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Applying RRG to the Lexical Paradigms of Old English Strong Verbs

Análisis de los paradigmas léxicos de los verbos fuertes del inglés antiguo mediante la GPR

Luisa Fidalgo Allo Universidad de la Rioja

This article tests the current Role and Reference Grammar (RRG) taxonomy in the lexical paradigms of Old English (OE) strong verbs. The data has been extracted from the lexical database *Nerthus* and consists of 328 lexical paradigms and 1,509 verbs. Lexical paradigms have been identified and reviewed. Then, the *Aktionsart* taxonomy in RRG has been applied to each verb. The conclusions address both theoretical and descriptive aspects. On the theoretical side, this study offers a critical review of the RRG theory and proposes updates such as the addition of a new *Aktionsart* type for describing unbounded processes. Additionally, the analysis offers a fresh perspective on the nature of causative states and identifies a significant group of verbs that do not fit into any of the *Aktionsart* classes in RRG, presenting a solution. On the descriptive side, the research finds RRG applicable to Old English with consideration of its findings.

Keywords: Role and Reference Grammar; Old English; lexical paradigm; verb; Aktionsart

Este artículo evalúa la aplicabilidad de la Gramática del Papel y la Referencia (GPR) en los paradigmas léxicos de los verbos fuertes del inglés antiguo. Se analizan 328 paradigmas léxicos y 1,509 verbos extraídos de la base de datos *Nerthus*. Tras una exhaustiva revisión de los paradigmas, se implementa la taxonomía de *Aktionsart* de la GPR en cada verbo. Las conclusiones abordan aspectos teóricos y descriptivos, ofreciendo una revisión crítica de la teoría de la GPR y proponiendo actualizaciones, como la inclusión de un nuevo tipo de *Aktionsart* para procesos no delimitados en el tiempo. Además, se presenta una perspectiva innovadora sobre la naturaleza de los estados causativos y se identifica un significativo grupo de verbos que no se ajustan a las clases de *Aktionsart* de la GPR, ofreciendo una solución. En síntesis, se concluye que la GPR es aplicable al inglés antiguo, considerando los hallazgos obtenidos.

Palabras clave: Gramática del Papel y la Referencia; inglés antiguo; paradigma léxico; verbo; Aktionsart

1. INTRODUCTION: AIMS, SCOPE AND OUTLINE

This paper engages in the syntax and semantics of the Old English (OE) verbs, by focusing on the *Aktionsart* or internal aspect of the lexical paradigms of OE strong verbs. Thus, it combines the pure semantics of the verb and its associations in the syntax of the sentence.

The main aim of this article is to conduct an in-depth examination of the *Aktionsart* taxonomy within the framework of Role and Reference Grammar (RRG; Foley & Van Valin, 1984; Van Valin & LaPolla, 1997; Van Valin, 2005, 2014, 2018). This analysis also entails a critical evaluation of the existing theoretical discourse and proposes necessary revisions. Additionally, in light of the predominant scholarly focus on contemporary English, with limited attention given to earlier historical stages of the language, this study endeavors to assess the applicability of the *Aktionsart* framework to OE. This marks a contribution to the ongoing research trajectory in the semantics and syntax of OE, aligning with recent works by scholars such as García (2019), Lacalle Palacios (2021, 2022), Martín Arista (2019, 2020, 2022), and Ojanguren López (2020, 2021).

The analysis data has been provided by the lexical database of OE *Nerthus* (Martín Arista, García Fernández, Lacalle Palacios, Ojanguren López & Ruiz Narbona, 2016) and comprise 328 lexical paradigms of OE strong verbs. That is, 328 lexical primes and 1,181 derived verbs. A total of 1,509 verbs have been analysed.

The content overview is as follows. Section 2 provides the necessary theoretical background, reviewing *Aktionsart* typology in RRG. Section 3 presents research data and analysis steps. Section 4 discusses analysis principles for applying *Aktionsart* to this research. Section 5 presents and discusses results. Finally, Section 6 concludes the research and suggests futures lines of inquiry.

2. THEORETICAL FOUNDATIONS: LOGICAL STRUCTURES AND AKTIONSART IN RRG

In RRG, the semantic representation of the sentence is based on the lexical representation of the verb which, in turn, depends on the *Aktionsart* class of the verb. The system of lexical decomposition used by RRG is based on the distinctions in *Aktionsart* proposed in Vendler (1967), who states that verbs as well as other predicating elements can be classified according to their inherent temporal properties. Vendler proposes four basic classes: 1) states; 2) activities; 3) achievements; and 4) accomplishments. States and activities are the basic types. States are non-dynamic and temporally unbounded. Achievements are temporally bounded and punctual changes of state or onsets of an activity. Finally, accomplishments are temporally extended changes of state or onsets of an activity, which lead to a terminal point.

Van Valin and LaPolla (1997) distinguish an additional class of active accomplishments (telic uses of activity verbs) and the causative of all the classes just mentioned. Then, Van Valin (2005) adds the class of semelfactives, which constitute punctual events, both non-causative and causative.

The whole system of verbal classes can be described in terms of four features, which give rise to six spontaneous types. A representation of these features, accompanied by illustrative examples for each category, is displayed in Table 1.

Table 1: The features of spontaneous Aktionsart classes (Van Valin, 2005: 33-34)

State [+static], [-dynamic], [-telic], [-punctual]	The boy is afraid.
Activity [-static], [+dynamic], [-telic], [-punctual]	The soldiers marched in the park.
Semelfactive [-static], [+ - dynamic], [-telic], [+punctual]	The pencil tapped on the table.
Achievement [-static], [-dynamic], [+telic], [+punctual]	The balloon popped.
Accomplishment [-static], [-dynamic], [+telic], [-punctual]	The ice melted.
Active accomplishment: [-static], [+dynamic], [+telic], [-punctual]	The soldiers marched to the park.

Each of these spontaneous classes presents a causative counterpart; a selection of illustrative examples is included in Table 2.

Table 2: Causative Aktionsart classes (Van Valin, 2005: 34)

Causative state	The dog frightens/scares the boy.
Causative activity	The sergeant marched the soldiers in the park.
Causative semelfactive	The teacher tapped the pencil on the table.
Causative achievement	The cat popped the balloon.
Causative accomplishment	The hot water melted the ice.
Causative active accomplishment:	The sergeant marched the soldiers to the park.

The feature 'static' distinguishes verbs which display a 'happening' from those which display a 'non-happening'; that is, static verbs cannot answer to the question 'what happened'? or 'what is happening'? The feature 'dynamic' differentiates verbs that involve action from those which do not. Dynamic verbs can be modified by adverbs such as vigorously, violently, energetically, and strongly. However, it must be noted that activity verbs presenting nonagentive subjects are not compatible with adverbs requiring a controlling subject such as carefully or deliberately. As regards the [+ - dynamic] feature displayed in semelfactives, it is explained by the fact that some of these verbs seem to be dynamic like *cough* in *He coughed* once violently, whereas others seem not to be, as is the case with glimpse in *He glimpsed the robber strongly. The 'telic' feature refers to whether a verb codes an inherent terminal point ([+telic]) in the state of affairs or not ([-telic]). As regards the feature 'telic' in achievements and semelfactives, whereas achievements are telic and depict a transition between one state of affairs and a new state of affairs, semelfactives are considered as atelic since they represent pure events that do not depict a change of state, there is no transition between one state and the next. Finally, the feature 'punctual' differentiates telic events presenting internal duration ([-punctual]) from those events which lack it ([+punctual]). With reference to achievement and accomplishment verbs, certain verbs are inevitably punctual such as pop or shatter, while some others are certainly temporally durative like dry or grow. Achievements are punctual (Van Valin, 2005) and only compatible with in-phrases referring to extremely brief intervals, such as in the blink of an eye, in an instant, in a fraction of a second. Conversely, in-phrases referring to temporal durations longer than this, such as in ten seconds, in a minute or in an hour are incompatible with achievements. Yet, Van Valin and LaPolla (1997) note that verbs like freeze, falling between instantaneous and noninstantaneous categories, may span a range from almost immediate (as in dipping into liquid nitrogen) to prolonged states. Similarly, the verb arrive is typically construed punctually, as exemplified in the sentence The train arrived at the station at exactly 9:00 a.m.. However, in suitable contexts, it can also be construed non-punctually, as demonstrated in the phrase *This* time last week, she was arriving at the station. Further to this, the verb break seems to exhibit a neutral quality, and its interpretation depends on the properties of the broken object. In this regard, the sentences He hit the vase with a baseball, and it broke into a dozen pieces and The

exposure to harsh weather conditions caused the asphalt road to break down slowly illustrate punctual and non-punctual constructions, respectively. These three verbs, having the possibility to code state of affairs ranging from a very short temporal duration to a longer one, must be considered as accomplishments if nothing else is added to the verb.

The lexical representation of the verbal classes gives rise to the logical structures in Table 3. Van Valin and LaPolla (1997) and Van Valin (2018) take states and activities as "the primitive building blocks of the system" (Van Valin, 2018: 77) and establish the main difference between the stative (predicate') and non-stative (do') part of logical structures (corresponding to the basic distinction between static and dynamic verbal classes); and between spontaneous and causative *Aktionsart* types. The variables x, y and z represent verbal arguments, and the labels INGR, SEML, BECOME and CAUSE correspond, respectively, to ingressives, semelfactives, accomplishments and causatives.

Verb Class	Logical Structure
STATE	predicate' (x) or (x, y)
ACTIVITY	do'(x, [predicate'(x) or (x, y)])
ACHIEVEMENT	INGR predicate '(x) or (x, y),
	or INGR do'(x, [predicate'(x) or (x, y)])
SEMELFACTIVES	SEML predicate (x) or (x, y) ,
	or SEML do'(x, [predicate'(x) or (x, y)])
ACCOMPLISHMENT	BECOME predicate (x) or (x, y) ,
	or BECOME do '(x, [predicate '(x) or (x, y)])
ACTIVE	
ACCOMPLISHMENT	$do'(x, [predicate_1'(x, (y))]) \& INGR predicate_2'(z, x) or (y)$
CAUSATIVE	α CAUSE β , where α , β are logical structures of
	any type

Table 3: Logical structures in RRG (Van Valin & LaPolla, 2005: 45)

Pavey (2010) explains that the class of active accomplishments is comprised of an activity predicate, to which an endpoint is added. Active accomplishments emerge from the basic activity and accomplishment types, in the sense that they depict accomplishment uses of activity verbs. Verbs from this class involve an activity predicate plus a change of state. This class includes verbs of motion (there is a change of location, and the motion is completed with the arrival at a particular location), consumption (the result state is of consumption) and creation (the result state is of creation). If a motion verb has a definite goal, which provides a terminal point, in some manner, it behaves like an accomplishment, e.g. *He walked to the park*. If motion verbs do not display a definite goal, they behave like activities. Then, consumption verbs such as eat or drink become equally active accomplishments when a specific amount delimiting the event is provided, as in He ate a plate of spaghetti and He ate the fish. Finally, creation verbs like write, paint or carve also represent active accomplishments if they make reference to a specific, quantified object, which limits the action, as in He wrote a poem. Thus, the terminal point is reached when the distance is covered, or the entity is created or consumed. An instance of a causative active accomplishment would be *The sergeant marched the troops* to the barracks.

As regards active accomplishments, Van Valin (2014) *contra* Van Valin (2005) comments on the problem of *incrementality* (Dowty, 1991; Krifka, 1992; Filip, 1993; Tenny, 1994; Rothstein, 2004). He explains that processes such as writing, eating and running are incremental processes measured by the incremental theme or path. Van Valin (2014), by drawing on the authors cited above, remarks that the process needs to be maintained as simultaneous with the activity and therefore he proposes the following logical structures represented in Figures 1, 2 and 3:

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Motion: \textbf{[do'(x,[pred'(x)]) ^ PROC cover.path.distance'(x,(y))] \& INGR \textbf{ be-at'}(z,x)].} \label{eq:motion:loss} \\ 1
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Figure 1: Logical structure of active accomplishments of motion (Van Valin, 2014).

For example, run: [do' (x, [run' (x)]) \land PROC cover. path.distance' (x,(y))] & INGR be-at' (z, x)] is interpreted as x runs and simultaneously a process of covering a path of distance y initiates. Both the activity of running and the process of covering a path of distance finish leading to the result that x is located at z.

Turning to consumption, Figure 2 presents the general logical representation.

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Consumption: [do'(x, [pred'(x, y)]) ^ PROC consumed'(y) & INGR consumed'(y)].
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Figure 2: Logical structure of active accomplishments of consumption (Van Valin, 2014).

For example, *devour*: [do' (x, [eat' (x, y)]) \land PROC consumed' (y) & INGR consumed' (y)] is interpreted as x eats y, simultaneously a process of consumption initiates. Both the activity of eating and the process of consumption finish at the same time leading to the result that y is consumed.

With respect to creation verbs, the logical structure is given in Figure 3.

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Creation: [do' (x, [pred' (x, y)]) ^ PROC create' (y) & INGR exist' (y)].
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Figure 3: Logical structure of active accomplishments of creation (Van Valin, 2014).

For example, write: $[\mathbf{do'}(x, [\mathbf{write'}(x, y)]) \land PROC\ \mathbf{create'}(y) \& INGR\ \mathbf{exist'}(y)]$ is interpreted as x writes y, simultaneously a process of creation initiates. Both the activity of writing and the process of creation finish at the same time leading to the result that y exists.

The semantic interpretation of verbal arguments in RRG is grounded on two generalized semantic roles or macroroles known as ACTOR and UNDERGOER (Van Valin & LaPolla, 1997). In a transitive predication, the ACTOR corresponds to the first argument, while the UNDERGOER represents the second argument of the verb. In an intransitive predication, the sole argument can be either an ACTOR or an UNDERGOER, depending on the semantics of the verb. For example, the first argument of *Peter saw the accident* is an UNDERGOER because *see* is a stative verb whereas the first argument of *Peter is dancing* is an ACTOR because *dance* is an active verb (Van Valin, 2005: 63).

3. SOURCES, DATA AND STEPS OF ANALYSIS

Research data has been provided by the lexical database of OE *Nerthus* (Martín Arista, García Fernández, Lacalle Palacios, Ojanguren López & Ruiz Narbona, 2016) and comprises 328 lexical primes and 1,181 derived verbs. This amounts to a total of 1,509 verbs and represents all strong verb primes and about 1/5 of the verbal lexicon. In practice, most of the verbs selected for the analysis are strong verbs derived from other strong verbs. To illustrate this point, the derivational paradigm of *(ge)bēatan* 'to beat, pound, strike, dash; to thrust; to hurt, injure; to lash; to tramp, read, trample, beat with the feet' consists on the strong verbs *ābēatan* 'to strike, beat; to break to pieces; to make to fall', *ofbēatan* 'to beat to pieces; to beat to death; to kill', *tōbēatan* 'to beat to pieces; to destroy by beating'; and the weak verb *(ge)bēotian* 'to promise, vow; to threaten'.

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^{1 &#}x27;^' stands for 'and simultaneously'.

The first step of analysis implies the identification of the lexical paradigms and the selection of the verbs within such paradigms. According to Pounder (2000: 82) a derivational paradigm is "a set of paradigmatic relations between word-formations sharing a lexemic root". Derivational paradigms are clearly defined sets where morphological relatedness is explicit. The members of a derivational paradigm are free lexemes or *lemmas* and the units and relations on which the paradigms of OE are based can be identified as the derivational processes of zero derivation, prefixation, suffixation and compounding.

Then, this study employs the taxonomy of *Aktionsart* in RRG to systematically analyse the lexical paradigms of OE strong verbs, aiming to assess its applicability in this historical language. Lexical paradigms comprise various verbs or lemmas and, additionally, each lemma may exhibit a range of distinct meanings. Consequently, this research undergoes a separate analysis to every individual meaning within each lemma, resulting in the assignment of a specific *Aktionsart* type to each distinct meaning.

In this regard, it is imperative to elucidate several facets. Given that the introduction of any context could result in varied *Aktionsart* classifications, this analysis deliberately examines each meaning in isolation, free from external contextual influence beyond the paradigm. Furthermore, it is essential to recognize the potential overlap of meanings among distinct lemmas within a paradigm. Finally, as mentioned earlier, research data, encompassing meanings, is sourced from *Nerthus*, which, in turn, in its reliance, draws upon foundational references in traditional OE lexicography such as *A Concise Dictionary of Anglo-Saxon* by Clark Hall (1984), Bosworth-Toller's (1973) *Anglo-Saxon Dictionary* and Sweet's (1976) *Student Dictionary of Anglo-Saxon*.

Following that, a deeper examination is conducted on the different meanings that do not align with any *Aktionsart* types outlined in the taxonomy. Finally, a critical evaluation of the current taxonomy is undertaken to address any gaps that may persist from prior studies.

4. PRINCIPLES OF ANALYSIS

The analysis principles can be categorized into general and specific principles. General principles emphasize the inseparability of form and meaning, prioritizing meaning over form in a language. The lexicon is organized into lexical paradigms that comprise a lexemic base of derivation and all the derivatives that share the lexeme in question. Morphological relatedness within a lexical paradigm is driven by semantic connections, shaping the meanings provided by derivational processes. Focusing on the verbal component, *Aktionsart* explains the intricate relationship between semantics, syntax and morphology in basic strong verb and the derived strong and weak verbs. Finally, *Aktionsart* relations can be identified not only between the different versions of a given verb but also between different verbs, which are usually related to each other by a derivational process.

As regards the specific principles of analysis, the application of the *Aktionsart* types of RRG to this OE analysis can be described as follows. With respect to the spontaneous classes, the class of states is defined by the features [+static], [-dynamic], [-telic], [-punctual]. Instances include: states or conditions such as (ge)belgan 'to be angry', sēocan 1 'to be ill', āberstan 'to be broken', biernan 'to be consumed', and ondrādan 'to be afraid'; existence verbs such as (ge)bīdan 'to live', ābīdan 'to stay, remain, abide, continue', (ge)faran 'to be, exist', līfan 'to remain', and (ge)weorðan 'to be'; pure location verbs like (ge)sittan 1 'to be situated', (ge)standan 'to occupy a place', (ge)beran 'to be situated, lie', tōlicgan 'to lie in different directions', and scacan 'to be displaced by shaking'; perception verbs such as (ge)sēon 'to see', ðurhsēon 'to see into, penetrate with the sight', ðurhwlītan 'to see', (ge)stincan 'to smell', and (ge)sūpan 'to taste'; cognition verbs like (ge)cnāwan 'to know', ācnāwan 'to understand',

flogettan 'to be uncertain, vacillate', teohhian 'to think', and ofergitolian 'to be forgetful of'; desire verbs like ðurfan 'to want, be needy, need', (ge)ðearfan 'to be in need or in want', fundian 'to desire, wish for, aspire to', onmunan 'to wish', and gielpan 'to desire earnestly'; propositional attitude verbs such as onbīdan 'to expect', (ge)cweðan 'to consider, regard', (ge)lātan 'to regard as, suppose, consider, estimate', (ge)wyrðan 'to estimate, appraise, esteem', (ge)scrīfan 'to have regard to, adjudge, judge, deem'; possession verbs like āgan 'to have, own, possess', (ge)rādan 'to have control over', (ge)bīdan 'to possess, carry', (ge)niman 'to keep, hold', and healdan 'to possess'; internal experience verbs like acan 'to ache, suffer pain, pain', (ge)beran 'to endure, suffer', (ge)ðearfan 'to starve', ongietan 'to feel', and āgrīsan 'to fear, dread'; emotion verbs like (ge)drēogan 'to enjoy', āðrēotan 'to dislike', gefēogan 'to hate', (ge)hrēowsian 'to lament for, feel grief or pity, feel sorrow, be grieve or repent', and ofunnan 'to envy, begrudge'; attributive and identificational expressions and specificational and equational verbs like (ge)wrītan 'to be the author of', ābīcan 'to be white', ābūgan 'to be humble', (ge)ðēon 'to be great', grimsian 'to be cruel', and forstandan 'to be equal to'.²

The class of activities is defined by the features [-static], [-dynamic], [-telic], [-punctal]. Some examples of this category include: motion verbs such as tōberan 'to move to and from', climban 'to climb', (ge)faran 'to wander', fēran 1 'to march', and gangan 'to go on foot, walk'; verbs for static motion such scacan 'to shake, quiver', tōsceacan 'to shake violently', scelfan 'to shake, quiver', (ge)spinnan 'to spin', and scelfan 'to totter'; light and sound emission verbs like (ge)berstan 'to resound', (ge)bærnan 'to light', (ge)blawan 'to sound', blīcan 'to shine, gleam, glitter', and glowan 'to glow'; performance verbs such as (ge)cyodan 'to perform, practice, exercise', (ge)tēon 'to play (instrument)', flēotan 'to swim', flēotan 'to sail', and (ge)galan 'to sing'; consumption verbs such as brūcan 'to eat, partake', (ge)cēowan 'to eat', (ge)drincan 'to drink, imbibe, absorb', oferdrincan 'to drink too much', and (ge)dicgan 'to take food, eat, drink'; creation verbs like wefan 'to construct', (ge)ceorfan 'to engrave, carve', (ge)sēoðan 'to cook in a liquid', (ge)singan 'to write', (ge)singan 'to compose verses', and āsettan 'to design'; directed perception verbs like (ge)bīdan 'to look for', (ge)fandian 'to examine, seek, search out', āsēoðan 'to examine', (ge)sēon 'to inspect', and āsmēagan 'to look closely into, scrutinize'; use verbs like brūcan 'to use', brūcan 'to enjoy', ātēon 'to use, employ', and *nēotan* 'to use'; the anomalous verb *gedon* denoting the unspecified action 'to do' and other verbs displaying a similar meaning such as (ge)drēogan 'to do', (ge)drīfan 'to do', gegān 'to do, perform', (ge)lædan 'to do' and healdan 'to do'. Besides, the verbs of saying like (ge)cunnan 'to express (thanks)', (ge)cweðan 'to speak', wiðercwiddian 'to murmur', cwiddian 'to talk', and gyrran 'to chatter', are considered a remarkable activity verb subclass. Nevertheless, Van Valin and LaPolla (1997) classify the verb tell as a causative accomplishment because of its telicity and the inherent causative aspect it presents. Thus, verbs which share these aspects with tell are also considered as causative accomplishments in this analysis, including examples such as (ge)bodian 'to tell', (ge)bēodan 'to declare, inform, announce, proclaim', misbēodan 'to announce wrongly', and ābannan 'to publish, announce', and (ge)cnāwan 'to make known'. Because of the analogy with the verbs of saying, verbs denoting the sounds emitted by animals, such as bellan 'to roar', beorcan 'to bark', giellan 'to chirp', gyrran 'to snarl', and (ge)singan 'to sing (of birds)' are equally considered activities. In the same way, verbs representing bodily noises such as hwōsan 'to cough', fnēosan 'to sneeze', fnæran 'to breath heavily, gasp, pant, breathe hard', gyrran 'to grunt', and fnæran 'to snort' have been included in this category. Finally, verbal constructions that specify the emission of a singular noise such as bellan 'make a hollow noise', beorcan 'to make a sharp

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² In this study, as in the lexical database *Nerthus*, numbered predicates point to different morphological classes or variants for otherwise equal predicates.

and explosive sound', (ge)brecan 'to make a noise or crash', ginian 'to utter a sound', and $hl\bar{o}wan$ 'to make a loud noise' are also considered activities in this study.

The class of achievements represents punctual changes of state or onsets of activity with the following features: [-static], [-dynamic], [+telic], [+punctual]. Some instances include the intransitive versions of tōblāwan 'to blow to pieces', (ge)brecan 'to shatter', tōðwīnan 'to burst', (ge)ēacnian 'to conceive, become pregnant', hnītan 'to come into collision with, knock', and (ge)berstan 'to burst'. By comparison, the class of accomplishments comprises non-punctual changes of state or onsets of activity with the following features: [-static], [dynamic], [+telic], [-punctual]. As has been noted in the literature, certain verbs encode state of affairs that may be punctual and almost instantaneous but need not to be. Besides, some other verbs are neutral as this feature is concerned and the classification under achievement or accomplishment depends on the context of the verb. As Van Valin and LaPolla (1997) explain, since the unmarked member of a privative opposition comprises a much greater range than the marked counterpart, my decision is to classify under accomplishments all these verbs which can display both features and the context or absence of context does not restrict their interpretation. Moreover, all those verbs that can take longer in prepositional phrases than in the blink of an eye, in a fraction of a second, or in an instant will be also considered as accomplishments. Some examples of accomplishment include wrōtan 'to root up', (ge)berstan 'to break', forberstan 'to vanish', ābidan 'to obtain', āblinnan 'to fail', (ge)blinnan 'to cease, leave off', forðbrengan 'to accomplish, fulfill', (ge)druncnian 'to get drunk', (ge)būgan 'to sink', calan 'to become cold',(ge)cringan 'to die', and (ge)cuman 'to recover'.

The class of semelfactives depicts non-static, punctual events which often imply repetition, are not temporally bounded, and do not present a result state. They are characterized by the following features: [-static], [+ -dynamic], [-telic], [+punctual]. Some examples are *blīcan* 'to twinkle, sparkle', *ongrindan* 'to smile', *plegan* 'to clap the hands, applaud', (*ge*)*būgan* 'to bow', *scīnan* 'to flash', and *scīnefrian* 'to glitter'.

Ultimately, the class of active accomplishments shows the features [-static], [+dynamic], [+telic], [-punctual]. They represent accomplishment uses of activity verbs and involve an activity predicate of motion, consumption, or creation plus a change of state, which turns it telic. Hence, the terminal point is reached when the distance is covered, or the entity is created or consumed. Some Present Day English (PDE) examples include *run to the park*, *walk to the shore*, *paint a picture*, *write a poem*, *eat a sandwich*, or *drink a glass of beer*. However, as noted by Cortés Rodriguez (2014) and Van Valin (2018), some verbs are lexically active accomplishments in their own such as the OE verbs (*ge*)*fēolan* 'to enter, penetrate, pass into', *gefēran* 'to get to a place', *frettan* 'to eat up', *ādrincan* 'to drink up', (*ge*)*cuman* 'to go', (*ge*)*cuman* 'to come', *ðurhbrūcan* 'to enjoy thoroughly', *forbrīcan* 'to consume, use up', and *ābītan* 'to consume, eat up, devour'.

5. RESULTS OF ANALYSIS

The first issue of this research is that the theoretical literature reviewed centers on PDE and, in general, there is no provision for earlier stages of the English language such as OE. Moreover, the examples of *Aktionsart* types provided by the available literature do not cover all the range exhibited by a significant part of the verbal lexicon of the language that has been selected as corpus of analysis for this paper. For instance, it has been necessary to deal with verbs that convey complex meanings, which are far from the transparent examples considered in the literature (Fidalgo Allo, 2023). Some instances such as *ofhnītan* 'to kill by butting, to gore to death', *stingan 1* (primitive) 'thrust one's self into the affairs of another', *giftian* 'to give a woman in marriage', *ābiddan* 'to get by asking', *ofswingan* 'to scourge to death', *ofweorpan*

'to kill by casting (stones, missiles, etc.)', oftreddan 'to tread to death' and scacan 'to be displaced by shaking' illustrate this point.

Firstly, it is important to note that the verbs under analysis need to be understood against the background of the OE culture, as it happens with *giftian* 'to give a woman in marriage' (Fidalgo Allo, 2023). In the same sense, *blōtan* 'to sacrifice, kill for a sacrifice' and *onblōtan* 'to sacrifice' need to be interpreted in the context of the OE period and, since both lemmas belong to the paradigm *BLŌTAN* (*blōtan* 'to sacrifice, kill for a sacrifice'; *onblōtan* 'to kill a victim; to offer, to sacrifice'; *(ge)blētsian* 'to bless, consecrate, hallow, call holy; to adore, extol'), to be read with the meaning: "to kill an animal or a person and offer them to a god or gods" (Cambridge University Press, 2023).

Secondly, to assign the *Aktionsart* type to complex verbs resulting in a causative accomplishment by means of an activity, this study has focused on the result rather than on the process by means of which a given result is obtained. Therefore, although an additional meaning specification is present in verbs such as *ofbēatan* and *tōbēatan* (both lemmas sharing the meaning 'to destroy by beating'), *ofbēatan* 'to beat to death', or *ābītan* 'to lacerate with the teeth', the *Aktionsart* type assigned does not vary from the simpler verbs 'to destroy', 'to kill', and 'to lacerate'. Nevertheless, although these verbs have been considered causative accomplishments, it is important to note that they are causative verbs, which embed an activity and are comparable to spontaneous active accomplishment in the sense that all of them result in an accomplishment by means of an activity. On the other hand, they include a [+dynamic] feature derived from the specification of the activity that gives rise to the accomplishment. Nevertheless, they do not correspond to any of the three causative or spontaneous active accomplishments considered in RRG (motion, creation, and consumption).

In this regard, active accomplishments of creation and consumption seem to imply an inherent causativity, that is, 'to paint a portrait' not only depicts the accomplishment of an activity but it is also associated with the creation of an entity different from the subject that performs the action, thus *it causes a portrait to be created* (causative aspect). Similarly, 'to eat an apple' causes the subsequent disappearance of the apple. Nevertheless, Van Valin and Lapolla (1997) reject the causative aspect of active accomplishments and hold that causative classes can be differentiated from the non-causative ones because of the existence of a causative paraphrase which presents the same number of NPs as the original sentence. Consider in this respect an active accomplishment of creation like *Jane painted a portrait* and the causative corresponding sentence *Jane caused a portrait to be painted* (by painting), as well as an active accomplishment of consumption like *Peter devoured an apple* and the corresponding causative sentence *Peter caused an apple to be devoured* (by eating).

Following Van Valin (2014), the logical structures in RRG for the sentences, *Peter devoured an apple* (active accomplishment of consumption), and *Jane painted a portrait* (active accomplishment of creation), can be seen in (1):

(1) a. Peter devoured an apple: [do' (Peter, [eat' (Peter, apple)]) ^ PROC consumed' (apple) & INGR consumed' (apple)]
b. Jane painted a portrait: [do' (Jane, [paint' (Jane, portrait)]) ^ PROC create' (portrait) & INGR exist' (portrait)]

Therefore, even though Van Valin and Lapolla (1997) reject the causative aspect of active accomplishments, Van Valin (2014) recognize the accomplishment of an entity different from the subject of the predicate, which takes place as a result of the activity carried out by the subject of the predicate. By comparison, an example of a logical structure in RRG for active accomplishments of motion can be seen in (2):

(2) Sally ran two miles to the park: [do' (Sally, [run' (Sally)]) ^ PROC cover. path.distance'(Sally, two miles)] & INGR be-at' (park, Sally)]

Thus, the logical structure for active accomplishments of creation, consumption, and motion identifies a process which needs to be maintained as simultaneous with the activity. Nevertheless, there is a remarkable difference: whereas active accomplishments of consumption and creation result in the accomplishment of a NP (object) different from the subject, active accomplishments of motion do not involve a different NP or object.

Bearing this in mind, the result of applying the logical structure for active accomplishments of consumption or creation ('[do'(x, [pred'(x, y)]) \land PROC ...'(y) & INGR ...'(y))] to represent *ofbēatan* and *tōbēatan* 'to destroy by beating', *ofbēatan* 'to beat to death', and *ābītan* 'to lacerate with the teeth', can be seen in (3):

(3) a. Charles destroyed the walls by beating: [do' (Charles, [beat' (Charles, walls)]) ^ PROC destroyed' (walls) & INGR destroyed' (walls)]
b. Jacob beat Adam to death: [do' (Jacob, [beat' (Jacob, Adam)]) ^ PROC killed' (Adam) & INGR dead' (Adam)]
c. The dog lacerated my arm with the teeth: [do' (dog, [bite' (the dog, my arm)]) ^ PROC lacerated' (my arm) & INGR lacerated' (my arm)]

By comparison, the result of applying the logical structure for causative accomplishments to the sentences in (3) can be seen in (4):

(4) a. Charles destroyed the walls by beating: [do' (Charles)] CAUSE [BECOME destroyed' (walls)]
b. Jacob beat Adam to death: [do' (Jacob)] CAUSE [BECOME dead' (Adam)]
c. The dog lacerated my arm with the teeth: [do' (The dog)] CAUSE [BECOME lacerated' (my arm)]

The examples in (4), although explicitly codify the causative aspect, neither they register the activities of beating or lacerating performed by *Charles*, *Jacob* and *the dog*, nor do they capture the processes undergone by *the walls*, *Adam* or *my arm*. Conversely, examples in (3) explicitly codify the simultaneity but lack the causative label.

All things considered, semantic proximity between active accomplishments of creation and consumption and complex causative verbs resulting in an accomplishment by means of an activity is noticeable. This study, therefore, feels advisable to reconsider the active accomplishment category and to readdress the causative aspect of active accomplishments of creation and consumption. Although more research is needed, the solution proposed here is to introduce the new active causative accomplishment category, defined by the features [-static], [+dynamic], [+telic], [-punctual], in order to embrace the examples in (1) and (3), that is, those causative verbs which, by means of an activity, result in the accomplishment of an argument different from the subject of the activity. The logical structure propounded can be seen in (5):

Furthermore, despite the richness and suitability of the *Aktionsart* taxonomy in RRG, throughout the analysis, I have come across some verbs that do not conform with any of the classes described above. Accordingly, a new *Aktionsart* class to represent unbounded processes is proposed. It is characterized by the features [-static], [-dynamic], [-telic], [- punctual] and displays processes of change that lack a clearly defined starting or ending point (Fidalgo Allo,

2022). Some examples include the intransitive verbs wrīdan 'to grow, thrive', (ge)wlitigian 'to grow beautiful', āwācian 'to decline', āwācian 'to grow weak', forweorðan 'to deteriorate', weaxan 'to prosper, flourish', forweaxan 'to progress', forweaxan 'to swell', āswindan 'to pine, decay, shrink', forsweorcan 'to grow dark or obscure', āspringan 'to diminish, dwindle', tōsīgan 'to decay', (ge)niman 'to develop', (ge)grōwan 'to increase', cwincan 'to decrease', and (ge)hefigian 'to grow worse'. Unbounded processes are similar to accomplishments like āðrintan 'to swell up' or forgrōwan 'to grow to excess or fullness', in that they represent non-punctual processes; however, this category includes the feature [-telic].

With the addition of this new class, the taxonomy of *Aktionsart* considered for the analysis of the lexical paradigms of OE verbs is as shown in Table 4:

Table 4: Taxonomy of spontaneous Aktionsart types considered in the analysis

Aktionsart type	Features	Examples
States	[+static], [-dynamic], [-telic], [-punctual]	sēocan 1 'to be ill', (ge)bīdan 'to live', ongietan 'to feel'
Activities	[-static], [+dynamic], [-telic], [-punctal]	gangan 'to go on foot, walk', (ge)drincan 'to drink, imbibe, absorb' (ge)cweðan 'to speak'
Achievements	[-static], [-dynamic], [+telic], [+punctual]	tōðwīnan 'to burst', hnītan 'to come into collision with, knock', tōblāwan 'to blow to pieces'
Accomplishments	[-static], [-dynamic], [+telic], [- punctual]	(ge)berstan 'to break', (ge)cringan 'to die', (ge)cuman 'to recover'
Unbounded processes	[-static], [-dynamic], [-telic], [-punctual]	wrīdan 'to grow, thrive', (ge)niman 'to develop', forweorðan 'to deteriorate'
Semelfactives	[-static], [+ -dynamic], [-telic], [+punctual].	blīcan 'to twinkle, sparkle', scīnan 'to flash', plegan 'to clap the hands, applaud'
Active accomplishments	[-static], [+dynamic], [+telic], [-punctual]	frettan 'to eat up', (ge)cuman 'to come', gefēran 'to get to a place'

It is important to note that, all of this spontaneous Aktionsart types in Table 4 present their causative counterpart. Dealing with causatives, this study introduces a point of disagreement regarding the nature of causative states and causative accomplishments as conceived in RRG. In this manner, causative states in RRG include examples of transitive verbs such as *scare*, *frighten* or *upset* (Van Valin, 2014). Nevertheless, all these causative verbs involve a process in the subject affected by these emotions, which is prior to the change of state. As an illustration of this point, consider some spontaneous accomplishments like get angry or get depressed, which initiate a process which results in a change of state. Thus, to irritate, annoy, or cast down (all intransitive) must be considered as causative accomplishments, as well as scare, frighten, upset and all causatives sharing these characteristics. On the other hand, preserve, keep safe and conserve are considered as causative states given that there is no process of change involved, the causative agent causes an entity or person to remain in the same state as it previously was. In this sense, forgrīpan 'to overwhelm', unbindan 'to unbind, untie, disclose, free or release from a bond, loosen', onfealdan 'to unwrap, unroll', drencan 'to intoxicate, inebriate, to make drunk', āsēoðan 'to refine, purify', ārēodian 'to put to shame', and āblycgan 'to make afraid' represent examples of causative accomplishments. On the other hand, (ge)nerian 'to preserve, defend, protect', and healdan 'to protect, guard, defend, preserve' represent causative states.

Besides, sometimes, no specific *Aktionsart* type can be attributed to a causative verb, as it happens with (*ge*)*manian* 'to prompt, instigate, impel, exhort, bring forth', *āmanian* 'require, exact', *forgiefan* 'to permit', and (*ge*)*bēodan* 'to order, command, decree'. In this sense, a verb predicate such as *order to go* stands for a causative active accomplishment, *order to walk* stands for a causative activity and *order to stop* represents a causative accomplishment, for instance.

It is also important to remark that, throughout this analysis I have also noticed counterfactual verbs such as *foregān 1* 'not to do, to neglect, fail', *ofunnan* 'to refuse to grant', *oferhebban* 'to omit, neglect, pass over', or *mishealdan* 'not to keep' which do not represent any of the types of the *Aktionsart* taxonomy in RRG. Similarly, the verb (*ge*) *faran* 'to happen' and its synonyms such as *gebringan* 'to happen', (*ge*) *scēotan* 'to befall, happen, occur' or (*ge*) *standan* 'to take place' do not conform to any *Aktionsart* class considered in the taxonomy either.

Finally, it is also worth noting that, on occasions, verbs can be classified under more than one Aktionsart type. First of all, polysemous verbs have multiple meanings and therefore can present different characteristics. Secondly, the distinction between the basic lexical meaning of a verb and the meaning a verb acquires in a particular clause or context cannot be disregarded. Furthermore, verbs and verbal constructions must be considered in the context of the paradigm to which they belong, which ultimately determines the meanings of its members. In this sense, Van Valin and LaPolla (1997), Van Valin (2005) and Van Valin (2018) note that, although verbs may present a basic Aktionsart type, the addition of prepositional phrases or adverbials, as well as the clause or the context in which they occur may result in a different Aktionsart interpretation for the verb. Moreover, the ability of a verb to convey multiple meanings clearly motivates its potential inclusion into more than one Aktionsart type. Then, to assign an accurate meaning to each verb, it is necessary to check every verb meaning against the context of the paradigm to which it belongs (Fidalgo Allo, 2023). Put in more technical terms, the semantic analysis cannot be independent from the patterns of semantic inheritance that turn up in the lexical paradigm. However, when the patterns of semantic inheritance of the paradigm do not allow us to specify the exact meaning, the etymology of the word may shed light on its meaning as happens with lesan 'to lease' which must be seen as conveying the obsolete meaning 'to glean, gather, collect' and aspēdan 'to scape' which represents the archaic variant of 'to escape'. Eventually, when limited information is available from some paradigms or it is not possible to trace the etymology of the word, I have followed Visser (1963) to determine if a given verb is transitive or intransitive. In this sense, Visser stresses the process of transitivization through which intransitive verbs go on the diachronic axis, from OE to PDE. In this analysis, consequently, the intransitive is the default choice. The paradigm GREOSAN, which only includes the verb grēosan 'to frighten' illustrates this point.

6. SUMMARY AND CONCLUSIONS

This section closes this study by summarizing the previous content and presenting the main findings of the research and its conclusions. Likewise, it makes some remarks on further lines of research regarding the *Aktionsart* taxonomy.

This paper has carried out an analysis of the 328 lexical paradigms of OE primitive strong verbs in terms of *Aktionsart*. First, the paradigms have been reviewed and updated. Second, the *Aktionsart* type of the different meanings inside each paradigm has been identified. The aim of this work has extended beyond validating the applicability of the *Aktionsart* taxonomy in RRG to OE; it also aimed to stimulate scholarly discourse and debate on this subject.

By section, the contents of this study can be summarized as follows. Section 2 has reviewed the theoretical and descriptive aspects relevant for an analysis of the lexical

paradigms of OE with respect to *Aktionsart*, or the internal aspect of verbs. Sections 3 and 4 have presented the data and addressed the question of the implementation of the analysis in the 328 lexical paradigms of OE primitive strong verbs. Finally, the results of the analysis have been discussed in Section 5.

The theoretical conclusions of this work bear on the typology of *Aktionsart* classes and, by extension, on the applicability of *Aktionsart* to different verbs. Regarding the descriptive conclusions, they refer to the results of the analysis of the OE lexical paradigms based on strong verbs.

To begin with, it is necessary to add the *Aktionsart* type of unbounded processes to the typology of RRG as put forward by VanValin and LaPolla (1997), Van Valin (2005), Van Valin (2014) and Van Valin (2018). This new class presents the features [-static], [-dynamic], [-telic], [-punctual] and corresponds to verbs such as *wrīdan* 'to grow, thrive', *āwācian* 'to decline', *forweorðan* 'to deteriorate', *forweaxan* 'to progress', and *(ge)grōwan* 'to increase' (all intransitive), which display processes of change not delimited by an inherent end. Verbs under this category exhibit processes which can be extended in an indefinite way. They are similar to accomplishments in the sense that they represent non-punctual processes; however, this new category includes the feature [-telic]. As is the case with other *Aktionsart* types, unbounded processes also present a causative version.

Then, causative states such as (ge)nerian 'to preserve, defend, protect' and healdan 'to protect, guard, defend, preserve' need to be differentiated from causative accomplishments which involve a process prior to the change of state in the subject affected such as drencan 'to intoxicate, inebriate, to make drunk', $\bar{a}r\bar{e}odian$ 'to put to shame', and $\bar{a}blycgan$ 'to make afraid'.

Also, with respect to the applicability of the *Aktionsart* types, I have come across counterfactual verbs, like *ofunnan* 'to refuse to grant, *ofersittan* 'to abstain from' or *mishealdan* 'not to keep', that do not represent any of the internal aspects of the verb as defined in RRG. It may be possible to account for these verbs by means of the factual verb ('to do', for instance), then assign the corresponding *Aktionsart* and finally add an operator of negation with scope over the verb (Van Valin & LaPolla, 1997). Similarly, verbs such as *(ge)faran* 'to happen' and its semantic derivatives do not correspond to any *Aktionsart* type considered in the taxonomy either.

The challenges encountered while applying the *Aktionsart* typology in RRG to this analysis do not imply its unsuitability. On the contrary, this typology has allowed me to relate derived verbs to primitive verbs on semantic-syntactic grounds.

Given these conclusions, the main line of future research has to do with the typology of *Aktionsart*. Firstly, it is necessary to apply the new class of unbounded processes to other languages to check its typological validity. Secondly, it is necessary to pay more attention to causative verbs that entail an activity, such as *ofbēatan* 'to beat to death', *ofbēatan*, *tōbēatan* 'to beat to pieces, destroy by beating', *fordelfan* 'to destroy by digging', 'to dash or knock to pieces', *ofhnītan* 'to kill by butting, gore to death' and *ofweorpan*, *ofworpian* 'to kill by casting (stones, missiles, etc.)'. Although more research is needed, it might be the case that these verbs constitute active causative accomplishments and could be defined by the features [-static], [+dynamic], [+telic], [-punctual]. Thirdly, another aspect that deserves more attention is the semantic proximity between these active causative accomplishment verbs and active accomplishments of motion and creation. Finally, the investigation into the lexical paradigms of OE in context will undoubtedly enrich our understanding of the syntactic-semantic behavior of the verbs under analysis, providing a deeper insight into the subject.

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