The class of *rumpo* verbs plus directional prefixes

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ABSTRACT

The Latin verb *rumpo* can be classified, according to Levin (1993), as a *break* verb. This class belongs to a larger class which expresses "change of state". The Latin verb *frango* appears to have a similar meaning to that of *rumpo*. Both verbs are transitive and can form new ones with prepositional prefixes. However, in the presence of prefixes that indicate direction (such as *in*, *ex* or *intro*), the result of the derivation is different for each one. *Frango* retains its meaning and the direct complement is the entity that "changes state", while *rumpo* modifies its meaning, turns into a movement verb and becomes intransitive, its main component being direction. The question we will attempt to answer is: why is the meaning of direction – present in the prefix – favoured in the new lexemes from *rumpo*, while in the prefixed verbs from *frango* is the feature cause – apparently present in the "change of state" root – preserved? The hypothesis is that the roots √RUMP and √FRANG have different meanings; the meaning of movement is present in the root √RUMP while √FRANG is closer to the verbs belonging to the destroy class. Our analysis describes the semantics and syntax of these verbs in the theoretical framework of Distributed Morphology and focalizes in the problem related to the content of Roots.

1. THE MEANING OF VERBAL ROOTS
AND ITS CONTRIBUTION TO WORD FORMATION

1.1. The problem

This paper will try to account for the differences in meaning and syntax between the Roots √RUMP and √FRANG/√FRING in the simple verbs *rumpo* and *frango*, and in the derivative verbs with prefixes /*in*/ and /*ex*/ (*irrumpo*, *erumpo*, *infringo*, *effringo*)[1]. When prefixed with /*in*/ and /*ex*/, *frango* retains its meaning and the direct complement – the entity that "changes state" – while *rumpo* modifies its meaning, turns into a movement verb and becomes intransitive, its main component being direction. There is another problem to which we would like to draw attention: the literature on this subject (Álvarez Huerta 2009) mentions that the prefix transitivizes the verb, whereas this is the opposite case, a transitive verb (*rumpo*) becomes intransitive (*irrumpo*, *erumpo*).

The Latin verb *rumpo*, according to the *Oxford Latin Dictionary* (*OLD*), is transitive and it means: "to cause to split open or explode, to cause to break, to burst (barriers, bonds) as to escape". *Frango* has a similar meaning, according to the *OLD*, "To break, shutter, smash, to break in pieces, split up, to break open, break down (barriers), to break through, penetrate".

These verbs, according to the classes proposed by Levin (1993), may be considered *break* verbs and they enter into a larger class that expresses "change of state". Levin (1993: 242) says (following Hale – Keyser 1987) that *break* verbs «refer to actions that bring about a change in the 'material integrity' of some entity». *Rumpo* and *frango*, as defined by the *OLD*, are transitive verbs that express the destruction

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[1] Another problem, that we are not going to address here, is the identification of the allomorphs of a single Root. Harley mentions that «Factors that a linguist might take into account in identifying occurrences of a root across different contexts include identity or similarity of form, identity or similarity of meaning, and purely morphological behaviors, such as idiosyncratic selectional restrictions with respect to affixation or other morphological processes» (Harley 2014: 1).

or degradation of an entity, material or immaterial, designated by the direct complement (DP in accusative). This DP-Acc changes its state (it's aggravated), or ceases to exist as such (as can be seen in 1a and b).

These verbs contain a [cause] feature and, when the external argument is an agent, they admit the presence of an instrument in ablative (*sacrifica securi*, in 1a).

(1)   *veluti qui candida tauri*
    rumpere *sacrifica molitur colla securi.* (Ov. *met.* 12, 249)

    "As when one strives to break a bull's white neck with sacrificial axe". (Trans. F.J. Miller)

(2) *mollis illa educatio, quam indulgentiam uocamus, neruos omnis mentis et corporis* **frangit**. (Quint. *inst.* 1, 2, 6, 4)

    "That soft upbringing, which we call kindness, saps all the sinews both of mind and body". (Trans. E. Butler)

The classification of these verbs into the *break* class could work well for both simple verbs, but it is problematic when they form new derivative verbs with prepositional prefixes. The meaning of the derivatives, with the prefixes that indicate direction /*in*/ and /*ex*/, does not remain constant for *rumpo*. This verb no longer indicates a change of state in an entity (there is no entity that is destroyed or that suffers some type of change in its "material integrity"). *Rumpo* with prefixes (*irrumpo*, *erumpo*) expresses movement and change of location of the external argument. It becomes intransitive and has no direct complement in accusative. A DP-Acc could be present, but, when it is, it expresses not the object that changes its state, but the Ground of Movement[2]. Moreover, we can find a directional PP *in* + Acc. or *ex* + Abl. (as it can be seen in 3a, *inrumpat in pectora*). The main component

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[2] We use "ground" in the sense of Talmy (2000: 312): «The Ground is a reference entity, one that has stationary setting relative to a reference frame, with respect to which the Figure's path, site or orientation is characterized».

of meaning of the derived verbs (*irrumpo*, *erumpo*) is DIRECTION, specifically, the boundary crossing (outwards or inwards). The verb *frango* with prefixes retains its meaning of "breaking" or "destroying". The verbs derived from *frango* (*infringo*, *effringo*) require a direct complement, a DP-Acc., that expresses the entity that "changes state" or that is destroyed (as it can be seen in 3b, *infregit*).

(3) a. *ut denique dominetur in adfectibus atque in pectora inrumpat*. (Quint. *inst*. 2, 5, 8, 6)

"how the orator stablishes his sway over the emotions of the audience, forces his way into their hearts". (Trans. E. Butler)

    b.   *rigidum fera dextera cornu*
*dum tenet, **infregit,** truncaque a fronte revellit.*
(Ov. *met.* 9, 86)

"holding my tough horn in his pitiless right hand, he broke it off and tore it from my forehead, mutilating me". (Trans. F.J. Miller)

The question we will try to account for is what kind of meaning the Root has and how does it change in context or according to the type of "relational elements" in which they are inserted (as used in Acedo-Matellán – Mateu 2014).

This is to say why is the meaning of DIRECTION – associated with the prefix – favoured in the derivations of prefixed *rumpo*, while in the prefixed *frango* the meaning of CHANGE OF STATE, as in the simple verb, is preserved?

We believe it is necessary to observe how the meaning of the prefixed verb is built from the union of the relational elements in which the Roots are inserted and the meaning of the Roots. This brings us to the question about the meaning that is associated with the Roots and also to consider the way they are distributed in the syntax. Why can √RUMP be inserted in structures of CHANGE OF LOCATION and √FRANG only in those

of CHANGE OF STATE? The hypothesis is that *rumpo* and *frango* are not synonymous and that the meaning of *frango* is nearer to the class of *destroy*.

The present paper is organized as follows: Section 1 sets out the research question and some specifications of the theoretical framework; Section 2 describes the meaning of the simple verbs *rumpo* and *frango;* Section 3 exposes the changes that occur when the Roots of these verbs enter the derivation with /*in*/ and /*ex*/; Section 4 describes the type of DPs accusatives that can be complements of the prefixed verbs (*infringo*, *effringo*) and Section 5 presents the conclusions and new research questions.

The examples were taken from a *corpus* that corresponds roughly to the texts of classical Latin. We have selected some authors that are considered representative of a Latin stage, with the exception of Plautus, which was included because of our interest in comparing certain structures of him with others that belong to the classical *corpus*: Cicero, Caesar, Quintilian, Virgil, Livy, Catullus, Lucretius, Ovid.

1.2. Specifications about the framework

We assume that word formation takes place in syntax and that the primitives combined are: Roots and terminal nodes (l-morphemes and f-morphemes, Harley – Noyer 1999). A central debate of morphological theory consists in defining what kind of meaning the Roots add and, in close relation to this problem, whether or not they can take arguments. Arad (2005: 1) defines the Roots as "atomic lexical elements". Within the framework of Distributed Morphology (Halle – Marantz 1993; Marantz 1997; Harley – Noyer 1997; Harley 2014; Embick 2015), meaning can be understood as "disjoint or bifurcated" and combining the elements provides different components of meaning. In other words, the meaning of the Roots is built contextually: according to Embick (2009: 1) there are «at least four components to meaning: the meaning of Roots, the denotations of functional heads in a syntactic structure,

operators introduced in the semantics (CAUSE, BECOME, etc.) when syntactic structures are interpreted, and aspects of meaning that arise via (competition for) use»[3].

Within this framework, it is necessary to ask ourselves what kind of meaning the Roots can carry. Embick (2009: 1) also asks this question: «What's in a Root (M1)? I.e, what types of semantic information could be built into the semantics of a Root»[4].

Acedo-Matellán – Mateu (2014) argue that there are two types of elements that merge in the syntax to form the argument structure (which, therefore, is not primitive): relational and non-relational elements. The non-relational elements are Roots and argumental DPs. «Only relational elements can project structure» (Acedo-Matellán – Mateu 2014: 15). In this theory, Roots have semantic properties that are not relevant to the syntax, while the relational structures have semantic features that are relevant.

In the definition of the Motion event, we follow Talmy (2000: 25) «the basic Motion event consists of one object (the Figure) moving or located with respect to another object (the reference object or Ground)». The other components of the Motion event are: Path (the path where the Figure moves or is located), Manner and Cause.

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[3] According to the Bifurcation Thesis for Roots (BT-R): «If a component of meaning is introduced by a semantic rule that applies to elements in combination, then that component of meaning cannot be part of the meaning of a Root» (Embick 2009: 1).

[4] Another problem that arises in relation to the Roots is whether they have a phonological representation from the beginning of the derivation (Embick 2005) or if they are subject to "late insertion" and therefore are Vocabulary Items. It is also possible to claim, as Borer (2013) does in fact, that the Roots have just phonological representation during the derivation. In this work we will not deal with this problem, although it is true that √FRANG presents, in the verbs that interest us, an allomorph whose phonological representation is /frĩŋg/; in that sense, It can be thought that is necessary to postulate the late insertion of the root in order to solve the problem of allomorphy. But we will not address this argument because we will focus on problems of meaning.

2. THE SIMPLE VERBS *FRANGO* AND *RUMPO*

2.1. Description

In this section we will describe the syntactic structures of the non-prefixed verbs in order to show that *frango* has a similar meaning to *rumpo*, but cannot be strictly classified within the *break* class. We will also outline the type of arguments that are possible to occur with the simple verbs formed from these Roots.

Beth Levin's (1993) classification of the English verbs distinguishes *break* verbs, which are included in the "change of state" verbs, from *destroy* verbs. In Latin there is a set of *destroy* verbs that «relate to the total destruction of the entities» (Levin 1993: 239): *destruo* "destroy"[5], *pereo* "pass away, disappear", *diruo* "demolish, destroy", *subruo* "undermine", *demolior* "remove, destroy". The *break* verbs class, instead, «describes specifics of the resulting physical state of an entity (e.g. whether something is broken, splintered, cracked, and so on) rather than simply describing the fact that it is totally destroyed» (Levin 1993: 239). In Latin, the set of break verbs includes verbs like *scindo* "cut, split", *solvo* "loose, dissolve", *divido* "separate" and *rumpo*. The question is what differentiates *rumpo* from *frango*. Is it better to classify *frango* as a destroy verb?

In (4) we present some examples of *frango*, and in (5) of *rumpo*. The state of "broken" can be achieved by the action of a DP originator in nominative case: *Martia legio* (in 4a), *Octavius* (in 4b), the greatness of Cesar's spirit and the office of the Senate (in 4c), and the one who wants to eat the kernel (in 4d); so that the causes are not only human, or physical, but also abstract DPs. It should be noted that in (4b) *Octavius* is the originator of the action, but the instrument is "his patience" (DP-Abl.).

Another important question is what kind of entities can be turned into a "broken" state. It should also be mentioned that it is possible for these

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[5] Definitions in brackets were taken from the *Oxford Latin Dictionary* (*OLD*).

entities to be broken "to a lesser or bigger extent". In the examples of (4) the DPs in accusative are: *furorem* (4a), *Tiberium Gracchum* (4b), *meum consilium* (4c) and *nucem* (4d).

(4)   a. *post eiusdem furorem Martia legio **fregit**, quarta adflixit.* (Cic. *Phil*. 10, 21, 4)

"Afterwards the Martian legion has broken his frenzy and the forth crashed it to the earth". (Trans. W. Ker)

b. *is, qui iniuria accepta **fregit** Ti. Gracchum patientia, civis in rebus optimis constantissimus M. Octavius.* (Cic. *Brut*. 95, 6)

"M. Octavius, a man of inflexible constancy in every just and laudable measure; and who, after being affronted and disgraced in the most public manner, defeated his rival Tiberius Gracchus by the mere dint of his perseverance". (Trans. E. Jones)

c. ***fregit** hoc meum consilium et Caesaris magnitudo animi et senatus officium.* (Cic. *Fam*. 4, 4, 5)

"This determination of mine suddenly gave away before Caesar's magnanimity and the Senate's devotion". (Trans. G. Williams)

d. *qui e nuce nuculeum esse volt, **frangit** nucem.* (Plaut. *Curc*. 55)

"The man that wants to eat the kernel, craks the shell". (Trans. P. Nixon)

In the examples of (5), structures where the root √RUMP is inserted, the elements that originate the change of state are DPs in nominative: *nulla dies* (in 5a); *ingens pavor* (in 5b); *caelatura* (the chisel hit) (in 5c); *qui* (the gods) (in 5d). And it is also possible to observe the type of DPs in accusative that end up broken "to a lesser or bigger extent":

peace and pacts (in 5a); sleep (in 5b); the sheet too thin (in 5c.) and the decrees of the ancient sisters (in 5d); which are all of very different kind (concrete and abstract things).

(5)   a. *nulla dies pacem hanc Italis nec foedera **rumpet**.* (Verg. *Aen.* 12, 202)

"No dark day shall cause the Italians to shatter thes treaty's peace-terms". (Trans. F. Ahl)

b. *olli somnum ingens **rumpit** pauor.* (Verg. *Aen.* 7, 458)

"Frightful and massive shock bursts in on his sleep". (Trans. F. Ahl)

c. *erit autem, si non ab initio tenuem nimium laminam duxerimus et quam caelatura altior **rumpat**.* (Quint. *inst.* 2, 4, 8, 1)

"And there will be sufficient if only we do not draw the plate too thin to begin with, so that it run the risk of being broken if the graver cut too deep". (Trans. Buttler)

d. *Talia nequiquam toto Venus anxia caelo verba iacit superosque movet, qui **rumpere** quamquam ferrea non possunt veterum decreta sororum*. (Ov. *met.* 15, 780)

"The anxious goddess cried these complaints throughout the sky, but all in vain. The gods were moved indeed; and although they were not able to break the iron decrees of the ancient sisters…". (Trans. F.J. Miller)

In conclusion, it could be said that the simple verbs formed from the Roots √RUMP and √FRANG are almost synonymous, with an argument in nominative as the originator of the event and a DP-Acc. that is broken or, at least, degraded in its characteristics. There is a possibility that a DP-Abl. expresses the instrument.

Although both verbs seem to be synonymous, we will see that they are not. There are some differences between the resulting states of the objects expressed by the DPs-Acc., that end up broken in the structures of *rumpo;* and the DPs-Acc. in VPs with *frango*. In (6), it is possible to observe that with *rumpo* there are DPs-Abl. (or, as in 6b, with the preposition *ab* + a DP-Abl.) that indicate the Paths, as in (6a) *multis locis*; or the part of the object that is broken: in (6b), *a pectore*. In (6c), the *rupta via* is the Path that allows us (*nos venerimus*) to arrive to the *clausula*.

(6)   a. *rupti inde multis locis ordines.* (Liv. 6, 13, 3)

"Then, the ranks were broken in many places". (Trans. Radice)

b. *tenues a pectore vestes / **rumpit**.* (Ov. *ars* 3, 708)

"she tore the thin clothing from her breast". (Trans. Kline)

c. *gratiam perdet si ad eam (clausulam)* ***rupta*** *via venerimus.* (Quint. *inst.* 9, 4, 63, 4)

"its elegance will be wasted, if the path which leads up to it be interrupted". (Trans. Butler)

In these examples it can be seen that the resulting *broken* state with *rumpo* does not consist in the total destruction of the entity. The object results broken in some parts, and those parts become the Path of Motion for the Figure.

Although we cannot say that this behavior is what Levin (1993) calls "Conative alternation", we think there are some similarities. The instrument makes contact with the object and "moving" makes it permeable[6]. If we look back on the examples of *frango* in (4), we can

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[6] Levin (1993) distinguishes cut verbs from break verbs. One of the differences between the two classes is the possibility of cut verbs to enter the Conative alternation. This alternation is defined by Levin (1993: 42) as «a transitive
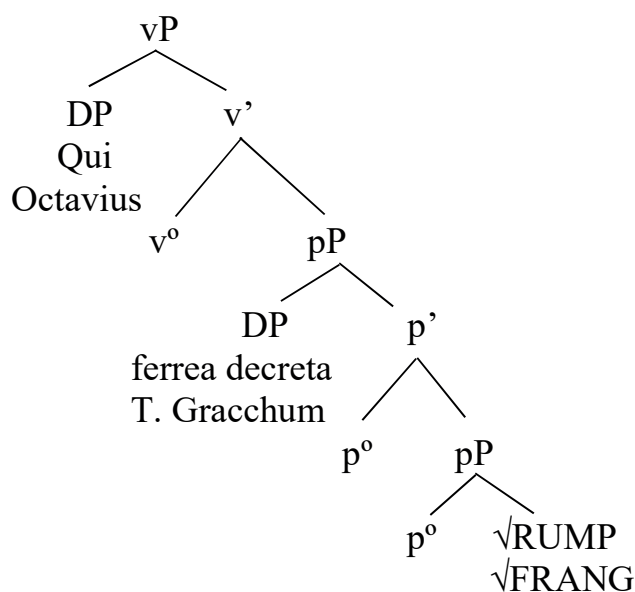
see that the objects end up totally broken or destroyed. There is no creation of Paths or places where the Figure could move through.

2.1. Analysis

The resulting verbs, beyond being apparently simple from a morphological point of view, have several layers of functional meanings, at least one operator, a vP layer, which expresses the CAUSE or the ORIGIN; and one of CHANGE, a pP layer. Roots are inserted into such relational structures and provide the form of the resulting state.

For our analysis we follow Acedo-Matellán – Mateu (2014) who proposed that the meaning of the Roots and the "arguments" depend on the place they occupy in the proposed relational structure. Thus, the vP specifier is an originator, the pP specifier is the Figure and the double pP complement is the Final Result or Final Ground. For these verbs, the structure we propose, following Acedo-Matellán – Mateu (2014), is:

alternation in which the object of the verb in the transitive variant turns up in the intransitive conative variant as the object of the preposition in a prepositional phrase headed by the preposition at […] The conative alternation seems to be found with verbs whose meaning includes notions of both contact and motion».

vP
DP   v'
Qui
Octavius
        v°   pP
              DP   p'
              ferrea decreta
              T. Gracchum
                        p°   pP
                              p°   √RUMP
                                      √FRANG

Qui rumpere quamquam / ferrea non possum veterum decreta sororum. (Ov. *met.* 10, 36)
Fregit Ti. Gracchum […] *Octavius* (Cic. *Brut.* 95)

3. THE PREFIXED VERBS *INFRINGO*/*EFFRINGO* VS. *IRRUMPO*/*ERUMPO*

3.1. Description

The Roots √FRANG and √RUMP also have the possibility of being inserted into structures with prefixes /*in*/ or /*ex*/. However, the meaning of the Roots in *infringo*/*effringo* is different than the ones in *irrumpo/erumpo* and the same happens with the types of arguments required in each case.

Verbs formed from *frango* enter syntactic structures with DPs in nominative that are the originators of the change of state. In (7) we provide examples for *infringo* (break, crush in or on): *hoc proelium* (7a); in (7b), the originator is not expressed, but it can be inferred from

the context that is Attalus' luck (*fortuna Attali*); in (7c), *Hercules*[7], in which a DP-Abl. expresses the instrument (*fera dextera*). The DPs-Acc. represent the objects that change of state: (7a) *res Samnitium*; in (7b.) *animos eorum*; in (7c = 3b) *rigidum cornu*.

(7)　a.　*hoc demum proelium Samnitium res ita* **infregit***, ut omnibus conciliis fremerent minime id quidem mirum esse, si impio bello et contra foedus suscepto.* (Liv. 8, 39, 10, 1)

"This defeat, after all that had gone before, so broke the spirit of the Samnites, that in all their councils they began to murmur that it was no wonder if they met with no success in an impious war, undertaken in violation of a treaty". (Trans. Foster)

b.　*non tamen ita* **infregit** *animos eorum, ut absisterent imperio.* (Liv. 38, 16, 14, 4)

"Yet he did not cow them so thoroughly that they refrained from exercising their power". (Trans. Sage)

c.　　　　　　　*rigidum fera dextera cornu*
dum tenet, **infregit***, truncaque a fronte revellit* (Ov. *met.* 9.86)

"Holding my tough horn in his pitiless right hand, he broke it off and tore it from my forehead, mutilating me". (Trans. Miller)

The structures in (8), which provide examples of *effringo* (to break open, to break in pieces), are syntactically and semantically similar to those in (7), a DP-Nom. is the originator of the change and a DP-Acc. is the theme that changes state: in (8a), *illi*; in (8b), [*illi*] *qui maiorem habere vim credunt ea*; in (8c), [*Philosophus*] *primus*; and the DPs-Acc.: in (8a), *foris aedis*; in (8c), *arta claustra portarum naturae.*

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[7] *Hercules* is not mentioned in this paragraph, but Ovid is referring the story of *Hercules* and *Aqueloo.*

(8)   a. *Illi noctu facta manu armataque veniunt, foris aedis **effringunt**.* (Cic. *II Verr.* 4, 96, 10)

"They, having prepared and armed a body of men, come by night; they break in the doors of the temple". (Trans. Yonge)

b. *qui maiorem habere uim credunt ea quae non habent artem, ut **effringere** quam aperire, rumpere quam soluere, trahere quam ducere putant robustius.* (Quint. *inst.* 2, 12, 1, 4)

"[Critics] who think that true vigour is all the greater for its lack of art, regarding it as a special proof of strength to force what might be opened, to break what might be untied and to drag what might be led". (Trans. Butler)

c.   *sed eo magis acrem inritat animi virtutem, **effringere** ut arta naturae primus portarum claustra cupiret.* (Lucr. 1, 69)

"Rather all the more they roused the ardor of his courage and make him long to be the first to burst the bolts and bars of nature's gates". (Trans. Smith)

The examples of the latin verbs *irrumpo* (to force one's way into, to rush suddenly into) and *erumpo* (to burst out, to break out) show different structures and meanings. The DP-Nominatives are: in (9a) *ille*, in (9b) *argumentatio*, in (9c) *sensus optimi*. These DPs cannot be interpreted as causing a change of state in an entity expressed by a DP-Acc., they undergo a CHANGE OF LOCATION. In (9a), the only example where we could find a DP-Acc. with this verb, we can see that, when it is in the context of the prefixed *irrumpo* and *erumpo*, the DP-Acc. is not the entity that changes its state. It is clear that *portas apertas* (the open doors; the entries not covered) are not entities that prevent the passage and must be "broken", but the GROUND through which the object (*ille)* moves. In (8b), there is a complement that also indicates

the GROUND or point of arrival: *in pectora;* and in (8c) there is no DP-Acc. or PPs complement.

> (9) a. *ille quidem potuit portas* **inrumpere** *apertas,*
> *sed nos obstitimus.* (Ov. *met.* 15, 598)
>
> "He might have forced his way within your gates, for they stand open, but I have hindered him". (Trans. Golding)
>
> b. *quam subtilis et crebra argumentatio,* […] *ut denique dominetur in adfectibus atque in pectora* **inrumpat**. (Quint. *inst.* 2, 5, 8, 6)
>
> "How subtle and frequent are the thrusts of argument […] and in conclusion how the orator establishes his sway over the emotions of his audience, forces his way into their very hearts (of the jury)". (Trans. Butler)
>
> c. **Inrumpunt** *enim optimi nonnumquam sensus, quos neque inserere oportet.* (Quint. *inst.* 10, 3, 33, 3)
>
> "For sometimes the most admirable thoughts break in upon us which cannot be inserted in what we are writing". (Trans. Butler)

The examples in (10), in which the lexeme *erumpo* appears, show that the DPs-Nom. are the ones that change location or move from a starting point: in (10a), *flumen universum*; in (10b), *eloquentia*; in (10c), *quae* (*lacrimae*); in (10d), *audacia*. The prefixation with *ex-*, to say it more appropriately, marks the exit point and, therefore, the direction. There are no DPs-Acc.: in (10a), *unde* indicates the starting point; in (10b), *per obstantia* marks the GROUND that is being traversed; in (10c), *dolore* and, in (10d), *ex avaritia* are the sources or the origin where the movement begins.

(10) a. *sed unde universum flumen* **erumpat**; *qui illi sedis et quasi domicilia omnium argumentorum commonstret.* (Cic. *de orat.* 2, 162, 8)

"But to the source whence a whole flood gushed forth; to an instructor who would show him the seats and aboded, as it were, of every sort of arguments and would illustrate them briefly" (Trans. J.S. Watson)

b. *nondum enim tantum dicendi lumen accesserat ut etiam per obstantia erumperet.* (Quint. *inst.* 12, 9, 5, 5)

"For it had not yet attained that splendor of diction which makes it impossible to hide its light under a bushel". (Trans. Butler)

c. *Quin etiam lacrimas iis natura mentis indices dedit, quae aut erumpunt dolore aut laetitia manant.* (Quint. *inst.* 11, 3, 75, 5)

"And further, nature has given them tears to serve as interpreters or our feellings, tears that will break forth for sorrow of stream for very joy". (Trans. Butler)

d. *In urbe luxuries creatur, ex luxuria exsistat avaritia necesse est, ex avaritia erumpat audacia, inde omnia scelera ac maleficia gignuntur.* (Cic. *S. Rosc.* 75, 7)
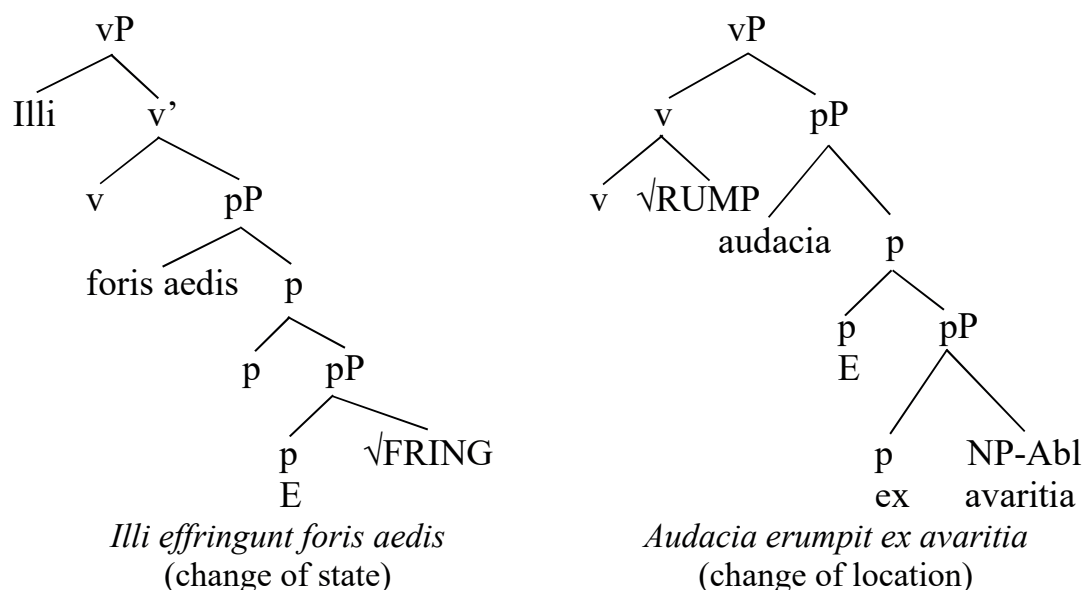
"In a city, luxury is engendered; avarice is inevitably produced by luxury; audacity must spring from avarice, and out of audacity arises every wickedness and every crime". (Trans. Yonge)

3.1. Partial conclusions and analysis

The analysis of the examples presented allows us to observe that the lexemes derived with prefixes show a difference in meaning, and that

what happens with the Root √RUMP is also different compared to what happens with the root √FRANG. In the latter, the meaning of the resultant state (broken) is conserved, but in the former the meaning of the direction or movement, proper to the prefix, is favoured. √RUMP (when prefixed with *in* or with *ex*) can enter the syntax with a type of DP-Acc. that expresses the GROUND (the limit to cross: *portas apertas*); or they can take a PP-*in/ex*. In contrast, √FRANG prefixed with *ex* or *in*, still expresses the change of state, and the DP-Acc. is the Theme. We understand that the incidence of the prefix is closely linked to where the change of state takes place, rather than to the direction of the process.

The change of location, which is expressed by the prefix with the Root √RUMP, is related to the Direction of the movement, and implies an argument related to the Ground (*towards* or *from*) that can be realized in the syntax as a PP-*in/ex* + a DP or as a DP-Acc., or not being realized. We will assume that the Roots √FRING and √RUMP are inserted into structures corresponding to the change of state and the change of location respectively. So, both the Roots and the arguments are interpreted according to the place they occupy in these structures. The DP in nominative of the *infringo* and *effringo* verbs is the originator, the DP in accusative is the Figure that changes state; in the corresponding structure there is no PP/DP that expresses the GROUND. The lexemes prefixed with the Root √RUMP are verbs of change of location, the DP in nominative is the Figure (the element that moves), there is no originator. The Root √RUMP provides an encyclopedic meaning linked to the (violent/sudden) way of entering or leaving.

```
              vP                                      vP
         Illi    v'                              v        pP
            v      pP                          v  √RUMP
        foris aedis   p                          audacia   p
                   p    pP                               p    pP
                  p   √FRING                            p  E
                  E                                        p      NP-Abl
                                                          ex    avaritia
```

Illi effringunt foris aedis   *Audacia erumpit ex avaritia*
(change of state)   (change of location)

According to the previous analysis, that is inspired in the analysis of the English verb *break in* proposed by Acedo-Matellán – Mateu (2014), √RUMP is inserted into structures in which the vP does not project a specifier, compared to what happens with √FRING, and this is the reason why the DP in nominative is not the originator but the specifier Figure of pP.

The lexemes *irrumpo*/*erumpo* are verbs of change of location, while *infringo*/*effringo* are verbs of change of state. Because the Root √FRING is inserted in this position, it receives interpretation of "result"; while √RUMP gives phonological incarnation to a verb of movement. The insertion of the preposition or prefix is different in each verb. We believe that *ex-/in-* are inserted at the lowest p when they express location and, when they express direction, they are inserted at the highest p instead.

4. PAST PARTICIPLES

At this point, we think it is necessary to ask whether there's a possibility of having the simple verbs (*frango* and *rumpo*) in their participial forms (specifically in the past participle form[8]: *fractus*, *ruptus*); and what kind of elements (the DP that agrees with the participle) can be in that state (*ruptus* or *fractus*). Another important question is what happens with the prefixed verbs (*infringo*, *effringo*, *irrumpo*, *erumpo*) and the possibility that these verbs have to appear in the past participle form. We think it is important to see if the passive forms of the prefixed verbs, especially *irrumpor* or *erumpor*, do exist in Latin and, if they do, as it seems to be the case for *erumpitur*, what meaning does it have.

The *OLD* records an entry for *fractus -a -um* ("broken, uneven, rugged") as an adjective and, on the contrary, there is no entry for *ruptus -a -um*. However, a search in the *corpus* has allowed us to observe that this lexeme can be found in the database not only as part of the passive periphrasis of perfect: verb *sum* + past participle, but also agreeing with nouns (*vinculis*, *catenis*, *foedus*).

> (11) a. *namque M. Fabius, captiuus Romanus, cum per negle-gentiam custodum festo die **uinculis ruptis** per murum inter opera Romanorum, religata ad pinnam muri reste suspensus, manibus se demisisset.* (Liv. 8, 16, 9, 2)
>
> "For Marcus Fabius, a Roman prisoner, being neglected by his guards on a day of merry-making, broke his bonds, let himself down by the wall, hand over hand, into the Roman works, by a rope which he had made fast to a battlement". (Trans. Foster)

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[8] It is worth to note that we are interested in the past participle because it has a passive meaning.

    b. *ut sese inclusit **ruptis**que immane **catenis** deiecit saxum.* (Verg. *Aen.* 8, 225)

       "Just as he'd shut himself in and had broken the chains he had crafted". (Trans. Ahl)

    c. *tum ex legatis unus abiens 'et haec' inquit, 'sacrata quercus et quidquid deorum est audiant **foedus a uobis ruptum**'.* (Liv. 3, 25, 8, 3)

       "Thereupon one of the envoys said, as he departed, "Let both this sacred oak and whatever gods there are hear that the treaty has been broken by you". (Trans. Foster)

It is interesting to note that the noun they agree with is the entity (material or immaterial) that has become "broken" as a result of an action. This meaning is most clearly seen in Livy's example (10c), in which *a vobis* is the cause or originator. So, the root √RUPT enters to form Achieved States (or Results).

    (12) a. *equi pars in mari **fractis nauibus** absumpti, parti neruos succiderunt in litore Macedones.* (Liv. 44, 28, 14, 2)

        "Some of the horses were destroyed in the sea as the ships were wrecked, some were hamstrung on shore by the Macedonians". (Trans. Schlesinger)

      b. *contentio fratrum trium turpis, **fracta vis**, contemptus furor.* (Cic. *Att.* 4, 3, 4, 8)

        "And the three brethren's struggle ended in disgrace, their strength broken, and their mad pride humbled". (Trans. Winstedt)

c. *mutum forum, elinguem curiam,* [***tacitam et fractam civitatem***] *videbatis.* (Cic. *post red.* 6, 9)

"This body issued no declarations by its authority; you saw the forum silent the senate-house mute, the city dumb and dispirited". (Trans. Yonge)

In the examples of (12) there is also an entity that has transformed to the state named by the Root √FRACT. The question that should be asked, then, is whether the Roots √FRACT and √RUPT with the prefixes *in-* and *ex-* are in the database and, in that case, with which meanings. The search in PHI5[9] shows that the forms (of the lexeme) *infractus -a -um* ("broken, weaken") and *effractus -a -um* ("broken in pieces") are possible and existing. We found examples of *infractus -a -um* (*omnibus hastis infractis*, *infractos animos, oratio infracta, infractus furor*) and *effractus -a -um* (*effractoque inlisit in ossa cerebro*, *ac ante paulo lucem effractam portam urbem ingreditur, effracta claustra portarum*) which has allowed us to observe that the N that agrees with these derived forms is the one that changes state and becomes broken, or at a near point on the degradation scale.

(13) a.   *maestusque per omnis*
it gemitus, torpent ***infractae*** *ad proelia vires.* (Verg. *Aen.* 9, 499)

"Sweeps through the ranks; battle energy breaks and begins to grow sluggish". (Trans. Ahl)

b. *sternitur infelix Acron et calcibus atram*
tundit humum exspirans infractaque tela cruentat. (Verg. *Aen.* 10, 731)

"Acron goes down, unfulfilled; and his heels, in his death-throes, pound earth. His blood dyes the now broken spear that has killed him". (Trans. Ahl)

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[9] PHI 5 is the data base of the Packard Humanities Institute (1997).

On the contrary, there are no examples of *irruptus -a -um*. As for the lexeme *erumpo*, the form *eruptos*[10] is found in an example of Lucretius, but its meaning is not "that which is in a broken state" but "that what comes out/exits":

(13)   *et hic Aetnaea minantur*
        murmura flammarum rursum se colligere iras,
        faucibus eruptos iterum vis ut vomat ignis
        ad caelumque ferat flammai fulgura rursum. (Lucr. 1, 724)

        "Here rumbling Etna threatens to reassemble her angry flames in readiness to belch fire from her throat in another violent eruption and once more shoot to the sky flakes of flame". (Trans. Smith)

The fact that the prefixed verbs, especially *irrumpo*, are not able to enter in past participle constructions, helps us to understand that, in effect, the lexemes formed by prefixing *in-* and *ex-* + *rumpo* have been detransitivized. The Root √RUPT does not appear in this structure as a result, but indicates a change of location. We have also looked in the database for the presence of these verbs in passive forms and, again, we have found examples of the derivatives of √FRING- (15a and b) and two of the verbs with the root √RUMP and the prefix *ex-* (16a and b), but none of *irrumpo*.

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[10] Acedo-Matellan (2010: 118), when discussing the Complement Direct Motion Construction, writes: «I note, last, that a possible counterexample to the deponent-restriction on past participle availability in intransitive verbs is provided, funnily enough, by a non-motional base: √RUMP "break". This root yields CDMCs when accompanied with a directional expression, and it contributes, as happens in English predicates involving *break* + particle, a manner component can be paraphrased as "in an abrupt, harsh or violent way"».

(14) a. *quae si in extremo breviora sunt, infringitur ille quasi verborum ambitus; sic enim has orationis conversiones Graeci nominant.* (Cicero *de orat.* 3, 186, 9)

"And if they are shorter at the end, this makes a break in the periodic structure of the words – for 'period' is the Greek name for these turning-points of speech". (Trans. Rackham)

b. *sed surdae ad omnia aures concitatae multitudinis erant nec minore intus ui quam foris portae effringebantur, effractisque omnibus toto Hexapylo agmen receptum est.* (Liv. 24, 32, 6, 3)

"But the ears of the excited crowd were deaf to all that; and the gates were being forced with no less violence from within than from without, ad when all had been forced, the column was admitted through the whole breadth of the Hexapylon". (Trans. Moore)

(15) a.   *post incita cum vis*
exagitata foras erumpitur et simul altam
diffindens terram magnum concinnat hiatum. (Lucr. 6, 583)

"Then its impetuous force, lashed to fury, bursts out and, in so doing, cleaves the earth to its depths and opens a yawning chasm". (Trans. M.F. Smith)

b. *ceterum, ubi primum sub ictu teli fuerunt, duabus simul portis erumpitur; et ad clamorem erumpentium ingens strepitus e muris portus ululantium mulierum.* (Liv. 43, 10, 5, 3)

"However, as soon as they were within range of missiles, a sally was made from two gates at once; and together with the battle-cry of the sallying parties, there arose from the walls a great uproar of women howling". (Trans. Schlesinger)

5. Conclusions

The *rumpo* and *frango* lexemes, formed from the Roots √RUMP and √FRANG can be classified as belonging to the class of CHANGE OF STATE. The verbs, resulting from the syntactic insertion of the Roots in the corresponding structures, are transitive and their direct complement is the entity whose state is modified.

The Roots themselves, in the case of *frango* the Root √FRING, when inserted with the prefixes *in-* and *ex-* behave differently from each other. √RUMP only retains a kind of MANNER flavor. The resulting verb is one of movement and has the meaning CHANGE OF DIRECTION, the Figure is the syntactic subject and the semantic theme, since it is the object that moves. The Root provides a meaning linked to the manner of the movement (with some violence or sudden). On the other hand, when √FRING is inserted with the same prefixes, its meaning is still CHANGE OF STATE, the prefixes have LOCATION values. The structure is transitive, so that the DP-Nom (syntactic subject) is the originator of the Change, the direct complement (DP-Acc) is the Theme that changes state.

Our work tries to explain this behavior from a theory that understands that the Roots are inserted into different syntactic structures, and it is the structures that provide the semantic features and the types of arguments required. The Roots provide the meanings, which can be forced to change due to functional phrases.

We would like to continue this research in order to understand what differentiates, exactly, the Roots in order to make them able to change their meanings when prefixed.

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