

THERE IS A LIGHT (VERB) THAT SOMETIMES GOES OUT IN WEATHER VERBS

BLEOTU ADINA CAMELIA

In this paper, we would like to argue in favour of the decomposition of weather verbs into light verbs and weather nouns, in the framework of Hale & Keyser (2002). A verb like *piove* ('rain', Italian), for example, can be decomposed into FALL [RAIN] or CAUSE [FALL [RAIN]], depending upon the unaccusative or unergative use of the weather verb. The idea of decomposing weather verbs is supported by explicit weather paraphrases in many languages across the world: weather paraphrases are present either as an alternative way of referring to the weather, apart from weather verbs, as in Romanian, Italian a.o. or as the only way of referring to the weather, as in Chinese, where there are no weather verbs. Moreover, there are languages (such as Finnish or Hungarian) in which the verb for raining is the same as the verb for falling - a phenomenon that has been labeled in the literature as 'generalized p-encoding.' (Eriksen, Kittilä & Kolehmainen 2010: 26). This suggests that the conflation theory of Hale & Keyser (2002) is the adequate way of coping with weather verbs, since incorporation seems to have taken place.

The verb FALL is, however, not the only light motion verb that can occur in weather contexts, we also find verbs like BE, COME, GIVE a.o. Since FALL and GIVE are heavier than BE or COME from a semantic point of view, one can set a scale of lightness/ heaviness. Taking this into account, the paper argues for the idea that it would be very elegant from a theoretical point of view to reduce light verbs to a limited set, and, hence, it proposes to decompose the 'heavier' light verbs into primitive predicates.

On the Ambiguity of Weather Verbs. Unaccusative or Unergative?

In order to provide an adequate representation of weather verbs in the Hale & Keyser (2002) framework, we have to analyze data from various languages. The question we would like to answer, and which we believe is particularly relevant for the decomposition of weather verbs, is whether meteorological verbs are unaccusative or unergative, in other words, whether they take a subject that is a Theme, or they take a subject that is an Agent, a question which might seem strange given the fact that, at first sight, it does not seem to be the case that weather verbs have a subject. However, answering it is essential for the decomposition of meteorological events, given that, if we assume the verbs are unaccusative, then we will decompose them as Light Motion Verb + Weather Noun, whereas, if we assume they are unergative, then we will decompose them as CAUSE [Light Motion Verb + Weather Noun]. Their lexical representations (in 1-syntax) will, hence, be different.

The Data

If we take a careful look at the data in various languages across the world, we notice several things about weather verbs. A first important remark is that weather verbs basically lack a real subject. They either take *pro* as subject (1), or an expletive (2). In addition, they may take a demonstrative as subject (3), a personal pronoun (4), or even a noun denoting the background or the source of the weather phenomenon, such as *nature*, *sky*, *God* (5 a, b, c, d), or even the substance of the weather phenomenon (5e):

- (1) a. *Piove*. (Italian), *Plouă*. (Romanian), *Llueve*. (Spanish)
Rains.
'It rains.'/ 'It is raining.'
b. *Neveca*. (Italian), *Ninge*. (Romanian), *Nieva*. (Spanish)
Snows.

'It snows.'/ 'It is snowing.'

- (2) a. *Il pleut.* (French)
It rains
'It rains.'/ 'It is raining.'
- b. *Es regnet heute.* (German)
It rains.
'It is raining today.'
- c. *Thadh er faridh adh rigna* (Icelandic)
it is started to rain
'It's raining'
- d. It hailed yesterday.
- e. It will drizzle tomorrow.
- (3) *Das regnet ja nicht mehr!* (colloquial German)¹
this rains particle no longer
'It no longer rains.'
- (4) *Hann er farinn adh rigna* (Icelandic)
He is started to rain
'Oh, sh*t, it's raining again!'
- (5) a. *Tuo pilvi sataa pian.* (Finnish)
DEM cloud.NOM rain.3SG.PRES soon
'(lit.) That cloud will soon be raining.'
- b. *Taivas salamo-i.* (Finnish)
sky.NOM flash-3SG.PST
'The sky was flashing/lightning.'
- c. God snows on us to make us happy and fluffy.
- d. God will thunder on us if we do not behave.
- e. The rain is raining on us heavily.

Latin is a very interesting case, given the fact that, in Latin, we find both cases of impersonal weather verbs (*pluit*= 'it has rained', *tonuit*= 'it has thundered') and of weather verbs that take as subjects nouns referring to gods (*Iove tonante.*, *Iupiter pluvius*). Meillet (1937: 133-134) argues that, in fact, at a certain point, a change took place in Latin from the personal to the impersonal, and then back to the personal, a change that can receive a religious explanation (the Indo-Europeans' belief in gods, the Christian belief in God)².

Apart from the cases mentioned above, there are some particular verbs used to refer to the state of the weather outside, which always require subjects:

- (6) a. The sun is shining.
b. The wind is blowing.

The fact that this is the case, while one says 'It is raining.' instead of 'The rain is raining.' may be explained through the fact that the sun and the wind have a higher degree of agency, as suggested by Piaget (1972). As for the fact that we do not usually say 'The rain is raining', but we have instead:

- (7) a. *It is shining.
b. *It is blowing.

¹ One also finds a demonstrative as the subject of weather verbs in Dutch dialects, namely, the pronoun *dat*.

² Ruwet (1991), however, goes against the idea of weather verbs being originally personal, arguing that the majority of weather verbs do not have a god-Agent or any other subject, for that matter, the occurrence of subjects is not systematic, neither cross-linguistically, nor within a given language (Greek, Sanskrit, Latin), and, in addition, verbs without an explicit subject are not uncommon in Latin.

This can be explained through the fact that, while it is not that clear who does the raining (is it the sky, the clouds, or is it God?), it is more clear that it is the sun that is the source of light, and the wind that is the Agent of blowing. In the typology proposed by Eriksen, Kittilä & Kolehmainen (2010), the cases under (6) are subsumed under the label ‘argument-predicate type’, as both the argument and the predicate are used to refer to the state of the weather. To be even more specific, it is the split type, in which the argument and the predicate express different facets of the same weather state/ event, and not the other variant of argument-predicate type, namely, the cognate type, in which the argument is cognate with the predicate (‘The snow snows (on us every winter).’). However, this is not the most common type used to speak about the weather. Examples (1)-(3) illustrate the predicate type, in which it is the predicate that expresses the meteorological event/ state, and the argument is almost vacuous.

Apart from the argument-predicate type and the predicate type, there is also the argument type, in which the argument expresses the meteorological event, while the predicate has almost no semantic value. This is the case of Chinese, for example, where there are no weather verbs, but weather expressions made up of the equivalent of the verb ‘fall’ and a noun related to the weather:

- (8) a. *Jintian xia yu.* (Mandarin Chinese)
 Today fall rain.
 ‘It is raining today.’
- b. *Dongtian xia xue.* (Mandarin Chinese)
 Winter fall snow.
 ‘It snows in the winter.’

As a matter of fact, a second important thing we notice when looking at meteorological events/ states is that languages often make use of weather paraphrases, even in the languages that have weather verbs. Some of the weather paraphrases used are causative (9a, b, c), and some are not (9 d,e):

- (9) a. *Hace viento.* (Spanish)
 Makes wind.
 ‘It’s windy.’
- b. *Hace sol.* (Spanish)
 Makes sun.
 ‘It’s sunny.’
- c. *Fa freddo.* (Italian)
 Makes cold.
 ‘It is cold.’
- d. *Hay nubes.* (Spanish)
 Is clouds.
 ‘There are clouds.’
- e. *C’è un freddo bestiale fuori.* (Italian)
 Expl is a cold terrible outside.
 ‘There is a terrible cold outside.’

The fact that weather verbs can take both subjects that are causative and subjects that are non-causative, as well as the fact that there are both causative and non-causative weather paraphrases in languages across the world suggests that weather verbs/ expressions have an ambiguous behaviour. To be more specific, they vacillate between an unergative and an unaccusative use.

If we look at the way weather verbs behave with respect to the unaccusativity tests proposed by Levin & Rappaport Hovav (1995), namely, *there*-sentences, locative inversion, resultatives, past participle used as a modifier inside NPs, we see that the tests yield no conclusive results, supporting the idea of ambiguity of weather verbs in English. Weather verbs do not enter *there*-sentences, just like non-prototypical unaccusatives and unergatives (10a), they do not occur in locative inversion constructions, just like unergatives (10b), they behave like unergatives in that they do not enter ‘real’ resultative constructions (10c), and like unaccusatives in that they do not enter fake resultative constructions (with a reflexive) (10d), and their past participle does not occur as the modifier of an NP, just like in the case of unergatives (10e):

- (10) a. *There rained heavily yesterday.
 b. *Outside snowed heavily.
 c. *It drizzled wet.
 d. *It drizzled itself wet.
 e. *the snowed snow

The idea that weather verbs are ambiguous between unaccusatives and unergatives is also supported by the fact that, in Italian, we have the possibility of selecting both the auxiliary *essere* (be) and the auxiliary *avere* (have):

- (10) a. Ha piovuto ieri.
 Has rained yesterday.
 'It rained yesterday.'
 b. È piovuto ieri.
 Is rained yesterday.
 'It rained yesterday.'

However, as argued in Benincà & Cinque (1992: 155), not all weather verbs in Italian display this kind of alternation: *tuonare*, 'thunder', *gelare*, 'freeze', for example, do not take the verb *essere* as an auxiliary. Benincà & Cinque (1992) argue that the verb *essere* can only occur with verbs of change of state, but this explanation does not seem to hold, given the fact that a verb like *tuonare* (which is not a change-of-state verb) can also occur with *essere*. Moreover, weather verbs in French, for example, do not display this kind of alternation. The Italian data is, nevertheless, relevant.

From the data, we can derive that weather verbs sometimes behave like unaccusatives and sometimes like unergatives (in different languages, as well as in the same language), but mostly like unaccusatives. Moreover, from a semantic point of view, weather verbs are unaccusatives (**It intentionally rained on us.*).

Apart from intransitive uses, weather verbs can also enter other types of constructions (transitive, or with a prepositional complement (as in 'It rained heavily on us yesterday.') a.o.). We will try to account for the inchoative-transitive alternation, but we will focus on the intransitive uses of weather verbs, taking into account the fact that subjects of unergatives occupy a different position in the structure from 'subjects' of unaccusatives (SpecV versus complement of V).

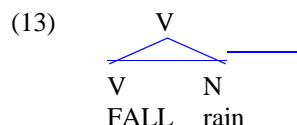
Proposal

We will adhere to the conflation theory of verb formation put forth by Hale & Keyser (2002), arguing that 'rain' can be decomposed as 'fall rain'. Several arguments can be brought in favour of this.

First, in a language like Chinese, there are no weather verbs but, instead, a construction using the verb *fall* and a weather noun (*rain*, *snow*). Second, weather sentences in various languages can be paraphrased using this construction: *rain*= 'FALL rain', *snow*= 'FALL snow'. Thirdly, in Finnish, but not only (in Hungarian, for example, we have the same thing), we come across a phenomenon labeled as 'generalized p-encoding' (generalized precipitation encoding) by Eriks, Kittilä & Kolehmainen (2010), namely, the verb for raining, *sataa* 'rain', meant 'to fall' initially, but, now, the original meaning has been lost, and *sataa* can only mean 'to rain', or 'to precipitate'. If it is to express events of snowing or hailing, arguments must be added:

- (12) a. Sataa (vet-tä).
 Rain.3SG.PRES (water-PART)
 'It is raining.'
 b. Sataa lun-ta.
 Rain.3SG.PRES. snow-PART
 'It is snowing.'
 c. Sataa rake-i-ta.
 rain.3SG.PRES hail-PL-PART
 'It is hailing.'

The structure we will assume for 'rain' is an l-structure in the Hayle & Keyser sense, i.e. a structure that is formed in the lexicon, pertaining to l-syntax:



In this structure, the verb is followed by a bare noun, not an NP or a DP, and, therefore, it needs no case, it does not have to observe Burzio³'s generalization: we are in the domain of I-syntax. The bare noun can, in this way, get incorporated into the verb by means of conflation.

Although the structure is not problematic for Burzio's generalization, from a semantic point of view, it only seems to account for the unaccusative use of weather verbs, not for the unergative use. We need to enlarge this structure so as to include the causative component as well.

Hale & Keyser (2002: 1) pay special attention to the causative-inchoative transitivity alternation which occurs in the case of unaccusatives, but does not occur in the case of unergatives. This could be explained by the fact that unergatives already contain the causative component (the cause resides inside the subject of the verb). We have:

- (14) a. The pot broke. (inchoative)
 b. I broke the pot. (causative)
 but, at the same time:

- (15) a. The engine coughed.
 b. *I coughed the engine.

In the case of weather verbs, however, the inchoative/ transitive alternation seems to be imperfect:

- (16) a. It rained.
 b. *God rained it.
 c. *The rain rained.
 d. God rained a heavy rain.

However, this does not mean the alternation is completely inexistent. Instead, the imperfect alternation could be explained by the fact that *it* is not a full-fledged DP, and it cannot occur in object position, and/ or by saying that *it* is pseudo-referential, and if we assume its reference is *God*, then a sentence like 'God rained God' would not make much sense.

On our account, *it* can refer to two different things, either God or the rain:

- (17) It rained.
 = God/ the sky rained.
 OR
 = The rain rained.

This is in consonance with the German, Dutch, and Icelandic facts mentioned when presenting the data (i.e., instead of an expletive, we can have either a demonstrative pronoun or a personal pronoun 'he'), as well as with the facts from the history of language (e.g. Latin)⁴.

Our proposal is that the verb enters two possible structures: (a) unergative, and (b) unaccusative. As unergatives, they have the structure CAUSE [FALL RAIN]⁵. This structure is in accordance with Hale & Keyser's (2002) view

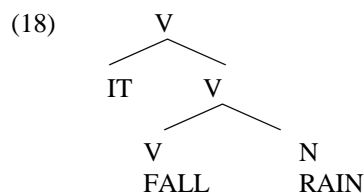
³ According to Burzio's generalization (1986), verbs that have no external argument cannot assign the Accusative case.

⁴ It is not, however, in accordance with the view put forth by Eriksen, Kittilä & Kolehmainen (2010). The authors argue that meteorological constructions simply lack participants, and the lack of real participants is most obvious with temperature constructions, like 'it is cold/hot', where the predicates do not seem to refer to any specific entities. Nevertheless, even in a case like 'It snows.', 'it' does not count as a real participant, and neither does the noun 'snow' in 'The snow snows.', since it behaves differently from regular thematic objects: it is cognate with the verb, it is the single participant that can actually snow, apart from metaphorical uses (Eriksen, Kittilä & Kolehmainen 2010: 568-569).

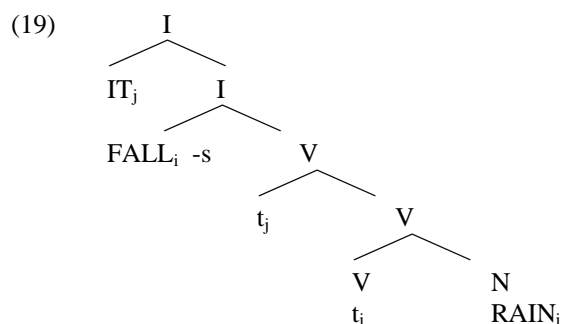
that unergatives are transitives underlyingly, a view that is supported by the presence across languages of unergative paraphrases made of light verbs and direct objects such as *do a song* in a sentence of the type *My sister did a wonderful song yesterday*, and, also, the presence of cognate objects with unergatives (e.g. *She laughed a beautiful laugh*). As arguments in favour of the unergativity of weather verbs (in some cases), we bring the fact that the verbs select a *have* auxiliary in the languages where we have a *to be/ to have* alternation, and, also, that the subject is not an expletive, but a pronoun in some languages. As unaccusatives, weather verbs have the structure FALL RAIN. In this case, we can have a transitive/ unaccusative alternation: *God rained this rain on us to punish us*.

In a previous proposal applied to French (and Italian) ,Manente (2008: 141-142) argued that *il* and *pro* are always Causes; in our analysis, however, the expletive pronoun *it* acts as a Cause in the unergative cases and as a non-Cause in the unaccusative cases. We thus argue for the polysemy of the expletive: the expletive has different semantic values/ theta roles depending upon the position it occupies in the I-structure (as a subject/ Specifier of ‘FALL rain’, or as a subject/ Specifier of ‘CAUSE [FALL rain]’). Weather verbs basically enter two possible structures:

- a. unaccusative: FALL RAIN, in which case we may have a transitive/ unaccusative alternation: *God rained this rain on us to punish us*.



and IT is coindexed with RAIN (It is raining now.), as shown in (19)⁶:



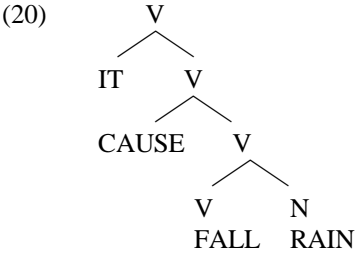
IT is coindexed with FALL (through the agreement features of inflection), and FALL is coindexed with RAIN (head-complement relation). (i=j)

and:

- b. unergative: CAUSE [FALL RAIN]

⁵ We opt for this analysis starting from the five lexical semantic representations proposed by Rappaport Hovav & Levin (1998): [x ACT<MANNER>] (activity), [x <STATE>] (state), [BECOME [x <STATE>]] (achievement), [[x ACT<MANNER>] CAUSE [BECOME [y <STATE>]]] (accomplishment), [x CAUSE [BECOME [y <STATE>]]].

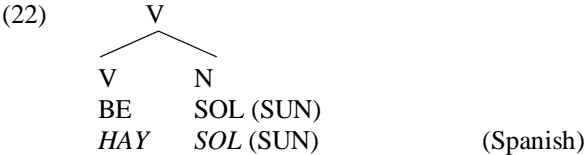
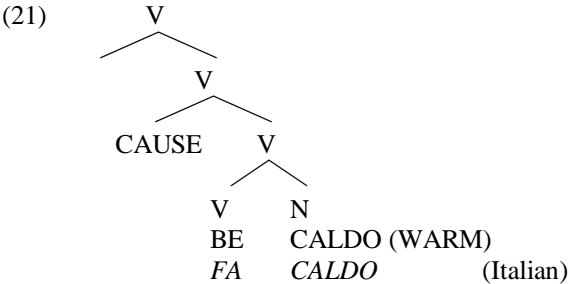
⁶ The coindexation explains the control between *it/pro* and the PRO following it in “It sometimes rains after PRO snowing.” (Chomsky 1981: 324), a phenomenon which does not occur with expletive IT. This supports the idea that weather IT is different from expletive IT (Yoon 2003).



in which case there is no alternation, and IT may refer to GOD (It rains with vengeance on us.) or THE SKY.

While in English, it is not that clear what IT refers to, in Italian, depending upon the auxiliary verb selected by weather verbs (*essere* or *avere*), one can argue for a CAUSE *pro* in the *essere* case, and a NON-CAUSE *pro* in the *avere* case. In the case of French weather verbs, which only select *avoir*, a possible indication for their unergativity, Manente (2008) argued that the expletive *il* is always a Cause.

While incorporation works very well for weather verbs, it does not for weather expressions, neither for causative weather expressions (21), nor for non-causative ones (22):



In these cases, we will argue that no incorporation takes place (*HAY* acts as a near-synonym of BE, just like *FA* (*FARE*) acts as a near-synonym of CAUSE). This is because the noun would have to get incorporated first (into V), and then the resulting V would have to get incorporated into CAUSE, given the fact that incorporation starts bottom up. However, as the noun gets spelled out, we will instead assume that the light verb CAUSE in the example above gets spelled out (the verb BE does not get spelled out in the first example, neither does incorporation into BE take place), and that the light verb BE in the other example also gets spelled out. It thus seems to be the case that weather expressions act as a spell-out of the underlying structure of weather verbs.

Weather Verbs as Motion Verbs

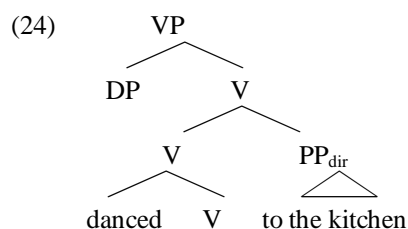
Since there is a motion verb that actually spells out in weather paraphrases, our basic claim is that weather verbs are motion verbs. It would be somehow supportive of this idea if we could show that other motion verbs can be decomposed into light verbs as well, not just weather verbs. This is precisely what we want to show.

On (Heavy) Motion Verbs

First and foremost, a verb like *dash* can be ascribed the meaning ‘to run very fast for a short distance’, and, thus, it can be decomposed into the verb *run* and the respective adjuncts. It could even be argued that the verb *run* can be decomposed further on: it can be ascribed the meaning ‘to move/go quickly on foot’, and, thus, be decomposed into the light verb *go* and the respective adjuncts.

Secondly, light verbs can combine with other motion verbs to yield a different meaning, as argued by Zubizarreta & Oh (2007). What they notice is that, in Germanic languages, so as to give rise to a directed motion meaning, manner of motion verbs can combine with a light aspectual verb (24) by virtue of a Compound Rule (25):

- (23) a. Kitty danced to the kitchen.
b. The bottle floated to the beach.



- (25) Compound Rule: Merge two lexical categories of the same category type.

This is different from Korean, where we have the following Generalized Transformation (GT):

- (26) Merge a verbal I-structure with the head of another verbal I-structure.

This GT is not part of the grammar of Germanic languages; if it were, we should expect sentences like *John ran go to the market*, as it happens in Korean, a serial verb language (v+go), where the verb is actually spelled out.

Coming back to Germanic languages, in this case, English, we come across two constructions:

- (a) the directed motion construction:

- (27) a. John wobbled to the door.
a'. [John [_v [_v wobble v] [to the door]]] and

- (b) the cause-motion construction

- (28) a. John kicked the ball to left field.
a'. [John [_v [kicked v] [the ball] [V [to left field]]]]).

Both constructions are explained by the Compound Rule, according to which two lexical categories of the same type can merge together, in this case, a verb with a light aspectual verb (*go*, *cause* respectively). Support in favour of this comes from sentences like *Go see a movie.*, *Come talk to me about your paper.*, where the light verb is spelled out.

According to Zubizarreta & Oh (2007), it thus seems to be the case that, in Germanic language, heavy motion verbs use light motion verbs to express directed motion. Unlike in Korean, though, the light verbs used in Germanic languages are usually silent.

On Light Motion Verbs

Even when they are not silent, light motion verbs are different from lexical motion verbs, as argued by Cardinaletti & Giusti (2001). According to them, 'semi-lexical' motion verbs represent a closed class, made up of the weaker motion verbs, i.e. the semantically most basic ones, like *go*, *come*, *run*, and not **walk*, **fly*, **rush*. One can find numerous examples in Southern Italian dialects (29), American English (30), and Swedish ('go', 'come'):

- (29) a. Vaju a pigghiari u pani. (infinitival construction)
go-1s to fetch-INF the bread
b. Vaju a pigghiu u pani. (inflected construction)
go-1s to fetch-1s the bread. (Marsalese, a Western Sicilian dialect)

- (30) a. I go to buy bread.

- b. I go and buy bread.
 c. I go buy bread. (American English)

These constructions are not serial verb constructions, as shown by the lack of object sharing between the two verbs, therefore, they are different from the Korean examples we have just seen.

What is particularly relevant for our discussion is the fact that light motion verbs possess particular properties that distinguish them from heavy motion verbs, both functional properties, and lexical properties. They behave like functional categories in that they appear in a fixed order (Motion V Lexical V), take no arguments, no adjuncts, they are subject to various morphological restrictions, for example, in American English, only the indicative present and imperative forms are allowed (*John managed to go visit Harry every week.*, *Go visit Harry tomorrow!*), and they allow clitic climbing in Marsalese. They behave like lexical categories, in that they have semantic content, they select a connecting element: *a* (Marsalese), *and* (American English), *och* (Swedish)- which is typical of lexical verbs, and they assign a secondary theta-role, i.e. a secondary *agentive* theta-role assigned to the subject only when inserted in the inflected 'VV' construction. This set of properties specific to light motion verbs goes to prove that they actually form a distinct class of verbs, and so, it is not arbitrary to postulate their presence, and create a projection in the tree for them.

Weather Verbs –Decomposed into Light Motion Verbs

Taking into account the fact that motion verbs either decompose into light verbs and other elements, or combine with light verbs to yield a different meaning, we would like to claim that weather verbs should be analyzed as motion verbs, in the spirit of Benincà and Cinque (1992). Since motion verbs can be unaccusatives (like *fall*) or unergatives (like *run*), this explains why they can take both the auxiliary *essere* ('be') and the auxiliary *avere* ('have') in Italian (*essere* in case we are dealing with a change of location, *avere* in case we are dealing with an activity). Weather verbs are no exception to this:

- (31) a. *Ha/ è piovuto.*
 'has/ is rained' ('It has rained')
 b. *Ha/ è nevicato fino all'alba.*
 'has/ is snowed until the dawn.'

Although there are some weather verbs that do not allow for both auxiliaries (*tuonare* 'thunder', *gelare* 'freeze'), be they unaccusative or unergative, motion verbs are decomposed into light verbs and nouns/ prepositions. On Hale & Keyser's (2002) account, light verbs are present in the make-up of verbs. On Zubizarreta & Oh (2007)'s account, light verbs combine with heavy verbs to yield a different meaning, more exactly, manner-of-motion verbs combine with the light verb *go* to give rise to the directed motion meaning (the verb takes a prepositional phrase). One operation takes place in I-syntax, the other takes place later in the derivation.

We argue that, in the case of weather verbs (motion verbs), where the direction is already specified (downwards, towards the earth (generally)), a light verb is present. However, unlike Zubizarreta & Oh (2007), we will not argue that the motion verb (in our case, the weather verb) combines with a light verb; instead, just like Hale & Keyser (2002), we will say that light verbs are present in the making of weather verbs.

If the weather verb is used unaccusatively, then the light verb is usually FALL, if it used unergatively (*Ha nevicato.*), or transitively (*God snows this snow on us to make us pure again.*), the lexical semantic representation makes use of two light verbs CAUSE and FALL ([God [CAUSE [FALL snow]]]).

However, the range of light verbs which can occur in weather contexts is much wider:

- (33) *Vine furtună.* (Romanian)
 Come storm.
 'The storm is coming.'
- (34) *Arriva la tempesta.* (Italian)
 Arrives the-storm.
 'The storm is coming.'
- (35) *Bate / Suflă vântul* (Romanian)
 Hit / Blow wind-the.

‘The wind is blowing.’

(36) *Dă cu ninsoare.* (Romanian)
Gives with snow.
‘It is snowing.’

(37) *Hace frio.* (Spanish)
Makes cold.
‘It is cold.’

(38) *Fa freddo.* (Italian)
Makes cold.
‘It is cold.’

The number of light verbs seems to be quite large (and the literature has used the term ‘light verb’ to refer to more or less any verb devoid of full semantic content). But we would like to propose that, actually, they can be reduced to a limited number, a fixed set. FALL may be decomposed further on into COME [TO BE down]; the items COME and BE and ‘down’ are taken from the numeration, and spell out as FALL after the syntax has finished manipulating them. We thus have:

- (39) a. BE
b. COME
c. ARRIVE = COME [TO BE AT X], X= PLACE
d. FALL = COME [TO BE DOWN]
e. MAKE = CAUSE [TO BE]
f. GIVE = CAUSE [X TO BE OF Y]

We can equate the notion ‘light verb’ with the notion ‘primitive predicate’, by which we mean ACT, BE <STATE>, BECOME and CAUSE, the predicates used in the lexical semantic representation of verbs (states, activities, achievements, and accomplishments) by Levin & Rappaport Hovav (1998). Moreover, we can even create a scale of light verbs (FALL > COME > BE), with the possibility of further adding the CAUSE.

In conclusion, light verbs are sometimes spelled out and sometimes not, as happens in the case of weather verbs, but irrespective of their being pronounced or not, they are always present in the lexical semantic representation. In representing them, one has to take into account at least two things: the unaccusative/unergative distinction, and the verb typology proposed by Levin & Rappaport Hovav (1998). In this way, one can provide a refined representation of weather verbs, decomposing them into light verbs and nouns, and then, decomposing light verbs further on, function of their meaning.

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