock (1989), Belletti (1990) and Chomsky (1991), that I° is split into AgrS° and T°, subjects of finite clauses have the option in French of positioning themselves as shown:



From (51), an S-structure is reached by moving the verb through  $T^{\circ}$  into AgrS°.

What this phenomena indicates is that subjects in French are not forced to move into AgrSP-spec in finite clauses; we see no reason why this should be different for the PRO subjects of infinitival clauses. It is most likely not possible for PRO to remain in VP-spec, however, as this position is governed by the verb which has moved into or through T°. We suggest then that PRO does move in infinitives, but not as far as AgrSP-spec. Instead, in cases where there is only a main verb, it raises to TP-spec. In this position it will not be governed by the verb, because verbs in infinitival clauses do not move into AgrS°.<sup>14</sup>

The situation in French compound tenses is somewhat more complex. Here, the auxiliary verb is able to move into AgrS<sup>°</sup>, cf. Pollock (1989:373). Thus, PRO cannot in these cases move into TP-spec because this position is now governed by the auxiliary verb. This shown in the diagram below.



Instead, we adopt Belletti's (1990:84) suggestion that there are two functional projections between the D-structure position of the auxiliary verb and the D-structure position of the main verb. If the main verb moves only to the lower of these two, then PRO can move to the specifier of this functional projection and remain ungoverned:

#### <sup>14</sup>Cf. Pollock (1989:374, (16d,c)):

AgrS°Neg T°(i)Fr. a. \*Ne posséder pasde voituré en banlieu...b. Nepas posséder de voiture en banlieu...(to own) not (to own) a carin the-suburbs ...

... rend la vie difficile ... makes life difficult

Here (as throughout) we employ the terminology of Belletti (1990) and Chomsky (1992) rather than Pollock's (1989) own.



If PRO can find an ungoverned position among the specifiers of the functional projections that make up clauses in Romance, then because it is not forced to move into AgrSP-spec, there is no pressure to invoke a recursive CP to protect PRO from government by a complementiser. This would account for the difference between Icelandic and French.<sup>15</sup>

### 5. Summary

(53)

The infinitival markers at in Danish, a in Norwegian, att in Swedish, and  $a\delta$  in Icelandic are governors. How can PRO avoid being governed?

1. Danish/Norwegian: at/å are not in C° and PRO is therefore safe in IP-spec. at/å are not in I° either, but further down, in V° or maybe in T°. This is why they follow sentence adverbials and negation. The infinitive itself remains in V°.

2. Swedish: *att* is not in C°, although this is often assumed, but in I°. Therefore PRO is safe in IP-spec, and therefore *att* precedes sentence adverbials and negation. The infinitive itself remains in V°.

3. Icelandic: Although  $a\delta$  is in C°, PRO is not in IP-spec, but rather in the lower CP-spec. This lower CP is a barrier. The lower C° may not stay empty (for the same reason that causes V2), and therefore the infinitive has to move there.

<sup>15</sup>The analysis proposed above for French will not work for Italian, as the infinitive in Italian would seem to move to 1° (or AgrS°), cf. Belletti (1990:71) and Rizzi (1993:21-22). This description of the Italian data goes directly against the fundamental idea of this paper, namely that only those verbs move to 1° which have a reason to do so, i.e. the ones that merge with a (strong) finite inflection. We will have to leave this for further research.

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