That-t in Scandinavian and elsewhere:
Variation in the position of C

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Abstract
It is common knowledge that there are no universal *that*-trace effects. The Scandinavian languages have figured rather prominently in the study of *that*-trace effects, and have played an important role in the theoretical implementation of them. In this paper I will provide an overview of the Scandinavian languages to show the vast differences between and within the languages. It will be shown that some varieties of Norwegian are very liberal, whereas others pattern more or less as English. These differences will receive a straightforward analysis when we assume that the structural position of the complementizers varies across varieties, that is, they lexicalize different heads. Thus *that*-trace variation is really nothing but a lexicalization difference. This conclusion also accounts for differences related to sub-extraction from subjects vs. extraction of subjects in Norwegian.

1. Introduction[*]

That-trace (*that*-t) effects have been an important subject of study in generative grammar for over thirty years.[1] It was first thought that it was possible to formulate a universal filter (Chomsky and Lasnik 1977), but Dutch and Scandinavian data were rapidly presented which argued against any universality (Perlmutter 1971: 116, Maling and Zaenen 1978). These languages were particularly important as they are not null subject languages. Today everyone agrees that we cannot speak about any universal *that*-t filter, both for empirical and theoretical reasons. Since we are not dealing with a universal phenomenon, we need some kind of parametrization. Recently Shlonsky and Rizzi (2005,

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[1] In what follows, I will speak about the *that*-trace effect, although I will be assuming the copy theory of movement (Chomsky 1995, Nunes 2004). However, *that*-t has become such a common term that I will continue to use it for expository purposes.

2006) and Rizzi (2006) have given this a lot of attention, and building on Rizzi's theory they have in their joint work presented a framework for deriving the cross-linguistic differences. However, they have not taken the Scandinavian languages into consideration.

The aim of this paper is to look at the distribution of the *that*-t effects in the Scandinavian languages, and to account for the differences found within the minimalist program.[2] We shall see that these languages have quite different strategies regarding how they deal with the presence or absence of the nominal complementizer *at/att/að* 'that'. Thus there is a lot of variation among the languages, which is quite surprising given their intimate historical relationship. I will also undertake a special study of Norwegian and show that we actually find most of the Scandinavian varieties present in what we consider to be one language.[3] Looking at closely related languages such as English and the Scandinavian ones is a good way to get a better understanding of the parametric differences between these languages. I will therefore try to provide a unified account of the variation among these languages. Taken together, understanding these differences would be an important achievement regarding the relationship

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[2] I will only deal with subject extractions, as those are the ones limited to *that*-t effects, as the contrast between (i) and (ii) illustrates.
(i)   a.   What did Janet say had happened?
        b.   *What did Janet say that had happened?
(ii)   What did Janet say that Paul had done?
The same holds true for the Scandinavian languages, as illustrated with Danish data in (iii) (Vikner 1995: 12)
(iii)   a.   Hvordan tror du Peter tog   til Paris?
               how   think you Peter went to Paris
        b.   Hvordan tror   du at   Peter tog til Paris?
               how   think you that Peter went to Paris
               'How do you think Peter went to Paris?'
        c.   *Hvem tror du at   ofte   tager til Paris?
                who   think you that often goes to Paris
               'Who do you think often goes to Paris?'
[3] This is actually not very surprising. Some of the dialects in Norwegian differs more than standard Norwegian and standard Swedish differ from each other. "Language" is obviously not a scientific term but a political, which is particularly evident from the point of view of the Scandinavian languages.

between parametric theory and the nature of locality. The study of locality has become particularly pertinent in recent years, and we will see that a proper understanding of the variation related to *that*-t offers us important insight into questions related to freezing effects and phase theory.

The paper is organized as follows. In section 2 I take a close look at the Scandinavian languages and their differences regarding the *that*-t effect. Section 3 deals with English and English varieties in addition to pro-drop languages like Italian. Section 4 aims at providing an explanation of the observed cross-linguistic variation in terms of a simple cue/parameter. The hypothesis that such a parameter exists will be supported by a small study of the variation among the Norwegian languages regarding *that*-t effects. It will also be shown that *that*-t effects in important ways relate to our understanding of locality effects and islands. Section 5 concludes the paper.

2. *That*-t in Scandinavian

The Scandinavian languages are by no means identical when it comes to movement out of a *that*-clause. Varieties of Norwegian are arguably the most liberal ones regarding the availability of subject extraction (see section 4 for further discussion on this variation). Most of the literature that discusses Norwegian fails to acknowledge this, and one can even get the impression that Norwegian is like English. An important aim of the present paper is to show that this is incorrect. Danish and Icelandic pattern more or less similarly, whereas Swedish is special in requiring resumptive pronouns (see e.g. Hellan and Christensen 1986 for a brief summary). In this section I will provide a brief overview of the data. I first look at varieties of Norwegian in 2.1, at Danish and Swedish in 2.2, and lastly at Icelandic in 2.3. Section 2.4 contains a short summary.

2.1. Varieties of Norwegian

I will limit myself to dealing with the nominal complementizer *at* 'that' which introduces clausal complements. Many linguists have a tendency of focusing on *som* in these contexts, but this is clearly a topic on its own. *Som* is subject to other restrictions, e.g. that it must occur whenever the subject of the relative clause is relativized. I will set aside the uses of *som* here (though see Taraldsen 1978, 1979, 1986, 2001 for much discussion related to *som*).

It is very difficult to use the notion "Norwegian" in this context. The reason for this is that this language has a lot of variation among the varieties. In this section I will restrict myself to those varieties/dialects that do not show any *that*-t effect. In section 4 I return more closely to the Norwegian situation.

The examples in (1)-(3) illustrate that some varieties of Norwegian do not have any *that*-t effect. It is impossible to say anything certain about the geographical distribution of these dialects, but see section 4.2 for some remarks. I have provided two variants of each sentence, one with the complementizer *at* and one without the complementizer. [4]

(1)　a.　Hvem tror　hun at　vil　komme?

　　　　　what　thinks she　that　will　come

　　b.　Hvem tror hun vil komme?

　　　　'Who does she think will come?'

(2)　a.　Hva tror　　han at　er i　boksen?

　　　　　what　thinks he　　that　is in box.DEF

　　b.　Hva tror han er i boksen?

　　　　'What does he think is in the box?'

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[4] There are several cases in Norwegian where we have to retain an overt *at* (see Faarlund, Lie and Vannebo 1997: 984-989). Among other things, this has to do with whether the embedded clause is presupposed or not. Embedded V2 also makes it harder to delete *at*. However, as long as we do not involve any of these cases, it is generally possible both with and without *at* in the varieties discussed in this section.

(3)   a.   Hvem tror   hun at   unngår å lese boken?

             who   thinks she that avoids to read book.DEF

       b.   Hvem tror hun unngår å lese boken?

             'Who does she think avoids reading the book?'

As we shall see, this is arguably the most radical variant found among the Scandinavian languages.

2.2. *Danish and Swedish*

Danish and Swedish are not as liberal as the varieties of Norwegian presented in 2.1. Both languages have the *that*-t effect just like standard English. This is illustrated in (4)-(5) for Danish (taken from Vikner 1995: 12; see also Vikner 1991) and (6) for Swedish.[5]

(4)   a.   Hvilken kok tror du har kogt   de   her grønsager?

             which   cook think you has cooked these here vegetables

             'Which cook do you think has cooked these vegetables?'

       b.   * Hvilken kok   tror du at har kogt   de   her grønsager?

(5)   a.   Hvem tror du   ofte tager til Paris?

             who   think you often goes to Paris

             'Who do you think often goes to Paris?'

       b.   *Hvem tror du   at   ofte tager til Paris?[6]

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[5] When it comes to Swedish, we find the so-called adverb effect (i) (see section 4.1 for more on this effect in general), that is, the presence of an adverb makes extraction possible. Notice, however, that there also is an "anti" *that*-t effect in these constructions since the complementizer needs to be retained. See Pesetsky and Torrego (2001) for similar facts from English.

(i)   a.   Vem är du glad att inte kunde komma?

           who are you glad that not   could come

           'Who are you glad couldn't come?'

       b.   *Vem är du glad inte kunde komma?   (Holmberg 1986: 193)

[6] Notice also that Danish is more restrictive than Swedish in not allowing an adverbial in higher positions (Haeberli 2002: 207, 236-238).

(6)   a.   Vilken elev trodde ingen skulle fuska?

which pupil thought nobody would cheat

'Which pupil didn't anyone think would cheat?'

       b.   *Vilken elev trodde ingen att skulle fuska? (Engdahl 1982: 166)

A fact that distinguishes Danish from all the other languages is that it often uses a dummy element *der* (akin to *there* in English) when the subject of a *that*-clause has been extracted. (7)-(8) illustrate this.

(7)   Vennen (som) han påstod at der havde lånt bogen var

friend.DEF that he claimed that there had borrowed book.DEF was

forsvundet.

disappeared

'The friend that he claimed had borrowed the book had disappeared.'

(Engdahl 1985: 21)

(8)   Hvem tror du, at der har gjort det?

who think you that there has done it

'Who do you think has done it?'   (Engdahl 1986: 123)

This is impossible in all the other Scandinavian languages, but it is actually rather similar to the Swedish resumptive pronouns. A resumptive pronoun is known to avoid the creation of islands, thus in order to avoid the *that*-t effect, Swedish needs to make use of such a pronoun. This is shown in (9)-(10) where we have a complementizer. We also find similar instances with embedded interrogative clauses (11). (9c) illustrates that it is impossible with a resumptive pronoun if the complementizer is absent.

(9) a. Vilken elev trodde ingen   att han skulle fuska?

which pupil thought nobody that he   would cheat

'Which pupil didn't anyone think would cheat?'

b. *Vilken elev trodde ingen att   skulle fuska?

c. *Vilken elev trodde ingen han skulle fuska? (Engdahl 1982: 166)

(10) a. Vilka elever var det oklart in i det sista om de   skulle

which pupils was it   unclear in in the last   if   they should

klara sig?

succeed

 'Which pupils was it unclear until the last minute if they were going to make it?'

b. *Vilka elever var det oklart in i det sista om skulle klara sig?

(Engdahl 1985: 22)

(11) a. Vilken film kunde ingen   minnas   hur den slutade?

what   film could no.one remember how it   ended

'What film could no one remember how ended?'

b. *Vilken film kunde ingen   minnas   hur slutade?

(Engdahl 1986: 121)

Boeckx (2003: 90-91) speculates that the use of resumption may be related to the fact known since Erteschik-Shir (1973) that Swedish appears to allow extraction out of Complex NPs (see also Platzack 1974, Allwood 1976, 1982, Andersson 1982, Engdahl 1986). I will have nothing further to say about this here. However, it is important to note that we also find varieties of Swedish that pattern like Norwegian. In Finland-Swedish, the sentences in (12)-(13) are grammatical.

(12) Vi har forsökt täcka sådana fall   som vi tänkte att skulle vara

we have tried   cover such   cases that we thought that should be

intressanta.

interesting

'We have tried to cover such cases as we thought would be interesting.'

(Engdahl 1985: 22)

(13) Vem sa   du   att hade sett oss?

who said you that had   seen us

'Who did you say had seen us?'   (Holmberg 1986: 192)

In the following, I will only consider standard Swedish, but it is interesting to see that we find this variation across such closely related varieties.

2.3. Icelandic

Icelandic has a pattern of its own, which is illustrated in (14) (Maling and Zaenen 1978: 478-479; see also Kitahara 1994).

(14) a.   Hver sagðir þú að væri kominn til Reykjavíkur?

who said   you that was come   to Reykjavik

'Who did you say that had come to Reykjavik?'

b.   Þetta er maðurinn sem þeir halda að sé of heimskur til að

this   is man.DEF   that they think that is too dumb   in order

vinna verkið.

to.do job.DEF

'This is the man that they think is too dumb to do the job.'

c.   Það er Ólafur sem þeir segja að   muni   koma.

it   is Olaf   that they say   that would come

'It is Olaf who they say would come.'

Regarding *að*, Maling and Zaenen (1978: 480) note: "Deletion of the complementizer *að* is only marginally possible in Icelandic, and is certainly no better in these examples of extracted subjects".[7] This makes Icelandic special, as it has a strict "anti" *that*-t effect.

2.4. Summary

We can summarize the variation across the Scandinavian languages as follows. Danish and Swedish pattern more or less like English, if we set aside the dummy element *der* and resumptive pronouns. Icelandic is different in that it only allows movement out of an embedded clause when the complementizer is present. The most liberal varieties are found within Norwegian. They allow movement regardless of whether the complementizer is present. It is very interesting to note this great variation between these languages, and we have even seen some data showing that there is significant internal variation as well. In section 4, we will on the basis of Norwegian data delve more deeply into this variation. In the next section, we will present a suggestion as to how the general differences between the Scandinavian languages can be derived. But first we need to look at other languages and some suggestions that have been put forward in the literature as to how they should be analyzed.

3. *That*-t elsewhere and theoretical implementations

Before trying to explain the Scandinavian differences, I think it will prove useful to look at recent accounts of the *that*-t effect within the minimalist program. As we shall see, combining various insights from these approaches will turn out to

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[7] Kjartan Ottósson (p.c.) informs me that the only systematical case where *að* is absent is when the *að*–clause has a light subject pronoun, as in (i).

(i)　　Ég　held　'ann komi
　　　　I　think　he　come.SUBJ
　　　　'I think he comes.'

yield a coherent explanation of the differences. However, it is necessary to say a few words about why *that*-t is so interesting and important. One major reason is that its presence or absence determines whether a subject is allowed to move out of the embedded clause. Normally, it is assumed that subjects are frozen when they have reached the canonical subject position in an embedded clause (labeled SpecTP in the present paper; see McCloskey 1997 for illuminating discussion on "subjects" within generative grammar), as argued by e.g. Takahashi (1994), Stepanov (2001), Boeckx (2003, 2006, 2007), Lasnik and Park (2003), Rackowski and N. Richards (2005), Rizzi 2006, Lohndal (2007) (see e.g. Chomsky 2005 for a different view).[8] The following data from English, taken from Lasnik and Park (2003: 650), illustrate this.

(15) a.   *Which Marx brother$_i$ did she say [a biograph of t$_i$] {is going to be published/will appear} this year?

   b.   *Which Marx brother$_i$ did she say that [a biographer of t$_i$] {interviewed her/worked for her}?

From this perspective, sentences such as (16) appear to be problematic.[9]

(16) a.   What do you think is in the box?

   b.   What did Susan claim had happened?

Confronted with such data, we mainly have two options: Either we have to say that SpecTP is not a universal freezing position, or we have to come up with an analysis that renders the data in (16) unproblematic. I will chose the latter path,

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[8] As is well known, in all the Scandinavian languages the subject moves to SpecCP in declarative clauses due to V2. This does not violate the freezing effect since there is no complementizer present that closes off the subject chain.

[9] I am here assuming the "extended"/"generalized" activity condition which assumes that everything within a DP freezes too (and not just the DP itself) (see Chomsky 2005, Rizzi and Shlonsky 2005, Boeckx 2006, Lohndal 2007, Gallego and Uriagereka in press).

and look more closely at the relationship between the complementizer and the subject position. That is also the approach taken by various other authors, and I will in particular focus on the important works of Boeckx and Rizzi.

Rizzi points out that "the possibility of moving the subject in certain environments […] amounts to the ability of the thematic subject to avoid moving to the EPP [Extended Projection Principle] position, thus escaping the freezing effect" (Rizzi 2006: 124). There are mainly two straightforward ways of doing this.[10] One is that null subject languages can let an expletive *pro* fulfill what Rizzi calls the Subject Criterion (i.e. the EPP), the other is to insert an overt expletive like *there*. The first alternative is illustrated in (17) for Italian and the second is illustrated in (18) for English (Rizzi 2006: 124).

(17) a. Chi$_i$ credi   che [pro verrà?]
          who do you think that *pro*   will come
      b. Credo che verrà   Gianni.
          I think that will come Gianni
(18) a. *What do you think that is in the box?
      b. What do you think that there is in the box?

Both of these strategies derive the adequate result: SpecTP is filled, which makes it impossible for other material to move into this position. Consequently, extraction from subjects must happen from a postverbal position (see already Platzack 1987 for a similar analysis). In the latter case there is no freezing effect as the subject has not yet culminated. However, there are also dialects of English that lack the *that*-t effect, as has been carefully documented by Sobin (1987,

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[10] N. Richards (2001: 168-171, 177-178) suggests another way to implement the standard distinction in English, but he does not discuss languages which do not show *that*-t effects. For yet other suggestions as how to derive *that*-trace effects within the minimalist program, see Deprez (1991, 1994), Szczegielniak (1999), Pesetsky and Torrego (2001), Ishii (2004), and Branigan (2005).

2002). These data have recently been reanalyzed by Rizzi and Shlonsky (2005), building on the framework in Rizzi (1997, 2006). Rizzi and Shlonsky propose that the difference between these varieties is that the Finite head (Fin) is endowed with the relevant nominal quality and unvalued φ-features in the variety where we find *that*-t effects.[11] These features check the Subject Criterion and thus make it possible for the thematic subject to bypass SpecTP. Crucially, Fin is the position whose role is to make the A-chain targeting T culminate. Boeckx (2006) develops this further (see also Boeckx 2003: 179-180, fn. 15), and suggests that the standard English complementizer *that* corresponds to Fin, which he argues is associated with subject-chain properties. That is, when Fin is present, it agrees with the subject, and thus the subject becomes frozen in place. The null complementizer corresponds to Force.[12] Boeckx also assumes that Fin does not need to be present in order for Force to be present (contra Rizzi 1997, but in line with e.g. Bošković 1996, 1997). One important argument in favor of Boeckx's argument that complementizers come in different guises is the co-occuring complementizers we find in Polish (19) and Dutch (20) (Boeckx 2006: 124-125):

(19)   On myslal, ze   Janowi zes   dal ksiazke.

      he thought that John   that.2.SG gave book

      'He thought that you gave the book to John.'

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[11] Rizzi (1997: 288) suggests to split the CP into the following extended structure:
(i)   ForceP … (TopicP) … (FocusP) … FinP TP
[12] This proposal is not novel. Various people have argued that different complementizers are in different position (see, among others, Authier 1992, Hoekstra 1993, Szczegielniak 1999, Roussou 2000). Another way to implement this is suggested by Lightfoot (2006), where complementizers differ as to whether they constitute a host for cliticization (see his work for further details). However, none of these works make the specific link between a complementizer and the subject-chain properties, which is the gist of the proposals by Boeckx and Rizzi.

(20) a.   Piet denkt (*of) dat Jan het gedaan heeft.

            Piet thinks   if   that Jan it   done   has

            'Piet thinks that Jan did it.'

      b.   Wat denkt Piet (of) dat Jan gedaan heeft.

            what thinks Piet if   that Jan done   has

            'What does Piet think that Jan has done?'

As the data illustrate, Polish has two morphologically identical complementizers, separated by a topic. The lower complementizer hosts the subject agreement marker/clitic. Dutch, on the other hand, can only realize the highest complementizer in the context of *wh*-movement. Boeckx takes these two examples to suggest that low complementizers are associated with subject A-properties like agreement, whereas higher complementizers can be used to extend A-bar chains beyond the mono-clausal domain.[13] On this account, the English varieties where no *that*-t effect is observed lexicalize Force instead of Fin. Since Fin is the head associated with the subject-chain, extraction is possible due to Fin's absence (Force can then attract the subject due to some feature).

    Besides the two alternatives to avoid *that*-t effects mentioned above, there is also another well-known alternative, namely what Culicover (1992) dubbed the "adverb effect". Some representative data from English are provided in (21)-(24) (from Browning 1986: 237-238, building on Culicover 1992):

(21) a.   Robin met the man Leslie said that for all intents and purposes was the mayor of the city.

      b.   *Robin met the man Leslie said that was the mayor of the city

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[13] This is supported by the fact that several languages exhibit what we often refer to as *complementizer agreement* (see among others Bayer 1984, Haegeman 1992, Zwart 1997, Carstens 2003).

(22) a. This is the tree that I said that just yesterday had resisted my shovel.

b. *This is the tree that I said that had resisted my shovel.

(23) a. I asked what Leslie said that in her opinion had made Robin give a book to Lee.

b. *I asked what Leslie said that had made Robin give a book to Lee.

(24) a. Lee forgot which dishes Leslie had said that under normal circumstances should be put on the table.

b. *Lee forgot which dishes Leslie had said that should be put on the table.

There have been a number of analyses to account for these facts, either by suggesting a PolP as Culicover (1992) does, or to assume CP recursion (Branigan 1996, 2005, Browning 1996; the latter one building on Watanabe 1992). Boeckx (2006) discusses these cases, and argues that they fit his theory nicely. Specifically, he argues that these adverbials are located in SpecTopicP, that is, between Force and Fin (cf. fn. 11). That means that *that* must be in Force in these constructions, and since there is no Fin, extraction is licit. The differences between the varieties in English is thus a difference in lexicalization, which is a welcome result from the perspective of the minimalist program where parametric differences mainly are reduced to lexical differences (Borer 1984).

There is one argument in favor of Boeckx's theory and against Rizzi's. Rizzi proposes a Subject Condition, which is dubious on both empirical and conceptual grounds. His Subject Condition is really nothing else than a restatement of the traditional EPP (see Boeckx 2007b, Bošković 2002, Epstein and Seely 2006 and Richards 2007 for an elimination of the EPP). Since Boeckx manages to do without this, I will propose a solution for the Scandinavian data within his framework.

4. Dealing with Scandinavian

4.1. A general account

In this section it will be argued that we can derive the differences between the Scandinavian varieties as resulting from differences in lexicalization. That is, the complementizer lexicalizes different positions in different varieties, which has a crucial impact on whether extraction from SpecTP is allowed or not.

I will follow Boeckx's (2006) account and assume that different complementizers lexicalize different positions, and that these positions have different properties as elaborated on above. It is then possible to arrive at the parametrization in (25)[14]

(25) a. *Languages exhibiting the* that-*trace effect:*
          The complementizer lexicalizes Fin. Agreement obtains.
      b. *Languages lacking the* that-*trace effect:*
          The complementizer lexicalizes Force. No agreement obtains.

I follow Boeckx (2006) and Rizzi (2006) in assuming that Fin is the relevant C head that shares its φ-features with T (cf. Chomsky 2005, 2006). (25) adopts this, but it also assumes that we can get an overt agreement relation, which is entirely expected (cf. fn. 13). Adapted on to the two varieties of English, (25) means that in the standard variety *that* lexicalizes Fin, whereas in the other varieties *that* lexicalizes Force. When *that* is in Fin, agreement obtains between Fin and T, and the subject becomes frozen in place. However, when *that* lexicalizes Force we assume that Fin is absent (in line with Boeckx and Bošković, though see Rizzi and Shlonsky 2005 for counter-arguments), thus no agreement relation obtains and the subject is free to move on to a higher landing

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[14] An argument supporting this is that not all child languages exhibit the *that*-t effect (McDaniel, Chiu and Maxfield 1995: 716, quoting Thornton 1990), as seen in (i). This can be taken to mean that the child has not yet set the accurate parameter for the complementizer.
(i)   Who do you think that's under the can?

site. Let us now see how this can be adapted on the Scandinavian variation illustrated in section 2.

The Norwegian varieties discussed so far pattern nicely with the English variety where no *that*-t effect occurs. Hence *at* lexicalizes Force. Below I will complicate this picture by showing some of the dialectal variation. However, this variation will in fact turn out to support the general argument. Danish and Swedish fall within the standard English group that lexicalizes Fin, as they do not allow any copy after the complementizer.[15] Icelandic is different in that it only allows extraction when the complementizer is present. I take this to mean that the overt complementizer *að* lexicalizes Force, but that this language also has a covert complementizer in Fin.[16] That derives the impossibility of subject extraction as this covert complementizer freezes the subject in SpecTP. I have not said anything about the cases in Danish and Swedish where extraction nevertheless is allowed when a complementizer is present. In Swedish this clearly relates to resumption and the adverb effect, and I am inclined to treat Danish similarly when it comes to resumption. The difference between these languages would then be that Danish only has some kind of default resumptive pronoun in these contexts. I will not say anything further about resumption, as it in crucial ways hinges on what theory of resumption one assumes. Hence I think these cases require independent explanations. See e.g. Boeckx (2003) for a very

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[15] As Christer Platzack (p.c.) mentions, at least for Danish another argument for the low complementizer is that we find adverbs above the complementizer (i).

(i)   … aldrig at   hun gjorde sådan.
         never that she did   such

In medieval Swedish we find cases where there is no *that*-t effect (Platzack 1987: 396-397). I consider this as further support in favor of the parameter/cue in (25).

[16] Boeckx (2006: 127, fn. 88) suggests a similar approach to the "anti-*that*-t" effects of the type found in Norwegian (i).

(i)   Vi vet   ikke hvem *(som) oppfant   ostehøvelen.
         we know not who   that invented cheese.slicer.DEF
         'We don't know who invented the cheese slicer.'

interesting approach where resumption is analyzed as stranding, and where its effects are derived through independent principles of the theory.[17]

So far I have treated Norwegian more or less like a unit, but as the reader will have noticed, this is not unproblematic. I will now turn to a brief discussion of the Norwegian variation that I have been able to locate, which will show that the lexicalization approach to *that*-t variation is on the right track. Unfortunately no study has ever been made on *that*-t variation in Norwegian, except a very few small studies on single dialects (e.g. Fiva 1985, 1991). Norwegian has a very large number of dialects, and the syntactic differences among these are rather poorly studied. I have performed a small investigation of some dialects, merely by asking various linguists that come from areas scattered all over Norway. Needless to say, this study is by no means comprehensive, but it might hopefully serve as a small study for future research within this area.

4.2. That-t variation in Norwegian

It has already been mentioned that there is much variation in Norwegian. Since nobody has ever studied this in any detail, I have undertaken a small survey among Norwegian linguists just to see if it was possible to arrive at a rough map of the variation. That proved to be impossible, but there are some tendencies that ought to be mentioned. People in the eastern and southern part of Norway (Østlandet and Sørlandet, respectively) quite readily allow the complementizer to be present, hence they have in general no *that*-t effect. People from the middle part of Norway (Trøndelag) appear to be more reluctant towards removing *at*. Northern Norwegian exhibits much variation, where some single dialects even allow resumption. There appear to be some regional differences, although a

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[17] I have not discussed context where we find embedded V2. As is well-known, the Mainland Scandinavian languages allow embedded V2 in some contexts (Vikner 1995, Thráinsson 2003, Bentzen, Hróarsdóttir, Hrafnbjargarson and Wiklund 2007, Julien 2007). See Bentzen, Hrafnbjargarson, Hróarsdóttir and Wiklund (2007) and Julien (in press) for some data on extraction in V2 contexts.

much more detailed study is needed in order to make any substantial claims about this. Thus in this paper I will mainly focus on the variation and not its geographical distribution.

Above we have seen that English has the so-called adverb effect. As Holmberg (2000: 477) remarks, there are variants of Norwegian that have this effect too (this also applies for Swedish, cf. fn. 5).

(26)   Hvem sa   du   at *(ikke) hadde kommet?

   who   said you that not   had   come

   'Who did you say that not had come?'

Holmberg makes the following claim: "*that*-trace is disallowed or dispreferred unless an adverb (e.g., the negation adverb) intervenes between C and the finite verb" (Holmberg 2000: 477). This is as we have seen too strong. In the variants discussed in 2.1, there is no adverb effect. Among my consultants, two persons indicate that they find examples such as (26) better than those without an adverb. Both of these also show a general *that*-t effect. There are also a couple of other people who do not accept the presence of the complementizer. Besides these two variants, there is also another which appears to be rather limited and special. Fiva (1991) investigated the Northern Norwegian dialect in the Bodø district (see also Fiva 1985), and found that this dialect uses resumption like Swedish does. A general example illustrating this is provided in (27) (note that dialects in North-Norwegian, as well as various other Norwegian dialects, use a personal pronoun to premodify personal names).

(27) a.   Han Paul trur æ ikke at   han har læst denne søknaden.

            he   Paul think I not that he   has read this   application

            'I don't think Paul has read this application.'

    b.   *Han Paul trur æ ikke at har læst denne søknaden.

    c.   *Han Paul trur æ ikke han har læst denne søknaden.

            (Fiva 1991: 66)

As the examples show, these varieties pattern exactly like Swedish resumption, cf. section 2.2.

    There are also some other dialects that chose yet another strategy in these cases, namely to insert *som*. The following example in (28) illustrates this.

(28) Kem han Jens trur   (som) er i baren   no.

     who he   Jens thinks that   is in bar.DEF now

     'Who does Jens think is in the bar right now?'   (Vangsnes 2004: 56)

It varies whether *som* is obligatory or not, and this does not necessarily correlate with the speaker's acceptance or non-acceptance of the complementizer *at* 'that'. Again, as mentioned above, *som* is rather different in many ways. Further study is necessary to say something more about how *som* relates to *at* in these contexts.

    Summing up, we have mainly seen four different types of *that*-t variants in Norwegian: a strong *that*-t effect, the adverb effect, no *that*-t effect and use of resumption. However, what appears to be the most general picture is that most people allow the sentences to have a complementizer, but they find extraction over *at* slightly degraded. I do not take this to mean that they show a strong *that*-t effect, just that they have a preference for the variant without the complementizer. The reason for this might be normative pressure from writing, as there is a misguided belief that structures with a retained complementizer (in

the cases where both options are possible) are bad language in Norway. At any rate, the important theoretical point to draw from this variation in Norwegian is that it supports the view that the cross-linguistic variation is due to a difference in lexicalization.

5. Conclusion

This paper has shown that we can maintain the ban on extraction from SpecTP. The possible problem regarding the lack of *that*-trace effect vanished as soon as we provided a proper analysis of the distinction between languages that exhibit this effect and languages that do not. Specifically, I have argued with Boeckx that different complementizers lexicalize different heads and that the head in question decides whether extraction is allowed or not. The analysis assumes the lexicon to be the locus of parametric variation, which makes it possible to assume that different languages have different complementizers. The variation found among the Norwegian varieties lends support to this conclusion.

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