83rd annual meeting of the LSA   Sverre Johnsen
San Francisco   Harvard University
January 11, 2009   johnsen@fas.harvard.edu

Binding in tenseless domains

1. Outline

- Present data from a Norwegian dialect showing that reflexives can be bound out of finite and non-finite complement clauses if the clause is semantically tenseless
- Argue that tenseless clauses trigger restructuring with interclausal verb raising
- Show that long-distance binding can be reduced to a restructuring effect

2. Norwegian binding

2.1 Previous literature

- As most Germanic languages, Norwegian has a separate 3rd person reflexive pronoun *seg*
- The binding domain for *seg* is not clear from the literature
- In work based on written corpora (Faarlund et al. 1997) or multi-regional surveys (Strahan 2003), no clear pattern is found, probably because the data reflect quite different dialectal distributions
- Work on a north-western dialect (Moshagen and Trosterud 1990, Strahan 2001) shows that *seg* is bound logophorically, as is well known also from Icelandic
- Presumably reflecting his own dialectal judgment, Hellan (1988, 1991) claims that *seg* is freely bound out of non-finite clauses, but cannot be bound out of a finite clause
- Hellan's claims are usually repeated in subsequent scholarly literature on binding as reflecting 'Norwegian binding' (e.g. Dalrymple 1993, Safir 2004, Büring 2005, Reuland 2006)
- Hellan (1988) admits in passing, however, that long-distance binding out of finite clauses is "occasionally used" in "casual speech", without providing examples

2.2 Østfold Norwegian

- Since the most consistent data come from work on specific dialects of Norwegian, the judgments in this paper are collected only from speakers in Østfold, a small region in the south-east corner of Norway
- I will call this regional variant Østfold Norwegian (ØN)

3. Østfold Norwegian (ØN) data

3.1 Finite complements of perception verbs
- In ØN, *seg* can be bound out of a finite clause when embedded under a perception verb (1a, 2a), but not for most other verbs (1b, 2b):

(1a) ?Reven$_i$ hørte/så/lukta   [at   noen   jakta   på   seg$_i$]
      The-fox   heard/saw/smelled   that   someone   chased   on   self
      'The fox heard/saw/smelled that someone was chasing him'

(1b) *Reven$_i$ sa/trudde/frykta   [at   noen   jakta   på   seg$_i$]
      The-fox   said/believed/feared   that   someone   chased   on   self
      'The fox said/believed/feared that someone was chasing him'

(2a) ?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'

(2b) *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'

- Since perception verbs are not licensers of logophoric pronouns (Culy 1994), the long-distance binding in (1a, 2a) cannot be due to logophoricity

3.2 Non-finite complements

- Exemplified with object control verbs, some allow *seg* in their complements, such as *la* 'let' and *tvinge* 'force', whereas others do not, such as *be* 'tell' and *beordre* 'order':

(3)   Læreren$_i$?lot/*ba   elevene$_j$ [PRO$_j$ stå   bak   seg$_i$]
      The-teacher   let/told   the-students   stand (inf.)   behind   self
      'The teacher let/told the students (to) stand behind him'

(4)   Læreren$_i$?tvang/*beordra   elevene$_j$ til [å PRO$_j$ stå   bak   seg$_i$]
      The-   forced/ordered   the-   to to   stand   behind   self
      teacher   students   (inf.)
      'The teacher forced/ordered the students to stand behind him'

4. Tenselessness

- The finite and non-finite complements that allow long-distance binding in section 3 above all have in common that they are semantically tenseless
- It is well documented that tense cuts across morphological finiteness, such that both finite and non-finite clauses can be either tensed or tenseless (Stowell 1982, Landau 2000, 2004, Wurmbrand 2001, Wiklund 2007)
- The non-finite complements of verbs like *la* 'let' and *tvinge* 'force' are tenseless (Wiklund 2007)

- That finite complement clauses can be tenseless has primarily been demonstrated for Balkan languages (Varlokosta and Hornstein 1992, Krapova 2001, Landau 2004, Radišić 2006)
- The finite complement clauses of perception verbs in ØN are special in three domains that all point to semantic tenselessness:
    1) Sequence of tenses (SOT)
    2) Double access reading (DAR)
    3) Temporal adverb disagreement

4.1 Sequence of tenses (SOT)

- In ØN, an SOT reading is generally optional in a past-under-past construction:

(5a) Per   sa   [at   Kari   var   med   barn]
        Peter   said   that   Kate   was   with   child
Interpretation: (i) Peter said: "Kate is pregnant"
                        (ii) Peter said: "Kate was pregnant"

- When the matrix verb is a perception verb, however, SOT becomes obligatory:

(5b) Per   så   [at   Kari   var   med   barn]
        Peter   saw   that   Kate   was   with   child
Interpretation: (i) Peter saw: /Kate is pregnant/
                        (ii) *Peter saw: /Kate was pregnant/

- Following the standard analysis of SOT as having a tenseless complement clause,[1] the obligatory SOT reading with perception verbs means that perception verbs select for tenseless complements

4.2 Double access reading (DAR)

- In ØN, present tense can be embedded under a past verb with a DAR reading (6a), but not for perception verbs (6b):

(6a) Per   sa   [at   Kari   er   gravid]
        Peter   said   that   Kate   is   pregnant

(6b) *Per   så   [at   Kari   er   gravid]
        Peter   saw   that   Kate   is   pregnant

- Given that the present tense in a DAR construction denotes temporal simultaneity (Enç 1987, Stowell 2007), the ungrammaticality of (6b) follows from the conclusion above that perception verbs must select tenseless complements

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[1] Ogihara 1995, von Stechow 1995, Kratzer 1998, Kusumoto 1999, Khomitsevich 2007.

4.3 Temporal adverb disagreement

- The standard test for tenselessness is to let a temporal adverb in the complement clause contradict a temporal adverb in the matrix clause (cf. Varlokosta and Hornstein 1992, Landau 2000, 2004 Krapova 2001, Wurmbrand 2001, Radišić 2006, Wiklund 2007)
- If the result is ungrammatical, it is taken as evidence that the complement has no tense that can be modified
- Such conflicts are tolerated with most matrix verbs (7a), but not with perception verbs (7b):

(7a) I dag   sa   Per   [at   det   regna   i fjord]
       Today   said Peter that   it   rained   last year
       'Today, Peter said that it rained last year'

(7b) I dag   så   Per   [at   det   regna   (*i fjord)]
       Today   saw   Peter that   it   rained   last year
       'Today, Peter saw that it rained last year'

4.4 Conclusion

- The three tests above show that finite complements of perception verbs are tenseless
- With previous (and uncontroversial) demonstration that the non-finite complements of *la* 'let' and *tvinge* 'force' are tenseless, the pattern shows that:

> *Complement tenselessness licenses non-local binding*
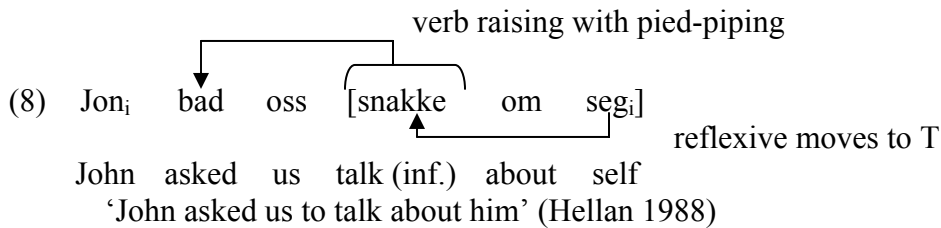
5. Analysis

5.1 Restructuring

- As seen above, clausal tenselessness is pivotal for long-distance binding in ØN
- Clausal tenselessness has been argued to be a prerequisite for 'restructuring' to take place, where the interclausal T-to-T movement has a wide range of language specific effects (cf. Zushi 2001, Wurmbrand 2001, 2006, Wiklund 2007 with references)

5.2 Binding through movement

- In the widely accepted movement theory of binding, the reflexive moves covertly to the T-projection, where it is in a local configuration with its subject binder in spec-TP (Lebeaux 1983, Chomsky 1986, Pica 1987, Battistella 1989, Reinhart

and Reuland 1991, Cole and Sung 1994, Cole, Hermon and Huang 2001, Reuland 2001a, Safir 2004)
- When a reflexive is bound structurally (i.e. not logophorically) by the subject in the higher clause, it follows under this approach that the embedded T must have undergone further movement to the matrix T, with pied-piping of the reflexive
- Using the data in Hellan (1988), Reinhart and Reuland (1991, Reuland 2001b, Reuland 2006) analyze binding out of a non-finite clause in Norwegian precisely in this way:

verb raising with pied-piping

(8)   Jon$_i$ bad   oss   [snakke   om   seg$_i$]

reflexive moves to T

John   asked   us   talk (inf.)   about   self
'John asked us to talk about him' (Hellan 1988)

- One problem with this analysis, as admitted in Reuland 2006, is that no independent motivation or trigger for this verb movement is identified

5.3 Long-distance binding from restructuring

- In ØN, T in tenseless clauses raises to the matrix T by restructuring
- If the tenseless clause contains a reflexive, the reflexive will be pied-piped to the matrix clause, where it is bound by the matrix subject
- The trigger for an interclausal T-to-T movement is therefore semantic tenselessness
- Long-distance binding in ØN is consequently an automatic consequence of restructuring – no independent stipulations need be made to account for it
- Long-distance binding can therefore be analyzed as yet another *restructuring effect*

6. Restructuring in Østfold Norwegian

- Restructuring can be shown to exist in ØN independently of long-distance binding, hence it is not posited simply to account for the binding facts
- Some Norwegian and Swedish dialects have a verb copying process, where the verb in non-finite tenseless clauses takes on the tense morphology of the matrix verb (Wiklund 2007)
- Wiklund (2007) argues that this is a restructuring effect. As shown in the following examples, the same verbs that allow verb copying are the same verbs that allow long-distance binding:

6.1 *la* 'let'

Verb copying
(9) Jeg hadde ikke **latt** 'n$_i$ [PRO$_i$ **gjort** det]
    I   had   not   let (perf.) him   done (perf.) it
      'I would not have let him do it'

Long-distance binding
(10) ?Læreren$_i$ **lot** elevene$_j$ [PRO$_j$ stå bak **seg**$_i$]
      The-teacher let   the-students   stand (inf.) behind self
        'The teacher let the students stand behind him'

6.2 *se* 'see'

Verb copying
(11) Jeg har ikke **sett** ['n **gjort** det]
     I   have not seen (perf.) him done (perf.) it
       'I have not seen him do it'

Long-distance binding
(12) Læreren$_i$ **så** [elevene stå bak **seg**$_i$]
      The-teacher saw the-students stand (inf.) behind self
        'The teacher saw the students stand behind him'

6.3 *be* 'tell'

Verb copying (not possible)
(13) *Jeg hadde ikke **bett** 'n$_i$ [PRO$_i$ **gjort** det]
     I   had   not   told (perf.) him   done (perf.) it
       'I would not have told him to do it'

Long-distance binding (not possible)
(14) *Læreren$_i$ **ba** elevene$_j$ [PRO$_j$ stå bak **seg**$_i$]
      The-teacher told the-students   stand (inf.) behind self
        'The teacher told the students to stand behind him'

7. Conclusions and implications beyond Norwegian

- In ØN, tenseless complement clauses license long-distance binding
- Under a movement approach to restructuring and binding, long-distance binding in ØN falls out as another restructuring effect
- ØN is the first language to my knowledge where *semantic* tense is shown to restrict binding, but since it has not been reported for Norwegian before, it is probably underreported or undiscovered in other languages, too
- Two seemingly unrelated phenomena in ØN can be seen as effects of a single operation – T-to-T raising across clauses

- More research on 'peripheral' binding facts might reveal how other syntactic processes, seemingly unrelated, are able to widen or constrain the use of reflexives

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