A Semantic Analysis of Universal and Idiosyncratic Features of Induced Motion Verbs: From the Perspective of Language Typology*

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Abstract

This is a semantic study of causative movement verbs that have been organized into two main groups consisting of similar and contrasting features. This analysis contradicts Van Valin & LaPolla (1997) and other authors working within the Role and Reference Grammar theoretical framework such as Jolly (1991, 1993), who defends the view that causative movement verbs only respond to one Aktionsart type (that is, to one type of mode of action): causative accomplishment verbs. I demonstrate that there are also

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causative active accomplishment movement verbs. This distinction is supported through the different locational expressions each take. Thus, the essential role that such expressions play in the lexical decomposition of movement verbs is discussed. Also, I offer a comparative analysis of these verbs in English and Quenya. The results allow for the identification of the universal semantic features of both types of verbs; they provide evidence for the usefulness of artificial languages not only in global and cross-cultural communication, but also in the contrastive syntactic and semantic analysis of natural languages. This study has followed the semantic approach of Componential Analysis, of which the different semantic classes of verbs reflect different syntactic and semantic argument structures. This explains the direct relation between the type of verb and the type of locative argument it takes.

1. Introduction

Throughout human history, at least 700 languages have been invented with the hope of creating a common language for all. Among them we find *Solresol*, invented by François Sudre, which was based on musical scales and which could be sung. *Tutonic* combined a basic lexicon of English and German. In John Wilkin's language words were formed through the addition of vowels and consonants that defined words by category. For example, *n* indicated 'living being' and *k* referred to an 'animal'; anything could be defined through an appropriate combination of letters. Finally, *Esperanto* is one of the most important and influential languages as it is still learned and taught, studied, and analysed.

This paper is devoted to induced motion verbs, based on their mode of action (also called *Aktionsart*), as developed by Vendler

(1967 [1957]) and later by Van Valin & LaPolla (1997), are called *causative movement verbs*. An analysis of samples of a corpus of 6,100 English verbs and of 8,500 locative expressions (spatial prepositions/adverbs), extracted from the British National Corpus, has been carried out through a study of semantic components in the semantics-syntax interface.[1] According to the results, causative movement verbs have been organized into two main groups made up of similar and contrasting features. Additionally, evidence for the existence of these two types of verbs has been sought in *Quenya*, one of several languages created by J. R. R. Tolkien for his fictional worlds. More concretely, it is the language spoken by the Elves in the Middle Earth. If we remember the film *The Lord of the Rings*, we know that there are two languages spoken in it. The more beautiful, soft-sounding one, spoken by most of the characters, is *Sindarin*. Quenya is used comparatively sparsely in the film. However, of all Tolkien's inventions, he was most pleased with the Quenya language than any of his other philological creations. He was so delighted with it that at first he conceived it as the language of Gods, and embellished it more using it with the Elves. Quenya constitutes the starting point for his creation of all the mythological cycles. He declared that legends were created in order to provide speakers with their invented languages. It is evident that Tolkien's (1992 [1955]) masterpiece, *The Lord of the Rings*, would have not been possible without Quenya. From a linguistic point of view, this language is interesting because of its high stage of development.[2] It shows connections with both Old and present day English (this is due to the fact that Tolkien was a native speaker of English and a philologist).

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[1]   With respect to the BNC, the examples in (11) in this paper have been extracted from it. They appear with their reference code, so that the reader can have access to the full real text to which such the samples belong.

[2]   There are many works dedicated to the analysis of the Quenya language. Some of them are Martsch (1992) and Baixauli (1996), and Helge's Quenya course in http://www.uib.no/People/hnohf/qcourse.htm.

It also shows similarities with *Sindarin*, another language invented by Tolkien which was spoken in the Tierra Media, and with Finnish in its grammatical structure. Finnish is typologically related to English since they are both of Germanic origin. Finnish was one of the languages that influenced English during the Old English period when the Danish invaded the British Isles in 835 A. D.   This remnant of Scandinavian languages can be observed in present day English place-names. Many of them have a Finnish suffix, such as –*thorpe* or –*by*.

I have decided to carry out a contrastive analysis of English with Quenya for several reasons. First, it is of high interest for linguists since, contrary to other artificial languages such as Esperanto, it attempts to emulate natural languages, both in their virtues and in their defects. Quenya has irregularities, redundant elements as well as inflections, and lexical devices of word formation. The fact that two languages of different status are compared, even while they have the same semantic structure for the verbs analysed, contributes to corroborate the hypothesis defended in this piece of work.

The first section presents the scope of the analysis. Then, the primary research is discussed of which there are two main subsections, according to two types of causative movement verbs. The third section is dedicated to Quenya in which the aforementioned verbs are also analyzed. Finally, the last section presents a conclusion based on complement distribution, thematic relations and grammatical organization. As a result, the final analysis provides suggestions for new explanatory lines of research on issues which are unclear in literary fields at the moment.

This study has been made within the semantic approach of Componential Analysis, for which lexical decomposition is used as a basic device providing a description of the meaning components of words, specifically in this case of movement verbs. These meaning components permit the establishment of verbs in groups and deals with their argument structure. The different semantic classes of

verbs reflect different syntactic as well as semantic argument structures, which explains the direct relation of the type of verb with the type of prepositional phrase (hereafter PP) it uses.[3] The description of syntactic structures through an analysis of the semantic components of verbs allows verbs to be grouped in classes. Therefore, a word has some meaning components which are relevant for grouping and consequently for identifying its corresponding grammatical processes. Some meaning components are helpful to establish particular differences between a certain word and its group. This distinction has already been identified by Pinker (1989) in his *Grammatically Relevant Subsystem Hypothesis*, of which the former components are labelled *semantic markers*, and the latter *semantic distinguishers*. This is equivalent to Grimshaw's (1994) distinction between *semantic structure* and *semantic content*. In this paper, the metalanguage used for the semantic representation of the verbs analyzed is the one adopted in Role and Reference Grammar (henceforth RRG) developed by Van Valin & LaPolla (1997).

2. Scope of Analysis and Theoretical Assumptions

It must first be mentioned that in this paper all causative movement verbs are assumed to have a semantic valence of three and a syntactic valence of two or three. For an example of this, see (1):

(1)   a. Mary **fixed** the switch *on* the garden wall.
      b. Mary **looked up** the wall.

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[3]   There are a few studies in Componential Analysis related to the interaction between semantics and syntax that are worth seeing: Pinker (1989), Gropen et al. (1991), Levin (1993) and Levin & Rappaport (1995) among others.

In (1a) the syntactic valence is three, because the third argument (*the garden wall*) is expressed. However, if we say *Mary fixed the switch*, the syntactic valence is two. That is, this clause has two syntactic arguments: *Mary* and *the switch-*, but the semantic valence is still three, even if the third argument is not overtly expressed. This is because the semantic valence of a clause is tied to the verbal predicate argument structure, which is invariable. This idea is also supported by the fact that movement verbs in Quenya also respond to such an argument structure, as will be seen in section 4.

   Another issue that should be noted is that both examples deal with a transitive construction. Nevertheless, there is an important difference between them: in (1a) the PP provides the new location for the second argument, represented here by the noun phrase (henceforth NP) *the switch*. This is the reason why both phrases appear within the same LS: **be-at' (x, y)**, where *x* represents *the garden wall* and *y* stands for *the switch*. The preposition *on* indicates the orientation of a second argument (*y*) with respect to its final location (*x*). In (1b), by contrast, there is no movement of the second argument, expressed here by the NP *the wall*. In this case, *up* functions as a particle, and such a particle indicates the orientation of the action predicated by the verb. There is not a causality element, and therefore the first argument, which is expressed through the NP *Mary* and has the thematic role of an AGENT, does not cause the second argument, in this case represented by the NP *the wall*, to move. *Up* is working at the level of the nucleus. Thus, all causative constructions are transitive, but not all transitive constructions are causative.

   Now, considering the establishment of an adequate logical structure (henceforth LS) for causative movement verbs, the prototypical LS for the verbs I am studying in RRG, according to Van Valin & LaPolla (1997), is given in (2)[4]:

(2) Peter **put** the book **on** the table.
     [**do'** (x, Ø)] CAUSE [BECOME **be-LOC'** (z, y)]

Motion verbs will be examined here from the perspective of the
interrelation of predicate types and spatial items. Spatial words
perform the essential function of orientation, which is essential for
human cognition. Orienting can be realised by two types of
elements: situating and linking elements. Situating is proper for
adverbs while linking is proper for PPs. Apart from this semantic
distinction they have the same role in the LS of verbs of movement,
as illustration (2) shows. However, they have usually been given a
marginal status in grammatical and semantic theories. This calls for
a deep analysis of LS. In fact, if one looks at locative words in detail
a very powerful and complex system of organization arises, which
plays an essential role in human languages and must be carefully
studied. I analyze these elements from the point of view of the
predicate types. This provides information about the specific
behaviour of every predicate type both semantically and
syntactically, and about the usefulness and the level of abstraction of
the prepositions that link them to their arguments. Due to the scope
of this article, I have only focused on the analysis of spatial items
functioning as prepositions. There is general agreement, from works
like Dik (1978) or Chomsky (1981), that both the semantic and
syntactic properties of predicates are interrelated. This is followed
by the Lexico-Grammar Model, hereafter LGM and it is taken as a
starting point in here. Nonetheless, since this model is still under
construction, I have selected the RRG system of semantic
representation as a starting point for my account.

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[4] Note that in RRG the concept LS refers to the semantic argument structure of the
     verb, not to its syntactic structure.

3. A Semantic Typology of Induced Motion Verbs in English

While all the verbs of the corpus correspond to the same predicate type (causative movement verbs), important differences can be found between some verbs and others. Such differences in meaning constrain the type of AAJ they can take and the number of PPs they admit in one clause. All these verbs can be divided into two main groups, and within each group some characteristics can help divide them into other subgroups. The differences between each group are called *variables*. The two groups of verbs are *causative active accomplishment verbs* and *causative accomplishment verbs*. Both groups are similar in that they are accomplishment verbs. According to this, they are "temporally extended (not instantaneous) changes of state leading to a terminal point" (Van Valin & LaPolla 1997: 92). Therefore, telicity is an inherent feature of all these verbs, and it is the third argument that carries the telicity feature: a LOCATION argument. This feature can however also be expressed through an adverbial particle, wherein the third argument is not explicit. Recall that even if it is not specified, this LOCATION argument is implicitly stated, and so it deserves to be represented in LS. This is one of the reasons why I believe all these verbs should have three arguments, although the third (LOCATIVE) is not always expressed.

Focusing now on *Aktionsart*, it is important to note that the mode of action presented by each group differs; active accomplishments invoke an SoA that goes from the original point of the UNDERGOER to the endpoint. That is, the language user can mentally represent any of the moments that compose the activity from the beginning to the end and express it linguistically. This is due to the feature of the extended duration [+durative], a characteristic of active predicates that non-active accomplishments lack. Depending on whether the GOAL is specified or not we can

have an activity or an active accomplishment *Aktionsart*. On the other hand, accomplishment verbs only invoke SoA at the endpoint. They express the resulting state of a non-active process of change. A change is understood as extended in time, but it is not change, but rather the result. In both kinds of verbs one can imagine the whole process, but this is a product of epistemic knowledge since, if an UNDERGOER is in one location, it is due to the fact that an ACTOR has placed it there. In fact, accomplishment verbs lack the feature of duration, so the referring scope of the accomplishment only points to the endpoint in time and space. Consequently, accomplishment verbs always have a GOAL argument in their argument structure, and it is this third argument which specifies, if it is overtly expressed, the endpoint location. With respect to their LS, 'BECOME' in both types of verbs indicates that they are accomplishments.

The problem arises with active accomplishment verbs, which are the result of an activity, and consequently come from an activity predicate, which is inherently atelic. In this case, the application of lexical rules brings them about. A useful test to differentiate active accomplishments from non-active ones is presented in Van Valin & LaPolla (1997: 101): if it is active accomplishment, adverbs such as *vigorously* or *actively* can be added, as shown in (3):

(3) a. Jhon **carried** the bags *actively and vigorously*.
     b. *John **installed** the TV aerial *actively and vigorously*.

In (3.a) we have an active accomplishment, *carry*, which therefore admits such adverbs. This does not happen to the clause in (3b), where we have an accomplishment verb that does not admit them, since it is not derived from an active verb. Thus, active accomplishments admit semantic parameters of manner and mood, while non-active accomplishments do not.

A detailed analysis of these verbs is carried out for which a

different LS will be proposed for each of these two verbal types since the common LS given in Van Valin & LaPolla (1997) does not account for the differences between them. Finally, all verbs in this section are causative and are what Jolly (1991, 1993) terms *induced motion verbs*.

3.1. Causative Active Accomplishment Verbs of Motion

The verbs that compose this group are realized by GOAL PPs, but they also admit PATH PPs. Such PPs can appear in the clause, but these verbs can also be used without them. If such motion verbs are followed by a GOAL PP, they are called *active accomplishments*. If they are not followed by a PP, but only by PATH PPs or by no PP at all, they are called *activity verb*s. For an illustration of this, see the examples below:

(4) a. John guided the tourists *through the field.* (Path PP)
       [causative active verb]
    b. John guided Mary *to the house.* (Goal PP) [causative active accomplishment verb]
    c. John guided Mary *from the house* (Source PP) *through the big avenue* (Path PP) *to the school.* (Goal PP)
       [causative active accomplishment verb]

Guide is a prototypical example of a causative active accomplishment movement verb. ACTOR, UNDERGOER, and LOCATION provide three possible arguments if we focus on macrorole assignment (ACTOR, UNDERGOER) and if we specify the correspondent microroles, primitive abstract predicates (LOCATION), and AGENT, THEME, and GOAL. However, as can be observed in (4.a), *guide* can also be a causative active verb if the GOAL PP is omitted. Besides, it admits more than one PP, as in (4c), although only the GOAL PP is relevant for its LS. This *Aktionsart* interpretation is

not possible for the verbs in the second group, since they do not allow for such alternations, called *activity-active accomplishment alternations*, by means of which an atelic verb becomes telic (Dowty 1979, Levin 1993). Van Valin & LaPolla (1997:182) provide evidence for the activity-active accomplishment alternations in languages which meet three criteria: morphological evidence, generality (that is, this alternation is not limited to a small number of verbs) and predictability according to a putative lexical rule. This is not the case in English, where there is not morphological evidence. However, according to these authors (1997), the internal criteria—economy, motivation and predictability—demonstrate that English has lexical rules to derive this alternation and to derive the causative version of predicates.

Causative active accomplishment verbs are rare according to Van Valin & LaPolla (1997: 100). They show *march* as an example: *The sergeant marched the soldiers to the barracks*. However, this does not imply that they do not exist. The way to differentiate them from causative accomplishment verbs is to see if the pattern of morphological derivation of the verb relates to a state verb or to an activity verb. It is further demonstrated that there are causative active accomplishment verbs, not only versions of non-causative ones, since all the verbs which have been selected for the corpus of analysis are only causative. Thus, they do not allow for this alternation. (5) offers examples of this:

(5)   a. *That man **transported** *to* the north of the state.
      b. That man **transported** *the goods* to the north of the state.
      c. *John **guided** *to* the new house.
      d. John **guided** *us* to the new house.

As these examples show, these verbs, with the ones in (6), only exist in this causative *Aktionsart*. For such cases it is not viable to look for morphological evidence related to alternations between these

active accomplishment verbs and causality since there is not an alternative non-causative version. Problems with paraphrases are not directly related to causative active accomplishment verbs. It is true that the causative as well as active accomplishment versions are derived from the four basic types of *Aktionsart*—states, activities, accomplishments and achievements—but the force of use has buried the original verbal types and has left what we have here. Historically, English verbs from the Old English period onwards have evolved from intransitive (and typically strong) to transitive (typically weak) in a significant number of cases.[5] Often verbs maintain both forms, but in others they end up being used as transitive, so their original intransitive use disappears. Though transitivity cannot be equated with causativity, it can be an evidential criterion, since all causative verbs are transitive even though not all transitive verbs are causative, as shown in example (1). This is a universal tendency for languages, as the analyzed verbs show:

(6) guide, lead, conduct, escort, accompany, show, direct, draw, tow, usher, carry, bear, bring, fetch, transport, deliver, ship, dispatch, despatch, take, propel

These verbs belong to different lexical fields. This is important in the sense that their meaning is what allows us to provide for their semantic LS. Some of them can have different *Aktionsart* interpretations depending on the context. In this paper, I focus on the core issues related to the LS presented in (2), which can be paraphrased as 'to cause an object to be on a specific location'.

   Jolly (1991:90) remarks that these verbs have GOAL, PATH and SOURCE arguments, all of which are different kinds of LOCATIVE

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[5]   As noted in section 2, transitivity is a different notion from causativity, but both are interrelated, in the sense that for a verb to be causative it has to be transitive. Though a transitive verb does not need to be causative according to the diachronic phenomenon, see Arista (2001).

arguments, as part of their lexical structures. This means that there would be five-place relations and that GOAL, PATH and SOURCE arguments may not be syntactically realized. This paper does not analyze each of these arguments. Van Valin & LaPolla (1997) state that verbal predicates allow for a maximum of three semantic arguments. However, Van Valin & LaPolla (1997: 161) are inconsistent because when they deal with the argument-adjuncts[6] (AAJs) of causative movement verbs, they declare, as Jolly (1991) does, that "there can be more than one AAJ (…) They are specifying the range of motion with a verb of motion (e.g. *run*, *walk*) or induced motion (e.g., *push*, *pull*, *move*), which includes specification of a SOURCE, a PATH and/or a GOAL". I disagree with this because the telicity feature, which is the essence of LS, is just provided by the GOAL AAJ, so the rest of the adjuncts (SOURCE and PATH) are superfluous, and this should be reflected in semantic representation. This is demonstrated throughout the analysis. In fact, it is the accomplishment part of the verb that is universal to all these verbs and gives systematization to their LS. This is noted by Van Valin & LaPolla themselves: "The semantically general part in the active accomplishment structure which is not specific to particular verbs is in the accomplishment part, while the primary verb-specific lexical content is in the activity part" (1997: 112).

Therefore, causative active accomplishment verbs allow for the occurrence of multiple locational prepositions. PATH and SOURCE PPs can be specified, and this is due to their inherent nature as derivations of active predicates, which are atelic and therefore provide the verb with a complex combination of temporal and

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[6] AAJs is the name given in RRG to expressions that are between arguments. That is, being essential for the LS of the clause, being adjuncts, and being additional elements that modify the clause as a whole. Locative arguments are included within this group, due to the fact that the locative word that introduces them modifies the meaning of the verb as a whole. It is not the same to say *Put the book **on** the table* than *Put the book **down** the table*.

spatial indeterminacy on one hand and an end-point on the other. The only inherent and necessary PP to complete the LS is the GOAL PP. In bringing this subsection to a close, it must be remarked that the LS of the verbs presented here differs from the general LS given in RRG for causative movement verbs, which has been given in (2). A proposal is provided below:

(7) DO (x, [**do'** (x, Ø)] CAUSE [**do'**(z,[**go'**(z)]) & BECOME **be-at'** (y, z)]

First, we have the activity part: DO (x, [**do'** (x, Ø)]. The use of 'DO (x …)' indicates that the ACTOR is an AGENT. It is used to represent verbs with lexicalized agency, which can never be used to express an action carried out unintentionally. A useful test to distinguish such *Aktionsart* is to add a clause adverb, such as *unintentionally*. If the verb is not contradictory, then it admits the ACTOR to be an EFFECTOR too. In this case, all the verbs we are dealing with carry agency by implicature, and so this initial LS has to be added.

However, the LS as a whole, as presented in (7), brings about certain problems that need to be solved. First, there is no specification of the type of action carried out. Second, one must observe that the predicate [**go'**(z)] has been used after (**do'**) to represent the fact that these verbs carry the [+durative] feature. With such an LS, one can not extract any differences from any of the verbs in (6). This means that that this LS is incomplete. In order to specify the type of action, the following LS has to be used:

(8) DO (x, [**do'** (x, [**guide'** (x, z)]))

Here, the predicate (**go'**) has been substituted by a more specific one: (**guide'**). As can be seen, this LS is not complete enough, since *guide* is not a primitive verb. Unfortunately, RRG does not provide

the lexical decomposition of all verbs but constitutes an excellent starting point to develop it. This the method used by the LGM, though it is still in an evolving process. In this study when such a representation as in (7) is used, the method is left open for a more decomposed account of any of the verbs in (6), so that this common LS is enriched.

3.2. Causative Accomplishment Movement Verbs

Causative accomplishment verbs are the result of a process of change. The second argument is always a THEME. These verbs are telic, and their basic predicate is a state. This separates them considerably from active accomplishment verbs, whose basis is an activity. As was the case with active accomplishments, we may suppose that if the GOAL is not specified the predicate cannot be considered an accomplishment verb, which is defined as temporally bounded, while state verbs are not. However, the difference lies precisely in that this is not the case. Even if no AAJ is realized in the clause, these verbs are invariably accomplishments. Thus, their LS is always the same, so when no AAJ is overtly specified a slot should be left empty to show that there may be some location there. Their LS has already been given in (2), and it is repeated below:

(9)   [**do'** (x, Ø)] CAUSE [BECOME **be-LOC'** (z, y)]

The verbs in this group are the only ones mentioned in Van Valin & LaPolla (1997: 102), because they are the most frequently used. In fact, these authors state that in case of doubt, a verb will most likely be an accomplishment than an active accomplishment:

Causative accomplishments are derived from a state predicate, whereas causative active accomplishments are derived from an activity predicate. […] It should also be noted that causative

accomplishments are much more common than causative active accomplishments, and therefore in unclear cases it is more likely that the verb would be a causative accomplishment rather than a causative active accomplishment.

Nonetheless, in English, movement verbs are clearly differentiated. The following verbs constitute the group under study in this subsection:

(10) fit, fix, install, place, space, clap, locate, situate, site, position, station, stick, remove, wrench, extract, withdraw, eject, bar, jam, seal, stuff (in the sense of 'put into'), scatter, sprinkle, cast, chuck, toss

As stated, these causative movement verbs are accomplishments in the sense that they are telic and thus have an end-point. In this sense, the resulting *Aktionsart* caused by such verbs is a state that is non-dynamic. It results from a process of change of location. Contrary to active accomplishment verbs, they are not derived from an active verb, but from a state verb. This factor determines their LS and the kind of PPs they admit. That is, the verbal predicate determines the kind AAJ or PPs that will occur in the clause. In this case, causative accomplishment verbs are characterized because they do not admit any other directional or locational PP apart from the GOAL PP, which functions as an AAJ. The reason is that they have the feature [+punctual], which implies that they do not last in time. Consequently, they can not admit PATH PPs, which express the transition from one point to another. These accomplishment verbs express that the action is finished and that the affected argument of the action has been located in a certain place. They focus on this terminal point. This explains why Lindstromberg (1997), calls them *endpoint verbs*. It must also be noted this influences the type of PPs they admit, as seen in illustration (11):

(11)   a. **KB8 1742** I will *carry* it **on** my shoulders.
       b. **AM5 1105** *Place* the paint brush **on** a firm surface.

In (11.a) we have a causative active verb, *carry*, followed by its UNDERGOER -THEME, in microrole terms- and by a PP, *on my shoulders*. This PP is not an AAJ, since it does not express an end point. It adds information to the clause, and therefore it modifies the whole clause. This preposition introduces a predicative complement. As a result, the action has not concluded, and we have an active verb, not an active accomplishment one. By contrast, in (11b) we have *place*, which is a causative accomplishment verb, occurring in the same preposition. However, in this case the function of the *on*-PP changes. It is a GOAL PP, and therefore it behaves as an AAJ.

4. Causative Movement Verbs in Quenya

Though the scope of my analysis is limited due to the few available verbs in Quenya, the samples are enough to support the view held in this research. In Quenya, there are two types of basic verbs, according to their etymological origin. There are *elementary* verbs, which come from a proto-Elvish root and do not have any additional component. They are characterised as having the complete form ending with a consonant. That is, they are formed by a consonant, a combination of consonants or a vowel plus a consonant. Then, there are the rest of the verbs, which are called *derived*. They are composed of a root plus some added suffix ending in a vowel. The most common are -*a*, -*ya* and -*ta*.

There is also the *complete form* of verbs, which is the one that verbs adopt when they are used or addressed in their dimension as words themselves. That is, they do not imply any action. This is understood as the dependent form of verbs or those which refer to the action expressed by the verb itself. According to this, the verb

drink, for instance, in (12a) and (12b) is different, since in (12a) it implies and action, while in (12b) it does not:

(12) a. I *drink* water. [It implies action]
     b. The meaning of the verb *drink* [It does not imply any action.]

My interest is focused on the dependent forms of verbs, such as in (12.a). With respect to *Aktionsart*, nothing has been said in this study about Quenya. However, there is enough information about the language to enable us to establish a typology of *Aktionsart* and to analyse the specific mode of action of causative verbs of movement in Quenya. This will help demonstrate that certain modes of action coincide with English verbs. In this way, the typology of *Aktionsarts* has universal validity.

With respect to transitivity, in Quenya many verbs can have both a transitive and an intransitive sense, or they can be either transitive or intransitive. This is true in English and in most natural languages. An example of this is shown in (13):

(13) a. **tele-**: transitive   'finish (something)'
     b. **telya-**: intransitive 'end, conclude'

As remarked in section (2), there is a difference between transitivity and causativity. Transitivity is related to syntax, while causativity is attached to the semantic structure of verbs. Nevertheless, due to the syntax-semantics interface, both concepts are interrelated. Thus, we can have a transitive verb that is not causative. A causative verb is always transitive, but not vice versa. Thus, since there is still nothing said about causation in Quenya, we can take transitive verbs as a starting point to identify those that are also causative. For an example, see (14):

(14)   a. **ranya-**: intransitive 'stroll, wander'
    b. **tele**-: transitive 'finish (something)'
    c. **tur**-: transitive 'dominar (something)'
    d. **tuk**: transitive [+ causative] 'bring (something)'

In (14a) we have an intransitive verb, *ranya-* 'stroll, wander', which can never be causative because it is not transitive and it does not fit the LS needed to do so. This implies that an agent causes an object (theme) to be on a certain location. In (14b) and (14c) we have transitive verbs, but they do not imply this causative motion. The only verb that responds to the causative LS outlined in (2) is the one in (14d). One more fact that supports the existence of causation in Quenya is that there are some verbs that have a different form for their causative version, such as *ita-* 'sparkle' This word becomes *tinta* when it means to cause something to be sparkled around/over a certain location.

Once the fact that causative movement verbs can also be identified in Quenya has been shown, my concern focuses to the hypothesis that there are not only causative accomplishment movement verbs, but also causative *active* accomplishment verbs. As mentioned earlier, the latter are those which imply an action that is [+durative], or extended in time. This idea is supported by the fact that in Quenya there is verbal form called *frequentative* that permits this semantic distinction. According to this form, when departing from a verb we can build another one that indicates a continued or extended action in time. Elementary verbs perform such an operation by repeating the part of the verb that goes until the main vowel (included) as a prefix. They make such a vowel longer and add a final vowel in order to mark the fact that the new verb is derived. Derived verbs add the whole verb as a prefix, separating it with a dash. This process is illustrated by texts extracted from Tolkien's *The Monsters and the Critics* (1997) below:

(15) a. *Man tiruva…/ ramar **sisílaba**, / kále **fifírula*** 'who
         observes...the wings that **shine** (**continuously**), the light
         that **fades** (**slowly**)': from *sil-* 'shine' and *fir-* 'fade'
      b. *Elenillor pella/ **talta-taltala*** 'from further than the starts
         that **fall** (**continuously**)': from *talta-* 'fall'.

This semantic feature of extended duration in time is therefore a
universal conceptual phenomenon. As such, it is expressed in this
language as well as in all natural languages, either through verbal
lexicalization, as is the case of English or Quenya, or through other
lexical devices, such as frequency adverbs. If we relate this to the
concept of induced motion, we get causative active accomplishment
movement verbs. However, this alternation is not always possible,
as the following examples show:

(16) a. *kir-* 'stick' (causative accomplishment) > *kikir-*
         'stick continuously' (causative active accomplishment?),
         *'stick slowly' (causative active accomplishment?)
      b. *ulya-* 'throw' (causative accomplishment) > *ulya-ulya-*
         'throw continuously (causative active accomplishment?),
         *'throw slowly' (causative active accomplishment?)

What these examples show is that we cannot form an active
accomplishment verb of motion out of a non-active one. The
Quenya verbs *kir-* and and *ulya-* are causative accomplishment
movement verbs, so they respond to the LS given in (2). This means
that their semantic structure evokes the conceptualisation of an
event after such an event has already finished. That is, in the
sentence "I throw a ball to you" what is evoked by this event is the
fact that the ball, which was previously in my hand, has been moved
to another location, to you. There is nothing in the structure of this
event that permits to extend it temporally. That is the reason why the
adverb *slowly* gives an erroneous interpretation of the frequentative

here, since such adverb refers to that part of the event that is not evoked. Thus, the frequentative in this case can only be used to mean that the same action as a whole was repeated once and again. However, this interpretation does not fit the LS of causative active accomplishment verbs. Therefore, the frequentative form does not transform a non-active accomplishment verb into an active one. The reason is that both modes of action are different and independent from each other. This demonstrates the hypothesis put forward here that there are two types of causative movement verbs which respond to two different *Aktionsart* types.

The frequentative form therefore only provides a verb with the feature [+ durative] when such verb can be extended in time, as is the case of causative active accomplishments. Otherwise, it gives the whole sentence an idea of repetition of the same action in time. Thus, in the first case we can either interpret this form through the adverb *slowly* or through the adverb *continuously*, as shown in (17), by the causative active accomplishment verb *col-* 'carry'. In the second case we can only translate it by the adverb continuously, as illustrated in (16.b), where we have two *non-active* causative accomplishment verbs:

(17) *col-* 'carry' > *cocól-* 'carry slowly' or 'carry continuously'

Finally, this section finishes with an outline of the causative movement verbs I have found in Quenya, both active and non-active.[7] There are not many, but enough to get a corpus of the compositionality of *Aktionsart* for causative movement verbs:

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[7]   These verbs have been extracted from a number of dictionaries: One found in Baixauli (1996), and others in the following addresses: http://www.dragondesign. com/TheLair/elf.html, http://www.rialian.com/quenya-english.htm, and http://www. taryneast.org/projects/QuenyaDictionary.pdf.

(18)

Causative Active Accomplishments	Causative Accomplishments
conduct, guide, lead, show, direct: *tulya-*	fit: Ø
escort, accompany: Ø	fix: *panya-*, *tulka-*
Draw: *tuka-*, *tuc-*	install: Ø
Tow: *mir-*	place, locate, situate, site, position: *mar-*
usher: Ø	space: Ø
carry: *kola-*	clap: *atsa-*
Bear (fruit): *yavin*, bear= *col-*	station: Ø
bring: Ø	stick: *himya-*
fetch: *tulta-*	remove, extract, withdraw: *hehta-*
transport, deliver (send flying): *orta-*	wrench: Ø
Ship: *luut-*	eject: Ø
dispatch, despatch: Ø	bar, jam seal: *tac-*
Take=*atsa-*	stuff (in the sense of 'put into'): *pansa-*
propel: Ø	scatter: *palya-*
	sprinkle: *winta-*
	cast: *etya-*
	chuck, toss: *ulya-*

As can be observed, some of the verbs have been arranged into synonym groups. For instance, *place*, *locate*, and *position* are very similar in meaning, so they have been arranged together for clarity. This does not mean that Quenya is not a rich language of significance. In fact, we also find synonyms in such language, as can be seen with *draw*, for which we have *tuka-* and *tuc-*. There are words that do not exist in Quenya because what they represent was not supposed to have existed in the Middle Earth. This is the case

with *install*, which evokes a much more modern concept.

5. Conclusion

In this paper I have demonstrated that causative movement verbs, contrary to the findings of Van Valin & LaPolla (1997), are made up of two different *Aktionsart* types. Therefore, they respond to two different LSs. I have shown how this is directly reflected in the types of PPs they use, which assumes different semantic and syntactic functions. As has been shown in this work, the GOAL thematic relationship is expressed differently in causative active accomplishment movement verbs than in causative accomplishment movement verbs. The former has a dynamic feature that is not present in the latter, and it is this feature which influences the predicate LS as a whole. The result of the action or of the process is the same, which is obtained form their accomplishment *Aktionsart*. However, the preposition *to* (and related ones: *into*, *onto* …) as a GOAL for active accomplishment verbs shows that there is a PATH role to undergo first, whether it is explicitly realized in the clause as a PATH PP or not. All this should be reflected in LS. I have made a proposal in this line in subsection 3.1.

I have analysed an artificial language, Quenya, one of Tolkien's invented languages, which has the complexities and irregularities of any natural language. Through an analysis of induced motion in these two languages, I have shown that causative movement verbs possess the same LS as those in English and that they respond to the same grammatical and semantic phenomena. Even more, in Quenya there is a distinction between causative and non-causative forms, which grants this invented language a greater richness than some natural languages. The presence of the frequentative form supports my hypothesis about the existence of two types of induced motion verbs.

In English, what is interesting is that the prepositions *in* and *on* (and related prepositions: *at*, *over*, *under*, etc.) are used with dynamic verbs too. Although, they do not express a GOAL, they add some modifying aspects to the clause. They are adjuncts in that context, and they affect the whole situation expressed by the mode of action. In my opinion, this is a direct consequence of the fact that active accomplishment verbs inherently need to have a terminal point in the action, and this telicity is expressed by *to*. With accomplishment verbs, since no dynamicity is expressed, it is understood that there is just one possible location. This is the telicity feature. This reasoning also explains why active accomplishments can admit multiple directional or locational PPs, and accomplishments only admit one. It can either be a SOURCE or a GOAL PP, but never a PATH PP, which implies extended duration in space and/or time.

SOURCE and GOAL are similar in terms of AAJs, though verbs which take a SOURCE PP as an argument are less frequent, because a location is specified. The PATH role cannot be represented as an AAJ because, according to the LS of both kinds of induced motion verbs, a resulting location should be specified. A PATH role does not carry the telicity feature needed in this case. The case with SOURCE is different. An object has been displaced from its original location, and so a new situation has begun that ends the previous one. For this process to take place, that old situation must have had an ending. Accomplishment movement verbs which take a SOURCE PP as a general rule instead of a GOAL PP are given in (19), together with their corresponding LS[8]:

   (19) remove, wrench, extract, withdraw, eject

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[8]   Due to the limitations of this paper, these verbs have not been fully developed. For a better understanding of their LS and mode of action, see Moreno & Pastor (2004).

[**do'** (x, Ø) CAUSE [BECOME NOT **be-LOC'** (y, z)]

With respect to each of these *Aktionsart* types in semantic representation, we have seen that the RRG system is insufficient to explain certain variables, especially in the case of causative active accomplishment movement verbs. For this reason, further proposals that aim to complete the LS given here would be welcomed.

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