CHAPTER 3

Aspect, infinitival complements, and evidentials*

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1. Introduction

This paper starts with an examination of Giorgi and Pianesi's (1997) evidence for positing certain differences between English and German infinitives. They argue that bare (eventive) infinitives without *-e(n)*, as in English, are perfective, but that infinitives with *-e(n)*, as in German and Dutch, are not. Two pieces of evidence they provide are: (a) Perception verb (PV) complements in English are perfective, but they are not in Dutch and German, and (b) the simple present in English cannot be used to express present tense. I show that there are several problems with these parts of Giorgi and Pianesi's analysis. First, the infinitival ending in English was lost several centuries before the infinitive became perfective, as defined in Giorgi and Pianesi, and before the simple present ceased to be used. Second, eventive (bare) infinitives are not always interpreted as perfective in Modern English. Rather than focus on the infinitival ending, I will argue that the position of the PV is responsible to account for (a), and that there are three kinds of PV, a (rare) activity verb and two stative ones, an evidential and a regular verb. Such an analysis accounts for a number of typological and historical phenomena, as well as for the difference in constituent structure between bare infinitives and *-ing* constructions (as discussed in Akmajian 1977), and restrictions in complementation to PVs. The structure I suggest also reflects the fact that in many languages evidentials and perfectives are related, in accordance with Abraham (1998, 1999). To account for (b), I assume that ASP is introduced for imperfectives in the 15th century and, adapting Cowper (1999), that the basic setting of the parameter ASP is switched in English in the 18th century.

The main differences between Modern English on the one hand and similar Germanic languages on the other now emerge as (a) *saw* is more grammaticalized in the former than in the latter,[1] (b) the contents of ASP(ect) in Modern English are either checked by the perfective evidential or by the form in *-ing*, whereas in Germanic, ASP is ambiguous, and (c) as argued by traditional grammarians, the real changes are caused by the availability of *-ing*, and perhaps by the loss of aspectual markers.

The outline is as follows. In Section 1, I sketch Giorgi and Pianesi's analysis of bare infinitives and very briefly describe the problems with this analysis. In Section 2, the problems are elaborated to show that complements to PVs continue to have non-perfective bare infinitives after the ending disappears, but that the use of the simple present continues long after. In Section 3, I provide an overview of the literature on ASP(ect) and account for one of the two predictions that G&P make. In Section 4, I argue that there are two kinds of *see*, an evidential in ASP(ect) and a full verb, each with their own structure, accounting for the second set. Section 5 presents my conclusions.

2. Are bare infinitives perfectives in English?

Giorgi and Pianesi (hence, G&P, 1997:163ff.) argue that English bare (eventive) infinitives carry a perfective feature. The reason infinitives need this feature is that their morphology does not differentiate them from nouns. G&P derive two empirical differences between a language such as English, without an infinitival ending, and languages such as German and Dutch, with an infinitival ending. First, they (1997:163ff.) argue that the difference between (1) and (2) is due to it:

(1) I saw/*see him cross the street.

(2) *Ik zag/zie hem de straat oversteken.*
     I saw/see him the street cross
     'I saw/see him cross(ing) the street'.

It is well-known (e.g. Quirk et al. 1985:1206) that Modern English bare infinitives differ from those in other Germanic languages in that the event referred to by the infinitive in (1) must be completed. In Dutch, on the other hand, the infinitive in (2) can refer to the action in progress (or to the completed action). If, as G&P argue, English eventive infinitives are [+pf], (1) cannot have an imperfective meaning. Instead, to indicate an incomplete action in English, the progressive is used, as in (3) and (4), not the bare infinitive, as in (1):

(3)   I see him crossing the street.

(4)   I saw her reading the book for hours.

Miller (2002:256) provides a good characterization of other aspectual differences between (1) and (2), the former being a "genericized but telic event" whereas the latter is a "non-completive, particularized event [] in progress that can have duration". Languages as diverse as Russian and Lele, a Chadic language, make similar morphological distinctions to indicate perfective, as in (5) and (7) respectively, or non-perfective complements, as in (6) and (8) (Buzarovska 2000 for Russian; Frajzyngier 1996:278–279 for Lele):

(5)   *Ja videla kak Bob pereshel ulicu*
       I   saw   if   Bob cross-PF street
       'I saw Bob cross the street'.

(6)   *Ja videla kak Bob perehodil   ulicu*
       I   saw   if   Bob cross-IMPF street
       'I saw Bob crossing the street'.

(7)   *ng-gòl-ì   wàl   tù*
       1s-see-3M slaughter goat
       'I saw him slaughter a goat'.

(8)   *ng-gòl-í   go   jè   wàl-dí   kúlbà*
       1s-see-3M COMP PROGR slaughter cow
       'I saw him slaughter a cow'.

I will not explore Russian or Lele further; the data are given to show that the English situation is not unusual.

There are other indications that the infinitive in (1) is really perfective: (9) is ungrammatical since the 'for hours' forces a durative reading, incompatible with the perfective, unlike its exact Dutch counterpart in (10):

(9)   *I saw him read books for hours.

(10)   *Ik zag hem urenlang boeken lezen*
       I saw him hourslong books read.

As in other constructions, a perfective is typically triggered with definite objects, and imperfective with indefinite ones. Therefore, (11) is worse in English than (12):

(11)   ?I saw him read books.

(12)   I saw him read the book.

Straightforward counterexamples, not discussed in G&P, are (13) to (17). *Swim* in (13) should be perfective and isn't. So, perfectivity is not connected to the infinitive (see also Parsons 1990):

(13)   Seeing her swim is exciting.

(14)   I made them watch Michael swim (for hours).

(15)   Mary watched the boatman leave the house.

(Gaskell, *Mary Barton* 31 from the OED)

(16)   Martin took it, feeling himself surrender.   (from Visser, IIIb: 2251)

(17)   We'd be hearing him holler for mercy.   (from Scheffer 1975:68)

In (13) to (17), the aspectual restrictions do not apply, since there is no tense to connect to (see e.g. Julien 2001:145). The bare infinitival complement need not be perfective, not explained in G&P's account. To jump ahead, I will agree with G&P that in (1), the complement is perfective, but for a reason different from theirs, namely depending on the PV instead of the complement.

The second piece of evidence that G&P use is that eventives cannot occur in the simple present tense, as (18) shows, since they are perfectives and perfectives are bounded and the present is not. Instead, the progressive as in (19) is used:

(18)   *I eat right now.

(19)   I am eating right now.

The presence of [+pf] is compatible with the progressive which is bounded (G&P, p. 169). Stative verbs such as *know* and *see* are not associated with [+pf] since, like habituals, they are associated with a generic operator.

Thus, according to G&P, there are two reasons for assuming English bare infinitives are perfective: the interpretation of (1) and the ungrammaticality of (18). If this account were correct, languages without the infinitival ending would always be expected to be like Modern English in these two respects, and this is not true as I show in the next section. In addition, English bare (eventive) infinitives would always be expected to be perfective. Sentences (13) to (17) above show this is not true either.

3.   Bare infinitives: Infinitival endings and perfectivity

In 3.1, I will argue that interpretations as in (1) are not dependent on the infinitival endings, since the change to the Modern English interpretation of (1)

does not coincide with the loss of the ending, and in 3.2, I show that neither does the ungrammaticality of (18).

3.1 Perception verb complements (hence PVCs)

In Old and Middle English (hence OE and ME respectively), the infinitive has an ending, as in (20), but a present participle also occurs ending in *-ande/ -inde/-ende*, as in (21) and (22), and later in *-ing*:

(20)   *Ic seah turf tredan*
        I saw earth tread
        'I saw earth being walked on'.   (Riddle 14, from Callaway 1913:35)

(21)   *se hælend ... seah hia hremende 7 uoepende*
        'The savior saw her weeping and weeping'.
                                        (Lindisfarne Gospel, *John* 11, 33)

(22)   *He seye ... a grom cominde*
        'he sees a man coming'.   (*Guy of Warwick* 5799, from Visser, p. 2344)

Many people argue that the present participle is not "a native idiom" but appears in texts that are translated from Latin, e.g. (21) is an interlinear gloss. Sentences such as these would have the same analysis as (3) in Modern English with *see* having a sentential complement. At issue is not their occurrence, but the occurrence of infinitives with perfective meaning at the time that the ending is disappearing. Some people have argued that the difference in aspect between constructions such as (1) and (3) was already present in Late OE (see Zeitlin 1908:72 for a nice list of examples of both). If that is the case, it would be problematic for G&P as well. Here I will only look at ME.

The ME bare infinitive constructions from Chaucer in (23) to (26) have imperfective interpretations, as in (2) above. For instance, the adverb *to and fro* in (23) indicates duration, and in Modern English, the *-ing* form would be used:

(23)   *The fairnesse of that lady that I see | Yond in the gardyn romen to and fro | Is cause of ...*
        'The beauty of that lady that I see roaming in that garden is the cause of ...'
                                        (Chaucer, *Knight's Tale* 40.1098-9, from Kerkhof 1966:55)

(24)   *The deeth he feeleth thurgh his herte smyte*
        'The death he feels cutting through his heart'.
                                        (Chaucer, *Knight's Tale* 42.1220)

(25)   *I sawgh hyr daunce so comlily | Carole and synge so swetely | Laughe and pleye so womanly*

'I saw her dancing so becomingly, dancing and singing so sweetly, laughing and playing so womanly'.   (Chaucer, *Book of the Duchess* 340.848-50)

(26) *But ... in hande I saw hym holde | Two firy dartes ...*
'But in his hand I saw him holding two fiery arrows'.
(Chaucer, *Legend of Good Women* 594.166-7)

In Chaucer, i.e. at the end of the fourteenth century, both *-e* and *-en* endings occur, but it is unclear if they are pronounced. It is at least sometimes pronounced in Chaucer, i.e. *smyte* in (24) rhymes with *Arcite*. Southworth (1947:925) estimates that in Chaucer the final infinitival *-e* is not pronounced in 82% of the cases. Minkova (1991), citing a number of other scholars, argues that the ending is disappearing in the North from 1100 on but that "[b]y 1400 final unstressed *-e* had been abandoned in all parts of the country" (p. 30). Görlach (1990:47) says that from 1400 onwards, the *-e* spelling is "arbitrary and optional" (see also Moore & Marckwardt 1951). This fits with the rise of I(inflection) in which the ending is lost and the irrealis of the infinitive is expressed by *to* in I (cf. van Gelderen 1993, 1997a) (cf. also Fischer 1992, 1995 who argues for ME that *to* expresses tense independence).

There is also an *-ynge* after PVs in Chaucer, as in (27):

(27) *And saw his barge saylynge in the se*
'And saw his barge sailing in the sea'.
(Chaucer, *Legend of Good Women* 624.2196)

Miller (2002:265ff.), based on arguments from Fischer (1995), argues that in Chaucer the aspectual difference is as in Modern English. Even though (27) occurs, (23) to (26) show the situation is not as in Modern English.

In the fifteenth century *Paston Letters* (hence, PL), the infinitival ending *-en* is fairly rare: apart from *ben* 'to be', there are perhaps 20 in a large corpus. In the PL, neither bare infinitive nor *-ing* is popular, probably because letters do not encourage present tense. In More's English (Visser 1946–1952), from the beginning of the 16th century, i.e. a century or so after the loss of the infinitival ending, infinitives need not have a perfective meaning, as (28) shows. (28) emphasizes the action through the adverb and Modern English would use *running*. This text has many *-ing* forms too (see Visser 1952:810):

(28) *The fox ... saw him run so faste*
'The fox saw him running so fast'.
(*Richard* 71 C 1, from Visser 1952:761–762)

Thus, even though the infinitive has no ending, it can be used as a non-perfective.

Mulcaster, an Early Modern English grammarian, in his 1582 *Elementarie*, divides final -e into "soundeth or ... silent" (p. 111). The first category includes *me, see, we, agree, yee*, and *e* in Latin words, but the section is very short; the silent *-e* section is much longer (and talks about nouns as well as verbs). Silent *-e* is said to have an effect on the length of the vowel preceding it, as in *made, cure*, and is used in many other situations, e.g. in *cause, excuse, deceiue, loue, moue*. Thus, Mulcaster's description shows that Elizabethan English infinitival endings are not pronounced differently from Modern English. Franz (1909: 21) says the infinitival *-e* is used "ziemlich prinziplos" in Shakespeare's time, but *-en* is never used. This lack of *-e(n)*, however, does not seem to force an increase in the use of *-ing*, since very few complements as in (29) and (30) occur. There are two *-ing* complements after *see/saw*, namely (29) and (30), but many bare infinitives, as in (31) to (33), and many past participles:

(29)   who you saw sitting by me on the Turph.   (*As You Like It* III, IV, 52)

(30)   may you see it comming.   (*Macbeth* V, v, 37)

(31)   to see thee weare thy heart in a scarfe.   (*As You Like It* V, ii, 23)

(32)   when she sees me worke.   (*Tempest* III, i, 12)

(33)   When shall you see me write a thing in rime.

                                                        (*Love's Labor's Lost* IV, iii, 181)

Adding the auditory PVs, of the 852 instances of *heare* in the First Folio edition of 1623, only five occur with *-ing* complements, two in *Hamlet*, as in (34) and (35), two in *King Lear*, and one in *First Henry IV*. Four of these have the same verb in the complement:

(34)   I heare him comming.   (*Hamlet* III, i, 55)

(35)   Withdraw, I heare him coming.   (*Hamlet* III, iv, 7)

Instances of bare infinitival complements after *hear*, as in (36) and (37), are very frequent. After *heard*, the complements are bare infinitives, as in (38) and (39), participles, as in (40), and *to*-infinitives, as in (41):

(36)   and another Storme brewing, I heare it sing ith' winde. (*Tempest* II, ii, 20)

(37)   harke, do you not heare the people crie Troylus?

                                                        (*Troilus & Cressida* I, ii, 244)

(38)   I heard the Owle schreame, and the Crickets cry.   (*Macbeth* II, ii, 16)

(39)   Me thought I heard a voyce cry, Sleep no more.   (*Macbeth* II, ii, 35)

(40)   You heare all these matters deni'd.   (*Merry Wives* I, i, 193)

(41)   Who heard me to denie it?   (*Comedy of Errors* V, i, 26)

Thus, as late as Shakespeare, the infinitive continues to be used as a non-perfective to a PV and after a present tense form of the verb *see* (and *hear*). It is also more frequent than the *-ing* complement, unlike the Modern English data by e.g. van Ek (1966:150–153) that show that (3) is twice as frequent as (1).

At what point does the Modern English situation arise? Is it a relatively sudden change or does it peter out? To answer that question, I have looked at later texts, an early 18th century and a 19th century one. It is sometimes difficult to interpret whether the complement is perfective or not, but it is not difficult to see if the present tense is used, which is no longer grammatical (see (1b) above). The early 18th century text (from 1710), *A Treatise Concerning the Principles of Human Knowledge* by George Berkeley contains quite a number of instances such as (42) and (43):

(42)   But, when we see things go on in the ordinary course they do not excite in us any reflexion.   (Principles, 57)

(43)   And I would fain see any one explain any the meanest phenomenon in nature by it.   (Principles, 72)

The picture is very different in the 19th century novel, *Emma* by Jane Austen. There is only one bare infinitival complement after *see*, as in (44), but here *see* is infinitival, not present tense, and is like (13). There are many infinitives as in (1) after *saw*, as is the case in Modern English, as in (45). The *-ing* complements all forms of *see*, as shown in (46) and (47). There is, however, still an infinitive with *to*, as in (48):

(44)   She was delighted to see her father look comfortable.
        (Emma, Vol. I, Chap. 3)

(45)   saw her go away in the evening attended by ...   (Emma, Vol. I, Chap. 1)

(46)   saw Frank Churchill looking intently across the room at Miss Fairfax.
        (Emma, Vol. II, Chap. 8)

(47)   I cannot see you acting wrong   (Emma, Vol. III, Chap. 7)

(48)   and it was not long before he saw it to be Dixon. (Emma, Vol. III, Chap. 6)

In conclusion to 3.1, the loss of *-en* cannot be shown to coincide with the bare infinitive becoming perfective. Rather, the infinitive remains ambiguous even

after it has lost its ending until gradually *-ing* is reanalyzed as imperfective marker.

3.2 The use of the simple present

There are two other problems for G&P's account, related to the use of the simple present: (a) the progressive is available in OE, i.e. is not introduced with the loss of *-en-*, and there is even no sudden increase of constructions such as (19), and (b) the use of the simple past remains frequent after the loss of the infinitival ending. This is also the situation in a contemporary language, namely Modern Afrikaans, a language without infinitival endings (e.g. *te drink*, *te se*, *te kom*) in which eventives can be present tense (*Nou dans die poppe*, Ponelis 1991:187; Paul Roberge p.c.).

The ultimate reason for the increase of the progressive is not known. Scheffer (1975:110ff.) says that it occurs especially in the 19th and 20th centuries, but it does not coincide with the demise of the infinitival ending. Mossé (1938, II, 2ff.), based on Streitberg, attributes the popularity of (19) to the loss of the aspectual system since the 13th century. In OE and Germanic, the simple verb is durative, whereas verbs with prefixes (he calls them 'preverbes') are not. I will argue later on that this is a major (parametric) shift between a system with unmarked perfective and one with unmarked imperfective. One of the problems for any theory might be that already in OE the *-ing/ende* form is alive and well, as (49) shows, especially with verbs of dwelling and movement (see also Pessels 1896; Raith 1951:iii, as opposed to Jespersen's 1931:168, claims that the ME *-ing* is not a continuation of the OE one), and as (21) and (22) above show for PVCs. It continues from then on, as (50) shows:

(49) *ac se æglæca eht**ende** wæs*
       but the monster pursuing was
       'but the monster was chasing'.   (*Beowulf* 159)

(50) *We han ben waitynge al this fourtenyght*
       'We have been waiting these two weeks'.   (Chaucer, *Knight's Tale* 38.929)

The additional problem for G&P is that long after the *-en* disappears, the simple present persists. I first provide some ME examples. The ME data in (51) and (52) are similar to those in other Germanic languages, e.g. Swedish, Afrikaans, German, Dutch in (53), and OE in (54), since eventive simple present occurs. Chaucer, as shown above, may still have an infinitival ending and hence G&P cannot be proved or disproved much before 1400:

(51) *What do ye, maister Nicholay?*
      What do you, master Nicholay
      'What are you doing, master Nicholay'.   (Chaucer, *Miller's Tale* 71.3437)

(52) *What say you, Scarlet and John?*
      'What are you saying, Scarlet and John'.
                                                  (Shakespeare, *Merry Wives* I, i, 155)

(53) *What doe je? Ik eet een appel.*
      'What are you doing? I am eating an apple'.[2]

(54) *nu ic arisu cwið drihten*
      Now I rise said lord
      'Now I rise up said the lord'.   (*Vespasian Psalter* 11.6, Visser 663)

In the 15th century *Paston Letters*, i.e. after the infinitival ending is definitely lost, the special progressive is relatively rare (around 20 perhaps in a corpus of over 250,000 words):

(55) *þer ys comyng, ..., more than a thowsand*
      there is coming ... more than a thousand
      'More than a thousand are coming'.   (*Paston Letters* #187, anno 1465)

(56) *where the seid felechep is abydung*
      'Where the above-mentioned fellowship abides'.
                                                  (*Paston Letters* #40, anno 1452)

(57) *syche mony that he is owyng*
      'such money that he owes'.   (*Paston Letters* #336, anno 1469)

These occur with the same verbs as in OE and most of those would not get *-ing* in Modern English, e.g. (56), perhaps indicating that it is not the same construction, in accordance with Jespersen (1931) as mentioned above (see also Note 4). That would make the connection between loss of *-en* and introduction of *-ing* even more tentative.

The present tense is typically expressed as in (58) to (60), with the latter possibly being fossilized:

(58) *I send you*
      'I am sending you'.   (*Paston Letters* #3, anno 1425)

(59) *I make þis day a new apelle*
      'I am making a new appeal today'.   (*Paston Letters* #4, anno 1426)

(60) *I recomaunde me to you*
      'I commend myself to you'...
                                        (*Paston Letters* #3, frequent formula in letters, anno 1425)

By the time of More, i.e. the early part of the 16th century, the progressive is still "employed rather sparingly" (Visser 1946:248), even though the infinitive has lost its ending. In Shakespeare, *-ing* is used on occasion, e.g. in (61), cf. also Franz (1909:514). Visser (p. 662) says, about both More and Shakespeare that "at the time the choice between the two possibilities did not yet depend on any fixed principle". The simple present is used frequently, as in (62) to (64), all from the *Merry Wives of Windsor:*

(61)   Now she's going to my wife.   (Shakespeare, *Merry Wives* III, ii, 36)

(62)   *Whether go you. ... To see your wife*
       'Where are you going'.   (Shakespeare, *Merry Wives* II, ii, 10)

(63)   But what saies shee to mee?   (Shakespeare, *Merry Wives* II, ii, 75)

(64)   What say you?   (Shakespeare, *Merry Wives* II, ii, 155)

Again, the question can be asked at what time the loss of (62) to (64) took place. I have looked at some 17th and 18th century (pedagogical) grammars. Only the ones from the middle of the 18th century include the *ing* as a regular present. Wharton (1654) does not allude to a special present tense form ending in *ing*, except in one sentence: "A Participle of the Present tens signifieth the time present, and endeth in *ing*; as *loving, teaching...*" (p. 54). Miege (1688) gives as the present tense *I love* or *I do love*. He was born in France and comments (p. 67) "Lastly, 'tis to be observed, that the English has a peculiar Way of using the Verb *to be*, with a Participle of the Present Tense. As, *I am writing* for *I write...*". Lane (1700) comments: "[t]he Auxiliaries of the Present Tense, are, *do, dost, ...; am, art, ...*; as *I do call ...; I am calling*" (p. 44). Duncan (1731) and Fisher (1750) clearly imply that the *ing* is a present; Greenwood (1711) seems to suggest the use is optional.

   G&P account for the differences between Dutch (53) and Modern English (18) by assigning [+pf] to the English eventive infinitive. This explanation encounters empirical problems. Even as late as Shakespeare's time, i.e. around 1600, long after the disappearance of *-e(n)*, (62) to (64) are grammatical. In the next section, I therefore suggest that this problem is independent of the ending, but depends on what is in ASP. One might ask what the function of the infinitival ending is if not to indicate perfectivity. Hoekstra and Hyams (1998) argue that the root infinitive in child language Dutch and German has a modal interpretation (also responsible for an aspectual constraint).[3] This modal meaning occurs even in adult Dutch, as in (65):

(65) *Niet op het gras fietsen als   het nat is*
      not on the grass bicycle when it   wet is
      'Don't bike on the lawn if it is wet'.

Infinitives indicate irrealis cross-linguistically. Certainly, the modern English *to* infinitive indicates irrealis in many cases, e.g. in (66) (see van Gelderen 1993: Chap. 5), and English child language shows sensitivity to modality/irrealis at the time *to* appears (see Hyams 2001: 225):

(66) I want to go.

I will not go into this further here, the main point being that the infinitive is not perfective.

4. The reanalysis of *-ing* as ASP

What is the reason for the changes that bring about the Modern English ban on eventive simple presents in (18) and the interpretations of PVCs in (1) and (3), if not the infinitival ending? In this section, I argue that it is the reanalysis of *-ing* as checker of the imperfective feature in ASP, starting in the 15th century, and a parametric change of the unmarked aspect in the 18th century that bring about the set of changes responsible for the present tense marking, as well as for the interpretation of PVs. In Section 4, I argue that PVCs involve ASP, and that PVs can be seen as more or less grammaticalized. Thus, it isn't only the complement and ASP that change, PVs do too. First, in 4.1, I look at some recent theories on ASP, and then, in 4.2, I propose a possible historical scenario.

4.1 ASP

Since the splitting of the IP into AGRP and TP in the late 1980s, ASP has become a frequently used functional category, e.g. Tenny (1987), Speas (1990), van Gelderen (1993), Travis (2000), to mention but a few. Other names are used as well, sometimes indicating a similar entity, VoiceP, and Tr(ansitive)P in Jelinek (1997). Some recent accounts, for instance, Ramchand (1997) and Cowper (1999) have provided analyses using ASP for present tense constructions, and Felser (1999) has used ASP for PVCs. In this section, I briefly discuss the latter two accounts.

    Cowper (1999: 218) argues that "languages choose either moment (perfective) or interval (imperfective) as the unmarked representation of events

... In English the unmarked value of *e* is moment, while in French it is interval. While English has inflectional morphology making sentences imperfective, French has inflectional morphology making sentences perfective". Cowper also needs a (universal) principle excluding two temporal points to be simultaneous, and a discourse anchor which is a point/moment. Because in French the simple present as in (67) denotes an interval, the constraint is not violated (the event takes place as the same time as the moment of discourse), whereas in the English translation in (68), it is because the simple present is a moment and so is the discourse:

(67)   *Elle écrit une lettre*

(68)   *She writes a letter

With special morphology, a marked form is possible, i.e. *-ing* in English indicates that *e* is interval. Cowper's account, unlike G&P's, does not give an independent reason why a language would have one choice unmarked over the other. For the purposes of this paper, however, I will adapt Cowper's theory. Cowper excludes stative verbs from having an ASP and *e* (e.g. 1999: 221), while others, e.g. Parsons (1990), have argued statives do include *e*. I assume statives include an ASP that is perfective, or in Comrie's terms, unanalyzable. A minor change from Cowper is that I use perfective for moment and imperfective for interval.
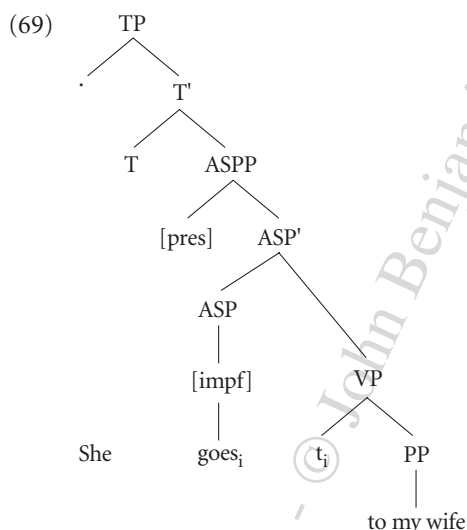
For PVCs, Felser (1999, e.g. 124) uses an ASPP. She not only includes ASP, vP, and VP, but allows a second vP Specifier position to accommodate the object. She does not include an AGRoP, since checking of the object Case is against v from the outer specifier position. I will provide a structure for PVCs in Section 4 which, like Felser, includes an ASP to account for PVCs. Felser, however, focusses on experiencer PVs. I will give different analyses for experiencer and activity perception verbs, and will argue that only the latter have a structure similar to Felser's.

4.2 Changes in ASP

Turning to the historical changes involving ASP, it has often been assumed that OE and Old High German, etc. display more aspect than their modern offspring. Streitberg (1891) believes that the German prefixes are perfectivizing. In Gothic, the prefix is on occasion even an independent morpheme (see Lenz 1886: 11). *Have* is not generally used for present perfect in OE and Traugott (1972: 91) argues it arose to replace *ge*. Brinton (1988: 202ff.) argues

that OE verbal prefixes indicate telicity, but that *ge-* has become "seriously over-extended" (p. 212) by ME. Mustanoja (1960:446) writes that *ge-* remains productive as a perfectivizer "down to the 13th century", but that its disappearance is due to Norse influence and occurs first in the North. *For* retains its productivity "down to the end of the ME period".

If Chaucer only uses a limited palatalized version in the poetry, it is safe to say that around 1400, *ge-* is lost completely as a marker of perfective in ASP. Is there a replacement, as Traugott suggests? There is a possible one, as in (50) above from Chaucer and (61) from Shakespeare, namely *-ing*. The typical present tense representation would be as in (69), with occasionally an *-ing* as in (61) occupying ASP:

(69)

```
              TP
             /  \
         .     T'
              /  \
            T      ASPP
                  /   \
             [pres]    ASP'
                      /    \
                   ASP      VP
                    |      /  \
                  [impf]  t_i   PP
                               |
     She     goes_i   t_i      to my wife
```

Many of the grammars of the time of Shakespeare write that the present tense is *I go* or *I do go*, and do not mention (61). The form with *do* indicates a continuous action, and could be in ASP. The unmarked representation of events in ASP is still imperfective, so that the verb is imperfective unless especially marked (see the discussion of Cowper 1999 above) and does not switch from imperfective to perfective until the 18th century, as shown by what the contemporary grammars write.[4] Note that the presence of a T is necessary for the ASP to connect to, as (13) to (17) above show.

Apart from *-ing* and possibly *do*, there are around and after 1400 other occupants of ASP, namely the past participle ending, infinitival *to*, (and *have*, not discussed here), each with a different interpretation. As a result, construc-

tions such as (70) and (71), where *me* and *her* are the subjects of *sayd* and *told* respectively, become frequent for a while, as do constructions such as (72) to (74), see also (41) above (taken from Visser IIIb: 2254-5):

(70) *And tolde hym al, as ye han herd me **sayd***
      'And told him all as you have heard me say'.

(Chaucer, *Franklin's Tale* 188.1547)

(71) *Whan Troilus hadde herd Pandare **assented** to ben his help*
      'When T had heard P agree to be of help'.   (Chaucer, *Troilus* 487.1009-10)

(72) Saw his ... artes to fayle.   (Spenser, *Fairy Queen*, I, 6, 5)

(73) it was a sight of joy to see my two brave rams to fight.

(Ben Johnson, *Sad Shepherd* II, ii)

(74) I saw her corall lips to moue.   (Shakespeare, *Shrew* I, i, 75)

The latter is a regular construction from later ME on, especially frequent in the 16th and 17th centuries, as in (73) to (74), and with a meaning as in (3) not (1). In the early 15th century Pecock (Zickner 1900:67), *see* is complemented by a bare infinitive only twice but by *to* four times and *forto* once. So, at the time of the changes around ASP, the *to*-infinitive expresses durativity. In other constructions, *to* is assumed to be in I(nflection). It seems to me that the meaning of (74) and that of (66) are very different, and I attribute that to *to* being in ASP in (74) and I in (66). The *to* of (66) indicates irrealis and is used throughout the history of English, even though it only starts to be situated in I around Chaucer's time. This construction also occurs with modals only if the modal is very far removed from the infinitive (Visser 1952:590, 620; see van Gelderen 2001). The past participle expresses perfective, also situated in ASP.

In conclusion, in OE, the prefixes on the verbs determine perfectivity, which, adapting Cowper's proposal, means ASP is perfective, and needs to be specially marked for perfectivity. As the prefixes disappear, *-ing*, and for a while *to*, as in (72) to (74), are reanalyzed as ASP with an imperfective meaning. For a certain period, the past participle, as in (70) and (71), is also perfective and there is unclarity as to the unmarked value of ASP from the 15th to the 18th century. This is due to a parametric change in the system from one specially marking perfectivity to one marking imperfectivity, or one with a basic ASP as in (75a) changing to (75b):

(75) C18 Aspect Switch:
      a.   ASP   b.   ASP
            [impf]   >   [pf]

Change (75) predicts that (18) becomes obsolete, (19) the regular present, and that (1) and (3) get the meaning they do in Modern English. It also accounts for the otherwise strange construction in (72) to (74) occurring between the end the 14th and the end of the 18th century. In the next section, I argue that PVCs do indeed involve ASPPs, and that (1) and (3) differ structurally.

5.   Perception verbs in Modern English and Dutch

There have been many analyses of PVCs (Akmajian 1977; Guasti 1993; Felser 1999; Miller 2002; to name but a few). I will not review these. My account differs in that I argue that there are different kinds of PVCs, since there are three kinds of PVs, of which one is a modal.

5.1   Three kinds of *see*

As is well-known, PVs such as *see* are typically stative (as well as achievements, see e.g. Dowty 1979:66) and are incompatible with the imperfective, as in (77), and with a durative adverb, as in (78).[5] Viberg (1983:123) uses the term experiencer-based for these. As a result, the simple present is typically used in (76) rather than the progressive in (77), but see below for an activity *see*:

(76)   I see (the) mountains.

(77)   *I am seeing (the) mountains.

(78)   *I see the mountains for two hours.
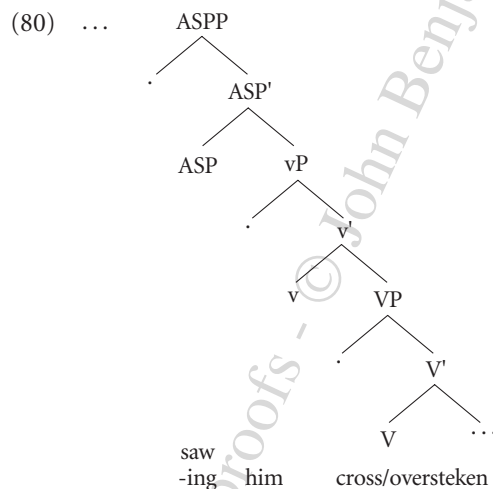
There is also an activity *see*, as in (79), but these are typically replaced by clearer activity verbs such as *watch*:

(79)   Poirot was seeing the face of a girl with red hair ...
(Agatha Christie, *Labours of Hercule* 55, Visser IIIb: 1982)

The activity one obeys Cowper's constraint, in that the present tense is specially marked by *-ing*. The activity PVs in English are not typically *see* but *watch, observe, look at,* and *perceive*. I'll come back to that later. I claim that *see* is ambiguous between an activity reading, as in (79), which is rare, and two kinds of stative readings, as in (1) and (3) above.

The case of stative *see* is more complex. It is not unusual for verbs of perception to grammaticalize into evidentials, and I will show that this is the case in (1), but not (3). I will refer to this process as grammaticalization, as it in-

volves the change from a lexical verb to a more auxiliary-like element. For instance, Gordon (1986: 75, 84) shows that in Maricopa, a Yuman language, *see* and *hear* can be either evidential or full verbs with a sentential complement. I call it an evidential in (1), since it indicates information source rather than mood. In Dutch and other languages, there is just one kind of stative PV. The evidence provided above that (1) is different from (2) even though both involve bare infinitival complements includes: an exclusively perfective reading in (1), an incompatibility with duration adverbs in (9), but not in (10), and a marginal (11). The structure I suggest for (1), (2), and (3) is (80), where following a system as in Chomsky (1995),[6] ASP has (Interpretable) features either for perfective or imperfective. In (1), the grammaticalized *saw* checks perfective and *cross* does not move, whereas in (3), *cross* moves to check imperfective (with *him* moving to Spec ASPP presumably for Case reasons in both sentences). In Dutch (2), *oversteken* 'cross' moves to ASP to check either perfective or imperfective. So, *saw* in (1) and *-ing* in (3) are in complementary distribution:

(80) ...

```
              ASPP
             /    \
            .     ASP'
                 /    \
               ASP    vP
                     /  \
                    .    v'
                        /  \
                       v    VP
                           /  \
                          .    V'
                              /   \
                             V    ...
            saw
            -ing    him    cross/oversteken
```

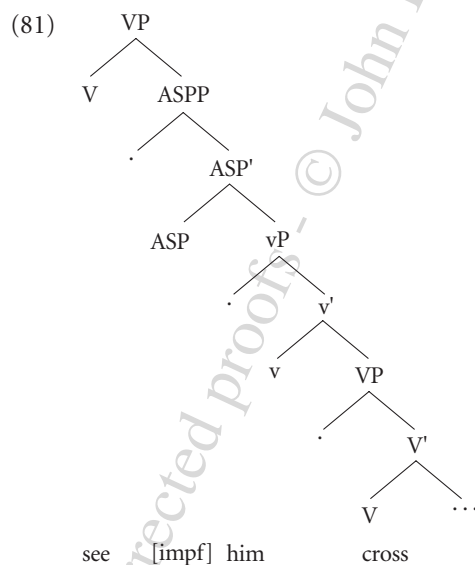Thus, while agreeing with Felser (1999) that PVCs involve an ASPP, I argue that the PV is in ASP (or moves to it from v). In (80), I include both vP and ASPP, but as Ramchand (1997: 216) argues it may be that vP is really ASPP and can hence be deleted. I won't go into that here. Since *-ing* is not available in Dutch, ASP is ambiguous. Therefore, *oversteken* 'cross' in (2) can have independent aspect which it checks in ASP.

Regarding terminology, I use perfective and imperfective, but use the latter only for the progressive, not for the habitual reading. See e.g. Parsons (1990)

for more precise formulations in terms of events: the perfective denotes a complete event with a culmination point, and the progressive an incomplete event without a culmination point.[7] Assume that in (80) ASP indicates ±pf, then Modern English has two options for ASP: either perfective *saw* or (the specially marked) imperfective *-ing*. Abraham (1998) argues that "evidentiality is ... often triggered by the perfect or perfectiveness", which is the unmarked setting for English. Comrie (1976:108–110) argues that the perfect is typical for the inferential evidential, not the direct evidence one. I see no reason to restrict it that way, and will assume that perfect can also be used for direct perception. In many languages, perception in the past/perfective is more grammaticalized than perception in the present. For instance, Turkish indicates evidentiality (direct vs. indirect perception) in the past tense (see Slobin & Aksu 1982:188), and Buzarovska (p.c.) reports that in Greek and Macedonian PVs in the past tense, i.e. as in (1), have a special complement that makes them more grammaticalized into evidentials than the present tense ones. Barnes (1984:259) shows that a verb with a visual evidential suffix is past unless specially marked.

See can also be non-evidential, and then it is a full verb higher in the tree with *cross* checking imperfective, as in (3). The tree would be as in (81), identical to (80) but with the higher VP showing:

(81)

```
            VP
           /  \
          V   ASPP
          .    |
              ASP'
             /   \
           ASP    vP
            .     |
                  v'
                 /  \
                v    VP
                .    |
                     V'
                    /  \
                   V   ...

see  [impf]  him      cross
```

Felser (1999:205ff.) argues that Dutch *aan 't*, in sentences such as (82), and German *am* are ASP projections as well. However, sentences such as (82) are marginal after PVs:[8]

(82) ?*Ik zag hem* ('*Harry Potter*') *aan 't lezen*
     I saw him Harry Potter on the reading
     'I saw him reading Harry Potter'.

It is interesting that historically many *-ing* forms in English derive from a preposition followed by a verb with *-ing* (cf. van Gelderen 1993:Chap. 8). Hence, (82) and the German counterpart with *am* in ASP would not be an unexpected development, predicted by (81).

   The complement to a PV cannot be a stative (or an individual level predicate), as (83) shows. Using Diesing (1992) and others to argue statives are IPs (see also Rochette 1988, and Higginbotham 1983:118 for a different account), one can expect that IP complements such as in (83) will not occur, since they do not 'fit' in (80) and (81):[9]

(83) *I saw you be/being tall.

(84) *I saw him know/knowing the answer.

The structure of these complements never allows auxiliary *have* or *be* (except passive) in either English or Dutch, as in (85) and (86) respectively:

(85) *I saw him have crossed the street.

(86) **Ik zag hem de straat zijn overgestoken*.

This is again explained by the structure: since perfect *have* and progressive *be* result in states (see Vlach 1981:287 and Comrie 1976:56), i.e. IPs, they cannot occur with PVs. Once *have* is used, as in (87), the structure changes into one where the *-ing* modifies the subject or object, and a comma intonation occurs between *him* and *having*:

(87) I saw him having crossed the street.

Syntactically, this means that the complement in (1) and (3) is pretty reduced in structure, as shown in (80), not an IP or CP, but a vP in (1) and an ASPP in (3). The complement is reduced in Dutch as well, but can only be an ASPP in (2).

   I will not go into the structure of verbs such as *watch*, the activity PV, but there is evidence that their complement is more like a CP. As Kirsner (1977) has shown, they cannot be passivized, as (88) shows, unlike the two kinds of *see*, as in (89) and (90):

(88) *Nureyev was watched to leap across the stage.

(89) Nureyev was seen to leap across the stage.   (both from Kirsner, p. 174)

(90) He was seen leaping across the stage.

In 5.1, I argue that there are three kinds of *see* in Modern English, two of which are represented in (80) and (81) but that Dutch (and other Germanic languages) do not have the evidential one. In all of the languages, PVs choose ASPP but in English if ASP is imperfective, there needs to be an *ing* marked form, whereas that's not the case in Dutch.

5.2 More evidence

In this section, I examine three further pieces of evidence in favor of (80) and of having three kinds of PV.

First, de Haan (1997:5) argues that evidentials (in Dutch) cannot be in the scope of negation. The same should hold for English *saw* in (1) if it is an evidential, as I argue. Hence, (91) should not exclusively mean that the crossing/drowning is finished. According to native speakers, this is the case. Compared to the non-negative (92), this is even clearer:[10]

(91)   I didn't see her drown, but someone else did and rescued her.

(92)   *I saw her drown and someone else did as well and rescued her.

Hence it is the PV that determines the interpretation of the complement, and a stative *see* ceases to have that effect, when it is negated.

A second piece of evidence, in favor of (80), comes from an old and often-debated problem, namely the different constituent structures of (1), (2), and (3). Akmajian (1977) argues, on the basis of preposing and clefting, that the structures for (1) and (3) are quite different: in (1), the NP and infinitive are separate constituents; in (3), they are not. Hence (93) is grammatical, but (94) is not:

(93)   It was [the moon rising over the mountain] that we saw.

(94)   *It was [the moon rise over the mountain] that we saw.

Applying this to Dutch (95), the result is (96), a somewhat formal construction, where the infinitive patterns with the *-ing* in English:
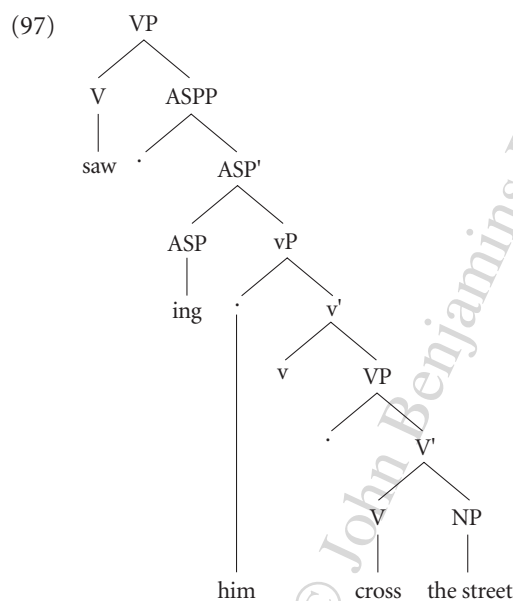
(95)   *We zagen de maan door de bomen schijnen.*
       we saw the moon through the trees shine

(96)   [*De maan door de bomen schijnen*] *is wat we gisteren zagen.*
       the moon through the trees shine is what we yesterday saw

These differences between (1) and (2) come out in the structure, if one argues that *saw* in Modern English is in ASP, as in (80) above, and the embedded

infinitive is bare. In (80), when *saw* is in ASP, the subject *she* moves to Spec IP. Therefore, the trace of *she* inside the ASPP in (94) would not be bound, if it is the ASPP that preposes in (94).

With *-ing*, as in (3), and in Dutch (2), the structure would be as in (97), similar to (80) and (81), i.e. with *see* less grammaticalized, *she* the subject of the higher clause, and the structure bi-clausal. In (97), *cross* moves to ASP and *him* to Spec ASP:

(97)

```
                    VP
                 /      \
                V        ASPP
                |       /    \
               saw    ·       ASP'
                            /      \
                          ASP       vP
                           |      /    \
                          ing   ·       v'
                                      /    \
                                     v      VP
                                          /    \
                                         ·      V'
                                              /    \
                                             V      NP
                                      
                          him          cross  the street
```

The difference between (80) with *saw* in ASP and (97) with *saw* in a higher clause accounts for the data in (93) and (94). In (93), the ASPP would move and the trace of the subject would be left un-c-commanded; in (94), there would be no trace. Thus, the crucial difference is either having the subject of *saw* inside or outside of ASPP.

Third, many people, e.g. Kuno (1973: Chap. 18), Dixon (1988: 38), have argued that PVs have complements different from other verbs. On occasion, the complementizer is different (e.g. Japanese); French allows clitic climbing, indicating that there is a close connection between the PV and its complement; and English has *to*-less infinitives. In addition, based on Viberg's (1983) observations, it can be shown that in many languages, English included, stative PVs, such as *saw* in (1), repeated here as (98), are lexically different from non-stative ones (activity based), such as *see* in (79), repeated here as (99), and *look at* (Viberg discusses a third kind but I will leave that out).

(98)   I saw him cross the street.

(99)   Poirot was seeing the face of a girl with red hair.

Viberg provides data from a number of languages, but he is predominantly interested in the different lexical realizations, not in the nature of the difference or the kind of complement.

Certain languages form variants through serial verbs (e.g. Vietnamese and Mandarin Chinese); others through compounds consisting of a noun and a (light) verb. Farsi is a good example of this. In the table Viberg provides (p. 131), it is the activity verbs that have the compound form. The light verb that is included in the compound is typically *kardan* 'do' in Farsi, emphasizing the imperfectivity of the activity-based verb (even though Farsi light verbs are typically more varied, e.g. *harf zadan* 'speak', literally 'letter hit', *yod gereftan* 'learn', literally 'memory get'). PVCs in Farsi (cf. Lambton 1953:155) are not infinitival, like English, but clausal, as in (100), even though (101) is very interesting with *him* 'raised' out of a finite clause.

(100)   *didim   ke   inja   hastand*
        we-saw that here   they-are
        'We saw they are here'.   (from Lambton 1953:155)

(101)   *ura   didam ke   miraft*
        him   I-saw   that   is-going
        'I saw him going'.
                    (from Haim's *Larger Persian English Dictionary*, entry for *didan*)

So, from (100) and (101), it appears that *didan* 'see' in Farsi is not grammaticalized into an evidential, but that the activity based ones show imperfectivity through the compound verb.

For Hindi (and the same holds for Urdu), Viberg lists *dekhna* (p. 133) as the equivalent for both 'look at' and 'see'. However, even though *dekhna* 'see' can be used as both (as *didan* can in Farsi), there are many noun-verb compounds for the activity-based verb 'see', namely *nazer kerna*, *malum kerna*, *deryaft kerna*, and *nagah kerna* (see Sant Singh's *Practical Dictionary*). The nouns that are part of the compound in Hindi/Urdu and Farsi are most often loanwords from Arabic and in the case of Hindi/Urdu from Farsi as well (see Platts' *Dictionary*) whereas *dekhna* and *karna* 'do' have cognates in Sanskrit. In Hindi/Urdu, *dekhna* can be complemented by a present participle, as in (102), (comparable to the English -*ing* form) or by a past participle, as in (103) (comparable to the English bare infinitive):

(102)   *meN   ne   use   beThte   hue   dekha*
        I   ERG   him   sitting be   see-PAST
        'I saw him (in the act of) sitting down'.

(103)   *meN   ne   use   beThe   hue   dekha*
        I   ERG   him   sat   be   see-PAST
        'I saw him (in the state of) sitting down'.
        (both from Barker II: 35, with *N* indicating that the preceding vowel is
        nasal, and T that the alveolar stop is retroflex)

In informal speech (Anju Kuriakose p.c.), an infinitive is used as well, as in
(104), but intuitions differ as to the exact (aspectual) interpretation.

(104)   *meN   ne   use   jane   dekha*
        I   ERG   him   go-INF see-PAST
        'I see him go/going'.

The conclusion about Hindi/Urdu and Farsi is that the simple verb is often used
for experiencer based, i.e. stative, meanings, but since it has a clausal comple-
ment, it has not grammaticalized, as in English. The reason for this is that the
difference between experiencer and activity based *see* is expressed in another
way, namely through compounds. Compounds are most often used for activity
based meanings with the light verb emphasizing the imperfectivity.

Turning to the development of words such as *see, watch, look at* in En-
glish, it was mentioned before that *see* is a very reluctant activity verb and
displays lexical differences between use as state and activity verb, as it does in
Hindi/Urdu and Farsi. As is clear from reflecting on (79), the preferred non-
stative PV is *watch* or *look at*, not the typically stative *see*. In fact, (77) above is
ungrammatical, as opposed to (105) with *watch* (with the object adapted):
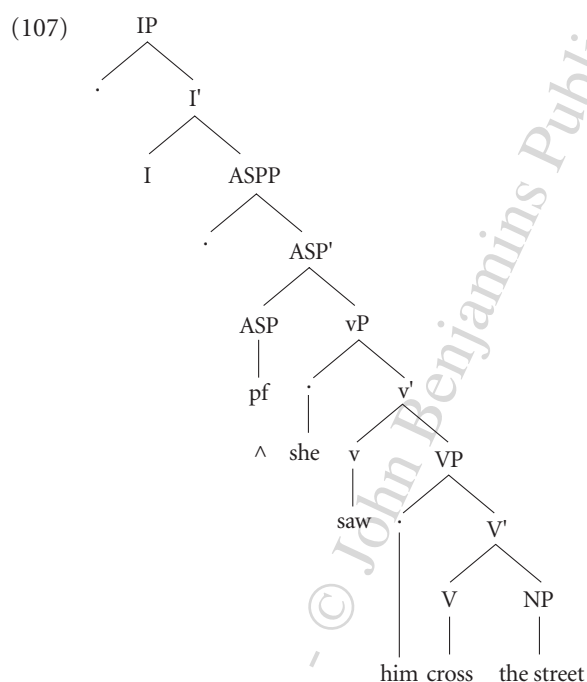
(105)   I am watching that program.

According to the OED, *watch* (or rather its unpalatalized form *wake*) means
'be awake' and 'remain/keep awake' in OE. By 1200, it acquires the meaning of
'be vigilant', and by 1600 or so, it acquires the modern meaning of observing
someone, as in (106):

(106)   Ill watch Titania, when she is asleepe, and drop the liquor of it in her eyes.
                                    (Shakespeare, *Midsummer Night's Dream* II, i, 177)

Observe and *perceive* are straightforward loans, the former being a late 14th
century loan with the initial meaning of 'obey, follow' and the latter being an
early 14th century loan. *Peer at, glance, stare* are all quite specialized forms

of non-stative PVs, and in OE, *look at* means 'direct one's sight to', according to the OED. Thus, in OE, the general PV for both stative and non-stative perception is *see*.

So far, I have given several different kinds of evidence that stative *saw* in English in structures such as (1) has a structure as in (80). It is possible to suggest a slight modification of (80) and have *saw* start out in v and move to ASP, as in (107).

(107)

```
                    IP
                  /    \
                 .      I'
                      /    \
                     I     ASPP
                          /    \
                         .     ASP'
                              /    \
                            ASP     vP
                             |     /  \
                            pf    .    v'
                             |        /  \
                             ^  she  v    VP
                                     |   /  \
                                    saw .    V'
                                           /   \
                                          V     NP
                                          |      |
                                         him   cross  the street
```

This means that the subject would receive a theta-role, Experiencer, from *saw* in v, slightly more elegant than *she* receiving a theta-role from an element in ASP. Note that *him* would be a Theme though. Sentences such as (108), pointed out by a number of people, e.g. Guasti (1993) and Felser (1999: 103), would show (Claudia Felser p.c.) that *him/them* would have to move to check Case, and then (108) could have a structure as in (107):

(108) She saw them all cross the street.

In conclusion, I have shown that there are three kinds of PVs in English, an infrequent activity one, as in (79), a stative, as in (3), and an evidential, as in (1). The former two are main verbs, but the latter is in ASP. There are a number of empirical advantages to (80), or its variant in (107), and (97): (a) charac-

terizing the perfectivity constraint in (1), (b) accounting for the difference in constituent structure between (1) and (3), (c) explaining (1) versus (13) to (17), both in terms of perfectivity and constituent structure, and (d) showing similarities between English, Hindi/Urdu, and Farsi. In Dutch and older English, *zie/see* would not have grammaticalized as far. Sentences such as (1) are grammaticalized: *saw* behaves more like an auxiliary.

6.   Conclusion and further research

In this paper, I questioned the assumption that eventive infinitives without ending are inherently perfectives, as argued by G&P. The reasons for these doubts are that at the time of the loss of the infinitival ending between the 12th and 14th centuries, there is no sudden change in either the interpretation of (1) or the grammaticality of (51). Unconnected bare infinitives, as in (13), are not perfective either, and neither are bare infinitives in Afrikaans. Instead, adapting ideas from Cowper (1999), I argue that the unmarked setting of ASP changes in the 18th century. This causes changes in both the present tense marking and the PVCs.

In addition I show there are three kinds of (visual) PVs in English: a rare activity one, a stative that is a main verb, and a stative that is not a main verb. This explains a number of phenomena. In a Chomsky (1995) framework, the features of ASP can be checked by a perfective *saw,* but then the infinitive will be dependent on the aspect of the PV. In this case, the PV itself has become an auxiliary verb (I call it evidential). The features of ASP can also be checked by an imperfective present participle, in which case the meaning is imperfective. In Dutch, PVs are always full verbs, but their complement is an ASPP.

In an attempt to provide an account of why Modern English on the one hand and Dutch, OE and ME on the other differ, I argued that including an ASPP with unmarked perfective and having *saw* in (1) as an evidential modal explains a number of phenomena: (a) The complementation of PVs in Modern English stem from being in or being lower than ASP, (b) typological differences between languages, and (c) structural differences, e.g. as between (93) and (94).

Notes

helpful discussion, as well as for valuable comments by two referees. I used TACT and the Oxford Text Archive e-texts of Chaucer, Paston, Shakespeare, as well as the 1894 Bartlett Concordance and a Corpus of American Professional Spoken English (available from Athelstan).

1. I am limiting myself mainly to visual perception verbs.

2. There is also a marked construction similar to the *-ing*. This construction may have an ASPP with *aan het* in ASP:

(i)   Ik ben een boek aan het lezen
       'I am reading a book'.

3. In fact, Hyams (2001:221) shows that the English bare infinitive in child language is typically used to indicate ongoing action. This goes against G&P, but Hyams argues this can be explained within G&P's system by saying the perfective constraint is present but aspect is not yet anchored in the tense. This is comparable to (13) to (17) above.

4. There is another change that I can't go into here that involves the compatibility of the Aktionsart of the verb with the imperfective. In Modern English, the imperfective is restricted to activity verbs such as *run* and accomplishment verbs such as *eat* (*an apple*). This is not the case in earlier English where statives could also be marked by *-ing*.

5. A referee mentions that (i), diagnosing non-stativity, is good. Native speakers I have asked say it isn't. If the latter judgement, as in (i), holds, it shows that *saw* is stative:

(i)   *What John did was saw Mary cross the street.

6. In Chomsky (2001), the features on functional categories (FCs) are not valued, and are 'filled in' after being checked (agreed with) by *saw* and *cross* respectively.

7. A semantic notation using the culmination point to distinguish between the two is given in (i) for (1) and in (ii) for (3):

(i)   _P_x_e[seeing(e) $\wedge$ Agent(e,x) $\wedge$ $\exists$e'$\exists$t[$^{\vee}$P(e') $\wedge$ Theme (e, e') $\wedge$ Cul (e,t,P)]]
(ii)   _P_x_e[seeing(e) $\wedge$ Agent(e,x) $\wedge$$\exists$e'[$^{\vee}$ P(e') $\wedge$ Theme (e, e')]] (From Zucchi 1998:209)

As mentioned, unlike Cowper, I assume stative have an ASP (and therefore an *e* in her system) but one that is always perfective, or unanalyzable in Comrie's (1976) system.

8. Werner Abraham (p.c.) reports that (82) is grammatical for him in German if the object is left out and Ruyter (1988:269) has data in Dutch as in (82) without an object.

9. As expected, the internal aspect of the complement to an unconnected PV can be an IP, as the grammaticality of (i) shows:

(i)   Seeing her be so healthy is a pleasure.

10. Dik and Hengeveld (1991:241) do not mention this when they discuss negation in English. They show that a PVC cannot be negated, as (i) shows. Native speakers do not seem to be too clear in their judgments, however:

(i)   *He saw the girl not cry/crying.

Abreviations used

1S	first person singular
3M	third masculine
ASP	aspect
COMP	complementizer
ERG	ergative
G&P	Giorgi & Pianesi
IMPF	imperfective in gloss
impf	imperfective in tree
ME	Middle English
INF	infinitive
OE	Old English
OED	*Oxford English Dictionary*
PAST	past
PF	perfect in gloss
pf	perfect
pres	present
PROGR	progressive
PV	perception verb
PVC	perception verb complement

References

Abraham, Werner (1990). "Modalverben in der Germania". *Akten des VIII. Internationalen Germanisten-Kongresses.*

Abraham, Werner (1998). "The Morphological and semantic classification of 'evidentials' and modal verbs in German: the perfect(ive) catalyst". *Groninger Arbeiten zur germanistischen Linguistik, 42*, 192–206.

Abraham, Werner (1999). "Evidentials". *International Conference on Historical Linguistics paper.*

Akmajian, Adrian (1977). "The Complement Structure of Perception Verbs in an Autonomous Syntax Framework". In *Formal Syntax* (pp. 427–460). New York: Academic Press.

Barker, Muhammad et al. (1967). *Spoken Urdu*, 2 vols. Ithaca [1975 edition].

Barnes, Janet (1984). "Evidentials in the Tuyuca Language". *IJAL, 50*(3), 255–271.

Bartlett, John (1894). *A New and Complete Concordance or verbal index to words, phrases, & passages in the Dramatic Works of Shakespeare*. London: MacMillan.

Benson, L. (1987). *The Riverside Chaucer*. Boston: Houghton Mifflin Company.

Brinton, Laurel (1988). *The Development of English Aspectual Systems*. Cambridge: Cambridge University Press.

Buzarovska, Eleni (2000). "On Complementation of English and Russian Verbs of Perception". Manuscript.

Callaway, Morgan (1913). *The Infinitive in Anglo-Saxon*. Washington: Carnegie Institution.

Chomsky, Noam (1995). *The Minimalist Program*. Cambridge: MIT Press.

Chomsky, Noam (2001). "Derivations by phase". In Michael Kenstowicz (Ed.), *Ken Hale: A Life in Language* (pp. 1–52). Cambridge: MIT Press.

Comrie, Bernard (1976). *Aspect*. Cambridge: Cambridge University Press.

Cowper, Elizabeth (1999). "Grammatical aspect in English". *The Linguistic Review, 16*, 205–226.

Davis, Norman (1971). *Paston Letters and Papers of the Fifteenth Century*, Part I. Oxford: Clarendon.

Dik, Simon & Kees Hengeveld (1991). "The hierarchical structure of the clause and the typology of perception-verb complements". *Linguistics, 29*, 231–259.

Diesing, Molly (1992). *Indefinites*. Cambridge: MIT Press.

Diesing, Molly & Eloise Jelinek (1995). "Distributing Arguments". *Natural Language Semantics, 3*, 123–176.

Dixon, R. M. (1988). *A Grammar of Boumaa Fijian*. Chicago: Chicago University Press.

Dowty, David (1979). *Word Meaning and Montague Grammar*. Dordrecht: Reidel.

Duncan, D. (1731). *A New English Grammar*. Scolar Press reprint.

Ek, Jan van (1966). *Four Complementary Structures of Predication in Contemporary English*. Groningen.

Felser, Claudia (1999). *Verbal Complement Clauses*. Amsterdam: John Benjamins.

Fischer, Olga (1992). "Factors conditioning Infinitive Marking in late Middle English". *DWPELL, 25*.

Fischer, Olga (1995). "The distinction between *to* and bare infinitival complements in Late Middle English". *Diachronica, 12*, 1–30.

Fisher, Ann (1750). *A New Grammar*. Scolar Press reprint.

Frajzyngier, Zygmunt (1996). *Grammaticalization of the Complex Sentence*. Amsterdam: John Benjamins.

Franz, W. (1909). *Shakespeare-Grammatik* (2nd edition). Heidelberg: Carl Winter.

Gelderen, Elly van (1993). *The Rise of Functional Categories*. Amsterdam: Johna Benjamins.

Gelderen, Elly van (1997). *Verbal Agreement and the Grammar behind its 'Breakdown'*. Tübingen: Niemeyer.

Gelderen, Elly van (2003). "ASP(ect) in Modal Complements". *Studia Linguistica, 57*(1), 27–44.

Giorgi, Alessandra & Fabio Pianesi (1997). *Tense and Aspect*. Oxford.

Gordon, Lynn (1986). "The Development of Evidentials in Maricopa". In Wally Chafe & Johanna Nichols (Eds.), *Evidentiality* (pp. 75–88). New York: Academic Press.

Greenwood, James (1711). *An Essay towards a practical English Grammar*. Menston: Scolar Press.

Guasti, Maria Teresa (1993). *Causative and Perception Verbs*. Torino: Rosenberg & Sellier.

de Haan, Ferdinand (1997). "Evidentiality in Dutch". University of New Mexico MS.

de Haan, Ferdinand (1998). "The Category of Evidentiality". University of New Mexico MS.

Haim, S. (1375). *Farhang Jama' Farsi – Angresi* [The Larger Farsi – English Dictionary]. Tehran.

Hale, Ken & Jay Keyser (1993). "On Argument structure and the Lexical Expression of Syntactic Relations". In Ken Hale & Samuel Keyser (Eds.), *The View from building 20* (pp. 53–109). Cambridge: MIT Press.

Higginbotham, James (1983). "The Logic of Perceptual Reports". *Journal of Philosophy, 80*(2), 100–127.

Hoekstra, Teun & Nina Hyams (1998). "Aspects of Root Infinitives". *Lingua, 106*, 81–112.

Hyams, Nina (2001). "Unanchored Expressions in Child Language". *Proceedings of COE International Symposium*, 211–236.

Ikawa, Hisako (1999). *Events and Anaphoric Processes*. University of Arizona dissertation.

Jelinek, Eloise (1997). "Functional Projections and Clitics". University of Arizona Manuscript.

Jespersen, Otto (1931). *Modern English Grammar* IV. London: Allen & Unwin Ltd.

Julien, Marit (2001). "The Syntax of Complex Tenses". *The Linguistic Review*, 125–167.

Kerkhof, J. (1966). *Studies in the Language of Geoffrey Chaucer*. Leiden: Universitaire Pers.

Kirsner, Robert (1977). "On the passive of sensory verb complement sentences". *Linguistic Inquiry, 8*(1), 173–179.

Kökeritz, Helge (1954). *Mr. William Shakespeares Comedies, Histories and Tragedies*. Facsimile edition of the First Folio of 1623. New haven: Yale University Press.

Kuno, Susumu (1973). *The Structure of the Japanese Language*. Cambridge: MIT Press.

Lambton, A. (1953). *A Persian Grammar*. Cambridge: Cambridge University Press [1990 reprint].

Lane, A. (1700). *A key to the art of letters*. Scolar Press reprint.

Miege, Guy (1688). *The English Grammar*. Scolar Press.

Miller, Gary (2002). *Nonfinite Structures in Theory and Change*. Oxford: Oxford University Press.

Minkova, Donka (1991). *The History of Final Vowels in English: The Sound of Muting*. Berlin: Mouton de Gruyter.

Moore, Samuel & Albert Marckwardt (1951). *Historical Outlines of English Sounds and Inflections*. Anne Arbor: George Wahr.

Mossé, Fernand (1938). *Histoire de la Forme périphrastique être + participe présent en germanique*. Paris: Klincksieck.

Mulcaster (1582). *Elementarie*. Menston: Scolar Press.

Mustanoja, Tauno (1960). *A Middle English Syntax*. Helsinki.

Oxford English Dictionary (*OED*) (1933). Oxford: Oxford University Press.

Parsons, Terence (1990). *Events in the Semantics of English.* Cambridge: MIT Press.

Pessels, Constance (1896). *The Present and Past Periphrastic Tenses in Anglo-Saxon*. Trubner: Strassburg [Johns Hopkins diss.].

Platts, John (1884/1982). *A Dictionary of Urdu, Classical Hindi, and English*. Oxford: Oxord University Press.

Ponelis, F. A. (1991). *Afrikaanse Sintaksis.* Pretoria: van Schaik.

Practical Dictionary (1987). Delhi: J. S. Sant Singh Publishers. 17th edition.

Ruyter, Lyda (1988). "Bare Infinitivals, INFL and pseudo-progressives in Dutch". *McGill Working Papers in Linguistics* [special issue], 260–279.

Quirk, Randolph et al. (1985). *Comprehensive Grammar of the English Language*. London: Longman.

Raith, Josef (1951). *Untersuchungen zum englischen Aspekt*. Munchen: Max Huber.

Ramchand, Gillian (1997). *Aspect and Predication*. Oxford: Clarendon Press.

Scheffer, Johannes (1975). *The Progressive in English*. Amsterdam: North Holland Publishing.

Slobin, Dan & Ayhan Aksu (1982). "Tense, Aspect, and Modality in the use of the Turkish Evidential". In *Tense-Aspect: Between Semantics and Pragmatics* (pp. 185–200). Amsterdam: John Benjamins.

Southworth, James (1947). "Chaucer's final -e in Rhyme". *Proceedings of the Modern Language Association, 42*, 910–935.

Speas, Margaret (1990). *Phrase Structure in Natural Language*. Dordrecht: Kluwer.

Streitberg, W. (1891). "Perfektive und imperfektive Aktionsart im Germanischen". *Beiträge zur Geschichte der deutschen Sprache und Literatur, 15*, 70–177.

Tenny, Carol (1987). *Grammaticalizing Aspect and Affectedness*. MIT PhD.

Traugott, Elizabeth (1972). *The History of English Syntax*. New York.

Travis, Lisa (2000). "The L-Syntax/S-Syntax Boundary". In *Formal Issues in Austronesian Linguistics* (pp. 167–194). Dordrecht: Kluwer.

Viberg, Åke (1983). "The Verbs of Perception: a typological study". *Linguistics, 21*, 123–162.

Visser, F. Th. (1946–1952). *A Syntax of the English Language of St Thomas More, Vol. I and III*. Leuven: Librairie Universitaire.

Visser, F. Th. (1963–1973). *An Historical Syntax of the English Language I-IIIb*. Leiden: Brill.

Vlach, Frank (1981). "The Semantics of the Progressive". In Philip Tedeschi & Annie Zaenen (Eds.), *Syntax and Semantics: Tense and Aspect* (pp. 272–292). New York: Academic Press.

Wharton, J. (1654). *The English Grammar*. Scolar Press reprint.

Zeitlin, Jacob (1908). *The ACI and Some Kindred Constructions in English*. Columbia PhD.

Zickner, B. (1900). *Syntax und Stil in Pecock's Repressor*. Berlin: Greifswald dissertation.

Zucchi, Sandro (1999). "Incomplete events, intensionality and imperfective aspect". *Natural Language Semantics, 7*, 179–215.