Research Article

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Stability and Change in Intransitive Argument Structure

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Abstract: The argument structure of verbs is pretty uniform across languages. Thus, verbs of `falling' involve a Theme and an optional Causer and verbs of `working' an Agent. Aspect is relevant to that uniformity as well since the former verbs will be telic and the latter durative. Stative verbs form a third main class. I first show that, when (spoken/written) languages change, the basic argument structure and aspect don't change for most unaccusatives and unergatives. There are, however, systematic reports (e.g. Rosen 1984; Keller & Sorace 2003; Randall et al 2004) that certain verbs are unergative in one language and unaccusative in another and that verbs alternate between different aspects (e.g. Levin & Rappaport Hovav 2014). I examine a few verbs diachronically that are ambiguous in the Keller & Sorace work, i.e. verbs of continuation and of controlled motional process, and conclude that a more fine-grained system is helpful.

Keywords: Argument structure, Aspect, Diachrony, Sorace Hierarchy, Unaccusative, Unergative

1 Introduction

Fillmore (1970), Vendler (1976), Levin & Rappaport Hovav (1995), and numerous others divide the Aktionsart of verbs into different kinds. In this paper, verbs are divided into three main aspectual types, manner (durative aspect), result (telic aspect), and state (stative aspect) and these aspects determine the theta-roles. Unergative verbs, such as *work* and *play,* are durative and their basic theta roles are an Agent; unaccusatives, such as *arrive* and *fall,* are telic and their basic theta roles are a Theme and an optional Causer may render them causative[2]. Subject experiencer verbs, such as *fear,* and (many) copular verbs are stative and have a Theme and optional Experiencer.

Argument structure and aspect remain fairly stable in language change, as I have argued in van Gelderen (2018). Causative-inchoative verbs have been the subject of much earlier research (e.g. Kulikov 2009, Narrog 2009, Ottosson 2013). This work shows that, as the causative suffix ceases to be transparent in the history of English, the unaccusative and causative classes converge into a class of labile verbs. Their aspect remains stable. Typical durative verbs, such as *plegan* `play' and *creopan* `crawl', keep their Aktionsart as well. The theta-role changes to verbs include additions of Causers to unaccusatives and of Themes to unergatives, keeping the Aktionsart stable.

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2 Sign language also distinguish unaccusatives from unergatives (e.g. Benedicto & Brentari 2004; de Lint 2010).

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There are also verbs, the *psych*-verbs, that change their aspect from durative to telic and then to stative and their theta-roles change accordingly (Allen 1995; van Gelderen 2014). That work shows that the stative alternative is the least marked and that languages change towards stative *psych*-verbs; similarly, sign languages have the stative variant (Oomen 2017) and first language acquisition (van Gelderen 2018) starts with this. *Psych*-verbs will not be discussed here.

The outline is as follows. Section 2 reports earlier results from van Gelderen (2018) that show that telic and durative verbs generally keep their original lexical aspect. It also introduces the Sorace Hierarchy that shows a gradient split between unergatives and unaccusatives. Section 3 lists systematic reports in the literature (e.g. Rosen 1984) that certain verbs are unergative in one language and unaccusative in another or that one verb includes both a durative and telic meaning (e.g. Levin & Rappaport & Hovav 2014). After these reviews, sections 4 and 5 discuss a few instances of ambiguous Aktionsart, namely verbs of controlled motion and of continuation. With controlled motion, the conclusion is that, for `swim', the agentive feature comes to predominate whereas, for `speed', the telic one does. Verbs of continuation are stative and therefore do not involve a telic feature but their agentive feature is not strong either. Of these, `float' is ambiguous and `remain' unaccusative.

The data discussed in this paper are obtained from dictionaries, i.e. Bosworth & Toller (B&T), Oxford English Dictionary (OED), Middle English Dictionary (MED), and Dictionary of Old English (DOE), and from corpora, e.g. Corpus of Contemporary American English (COCA) and Corpus of Historical American English (COHA). The sources used in these corpora and dictionaries will not be cited in the references.

2 The aspectual stability of intransitives

Perlmutter (1978) makes a very important distinction between intransitives that have come to be called unergative and those that have come to be called unaccusative. Unergative verbs have Agents that are animate and act deliberately whereas unaccusative verbs have Themes that are either animate or inanimate and undergo the action. The characteristics listed in Table 1 present well-known contrasts between these two verb types in Germanic and Romance.

Table 1. Some differences between unergatives and unaccusatives

	Unergative	**Unaccusative**
a.	*-er* can be added (e.g. *worker*)	*-er* can generally not be added (e.g. **arriver*)
b.	*have* perfect	*be* perfect (in older English, German, Dutch, Italian)
c.	Theme can be added (e.g. *She danced a dance*)	Theme cannot be added (e.g. **The bus arrived a passenger*)

Dowty (1991) characterizes unergatives as atelic and unaccusatives as telic and Tenny (1987: 264) writes that unergatives "tend to describe non-delimited events, while unaccusatives tend to describe delimited events". In this way, the choice of argument is connected to that of lexical aspect. Likewise, many other scholars see the unergative-unaccusative distinction as completely aspectual, e.g. Zaenen (1988). Abraham (1990) uses the terms terminative/biphasic versus monophasic to distinguish two crucial classes, which I will refer to as telic versus durative.

Unergative verbs have durative aspect with an obligatory Agent and, in the history of English, acquire transitive-like properties, keeping their Agent and durative aspect, while allowing the possibility to add a Theme. This is shown in the change from the earlier intransitive `climb' (1), the only Old English occurrence of *climb* in the OED, to the later transitive (2) use.

(1) *Gif hit unwitan ænige hwile healdað butan hæftum,*
If it (light) unwise any time holds without fetters

hit ðurh hrof wædeð, bryceð and bærneð boldgetimbru,
it through roof wades, breaks and burns timbers
*seomað steap and geap, stigeð on lenge, **clymmeð** on gecyndo*
hangs steep and high, rises in length, climbs in nature.
`If an unwise person holds it (light) without bounds, it will go through the roof and break and burn the timbers (of a house); it hangs steep and high and rises and climbs in nature.' (DOE, Solomon and Saturn 412-6, Dobbie, 1942)

(2) a. *To **climbe** þe cludes all þe sunn sal haf þe might.*
`To climb the clouds the sun shall have the power.'
(OED, Cursor Mundi, Vesp. 16267)

b. *Thai stoutly **clam** the hill.*
`They courageously climbed the hill.'
(OED, Barbour Bruce, St. John's Cambr. x. 63)

Unaccusatives are telic with a Theme, as in (3), and develop into causatives by adding a Causer in (4). The unaccusative meaning is also kept, as in (5).

(3) æfter gereordunge hi æmtian *heora rædingum oððe on sealmum.*
after repast they empty their readings or (spend it) on psalms
'After repast, they free themselves for readings or psalms.'
(*Rule of St Benet*, Logeman, 48, 82.13)

(4) Hugo **empties** his pockets of screws, springs, and other tiny metal pieces. (COCA 2012)

(5) His eyes **emptied**, his jaw went slack and he mumbled. (COCA 1993)

The unaccusative verb *arrive* `to come to shore' is a loan from French and is initially both unaccusative, as in (6) and (7), and causative, as in (8).

(6) Þat folc of Denemarch … ***aryuede*** in þe Norþ contreye.
'The people of Denmark … arrived in the North country.' (OED, Gloucester Chron. 371)

(7)

Nu	*beoð*	*of Brutaine*	*beornes **ariued** …i þis lond at Tottenæs*
Now	are	of Brittany	barons arrived … into this land at Totnes

`The barons have arrived from Brittany into the land at Totnes.'
(OED, Layamon, Caligula, 8016)

(8) Þe wynde ***aryueþ*** *þe sayles of vlixes..and hys wandryng shippes … in to þe isle þere as Circe..dwelleþ.*
`The wind (makes) arrive the sails of Ulysses … and his wandering ships … into the island where Circes dwells.' (OED, Chaucer, *Boethius*, 4.3.122)

The causative use of *arrive* remains until the 1650s but then, like other change of location verbs, becomes impossible. The basic aspect and Theme-focus remains the same.

So far, the durative aspect has been seen to go with an Agent whereas telic aspect needs a Theme. Of course, the distribution in two classes of intransitive verbs is more complex. Sorace's (2000) Hierarchy considers seven classes of verbs that form a continuum between unaccusative at the top of Table 2 and unergative at the bottom. I have added the aspect in the right hand column and this shows the three basic ones, telic, stative, and durative.

Table 2. Sorace's continuum between unaccusative and unergative

Sorace's label	Example verbs	Aspect
Change of Location	come, arrive, fall	telic
Change of State	begin, rise, grow, die	telic
Continuation of a pre-existing state	**remain**, last, survive, **float**	stative
Existence of State	exist, please, belong	stative
Uncontrolled Process	cough, laugh, shine	durative
Controlled Process (motional)	run, **swim**, walk, **speed**	durative
Controlled Process (non-motional)	work, play, talk	durative

Sorace (2000) and Keller & Sorace (2003) recognize core from non-core unaccusative and unergative verbs: the core ones consistently display the characteristics that are expected according to Table 1. In Table 2, the verbs in the top row (`Change of Location') and in the bottom row (`Controlled non-motional process) represent the core unaccusatives and unergatives, respectively. Other verb types, e.g. controlled motional process and the continuation of a pre-existing state do not. I will discuss two of each of the non-core groups that Keller & Sorace identify as not conforming (bolded in Table 2), namely *swim* and *speed* in the controlled motion group and *float* and *remain* in the continuation group[3]. Although telicity is crucial in distinguishing the core classes, motion can be telic or not, thus making a controlled motional process less of a core unergative. In the same way, telicity is less relevant in verbs of continuation of existence. Accordingly, these verbs are ambiguous unless an agentive feature is explicitly added.

In the course of the history of English, unaccusative verbs not only acquire a Causer theta-role, but they are also develop into copular verbs. Because the Theme theta-role is central to unaccusatives, i.e. the intransitives in the upper half of Table 2, these verbs are typically reanalyzed by language learners as copulas. The verb *become* is originally a telic unaccusative in (9) but it is later used as a (telic) copula in (10).

(9) *Hannibal to þam lande **becom**.* unaccusative
Hannibal to that land came
'Hannibal came to that land.' (OED, Orosius, Bately 100.17)

(10) *[Of] tristrem and hys leif ysote, How he for here **be-com** a sote* copula
`About Tristram and his love Isolde, how he become a fool for her.'
(Cotton, 17-18; also in Fairfax)

Having shown in this section that intransitives, like *climb*, *empty,* and *become,* don't change their durative or telic aspect when they develop into transitives and copular verbs, I now first turn to claims in the literature that some intransitives are durative in one language but telic in another and that verbs can be poly-aspectual before looking at examples of these in the history of English.

3 Cross-linguistic differences

Rosen (1984) argues that languages differ as to how the intransitive class is divided. Using Davies' (1981) work on Choctaw, she compares Choctaw and Italian `die' and `sweat'. The former is unergative in Choctaw but unaccusative in Italian whereas the latter is unergative in Italian and unaccusative in Choctaw. Similarly worrisome, verbs of uncontrolled process, such as *sneeze* and *snore,* are unergative in Dutch and Italian, but unaccusative in Eastern Pomo. In response to Rosen, Sorace (2000: 877) argues that languages make different decisions about verbs like `sweat',`sneeze', and `snore' because, as uncontrolled process verbs, they are in the middle of the Hierarchy in Table 2 and can be more or less agentive. She doesn't discuss the change of state verb `die' but Dąbrowska (2015) shows that English *die* fails many of the typical

[3] An investigation into the other non-core verbs remains for future work.

unaccusativity tests and argues it is not an unaccusative verb. I therefore assume there is some cross-linguistic variation with verbs of uncontrolled process and, with Dąbrowska, that `die' is unclear as to what category if belongs to.

Rosen also argues that the "class of motion verbs presents special complications" (Rosen 1984: 66) because some express manner of motion and others result. Not only do some express manner in one language and result in another, as also known from Talmy's (1985) work, but specific verbs can be coerced by adding adverbials of manner or result. Dutch *lopen* `walk' is durative in (11), shown by the auxiliary `have', but it can be coerced into a telic verb in (12), in which case the auxiliary changes to `be'.

(11) *Ik **heb** gelopen.* Dutch unergative durative
I have walked
`I walked.'

(12) *Ik **ben daarheen** gelopen.* Dutch unergative coerced to telic through goal
I am there walked
`I walked there.'

Languages indeed choose a boundary between the verbs in Table 2 and the cut-off point may be different. The verb `sweat' is an uncontrolled process and can therefore either be seen on the unergative side (if process is emphasized) or on the unaccusative side (if the lack of an agent or the presence of a goal is emphasized).

Another example of a verb that may have two meanings that differ aspectually is *clean*. Levin & Rappaport Hovav (2014) point out that this verb is ambiguous between a manner (i.e. durative) reading, as in (13), and a result (i.e. telic) reading, as in (14).

(13) He was **cleaning** after he cooked (but it remained dirty).

(14) The machine **cleaned** the carpet beautifully.

Note that in (13), there is just an Agent, not a Theme, and a progressive *–ing* coercing it towards manner/telic aspect. In (14), there is a Causer and Theme with a telic reading. I will argue that the basic aspect of *clean* is telic; the history of English sheds light on this topic, as it will on some other verbs in sections 4 and 5.

Old English has a verb *clænsian* `make clean' that Modern English still retains as *cleanse* but which has narrowed its meaning to `make completely clean'. The verb *clean* is a relatively recent addition, according to the OED. Apart from a mention in a lexicon from the 1450s, the earliest examples are given in (15) and (16) and these are all telic, thus suggesting that this aspect is basic.

(15) The English Frigats are now so well Fitted and **Cleaned**, that none of the Algerines they meet with, escape them. (OED, 1681, London Gaz. No. 1666/2)

(16) We scrubb'd and **clean'd** our Men of War. (OED, 1697, W. Dampier New Voy. around World vi. 138)

Looking in COHA, the frequency of the verb *clean* increases dramatically after this introduction. In the period from 1810 to 1840, there are 59 instances of the verb *clean* and they are all telic; from 2000 to 2010, there are over 10 times as many such verbs (750) and most remain telic.

Data from first language acquisition confirms this telic basic aspect. Eve's files (Brown 1973) show seven instances of the verb *clean* and they are all telic, as in *I clean it off, you clean it off,* and *we better clean them,* between the ages of 1;6 and 2;3. It therefore appears that the telic meaning is relatively basic. In short, *clean* is a verb that is a telic verb, due to its adjectival origin, but which can be coerced into a manner meaning, which is durative.

Randall et al. (2004) show that speakers and learners seem to operate with a system of features in which certain features are ranked over others in a particular language. German, for instance, uses locomotion to distinguish unergatives and unaccusatives but Dutch does not. Below, we will see that, in the history of English, the feature agentivity is more prominent with the verb `swim' but not with the other verbs of the same type. In earlier but related work, Keller & Sorace (2003) conduct a series of experiments testing German native speakers on the `have' versus `be' distinction with the seven verb groups presented in Table 2. As mentioned in section 2, they find two unexpected verb classes: verbs of continuation (`stay', `survive') prefer `have' and verbs of controlled motion (`walk', `swim') tend to be combined with `be'. Accordingly, rather than just invoking telicity for the higher group and agentivity for the lower group, there are other factors, namely motion. These basic concepts are important parts of the Faculty of Language and may be pre-linguistic.

Because I argue that argument structure is pretty uniform, in this section, I have discussed a few verb types that seem to differ cross-linguistically in their Aktionsart. First, the verbs of uncontrolled process are genuinely ambiguous between durative and telic, which is not unexpected from their position in the Hierarchy. Second, the verb `die' may not fit in this hierarchy, for unclear reasons. Third, certain motion verbs express either goal or manner and, last, seemingly ambiguous verbs, like `clean', still have a basic aspect, namely telic. In the remainder of this paper, four Old and Middle English verbs from two classes of verbs in Table 2 will be examined to see how they develop and which features seem to play a role.

4 Origin and changes in verbs of controlled motional process

In this section, I look at two intransitive verbs that are ambiguous between unaccusative and unergative meanings and how that plays itself out in language change. I selected *swim* and *speed* from this group that also includes *walk, run, crawl, wade,* and *stride*. *Swim* is a non-core unergative in Table 2, i.e. a controlled motional process.[4] I start by listing all Old English meanings of this verb and then turn to another verb in this group, *speed*, which originates in Middle English and for which I examine some MED examples.

Buck (1949: 680) writes that notions of `float, swim, and sail' are closely related in Indo-European and this carries over into Old English. Thus, Bosworth & Toller's (B&T) Old English Dictionary lists three main uses of *swimman* `swim': (a) "of living creatures moving in or on water", (b) "of a vessel moving on water", and (c) "of lying on the surface of water". This definition includes agentive and non-agentive meanings, i.e. verbs with an Agent theta-role (involving a durative manner verb), as in (17), verbs with a Theme theta-role (involving a continuation of state rather than a telic change of location), as in (18), and a Theme with a continuation of state in (19).

(17)

Com	þa	*to*	*lande*	*lidmanna*	*helm*	*swiðmod*	***swymman.*** (a)
came	then	to	land	seafarer's	leader	strong.mood	swimming

`The seafarer's leader came to land swimming bold-heartedly.' (Beowulf 1624)

(18)

swa	*hine*	*oxa*	*ne*	*teah*	*ne*	*esna*	*mægen ne*	*fæt*	*hengest*(b)
so	it	ox	not	drew	nor	strong	servants nor	draught	horse
ne	*on*	*flode*	***swom.***						
nor	on	water	floated						

`so that an ox didn't draw it, nor strong servants or a draught horse, and it didn't float on water either.' (Exeter, Riddle 22.13-4)

[4] There is literature on the typology of verbs of aquamotion, e.g. Koptjevskaja-Tamm et al. 2010. I haven't considered this because those verbs are from all classes in Table 2 and I wanted to specifically look at the non-core verbs.

(19) *genim doccan oððe clatan* þa þe ***swimman*** *wolde*. (c)
take sorrel or clote those REL swim would
`Take sorrel or clote such that they float.'
(Leechdoms, Cockayne, 50.1.1)

Because these meanings are aspectually varied, I have examined all 32 Old English instances of `swim' that are found in the DOE Corpus to determine if there is a basic aspect and what the relevant features are. The examples can be found in Appendix A and will be referred to by the number with an A. In addition to the three Old English examples in (17) to (19), the other instances of the Old English verb *swimman* appear in (A1) to (A20). I have organized them according to the three descriptions in B&T with a fourth category for verbs that seem to fall outside these definitions. Examples from the same text are grouped together.

Examples (A1) to (A13) are agentive and durative, while (A14) is agentive with coerced telicity (through `out'). Evidence for the unergativity of this group is, for instance, the perfect auxiliary *have* in (A8b), and a deontic modal in (A14b) and (A14c), typical of an Agent. The second group has only two known instances, (18) above and (A15). The context of (A15) makes this agentive, as does the deontic modal *mihte*. The third group includes the examples in (A16) to (A18). Many have a deontic modal, e.g. all instances in (A16) have *wille*. This may be to coerce a more agentive meaning of the basic `continue to be on the water'. The last group includes (A19), for which I am not sure if `swim' or `float' is the appropriate translation and (A20) which is a metaphorical use of `float'.

The results for the four meanings of Old English `swim' are summarized in Table 3. Meaning (a) is the durative, agentive meaning and its use predominates. Meanings (b) and (c) are related, a Theme is floating with no goal reached; some are coerced into agentive meanings. Taking that coercion into account, 23 are durative, 3 telic (A14abc), 3 stative (marking a continuation of state), and 2 are unclear.

Table 3. All instances of `swim' in the DOE Corpus

(a) swim	(b) of a vessel and (c) lying on water	(d) other	total
21	9	2	32
(17); (A1) to (A14)	(18), (19), (A15) to (A18)	(A19) and (A20)	

Table 3 shows that an agentive meaning predominates, which means a durative aspect prevails. That `swim' is unergative in Old English is corroborated by a number of other phenomena (of Table 1). There is one instance, i.e. (A8b), of a `have' auxiliary, as mentioned, and none with `be'. In addition, according to B&T, there are also a number of adjectives with a meaning of `able to swim', e.g. *swimmendlic* and *sund*. These are typically agentive.

The aspectual meaning doesn't change much in the Middle English period as evidenced in the MED. The MED keeps the durative/agentive category (a) but collapses the Theme-based classes (b) and (c) and adds a new third category, namely `have an abundance of.' By 1600, the durative, agentive meaning of `swim' prevails, however. For instance, Shakespeare's occurrences with *swim* are durative, as shown in (20) and (21), except for one which involves a vessel in (22) but here some translations give `sailed'.

(20) Though thou canst **swim** like a Ducke (Shakespeare, 2.2.136)

(21) ,tis a naughtie night to **swimme** in. (Shakespeare, KL 3.4.116)

(22) You have **swam** in a gondola (Shakespeare, AYLI 4.1.38)

The agentive suffix *-er* occurs twice, as in (23), another indication of basic unergativity.

(23) a. Leander the good **swimmer** (Shakespeare, Much Ado 5, 2, 31)
b. As two spent **Swimmers**, that doe cling together. (Shakespeare, Macbeth 1,2,8)

In short, the verb *swim* is initially unergative with an Agent although, infrequently, it has a Theme without a telic aspect. It changes at the end of Middle English into a mainly durative, agentive, unergative verb.

The next verb in this group, *speed*, is initially ambiguous but then ends up more telic. In Old English, the intransitive *(ge)spedan* is not a motion verb; it has the meaning of `to succeed, prosper', as in (24) and

(25). It derives from the noun *sped* `abundance, success' but is not very frequent.

(24) *Ne* þurfe *we us spillan, gif ge* ***spedaþ*** *to þam.*
NEG need we us destroy, if you succeed for that
`We needn't be destructive, if you are rich enough.'
(OED, Battle of Maldon 34)

(25) *Filippe frankæne kyng ne* ***spedde*** *naht* æt …
Philip French king NEG speeded not at
`Phillip the French king was not successful at …' (DOE, Ker, 1957 331)

In Middle English, it comes to be used as a motion verb in (26) and (27), and would be classified as `controlled process' in Table 2, a manner of motion verb with the meaning `to travel swiftly'. As in the case of `swim,' we would therefore expect some ambiguities because motion may imply a goal and this is the case. From the use of the causative in (26), it seems telic (unaccusative/causative) and that is emphasized by the particle *ut*. However, there is a perfective auxiliary *have*, more indicative of unergative. The sense in (27) is very much agentive but, there too, a Goal is supplied.

(26) *Egipte folc hem hauen ut* ***sped.***
Egyptian people them have out hastened
`The Egyptian people hastened them out.' (OED, Genesis & Exodus 3178)

(27) *Hu mikell Cristess bede ma33 Towarrd hiss faderr* ***spedenn.***
how much Christ's prayer can towards his father speed
`How fast Christ's prayer can speed towards his father.' (MED, Ormulum, Jun 1/1765)

In Modern English, this verb is still ambiguous, unergative in that *speeder* exists in (28) and unaccusative in that many instances of causatives, as in (29) and (30), occur.

(28) They sit behind traffic signs, they hide in hedges to catch a **speeder**. (COCA 2002)

(29) violence would **speed** the change (COCA 2015)

(30) the warmth of the electronics would **speed** the reaction of the yeast enzymes (COCA 2014)

Looking at the first 50 (relevant) instances of the verb `speed' in COCA, we find the results in Table 4.

Table 4. The first 50 instances of `speed' in COCA

Causative, e.g.	Unaccusative, e.g.	Agentive, e.g.
speed up traffic	*the game speeds up*	*he can speed*
40	4	6

Since `swim' and `speed' are motion verbs, I should say something on the relevance of the work of Talmy (1985), Fanego (2012), and Huber (2017). Talmy classifies languages as to whether their motion verbs encode the path or the manner of an event and Fanego and Huber show that English, throughout its history, has had more manner of motion verbs with the path being indicated by an adverb or particle. This classification emphasizes duration and telicity but ignores agentivity, which appeared to be very relevant in Table 2, and is therefore not further explored.

In short, two verbs from the non-core unergative group of controlled motional process in Table 2, *swim* and *speed,* show variable behavior in the history of English, the former settling on an unergative meaning and the latter on an ambiguous Modern English pattern, although with the unaccusative meaning being dominant.

5 Origin and changes in verbs of continuation

In this section, I examine two verbs from the group of continuation of a pre-existing state, namely *float* and *remain*. This group also includes *last, stay, survive, persist, persevere, stand, lie,* and *rest*. As with the previous two verbs, the first one appears in Old English whereas the second only does in Middle English. For these verbs I have looked at all instances in the DOE but have not listed them all.

A word closely related in meaning to *swim* is *float*, *flotian* in Old English. Bosworth & Toller's definition for *flotian* is simply `to float.' In Old English, this verb is unaccusative in (31) in having a Theme and a Goal, but it is also agentive, in (32). It develops causative uses in (33), as expected if it is unaccusative.

(31) *and heo* ***fleat*** *ofer þæt wæter to lande.*
and she floated over the water to land
`And she floated over the water to the bank.'
(Das altenglische Martyrologium, Kotzor II, December 25)

(32) *ofer ðæne mægene oft scipu scriðende scrinde* ***fleotað****.*
over that strongly often ships going swiftly sail
`And over the sea, the ships go strongly and swiftly.' (Paris Psalter 103.24).

(33) The first Piece of Improvement of **floating** or watering Lands. (OED, 1649 W. Blith)

The basic meaning of the verb is continuation of a state, i.e. not very telic, as in (34) and (35), and some are ambiguous between `float' and `swim', as in (36), which is emphasized by the deontic modal *meahte***.**

(34) *ac hit sceal* ***fleotan*** *mid ðy streame*
but it (a ship) must float with the stream
`It must float with the current.' (Cura Pastorale 445.10)

(35) *swa scipes byðme þonne hit* ***fleoteð*** *on streame.*
as ship's hull when it floats on water
`like the hull of a ship when it floats above the current.'
(Das altenglische Martyrologium, Kotzor II, 10 July)

(36) *No he wiht fram me flodyþum feor* ***fleotan*** *meahte*
Not he creature from me water.wave far float could
`He could never move/swim further than I over the water.' (Beowulf 541)

The MED has a more complex definition than B&T, namely "(a) to rest or move on the surface (of a liquid), to float; to sail or drift (in a ship); of fish: to float or swim; (b) of humors: to flow; (c) of an odor: to be wafted

(on the air); (d) of persons: to move about, run". The examples are mainly of the meaning type in (a) and are similar to the Old English uses. The examples of the meaning types in (b), (c), and (d) are from later Middle English. The ones of the meaning type in (d) are given in (37) and (38) and show a more agentive/durative reading.

(37) Þa3 *he were inne hys man hode Amanges ous to* ***flotie***.
though he was in his manhood amonst us to move
`Though he were to move among us as a man.' (MED, c1350 Shoreham Poems)

(38) *Hij ferden so dere in halle And* ***floteden*** *so fyre*
They went as deer in hall and moved (around) as fire
in felde, þe *folk of Perce so gan abelde*.
in field the people of Persia thus began take.heart
`They went as quick as deer inside and moved as fire in a field and the people of Persia began to take heart.' (MED, c1400 Kyng Alisaunder 2436-8)

This ambiguity between Agent and Theme as theta-role for the intransitive `float' is not unexpected from verbs with a meaning of `continuation of a pre-existing state'. Although Keller & Sorace (2003) have shown that there is a preference for the auxiliary `have' in German and Dutch, there are very few agentive uses of *floater* in English, as in (39).

(39) And you never know what wonders you will find as you float. I'm a **floater**! (COCA 2014)

So the stative aspect of `float' makes this verb an unclear unaccusative. Looking through COCA, most modern uses focus on a Theme and some on a Goal, as in (40).

(40) a. as teachers **float** through the classroom facilitating vocabulary-building (COCA 2017)
b. we can't put all of our eggs in a basket that might float down the river (COCA 2017)

Another unaccusative verb like *float* is *remain* in that its focus is a Theme argument, not an Agent, but it is stative, not telic, and in that sense is not a core unaccusative. The earliest examples from the MED and OED are from late Middle English, provided in (41) and (42).

(41) *To the part of this endenture* ***remaynand*** *to the forsaid Alexander.*
`As for the part of this agreement remaining to the already mentioned Alexander.'
(OED, 1388, Robertson Illustr. Topogr. & Antiq. Aberdeen & Banff 1857)

(42) *Onely oo cow she hadde a-lyue* ***remaynyng*** *of that pestilence.*
'Only one cow she had alive remaining of the plague.' (MED, 1425, Found.St.Barth. 60/15)

Further similar examples are shown in (43) to (45), not telic but focused on a (frequently inanimate) Theme.

(43) *Yet* ***remaigneth*** *dwe to þe executoures of þe seid John Baxter*
`(Something) still remains due to the executors of John Baxter.' (MED, 1436 Paston)

(44) *but hir voice* ***remayneth****, which lastith yit.*
`but her voice remained, which still does.' (MED, c1450 Scrope Othea (StJ-C H.5) 105/4)

(45) *Ther* ***remanes*** *in ye hondes of the forsayd proctours …*
`There remains in the hands of the mentioned proctors …..'
(MED, 1445, Acc.St.Mary Thame in BBOAJ 8.54)

I have not found instances of this verb used with the auxiliary `be', which would be indicative of unaccusative use, or of *–er*, indicative of unergative use. This verb also develops into a copula in the 16th century, as (46) shows, and stays quite stable in its stative aspect. The copula use now predominates in modern corpus data, e.g. COCA.

(46) the hole body of Christes holy church **remaine** pure.
(Thomas More Works 183 F8, Visser 1963: 195).

In this section, I have looked at *float* and *remain* to see if they are aspectually ambiguous. Both are mainly unaccusative, focussing on a Theme, but the former includes motion that could be either durative or telic. With *remain,* motion is not relevant, making this verb more clearly unaccusative.

6 Conclusion

Intransitives can be divided into unergatives and unaccusatives but, as many people have shown, the division is gradient, with some verbs displaying core and some non-core characteristics. In this paper, I have examined two verbs each from two non-core verb groups. The results corroborate the work in Keller & Sorace (2003) who show that native speakers of German have variant `have'/`be' selection (and impersonal passive use) with these verbs as well as cross-dialectal differences. Among the verbs of controlled motion, the diachronic data show the durative `swim' initially to be somewhat ambiguous between unaccusative and unergative but it settles on the latter in the modern period, which is consistent with its basically durative aspect. The verb `speed' is initially ambiguous and continues to be although the telic sense is more prevalent. The verbs of continuation that are examined are *float* and *remain*. Of these, *float* may involve motion so is more ambiguous than the more clearly unaccusative *remain*.

The reason behind the instability of these two verb classes has been touched upon above: controlled motional process verbs (unlike non-motional ones) have movement inherent in their meaning with an emphasis on a moved element and a possible Goal. This makes that class of verbs more like unaccusatives. Stative verbs of continuation by definition reach no goal but involve no Agent either. The features that play a role in dividing the unergative and unaccusative class involves: Agent, Theme, Goal (telic), and motion.

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Appendix A: swimman `swim'

Animate creatures moving in water (a)

(A1) þætte oþre þurh þone sæfisca cynn ... ***swimmað*** *sundhwate*
that others through that seafish kind ... swim actively.swimming
þær se sweta stenc ut
thare the sweet smell out
`that other kinds of sea-fish, those swift in swimming, ... swim to where that sweet smell comes out.' (Exeter Book, Whale 51-6)

(A2) *fleah mid fuglum ond on flode* ***swom***.
flew with birds and in water swam
`I flew among the birds and I swam in the water.' (Exeter, Riddle 74.3)

(A3) a. *Sume fleoð mid fyðerum, sume on flodum* ***swimmað.***
some fly with feathers some in water swim
`Some fly using feathers; some swim in the water.'
(Ælfric's Lives of Saints, Skeat I, 14, Nativity 53-4)

b. þa *geseah he scealfran* ***swimman*** *on anum flode*.
then saw he diver-birds swim in a river
`Then he saw some diver-birds swimming in a river.'
(Ælfric's Lives of Saints, Skeat II, 300, St Martin 1314)

(A4) Ða *geseah he* ***swymman***. *scealfran on flode*.
Then saw he swim diver-birds on/in water
`Then he saw some diver-birds swim in the water.'
(Ælfric's Catholic Homilies II, Godden, 296.275)

(A5) & *sæ mid eallum þam ðe hire on* ***swymmað.***
and sea with all REL REL her in swim
`and all that swim in her.' (Ælfric's Catholic Homilies, Clemoes, 336.3)

(A6) *swa swa fixas* ***swymmað*** *on wætere*.
So so fishes swim in water
`Like fish swim in the water.' (Ælfric's De temporibus anni, Henel, 10.4)

(A7) ælas & *hacodas, mynas* & *æleputan, sceotan & lampredan*
eels and pike minnow and burbot shote and lamprey
& swa wylce swa on wætere ***swymmaþ***.
and whosoever in water swims
`Eel, pike, minnow, burbot, shote and lamprey, and what else swims in the water.'
(Ælfric's Colloquy, Garmonsway, 101-2)

(A8) a. *hie on sunde to þære byrig foron &* ***swumman***
they on/in sea to that city went and swam
ofer æfter þære *ea to þæm eglande*.
over afterwards the stream to that island

`they went to that city over the sea and swam to that island afterwards.'
(Alexander's Letter to Aristotle, Orchard, 15.10)

b.

Þa	*hie*	ða	***hæfdon***	*feorðan*	*dæl*	þære ea	***geswummen,***
then	they	then	had	fourth		part	that river swum

`When they had swum a quarter of that river, …'.
(Alexander's Letter to Aristotle: Orchard, 1995 224-52, 15.12)

(A9)

Summe	***swimmæð***	*on*	*flode;*	*summe*	*fleoð*	*geont*	*þas*	*lyft.*
some	swim	in	river	some	fly	through	that	air

`Some swim in the river and some fly in the air.'
(Twelfth-Century Homilies in MS. Bodley 343, Belfour, Christmas Day 100)

(A10)

Ða	*fugelas*	*soðlice*	*þe*	*on*	*flodum*	*wuniað*	*syndon*	*flaxfote*	*be*
Godes									
The	birds	indeed	REL	in	rivers	live	are	web.footed	by
God's									
foresceawunge, þæt		*hi*	***swimman***		*magon and*		*secan*	*him*	*fodan.*
providence	that	they	swim		can	and	seek	REFL	food

`The birds, indeed, that live in the rivers are webfooted so that they can swim to find food.'
(Hexameron, Crawford, 252)

(A11) a.

Ða	***swimmaþ***	*nu*	*sealtum*	*yþum*	*ða*	*þe*	*of*	*ðæm*
Then	swim	now	salt	waves	those	REL	of	those
gesceapen	*wæron.*							
created	were							

`Then, those made from the salty waves swim.'

b.

ond	*þa*	*sittaþ*	*on*	*feldum*	*ond*	*ne*	*magon*	***swimman***	*ða*
and	then	sit	in	fields	and	not	can	swim	those
þe	*of*	*þæs*	*græses*	*deawe*	*geworht*	*wæron*			
REL	of	that	grass'	dew	made		were		

`And those who were created from the dew of the grass sit on the fields and cannot swim.'
(Das altenglische Martyrologium, Kotzor II, March 22)

(A12) a.

Natare se uidere dampnum significat

swimman	hine	geseon	hearm
swim	him	see	harm

`To see him swim means harm.' (Prognostics, Förster, 263)

b.

In flumen notare anxietatem significat

on	flod	**swymman**	anxsumnesse
in	water	swim	anxiety

`To swim in the water means anxiety.' (Prognostics, 135)

(A13)

Ðonne	*þu*	*fisc*	*habban wylle*	*þonne*	*wege*	*þu*	*þyne*	*hand*
Then	you	fish	have want	then	move	you	your	hand
þam	*gemete*	*þe*	*he*	*deþ*	*his*	*tægl*	*þonne*	*he*	***swymð.***
that	measure	REL	he	does	his	tail	then	he	swims

`When you want to have a fish, move your hand in the way it does with his tail when it swims.'
(Monasterialia indicia, Kluge, 11.70)

(A14) a. *buton þa ane þe þær ut* ætswummon *to þam scipum.*
except those only REL there out swam to the ships
`Except only those who swam out to the ships.' (Chronicle A, 914.22)

b. *buton þa ane þe ðær ut* ætswymman *mihton to þam scypum*
except those only REL there out swam could to the ships
`Except only those who could swim out to the ships.' (Chronicle C, 915.1.20)

c. *buton þa ane þær ut* ***oðswymman*** *mihton to þam scipum*
except those only there out swam could to the ships
(Chronicle D, 915.20)
`Except only those who could swim out to the ships.'

Vessels floating (b)

(A15) þa *onsende God micelne ren 7 strangne wind* ...
then sent God much rain and strong wind
swa þæt þæt scip ne mihte naþer ne forð ***swymman*** *ne underbæc*
So that that ship not could neither not forth move nor back
`Then God sent much rain and strong winds so that the ship couldn't move forwards or backwards.'
(Vercelli, Scragg, 321: 121-2)

Lying on the surface (c)

(A16) a. *Wiþ circuladle genim doccan þa þe* ***swimman*** *wille*
against shingles take sorrel REL REL float want
`Take sorrel that floats against shingles.' (Leechdoms, Cockayne 2, 36, 2.1)

b. þa *ruwan wegbrædan nioþowearde & doccan þa þe* ***swimman*** *wille*
the rough waybread downwards and sorrel REL REL float want
(Leechdoms, Cockayne, 65.1.14)

c. *Wiþ miclan lice genim nioþowearde elenan & þung & ompran*
against big body take bottom (part) helenium and aconite and dock
þa *þe* ***swimman*** *wile*
REL REL float want
`Against elephantiasis, take the bottom parts of helenium and aconite and dock, that namely which will swim.' (Leechdoms, Cockayne 2, 26.1.1)

d. handfulle niðewearde doccan þære þe **swimman** wille on butran
(Leechdoms, Cockayne, 71.1.1)

(A17) *Wið sidwærce, betonican, bisceopwyrt, eolonan, rædic, ompran ða ðe* ***swimman***.
Against side.pain, betonys, bishopwort, helenium, radish, docks those REL float
`For pain in the side, betonys, bishopwort, helenium, radish, docks that float'.
(Anglo-Saxon Magic and Medicine, Grattan & Singer 50.1)

(A18)[5] *Ageot wæter uppon ðone ele. and se ele abrecð up*
Pour water on that oil and that oil breaks up
and ***swimð*** *bufon.*
and float above
`Pour water on oil and the oil will break through and will float on top.'
(Aelfric Catholic Homilies II, Godden 328.51)
Unclear/other (d)

(A19) *warþ gasric grorn þær he on greut* ***giswom***
became terror.king sad there he onto[6] shingle swam
`The whale became sad where he swam onto the shingle. (Auzon Casket, Napier, 2)

(A20) ***Swimmað*** *eft on weg. Fleotendra ferð*
float again on way Fleeting spirit
`They (memories) float away again. The spirit of the fleeting ones ...'
(OED, Wanderer 53-4)

[5] The text in which example (18) appears has an alternative with `float' just one line before, namely (i).

(i) *Ageot ele uppon wæter. oððe on oðrum wætan. se ele* ***flyt*** *bufon.*
`Pour oil on water, or on another fluid, and the oil will float on top.'
(Catholic Homilies II, Godden, 328.50

[6] Page (2003: 177) provides the translation of `onto.'