**Changes in the argument structure affecting experiencers**

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There is a systematicity in how a verb’s meaning changes because its inner aspect and argument structure change in predictable ways. This talk will take as a basic point of departure that there are three aspectual verb types, durative, telic aspect, and stative aspect, that determine the basic orientation of a verbal root. Thus, unaccusative verbs can easily turn into causatives because all that’s added is a Causer but the Theme and telic aspect remain stable (van Gelderen 2016). In this talk, I test what happens to the aspectual orientation as copulas, perception and *psych-*verbs undergo a reanalysis of the Experiencer and Theme theta-roles. The data will be taken from the history of English.

 The lists of Modern English verbs were gathered from various sources, e.g. Levin (1993), Levin and Rappaport-Hovav (1995), and Pesetsky (1995). Changes in verbs in the history of English have been examined in Visser’s *An Historical Syntax of the English Language,* Mitchell’s *Old English Syntax,* Jespersen’s *A Modern English Grammar*, and Poutsma’s *A Grammar of Late Modern English.* I have taken these studies as a basis and then used online corpora, the Dictionary of Old English (DOE), the Middle English Dictionary (MED), the Corpus of Contemporary American English (COCA), and the Corpus of Historical American English (COHA) for data on verbs and the various stages.

**1 Background on aspect**

Since at least Fillmore (1971), linguists have thought of verb meanings in terms of either manner/process/duration (all terms are used somewhat interchangeably) or in terms of change of state/telicity. A third, neutral aspect is the stative. Durative verbs emphasize process and Agent where telic and stative verbs have the Theme central.

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| **durative telic stative**0 arg rain -- --1 arg dance, walk arrive, fall be tall2 arg eat, read break know3 arg -- give, send --  |

Table 1: Inner aspect of verbs

The tree for the durative emphasizes the higher part, as in (1); the telic aspect the lower part, as in (2).

(1) a. vP b. vP

 ei ei

 *She* v’ *She* v’

 ei ei

 v VP v VP

 ei ei

 V N V DP

 *dance*  ~~dance~~ *dance* 4

 [durative] [durative] *the tango*

(2) a. VP b. vP

 ei ei

 *it* V’ *They* v’

 ei ei

 V (PP) v VP

 *broke* ei

 [+telic] *it* V’

 ei

 V (PP)

 *broke*  4

 [+telic] *into two pieces*

Copula verbs are centered around a Theme argument and can vary in aspectual character. English has a very sizable inventory of copula verbs, which can be divided into those of duration (*remain* and *stay*), change of state (*become* and *fall*), and state (*seem* and *appear*).

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| **stative telic durative**seem, appear, feel become, fall, go, turn remain, stay, stand |

Table 2: Types of copulas

Because the Theme is central, the sources of copulas are mostly the unaccusatives, which continue to occur that way, as Table 3 shows; some derivefrom other kinds of verbs. A tree for copulas is given in (3).

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| **Also unaccusative: also transitive: also labile:**appear, remain, stay feel, sound, smell, look, taste ring, continue,persevere, persist, go hold, keep, wear, get, prove, grow, turn,come (expensive), fall (flat), strike, show, flash, bang (shut) commence, wax,loom, break, befall, seem, fly (open), burnstand, lie, blush, rest, become blow (open) |

Table 3: Copula verbs in Modern English

(3) PredP

 ei

 DP Pred’

 *she* ei

 TH Pred DP/AP/PP

 *appears happy*

Stative copulas can have an Experiencer, e.g. *appear, feel, sound*. These form part of a class of sense perception verbs that Viberg has divided into those in Table 4. Trees for the copula are given in (4a) for stative2 and in (4b) for stative1 and durative uses.

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|  **Stative1 Stative2 = copula**  **Durative** **EXP TH TH (EXP)**  **A TH**sight see look, be visible, appear look at, watch, observe, have/take a look athearing hear sound, be audible listen to, find out, hearken,  give (...) eartouch feel feel feel, touchtaste taste taste tastesmell smell smell smell |

Table 4: Sense perception verbs in English (adapted from Viberg 1983: 125)

(4) a. PredP b. vP

 ei ei

 DP Pred’ DP vP

*She* ei *She* ei

 Theme Pred’ PP Agent/EXP v VP

 ei *to me* ei

 Pred AP EXP V DP

 *looks happy* *look at/see it* durative/stative Theme

Non-sense perception verbs with Experiencers and Themes are listed in Table 5 together with their counterparts of Causers and Experiencers. Trees appear in (5).

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| **Subject Experiencer Object Experiencer**love, like, hate, fear please, frighten, annoy, grievepity, detest worry, surprisedislike, dread, loathe weary, trouble, disturb |

Table 5: *Psych*-verbs in English

(5) a. vP > b. vP

 ei ei

 *This* v’ *I* v’

 CAUSER ei EXP ei

 v-cause VP v-state VP

 ei ei

 V DP V DP

 *frightens me fear it*

 [telic] EXP [state] TH

Having listed some major classes of verbs and their trees, I now turn to the changes in copulas, sense perception, and psych-verbs.

**2 Changes**

I’ll divide this section into four subsections for the different kinds of verbs. I’ll start with verbs that do not involve an Experiencer but that remain stable and then go into the three kinds of Experiencer verbs.

*2.1 Unaccusatives and Unergatives*

In (1) and (2), we saw trees for these verbs. Unaccusatives, e.g. *ætslidan, berstan, bugan, droppian, droppetan,* and *growan*, all develop causatives whereby they add a causer to the telic structure which remains stable in aspect. Unergative verbs, e.g. *climban* `climb’*, cloccian* `cluck’, *clymmian* `climb’*,* and *felan* `feel’, develop into transitive structures by making their Theme overt.

*2.2 Copulas*

The main function of a copula is to help assign a theta-role and to add aspectual and modal meaning (at least in English). The three kinds of aspect that we saw play a role here as well: change of state, duration, and the absence of aspect appear in the copulas as *become, remain,* and *appear* show, respectively. Most copulas have been reanalyzed from unaccusatives because the Theme is crucial, as in (6): both have a Theme and are often ambiguous and therefore easily reanalyzable, as in (7).

(6) ***Aperede*** *an ongel of heuene in here slepe.*

 `(There) appeared an angel from heaven in her sleep.’

 (OED, *c*1250   *Kent. Serm.* in *Old Eng. Misc.* 27)

(7) a. VP > b. PredP

 ei ei

 V PP DP Pred’

ei 4 *an ongel* ei

V DP/AP *in here slepe* [i-3S] Pred PP

*aperede an ongel* [Th] *aperede* 4

[visible] [i-3S] [mood] *in here slepe*

[uTh] [Th] [uTh]

Although copulas revolve around a Theme, which would fit with an inner aspect of telic or stative, there are copulas of all three aspectual kinds. I will show that the aspect of the copula is determined by Sorace’s (2002) continuum, with telic as the most unaccusative moving towards durative for less unaccusative verbs. Table 6 shows how the erstwhile unaccusatives can be divided along Sorace’s continuum and how that fits with their copular aspect.

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| **Sorace’s term example copular aspect**Change of Location come, fall, befall telicChange of State break, blush, become, **appear** telicContinuation of a remain, stay, persist, persevere  pre-existing state stand, lie, rest, loomdurativeExistence of State  seem, **appear** stativeUncontrolled process (cough)Controlled process (motional)  **go** telicControlled process (non-motional) |

Table 6: The types of unaccusative copulas mapped onto the unaccusative-unergative continuum

Copulas that are cognate with labile verbs go through an unaccusative stage first and those cognate with sense perception verbs through a middle stage (The rags **smelt** unpleasantly), in the case of the perception verbs *feel* and *look*; *sound* starts out an unaccusative in 1300 and is extended to copula in 1375, very much like the other unaccusatives; *smell* is of unclear origin but transitive as well as copula around 1175; *taste* starts out as a transitive; and *show* is an uncommon copula.

*2.3 Sense Perception verbs*

As mentioned, the verbs of sense perception can be divided into two statives and one durative. Table 4 shows the main ones for Modern English and Table 7 for Old English.

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|  **Stative1 Stative2 Durative** **EXP TH TH (EXP) A TH**visual (ge)seon `see’ þyncan `seem’ seon, locian, (ge)sceawian wlitan, hawian, cepan `look’auditory (ge)hieran `hear’ swegan `sound’ gehlystan, hearcnian `listen, obey’tactile (ge)felan beon `be’ hreppan, (ge)hrepian, (æt)hrinan (ge)fredan `feel’ (ge)grapian `touch’taste byrgan `taste’ smæccan `taste’ (a)byrian, abyrgan, smæccan `taste’smell (ge)stincan, eðian stincan, reocan gestincan `smell’ gesweccan `smell’ bladesian, stiman,  æþmian, hremian `smell’  |

Table 7: Perception verbs in Old English

Comparing those table, the changes are (a) renewal of especially the durative and (b) those in Table 8. One of the unexpected changes is given in (8) and (9).

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|  **stative**  **copula durative**visual see OE look 1225 look OEauditory hear OE sound 1325 listen 1220 (1 OE example)tactile feel OE be OE feel 1225 feel 1384 taste 1290taste taste 1340smell stink OE; smell 1175 stink OE; smell 1175 stink OE; smell 1200 |

Table 8: First use of the basic verbs

(8) *swa sweotole swa he on þa sunnan mæg eagum andweardum* ***on locian***

 as clear as he on the sun may eyes present on look

 `As clearly as he can look at the sun with his eyes.’ (DOE, Metres of Boethius, Krapp 22.16)

(9) *Wurðliche hie deð* ***lokin*** *ðe manne ðe hes luuieð*

 decent it makes look the man that it loves

 `It makes the man look decent who loves it.’ (MED, 1225, Vices & Virtues 133-4)

*2.4 Psych-verbs*

Three changes occur, as in Figure 1, but not in any order. Object experiencer verbs are reanalyzed as subject experiencer ones, as in (10), but new object experiencers arise through borrowing and internal change when an Agent is reanalyzed as Causer, as in (11). Finally, it is possible that stative subject experiencer verbs are currently changing their inner aspect, as shown by (12).

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Figure 1: Changes affecting *psych*-verbs

(10) a. *He wile himm* ***færenn*** *3iff he ma33.*

 ‘He wants to frighten him if he can.’

 (MED, c1200 Orm. Jun 1 675)

 b. *And that schold every wys man* ***fere****.*

 ‘And that should every wise man fear.’

 (MED, a1393 Gower CA Frf 3 2.578)

(11) a. The ball, which had been nearly spent before it struck him, had **stunned** instead of killing him. (OED, 1837 Irving Capt. Bonneville I. 271)

 b. You shall sometimes see him gather a Crowd round him ... and **stun** the People with a senseless Story of an Injury that is done him. (OED, 1714 E. Budgell tr. Theophrastus Moral Characters vi. 22)

(12) The Steelers are **loving** it. (COCA NBC Today)

Reason for the first change: loss of causative morpheme; for the second: animacy discrepancies, as in (11a); for the third: progressive cycle.

**3 Conclusion**

A verb’s meaning is determined in large part by its argument structure, i.e. its theta-roles, and its inner aspect. I have tried to track some changes involving Experiencer theta-roles and found much more variation than with e.g. unaccusatives and unergatives.

Copulas have as their main source unaccusatives (because of the centrality of the Theme) but their aspect derives from where they are on Sorace’s continuum. Sense perception verbs are stative (due to the Experiencer) and durative. One expects stative1 to be the source for stative 2 (which happens) but not the durative to be the source for stative 2 (which also happens). As for the *psych-*verbs, three changes happen, each for a different reason.

**References**

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