The syntax of temporal anaphora in early Germanic

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Carola Trips & Eric Fuß
Universities of Stuttgart and Frankfurt

1. Introduction

- The early Germanic languages exhibit a class of temporal adverbs that originated from former demonstratives: Gothic *þan(uh)*, Old English (OE), *þa*, *þonne*, Old High German (OHG) *thô, thanne*, Old Saxon (OS) *tha, thanna*, all roughly meaning 'then'.

- These adverbs often show a peculiar syntactic behaviour that sets them apart from other adverbs: (i) In OE, *þa, þonne* consistently trigger inversion; (ii) they can assume the role of conjunctions in all early Germanic languages.

(1) **Þa** <u>for</u>   *he* norþryhte   be þæm   lande;
    then went *he* northwards to   that   land
    'Then he went northwards to that land.'
    (Orosius,:1.14.7.128)

(2) **Þonne** <u>ærnað</u> *hy*   ealle toweard þæm feo;
    then   run-to   they   all   towards   the   treasure
    'Then they all ran towards the treasure.'
    (Orosius,:1.17.21.233)

(3) **Ða**   se wisdom þa   ðis spell   asæd hæfde, **þa**   <u>ongan</u> *he* eft   singan
    when the wisdom then this story said   had   then began he again   sing
    'When wisdom then had told this story, he began to sing again'
    (Fischer et al: 2000, 57)

- <u>Etymology of *þa* (*þo*)</u>: OE. *ðá, Þá*, ModE *then, when*; originally a case-form of the demonstrative stem *Þa-* of *the, that*; the actual accusative singular feminine form.

- <u>Etymology of *þanne* (*þonne*)</u>: OE *Þanne, Þonne, Þœnne, Þenne*, ME. *Þenne, Þan, Þen* (OHG. *danne, denne*, MHG. *danne, denne*, G. *dann*); cf. also Gothic *Þan*; adverbial formations from the demonstrative root *Þa-*: cf. *that, the*. Both the adverb and the conjunction *then* originate in the same word, which in both senses varied in ME. and 16th c. between *then* and *than* (ModG has *dann* (adverb) 'then', *denn* (conjunction) 'than') (from the OED, 2002)

- According to Ramat (1981) the Proto-Germanic demonstrative *TO- is the origin of West Germanic temporal adverbs and conjunctions like OE *þa*, OHG *dô*, later with a nasal suffix as in Gothic *þan*. What these elements have in common is their anaphoric and deictic function in relation to something previously mentioned.

- Focusing on the syntax of *þa, þonne* in OE and the changes that affected the distribution of these elements in the Middle English (ME) period, this paper presents a new approach to the syntactic behaviour of these elements based on the following assumptions:

<u>Basic claims</u>:
  (i) OE was a discourse-configurational language; that is, word order was determined by discourse-related factors such as anaphoricity, or the distinction between old/new information (in contrast to ME and ModE where it primarily serves to discriminate syntactic functions), cf. e.g. Fischer et al. (2000), Kemenade & Los (2006).

  (ii) Subject pronouns and clause-initial *þa, þonne* compete for the same structural position, which is linked to the discourse anchoring of anaphoric expressions in OE (and which we identify as SpecTP).

2. *Þa, Þonne* and V2 in Old English

- <u>Well-known fact</u>: Old English (OE) main clauses exhibit word order patterns reminiscent of the Modern Germanic V2 languages, i.e. the finite verb occupies the second position after a fronted XP, leading to subject-verb inversion (examples taken from Trips 2002:231):

(4) a. *object–V$_{fin}$–subject*
      [Þæt hus] <u>hæfdon</u> *Romane* to ðæm anum tacne geworht ...
      that house had   Romans to the one sign made
      'The Romans had made that house to their sole sign.'
      (Or_3:5.59.3.1042)

  b. *PP–V$_{fin}$–subject*
      [On þysse dune ufanweardre] <u>bæd</u> *Sanctus Albanus* fram Gode ...
      on this   hill higher up   bade Saint Alban   from God
      'On this hill higher up Saint Alban asked from God ...'
      (Bede_1:7.38.30.323)

  c. *adverb–V$_{fin}$–subject*
      [Uneaðe] <u>mæg</u> *mon* to geleafsuman gesecgan ...
      Hardly   may man to faithful   speak
      'Hardly may man speak to the faithful ...'
      (Or_3:9.70.16.1292)

- <u>Pronoun placement</u>: in clauses with a fronted non-operator, subject pronouns regularly intervene between the clause-initial XP and the finite verb, giving rise to V3 order:

(5) [Æfter þysum worde] *he* <u>wearð</u> eall gehæled.
    after   this   word   he was   all   healed
    'After this word, he was all healed.'
    (ÆLS_[Sebastian]:299.1391)

- However, subject-verb inversion is obligatory with both pronominal and nominal DP subjects if the fronted element is an operator such as a wh-phrase as in (6) or the negation *ne* as in (7):

(6) a. Hwæt <u>sculon</u> *we* þæs   nu   ma   secgan?
       what   shall   we afterwards   now   more speak
       'What shall we afterwards speak now more?'
       (Bede_2:9.132.1.1253)
   b. hu   <u>wurð</u> *he* elles   gelæred?
       how was   he otherwise taught
       'How was he taught otherwise?'
       (BedePref:2.11.153)

(7) a. ne <u>bið</u> *he* lengra þonne syfan elna   lang.
       NEG is   he lenger than   seven ells   long
       'He is not taller than seven ells.'
       (Orosius,:1.15.2.149)
   b. Ne <u>meaht</u> *þu* deman Gallia biscopas buton heora agenre
       NEG might you judge   Gaul's bishops   but   their   own
       aldorlicnesse, ...
       authority
       'You might not judge the Gaul's bishops but their own authority.'
       (Bede_1:16.74.5.679)

- In addition, subject-verb inversion is obligatory with all kinds of subjects in cases where the clause-initial position is occupied by the temporal adverbs *þa*, *þonne* 'then' (cf. Mitchell 1985, Kemenade 1987, Kroch & Taylor 1997, Pintzuk 1999):

(8) **Þa**   <u>for</u>   *he* norþryhte   be þæm lande;
      then   went he northwards to   that   land
      'Then he went northwards to that land.'
      (Orosius,:1.14.7.128)

(9) **Þonne** <u>ærnað</u> *hy*   ealle toweard   þæm feo;
      then   run-to they   all   towards   the   treasure
      'Then they all ran towards the treasure.'
      (Orosius,:1.17.21.233)

- <u>Wide-spread analysis of these word order facts</u> (cf. e.g. Cardinaletti & Roberts 1991; Pintzuk 1993, 1999; Hulk and van Kemenade 1995; Kemenade 1997, 1999; Kroch & Taylor 1997; Haeberli 1999, Fischer et al. 2000):
    (i)   Subject pronouns occupy a fixed position at the left edge of IP (preceded by fronted topics).
    (ii)   Full DP subjects occupy a lower (presumably VP-internal) position (in more technical terms, INFL/T does not host an EPP feature in OE).

> (iii)   The finite verb occupies a head position in the IP domain; it moves further to C only in operator contexts (leading to obligatory subject-verb inversion).

(10)   *V3 with pronominal subjects*
[CP Æfter þysum worde [IP *he* [I' <u>wearð</u> [VP eall gehæled]]]].
  after   this   word   he   was   all   healed
'After this word, he was all healed.'
(ÆLS_[Sebastian]: 299.1391)

(11)   *V2 with full DP subjects*
[CP Þæt hus [IP $\varnothing$ [I' <u>hæfdon</u> [VP *Romane* to ðæm anum tacne geworht]]]]
  that house   had   Romans to the   one   sign   made
'The Romans had made that house to their sole sign.'
(Or_3:5.59.3.1042)

(12)   *Obligatory inversion with fronted operators*
[CP hu [C' <u>wurð$_i$</u>+C^0 [IP *he* [I' t$_i$' [VP elles   gelæred t$_i$]]]]]?
  how   was   he   otherwise taught
'How was he taught otherwise?'
(BedePref:2.11.153)

- <u>Problem</u>: up to now, no convincing explanation of obligatory inversion triggered by *þa* and *þonne*.
- <u>Traditional analysis</u>: *þa, þonne* are syntactic operators on a par with wh-phrases negation etc. As a result, they trigger verb movement to C^0 which crosses the subject pronoun in SpecTP (cf. e.g. van Kemenade 1987):

(13)   [CP þa/þonne [C' V$_{fin}$ [TP pron. [T' t$_V$ [$_{vP}$ ...]]]]

- <u>Problem</u>: lack of V2 effects with 'then' in Modern English: although fronted operators such as wh-phrases and negation continue to trigger inversion in Modern English, *then*, the present-day equivalent of OE *þa, þonne* fails to do so:

(14) a. ***Then** <u>will</u> *Harry/he* read that book.
    b. **Then** *Harry/he* <u>will</u> read that book.

- <u>Kemenade & Los (2006)</u>: clause-initial *þa/þonne* is a discourse operator located in SpecCP that signals discourse continuity and requires the finite verb to occupy C.
- <u>Unclear</u>: (i) notion of "discourse operator"; (ii) why is the finite verb required to move to C?

3. An alternative approach

3.1 Preliminaries: The syntax-discourse interface

- An utterance that coherently continues a given discourse must meet at least the following conditions w.r.t. the syntax-discourse interface:
  - (i) Sentence mood ("Force") must be coded (questions vs. assertions etc.)
  - (ii) Distinction between "old", given information and "new" information must be properly marked (topic vs. focus etc.)
  - (iii) Anaphoric expressions must be anchored in the discourse (e.g., pronouns must receive a referential index)
- Conjecture: In discourse-configurational languages like OE, not only (i) & (ii), but also (iii) may be linked to certain structural positions/configurations in the syntax.

3.2 The temporal interpretation of clause-initial *þa/þonne*

- Semantics of 'then': 'then' is commonly analyzed as a temporal anaphor that (i) introduces a temporal relation between two sentences, and (ii) must be linked to an anchor time given in the discourse (cf. Smith 1981, Schiffrin 1992, Glasbey 1993, Thompson 1999).
- Syntactic position determines the temporal interpretation of 'then': systematic differences between clause-initial and clause-final *then* in Modern English (cf. e.g. Schiffrin 1992, Thompson 1999).
- Clause-initial *then* (henceforth **sequential 'then'**): (i) sentence adverb, associated with IP; (ii) events described by successive sentences are interpreted as temporally ordered – in (15), the photographing event occurs after the speaking event, and there is no temporal overlap between these events (sequential/ordered reading):

(15)   Mary will speak to the reporters. **Then** Bill will photograph her. (Thompson 1999: 126)

- Clause-final *then* (henceforth **cotemporal 'then'**): (i) VP-adverb; (ii) events described by two successive sentences are interpreted as temporally overlapping – in (16), Bill photographs Mary while she is speaking to the reporters:

(16)   Mary will speak to the reporters. Bill will photograph her **then**. (Thompson 1999: 126)

- Analysis (Thompson 1999): The anaphoric character of 'then' consists in linking (Reichenbachian) times in tense structure with relevant times given in the immediate discourse context.[1]

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[1] In somewhat more formal terms, we can say that the interpretation of temporal anaphora requires the assignment of a temporal index given in the discourse.

- **cotemporal 'then'** links the Event time of its clause (associated with VP) with the Event time of the previous clause (→cotemporal reading).

- **sequential 'then'** links the Reference time of its clause (associated with IP) with the Reference time of the previous clause (→ordered/sequential reading).[2]

- <u>Clause-initial *þa, þonne*</u>: typically used to mark a sequence of foregrounded successive actions/events that do not overlap temporally (cf. e.g. Foster 1975, Enkvist & Wårvik 1987, Wårvik 1995). Compare the Ohthere interpolation in Alfred's Orosius (reproduction of oral narrative; simple narrative structure):

(17) He sæde þæt he æt sumum cirre wolde fandian hu longe þæt land norþryhte læge, oþþe hwæðer ænig mon be norðan þæm westenne bude. **Þa** for he norþryhte be þæm lande; let him ealne weg þæt weste land on ðæt steorbord & þa widsæ on ðæt bæcbord þrie dagas. **Þa** wæs he swa feor norþ swa þa hwælhuntan firrest faraþ. **Þa** for he þa giet norþryhte swa feor swa he meahte on þæm oþrum þrim dagum gesiglan. **Þa** beag þæt land þær eastryhte, oþþe seo sæ in on ðæt lond, he nysse wæðer buton he wisse ðæt he ðær bad westanwindes & hwon norþan & siglde ða east be lande swa swa he meahte on feower dagum gesiglan. **Þa** sceolde he ðær bidan ryhtnorþanwindes, for ðæm þæt land beag þær suþryhte, oþþe seo sæ in on ðæt land, he nysse hwæþer. **Þa** siglde he þonan suðryhte be lande swa swa he mehte on fif dagum gesiglan. **Ða** læg þær an micel ea up in on þæt land. (Or_1:1.14.5.226-235)

   'He said that at one occasion he wanted to find out how far that land extended northwards, or whether any man lived north of the wilderness. **Then** he travelled northwards along the coast; keeping all the way the waste land on the starboard and the open sea on the portside for three days. **Then** he was as far north as the whalehunters go furthest. **Then** he travelled still northwards as far as he could sail in another three days. **Then** the land turned east, or the sea into the land, he didn't know which, but he knew that he there waited for a wind from the west and somewhat from the north and sailed then east along the coast as far as he could sail in four days. **Then** he had to wait for a due north wind, because that land turned there directly to south, or the sea into the land, he didn't know which. **Then** he sailed from there southwards along the coast as far as he could sail in five days. **Then** there was a large river reaching up into the land.' (Enkvist & Wårvik 1987: 234)

- <u>Preliminary conclusions</u>: Clause-initial *þa, þonne* triggering inversion are instances of **sequential 'then'**, linking the Reference time of their clause with the Reference time of a previous clause. Accordingly, they must be associated with IP, the locus of Reference time.

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[2] Intuitively, the linking of Reference time results in an ordered reading in the following way: If the tense structures of two successive clauses are linked by clause-initial 'then', this leads to an interpretation where both clauses share the same Reference time. Now, if there is no additional link associating the Event times of the two clauses, the event described by the first clause is (by default) interpreted as completed when a subsequent clause describes a second action or event that is viewed from the same Reference time.

3.3 The distribution of sequential *þa/þonne* and subject pronouns

- <u>Observation</u>: Fronted *þa, þonne* may be preceded by a topicalized phrase, giving rise to V3 orders that are reminiscent of the kind of V3 occurring with subject pronouns (compare (5) above):

(18) a. On þa   ilcan tima **þa** <u>comon</u> *hi*   to Medeshamstede...
at the   same   time then came   they to M.
(ChronE_[Plummer]:870.5.1115)
  b. Syððan   **þa** <u>com</u> *he* to se   cyng Eadgar, ...
afterwards then came he to the king E.
(ChronE_[Plummer]:963.9.1396)
  c. Mid þam **ða** <u>com</u> þæt wif.
with that then came that woman
(ACHom_II,_8:67.14.1355)
  d. Him **þa** <u>andswarode</u> se   biscop.
him then answered   the bishop
(GD_1_[C]:4.28.5.293)

(19) a. For þi   **þonne** <u>wacion</u>   *we, ...*
for that then   stay-awake/watch we
'because then we stay awake/watch...'
(ChrodR_1:14.6.277)
  b. On ðone sexteoðan dæg ðæs   monðes **þonne** <u>bið</u>
on the   sixteenth day of-the month   then   is
Sancte Marcelles   tid   ðæs   papan.
Saint Marcel-GEN feast-day of-the pope-GEN
(Mart_5_[Kotzor]:Ja16,A.1.99)

- Note that in the above examples, both pronominal ((18a,b) & (19a)) and full nominal subjects ((18c) & (19b)) undergo inversion with the finite verb.
- <u>Recall</u>: fronted *þa, þonne* are better analyzed as non-operators (see section 2 above).
- <u>Claim</u>: The finite verb uniformly occupies INFL/T in all clauses with a fronted non-operator, including those with clause-initial *þa, þonne*.
- Accordingly, the data in (18) & (19) can be accounted for under the following assumptions:
  (i)   The topicalized element occupies SpecCP.
  (ii) *þa, þonne* occupy a spec in the inflectional domain, presumably SpecTP.
  (iii) The finite verb is located in T.
  (iv) All subjects, including pronouns occupy a lower, VP-internal position.

(20)   *V3 with* þa, þonne[3]
[CP topic [TP **þa/þonne** [T Vfin [vP subject (pronoun) ...]]]]

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[3] The absence of a fronted topic leads to V2 orders as in (1) & (2) above.

- If we compare the structure in (20) with the structure commonly posited for V3 orders with pronominal subjects, it appears that the preverbal position is apparently either filled by the subject pronoun (giving rise to V3 without inversion) or with *þa, þonne* (leading to V2/V3 and obligatory inversion):

(21) *V3 orders with fronted non-operators*
      [CP topic [TP **subject pronoun** [T' V_fin [vP ...]]]]

- This can be taken to suggest that *þa, þonne* and subject pronouns compete for the same structural position (see appendices I & II for a more detailed view on the distribution of *þa, þonne* in both main and embedded clauses).
- Analysis: The temporal anaphora *þa, þonne* are merged in the specifier of TP, thereby blocking movement of the subject pronoun to this position (*Merge over Move*, Chomsky 1995). As a consequence, the pronoun has to stay behind in its theta-position (SpecvP), giving rise to subject-verb inversion. Case and agreement checking with the in-situ pronoun can be accomplished by an AGREE-relation initiated by T.
- Further evidence that this position is to be identified as SpecTP:
  (i) Sequential *þa, þonne* specify Reference time, which is often associated with IP/TP (Hornstein 1990, Stowell 1995, Thompson 1999).
  (ii) Tense selection: *þa* requires that the finite verb is in the preterite indicative (in contrast to *þonne*, which occurs with other tenses/moods as well, cf. Mitchell 1985, Wårvik 1995).
- Question: Why do subject pronouns and *þa, þonne* compete for SpecTP?

3.4 Discourse-configurationality and the nature of SpecTP in OE

- OE as a discourse-configurational language; structural positions are not linked with grammatical functions, but with information-structural distinctions (cf. Fischer et al. 2000, Kemenade & Los 2006).
- Basic claims: In OE, the licensing of anaphoric expressions was linked to certain structural positions. More specifically, we claim that the discourse anchoring of temporal anaphora (sequential 'then') and (subject) pronouns took place in SpecTP, which was associated with anaphoricity.[4] Furthermore, we adopt the (common) assumption that SpecTP is reserved for nominal material (i.e., it is specified as [+D]):

(22) SpecTP in OE: [+anaphoric, +D][5]

- Subject pronouns: [+D], [+anaphoric]; move to SpecTP to receive a referential index given in the discourse context.

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[4] That is, we assume that the assignment of referential/temporal indices drawn from the discourse context (which is necessary to interpret anaphoric expressions) took place in SpecTP.

[5] Recall that we assume that in OE, T lacked an EPP feature. The frequent presence of subject pronouns in SpecTP (due to their anaphoric nature) possibly supported the development of [+EPP] T in the ME period (see section 4 below).

- Full DP subjects: [+D], [–anaphoric]; remain in situ (SpecvP), since they are referential expressions (but may move further up into the C-domain to be interpreted as topic, focus etc.).
- *þa, þonne*: [+D], [+anaphoric]; if interpreted as a sentence adverb (sequential 'then'), *þa, þonne* are merged in SpecTP to receive a temporal index (i.e., they are linked with a Reference time given in the discourse), blocking movement of subject pronouns to this position.
- In cases where *þa, þonne* occupy SpecTP, the assignment of a referential index to the subject pronoun proceeds via an AGREE-relation between T and the pronoun (established during the syntactic derivation for independent reasons (Case and agreement)).[6]

4. The loss of 'then'+inversion in the Middle English period

- Observation: chronological parallels between the loss of 'then'+V2 and changes affecting the status of the subject position in the Middle English (ME) period.[7]
- In contrast to modern English, OE displays a number of subjectless constructions where neither a nominative subject nor an expletive element shows up in the subject position (SpecTP). Relevant examples include weather verbs, experiencer verbs and impersonal passives:

(23)   a. norþan   sniwde
           [from] north   snowed
           'it snowed from the north'
           (Seafarer, 31; Kiparsky 1997:471)
       b. him   ofhreow   þæs mannes
           him-DAT   pitied   the   man-GEN
           'he pitied the man'
           (AColl, 192.16; Allen 1995:68)
       c. þæt   eallum folce   sy gedemed beforan   ðe
           that all   people-DAT be judged   before   thee
           'that all the people be judged before you'
           (Paris Ps. 9.18; Kemenade 1997:335)

- In Early Middle English, these constructions began to disappear, a development which is accompanied by the emergence of the expletive *there*. According to e.g. Breivik (1989), (1990), Allen (1995), Kemenade (1997) and Haeberli (1999), the loss of subjectless structures took place roughly between 1350 and the early 15th century.
- This change can be attributed to the development of an EPP feature that requires the subject position (here identified as SpecTP) to be overtly filled –

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[6] Note that this is reminiscent of the relation between *there* and its associate DP in existential constructions.

[7] More generally, it seems that there are chronological parallels between the overall loss of V2-patterns and the rise of the requirement that the subject position be overtly filled (in the ME period, roughly from 1350 to 1425, cf. Hulk & van Kemenade 1995, Kemenade 1997, Haeberli 1999, 2000, Fuß 2003).

either by a nominal bearing nominative case or a semantically vacuous expletive element such as *there*.

- Interestingly, it seems that the loss of 'then'+V2 took place in the very same period. A survey over a set of ME texts in the PPCME2 shows that 'then' loses its special status as a trigger of V2 in the period from 1340-1475, cf. Fuß & Trips (2003).

- This period was characterized by a whole set of surface changes that contributed to the overall loss of discourse-configurationality (loss of case inflections, loss of subjectless constructions, general loss of word order variation, rise of structural passive constructions etc.).

- The correlation between the loss of 'then'+V2 and development of the expletive *there* becomes particularly clear in the *Ayenbite of Inwit* (1340), a text which exhibits variation between inverted and non-inverted orders after clause-initial *þanne* 'then'.[8] However, all examples with the expletive *þer* 'there' display V3 order, with the expletive intervening between *þanne* and the finite verb:

(24)   a.   **þanne** þer   <u>nys</u>   prowesse   ari t: ...
         then   there   not-is   prowess   properly
         'Then there is no proper prowess.'
         (CMAYENBI,83.1613)
   b.   **þanne** þer   ne   <u>is</u>   non noblesse: ...
         then   there   not   is   no   nobleness
         'Then there is no nobleness.'
         (CMAYENBI,87.1702)

- The absence of V2 orders in clauses in which *þanne* and *þer* co-occur supports the conjecture that there is a close connection between the loss of 'then'+V2 and the rise of an EPP feature in T: in cases where an expletive is inserted as SpecTP to satisfy T's EPP feature, the adverb *þanne* must occupy another position (e.g., in the CP domain, or adjoined to TP).[9]

- Over time, V2 patterns with 'then' dropped out of the grammar, since SpecTP became a position reserved for subjects/expletives, which could not host adverbs any longer:

(25)   [$_{CP}$ ∅ [$_{TP}$ 'then' [$_{TP}$ expl./subj. [$_{T'}$ V$_{fin}$ [$_{vP}$ ...]]]]]

- The connection between the two changes in question can be nicely captured under the assumption that OE *þa, þonne* occupy SpecTP, but is much more difficult to account for if these temporal adverbs are analyzed as operators located in SpecCP.

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[8] In the *Ayenbite of Inwit*, we found 70% inversion with subject pronouns (16 of 23 cases), and 44% inversion with full subject DPs (14 of 32 cases), probably an instance of *Grammar Competition* (Kroch 1989).

[9] In a similar vein, Alexiadou (2000) assumes that SpecTP can host temporal adverbs only if there is no EPP feature in T. However, in languages where such a feature requires subjects to appear in SpecTP, temporal adverbs cannot occur in this position.

- The development in question is also reflected by changes affecting the so-called 'correlative construction', in which an adverb at the beginning of an independent clause recapitulates or anticipates a temporal adverb clause.
- Example from OE:

(26) **Ða**   se wisdom þa ðis spell asæd hæfde, **þa** <u>ongan</u> he eft   singan
when the wisdom then this story said had   then began he again sing
'When wisdom then had told this story, he began to sing again'
(Fischer et al: 2000, 57)

- In ME we find three patterns:

(27)   'when'-S-V$_{fin}$ ... 'then'-V$_{fin}$-S (OE order, 34 cases)
for **whan** they knowen thy   naked purpos, **thanne** <u>haue</u> *thei*
for when they know   your naked purpose then   have they
no cause to repreue the, neither for pore folke ne for noo religious
no cause to repreive you, neither for poor folk   nor for no   religious
gystes.
gests
(AELR4,3.68)

(28)   'when'-S-V$_{fin}$ ... 'then'-S-V$_{fin}$ (38 cases)
bote **whanne** he schal come hym-self to gyue rigtful dom
but when   he shall come himself to give rightful judgment
ate day of dome,   **þanne** *he* <u>schal</u> be knowe a verrey mygtful   God.
at day of judgement then   he shall be known a very   mightyful God
(AELR3,47.668)

(29)   'then', 'when'-S-V$_{fin}$ ... 0/S-V$_{fin}$ ... (6 cases)
Then aftyr, **when** scho was wened,   *þay* <u>broght</u> hur to þe tempull,
then after when she was accustomed they brought her to the temple
(MIRK,16.471)

- The last pattern might indicate the change from the pattern *þa*-V$_{fin}$-S to *þa*-S-V$_{fin}$: Under the assumption that *þa* triggers V2 for discourse reasons, when the main clause is interrupted by the *when*-clause (with *þa* preceding that clause), subject-verb inversion can no longer be triggered and thus S-V$_{fin}$ orders start to occur.

5. V2 and temporal anaphora in other early Germanic languages

- <u>General observation on clause-initial 'then'</u>: Parallels concerning syntax and discourse function(s) between OE *þa, þonne* and the relevant cognate forms in other early Germanic languages (cf. Betten 1987 on OHG *thô*, Klein 1994 on the use of clause-initial *þanuh* in Gothic), compare the following quote from

Klein (1994: 262) on the discourse function of Gothic *þanuh/þaruh*, and the passage from the OHG *Tatian* translation in (30):[10]

> "[...] the former two particles [Gothic *þanuh* and *þaruh*] are discourse-continuative foregrounding markers, carrying forward the discourse along the time-line of the main story [...]" (Klein 1994: 262)[11]

(30) **Thô** gihortun inan thie iungiron sprechantan inti folgetun themo heilante. **Thô** giuuanta sih ther heilant inti gisah sie imo folgente, quad in: uuaz suochet ir? Sie quadun imo: rabbi (thaz ist arrekit meistar) uuâr artos? **Thô** quad her in: quemet inti gisehet. Quamun sie thô inti gisahun uuâr her uuoneta, inti uuonetun mit imo then tag; **thô** uuas thiu zehenta zît thes tages. (*Tatian*, 16.2; Betten 1987: 397)

'**Then** the disciples heard him speak: and they followed the Saviour. **Then** the Saviour turned and saw them following him, saith to them: What seek you? They said to him: Rabbi (which is to say, being interpreted, Master), where dwellest thou? **Then** he saith to them: Come and see. They came and saw where he abode: and they stayed with him that day. **Then** it was about the tenth hour.'

5.1 A closer look at Old High German

- <u>Background</u>: In contrast to OE, even the earliest records of Old High German exhibit a much more consistent V2 syntax.
- In the following example, a non-V2 order (in the Latin original) is changed to a V2 declarative in the OHG translation, in which the subject pronoun follows the finite verb. This suggests that pronouns underwent regular subject-verb inversion as early as in the OHG *Isidor* translation (around 800):

(31) a. et   ideo   nobis natus est
          and therefore us   born   is
      b. endi [bidhiu] <u>uuard</u> *ir* uns   chiboran
          and   therefore was   he   us   born
          'And therefore he was born to us.'
          (Isidor, 394)

- Similar examples are found in the OHG *Tatian* translation (around 880):[12]

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[10] Interestingly, Hirt (1929: 352f.) observes that clause-initial 'then' triggers regular inversion in other early Indo-European languages as well (including Sanskrit and Old Greek). This might be taken to indicate that the phenomenon in question is actually of greater antiquity than originally assumed.

[11] See Betten (1987: 405) for a very similar characterization of the discourse function(s) of OHG *thô*.

[12] The line numbers refer to Masser's (1994) edition of the *Tatian*. The numbers in brackets refer to the version edited by Sievers (1961).

(32) tunc & ipse <u>ascendit</u> → tho ersteig *her* úf
      then self went-up   then climbed he up
      ad diem festum   zi themo itmalen dage
      to feastday   to that solemn day
      'then he himself went also up unto the feast'
      (347,12f. [104,3]; Dittmer & Dittmer 1998: 79)

- <u>OHG *Tation* translation</u>: In the vast majority of relevant main clauses, deviations from the word order of the Latin original result in V2 order (cf. e.g. Dittmer & Dittmer 1998).

- This is achieved by either (i) reducing the number of preverbal elements found in the Latin original (via shifting elements to a postverbal position, mostly in the middle field) or (ii) inserting or shifting elements to the prefield in cases where the Latin original exhibits V1 order.

- <u>Strategy (ii) is of particular interest</u>: According to Dittmer & Dittmer (1998:95), the chapters 106-109 of the OHG *Tatian* contain 12 cases where an empty preverbal position in Latin is rendered by an OHG clause with a single element in front of the finite verb (in addition, there are 34 relevant examples in chapters 140-150).

- Dittmer & Dittmer further note that these elements are always light elements such as subject pronouns (e.g., *ih* 'I', 3 examples), *thô* ('then', 8 examples), and *thanne* ('then', 1 example):

(33) <u>dixit</u> illi. → **thô** <u>quad</u> her imo.
      said   him   then said he   him
      'then he said to him'
      (Tatian 357,1 [106,2]; Dittmer & Dittmer 1998: 92)

(34) <u>rogo</u>   ergo   te   pater → *ih* <u>bitiu</u> thih fater
      pray-1SG therefore you father   I   pray   you   father
      'I pray thee therefore father'
      (Tatian 365,5 [107,3]; Dittmer & Dittmer 1998: 95)

- Note that these are the very same elements that (obligatorily) occupy the preverbal position SpecTP in main clauses of OE.

- <u>This can be interpreted in the following way</u>:
- Cases in which another element is newly inserted into the preverbal field still reflect the unmarked, 'core' instances of inversion/V2 in OHG.

- The facts illustrated in (33) and (34) can then be taken to suggest that full V2 developed via a structural change in which patterns involving an obligatory spec-head relationship between the finite verb and anaphoric elements in SpecTP ('then' or pronouns) were reanalyzed in terms of an obligatory spec-head configuration in the C-domain:

(35) a. [$_{CP}$ ... [$_{TP}$ 'then'/subject pronoun [$_{T'}$ V$_{fin}$ [$_{vP}$ ...]]]] →
      b. [$_{CP}$ 'then'/subject pronoun [$_{C'}$ V$_{fin}$ [$_{TP}$ [$_{vP}$ ...]]]]

- Presumably, this change reinforced the V2 character of the ancestor(s) of OHG by adding new V2 patterns to already existing cases of inversion with fronted operators.

6. Summary

- In this paper, we presented a new approach to V2 patterns triggered by *þa, þonne* in OE which does not make use of the problematic assumption that these adverbs are operator-like elements.

- Clause-initial *þa, þonne* were analyzed as temporal anaphora that give rise to a reading where actions/events are temporally ordered. This particular interpretation was accounted for by the assumption that clause-initial *þa, þonne* links the Reference time of consecutive clauses.

- In narratives, *þa, þonne* are employed as discourse markers that mark a sequence of foregrounded actions/events.

- The relative distribution of *þa, þonne* and subject pronouns was taken to indicate that these elements compete for the same structural position, SpecTP. We argued that this position was linked to the discourse anchoring of anaphoric expressions in OE.

- The fact that *þa, þonne* trigger inversion with pronominal subjects was attributed to the assumption that these temporal anaphora are merged in SpecTP, thereby forcing subject pronouns to stay behind in a VP-internal position (with the finite verb in T).

- Further support for our analysis comes from the loss of V2 patterns with 'then' in the ME period, which can be attributed to an independent change, namely the rise of an EPP feature in T (and the overall loss of discourse-configurationality).

- A brief look at other early Germanic languages revealed parallels between OE *þa, þonne* and the relevant cognates forms in Gothic and OHG, concerning both syntactic properties and discourse functions.

- Finally, we speculated that inversion structures with 'then' possibly played a role in the rise of general V2 in early stages of German.

Appendix I: *þa/þonne* in embedded clauses

- <u>Observation</u>: At first sight, embedded clauses exhibit an even wider range of ordering possibilities concerning the position of adverbial *þa/þonne* (see Adams 1907, Mitchell 1985, Kemenade & Los 2006 for details).

- However, in contrast to main clauses, subject pronouns generally occur to the left of *þa/þonne*, directly adjacent to the complementizer:[13]

(36) Þa   *hi*   **þa**   hine   geornlice beheoldon...
      when   they   then   them   carefully beheld...
      'when they then carefully beheld him...'
      (coeust, LS_8_[Eust]:270.286; Kemenade & Los 2006: 236f.)

- <u>Problem</u>: not expected under the analysis proposed in section 3 (presence of *þa/þonne* should block movement of subject pronouns).

- <u>Possible answer(s)</u>: Tense properties of embedded clauses differ significantly from the tense properties of main clauses. More precisely, embedded tense is dependent on the temporal anchoring of the matrix clause (cf. e.g. Enç 1987). Presumably, this dependency is mediated by the complementizer (cf. Travis 1984, Bennis & Hoekstra 1989).

- Therefore, it seems plausible to assume that in embedded clauses the interpretation of temporal anaphora such as *þa*, *þonne* is less dependent on an anchor time given in the discourse, but can rather be computed directly from the tense properties of the matrix clause transferred to embedded T. Hence, *þa*, *þonne* are not required to occupy SpecTP, giving rise to more word order options.

- Moreover, note that the typical rhetoric use of sequential 'then' in OE (marking of foregrounded successive actions/events, cf. Foster 1975, Enkvist & Wårvik 1987) is much less called for in embedded clauses, which are typically associated with backgrounded information.

- In contrast, the requirements for identifying the reference of pronominal elements do not differ much from the situation in main clauses. As a result, SpecTP is regularly occupied by subject pronouns in embedded clauses.[14]

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[13] Furthermore, object pronouns may occur to the left of *þa/þonne*, either alone (if there's no pronominal subject present), or together with the subject pronoun:
(i) ðætte <u>hie</u> **ðonne** gemonnðwærige sio lufu &   sio geferræden hiora   niehstena...
    that   them then   may-humanize   the love and the society   of-their neighbors
    'that love and the society of their neighbors may humanize them'
    (cocura,CP:47.363.15.2461; Kemenade & Los 2006: 236)
(ii) gif he hit him **ðonne** sellan mæge
     if   he it   him then   give   may
     'if he can give it him then'
     (cocura,CP:44.323.24; Kemenade & Los 2006: 235)
The presence of all pronouns in front of *þa/þonne* can perhaps be accounted for under the assumption that pronominal elements may form a cluster prior to movement to SpecTP. In addition, it is of course possible, that some of the apparently problematic examples involve instances of cotemporal 'then', which occupies a lower, VP-adjoined position.

- <u>Prediction</u>: *þa, þonne* may show up in SpecTP, directly adjacent to the complementizer, if the clause does not contain other anaphoric elements (in particular, no subject pronouns). This seems to be borne out by the facts:

(37) a. Gif **þonne** swiðra   wind aras, þonne tynde he his bec
            if   then   stronger wind arose then   closed he his books
            'if a stronger wind then arose, then he closed his book'
            (cobede,Bede_4:3.268.18.2727; Kemenade & Los 2006: 238)
      b. Gif **þonne** hwylc læsse þing   sie to smeagenne, þonne...
            if   then   any   less   thing be to think on   then
            'if there is any more minor thing to consider, then...'
            (cobenrul,BenR:3.16.9.232; Kemenade & Los 2006: 238)

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[14] For reasons of Relativized Minimality, object pronouns may occupy SpecTP only (i) if they form a cluster with the subject pronoun prior to movement to SpecTP, or (ii) if no subject pronoun is present.

Appendix II: A closer view on the distribution of pronouns and *þa, þonne*

SpecCP	C	SpecTP	T	VP-internal	Comments[15]
a. (topic)	$\varnothing$	pron$_{subj}$	V$_{fin}$	...	giving rise to V3 with fronted non-operators
b. (topic)	$\varnothing$	*þa, þonne*	V$_{fin}$	pron$_{subj}$	Most common pattern with fronted *þa, þonne* (2094 tokens plus 21with fronted non-pronominal topic)
c.		pron$_{subj}$	V$_{fin}$	*þa, þonne*	634 tokens; presumably instances of cotemporal 'then'[16]
d. pron$_{subj}$	$\varnothing$	*þa, þonne*	V$_{fin}$	...	119 tokens; pronoun as topic
e.		*þa, þonne*	$\varnothing$	pron$_{subj}$ V$_{fin}$	29 examples, possibly cases of residual verb-final order
f. wh	V$_{fin}$	pron$_{subj}$	$\varnothing$	*þa, þonne*	6
g. wh	V$_{fin}$	*þa, þonne*	$\varnothing$	pron$_{subj}$	not attested

Table 1: Distribution of (sequential) *þa, þonne* and subject pronouns in OE/main clauses

- Examples:

(38) *Pattern (a.)*
[*Æfter* þysum worde] *he* **wearð** eall gehæled.
after this word he was all healed
'After this word, he was all healed.'
(ÆLS_[Sebastian]:299.1391)

(39) *Pattern (b.)*
On his time **þa** seonde *he* to Rome Wilfrid biscop to þam pape ...
in his time then sent he to Rome W. bishop to the pope ...
(ChronE_[Plummer]:675.4.530)

(40) *Pattern (c.)*
a. *He* dyde **þa** his fingras innto his earan,
he did then his fingers into his ears
(ÆHom_18:30.2518)
b. *He* sende **þa** æt nextan his sunu to, ...
he sent then at next his son to
(ÆHom_3:18.412)

- Comment: Apparently, a sequential/ordered reading of VP-adjoined *þa, þonne* can be forced by adding an adverbial PP such as 'at next' as in (40b).

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[15] Total numbers referring to occurrences in the York corpus.

[16] Furthermore, note that clause-internal occurrences of *þa, þonne* often lack a clear temporal interpretation (cf. Kemenade & Los 2006), but rather seem to function as modal particles with a slight adversative meaning, perhaps similar to Gothic *þan* in its use as a second position clitic (cf. Braune & Ebbinghaus [19]1981, Ferraresi 1997).

(41) *Pattern (d.)*
Hig **þa** <u>forlættan</u> þone wall &   heora burh,
they then left   the wall and their fort
(Bede_1:9.46.20.406)

(42) *Pattern (e.)*
a. **Ða** *hig* <u>wunedon</u> on Galilea;
then they dwelled in Galilea
(Mt_[WSCp]:17.22.1163)
b. *Hi* **þa** þæt lond <u>forleton</u>.
they then the land abandoned
(Orosius 44.22; Mitchell 1985: 968)

(43) *Pattern (f.)*
Hu <u>mage</u> *we* **þonne** witan hwænne he cymð?
how may we then   know when   he comes
(ÆCHom_II,_44:330.117.7430)

- <u>Comment</u>: Contrary to what is expected under the analysis developed in this paper, a subject pronoun always immediately follows the fronted verb in root wh-questions. In other words, the pattern wh-V_{fin}-*þa*/*þonne*-pron.subj is apparently not attested.
- This might be due to a morphophonological requirement (or at least strong tendency) that the (weak) subject pronoun must be adjacent to the fronted finite verb (similar constraints hold in many present-day Germanic V2-languages).
- However, a closer look reveals that in many of the relevant examples, *þa*/*þonne* should rather be interpreted as instances of cotemporal 'then':

(44) and þonne gyt ne cymð se brydguma; Eac swilce þa six ðusend geara
and then still not comes the bridegroom; also the six thousand years
fram Adame beoð geendode and ðonne gyt elcað se brydguma.
from Adam is ended   and then still delays the bridegroom.
[Hu <u>mage</u> *we* **þonne** witan hwænne he cymð?]
How may we then know when he comes?
(ÆCHom_II,_44:330.117.7427-7430)

- <u>Speculation</u>: The order wh-V_{fin}-*þa*/*þonne*-pron.subj is not attested in the corpus for the following reasons: (i) it would have been quite rare anyway, since it is confined to a special context (a wh-question concerning a foregrounded sequence of actions/events); (ii) for PF-reasons, subject pronouns are preferably adjacent to a fronted finite verb.

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Carola Trips
Institut für Linguistik/Germanistik
University of Stuttgart
Keplerstraße 17
70174 Stuttgart
Germany
carola.trips@ling.uni-stuttgart.de

Eric Fuß
Institut für Kognitive Linguistik
University of Frankfurt
Grüneburgplatz 1
60629 Frankfurt
Germany
fuss@lingua.uni-frankfurt.de