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► To cite this version:

Machteld Meulleman, Katia Paykin. Thetic and categorical judgments inside the weather domain. Flaux Nelly; Haas Pauline; Vassil Mostrov; Paykin-Arrouès Katia; Tayalati Fayssal. De la passion du sens en linguistique : hommages à Danièle Van de Velde, Presses universitaires de Valenciennes, pp.263-285, 2017, 978-2-36424-050-6. hal-02473729

HAL Id: hal-02473729

<https://hal.univ-reims.fr/hal-02473729>

Submitted on 2 Sep 2021

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**Thetic and categorical judgments
inside the weather domain**

INTRODUCTION^{1, 2}

The linguistic expression of natural atmospheric phenomena has intrigued linguists for centuries due to its peculiar behavior.

Indeed, constructions that encode these phenomena often contain impersonal verbs and testify to the conceptual difficulty of distinguishing participants and processes inside these complex manifestations independent from human activity or control. According to N. Ruwet (1990:59), atmospheric phenomena are synthetic and impossible to decompose into what happens and what gets affected by what. Therefore, linguistic means employed by each language to describe natural phenomena artificially divide this synthetic core into subject- and predicate-like elements, possibly leaving one of them semantically empty. As has been pointed out by E. Keenan (1976:317),

in simple statements about the weather, there appears to be little distinction between the activity (the raining) and the object involved (the rain). So in general, if a weather sentence [contains] a subject-predicate form (it may consist of just a single verb) then either the subject will be semantically weak or the predicate will³.

Starting from the second half of the 20th century, one of the emphases in the linguistic study of weather expressions, within various theoretical frameworks, has been on the consistent presence of a locative (*cf.* among

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¹ This work has received support of TransferS (laboratoire d'excellence, program “Investissements d'avenir” ANR-10-IDEX-0001-02 PSL* and ANR-10-LABX-0099).

² We would like to thank Vassil Mostrov, Laure Sarda and Marleen Van Peteghem for their judicious comments on the first draft of this paper. Needless to say, all persisting errors are entirely ours.

³ As, for example, in Russian *dožd'* *idët*, lit. ‘rain goes’.

others, C. Fillmore 1968, D. Bolinger 1973, 1977, N. Erteshik-Shir 1997, O. Fernández-Soriano 1999, K. Taylor 2001), analyzed as situated on the (sub)syntactic structure level or as part of the information structure. The aim of the present article is to investigate the exact role of these locatives in the expression of weather and to elucidate possible correlations between the syntactic encoding used to denote natural atmospheric phenomena and the type of judgment put forth.

The article is structured as follows. We will start by a succinct description of some major studies dealing with locatives in the weather domain, considering that an exhaustive overview of the numerous studies consecrated to the description of weather in general goes far beyond the scope of the present paper. We will then provide a brief description of the main points of view on the information structure of weather sentences. Section 2 will present our own analysis of structures denoting atmospheric phenomena with a special emphasis on the different pragmatic roles that spatio-temporal locatives can fulfill. We will consider separately traditional weather constructions (*cf.* section 2.1) and formally possessive constructions (*cf.* section 2.2). Our study will involve three different languages, English, French and Russian, each belonging to a different family of Indo-European languages.

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1. THEORETICAL BACKGROUND: SPATIAL INDICATIONS IN THE DOMAIN OF NATURAL PHENOMENA

A non-negligible amount of work has been done on the presence of a locative inside structures encoding weather phenomena be it on a syntactic or sub-syntactic level or on the level of information structure. In the large majority of studies, the question of the locative is posed primarily if not exclusively for the impersonal verbal structures, thus often leaving aside other ways of weather expression, such as existential constructions, for example. Indeed, some authors consider the locative to underlie the impersonal pronoun of weather verbs, others see it as an unarticulated constituent, yet others as a stage topic. In what follows, we will provide a brief account of the major analyses available on this subject.

1.1. Syntactic perspective

On the basis of D. Langendoen (1966), C. Fillmore (1968) argues that the impersonal pronoun of meteorological verbs and other structures expressing atmospheric phenomena, such as *It is hot in the studio*, is in fact a trace of the underlying extraposed locative. The locative is thus presented as a real syntactic argument of weather predicates, compa-

rable to a deep subject. C. Fillmore's reasoning is based on examples like the one in (1), where the locative can indeed be viewed as an extraposed argument.

- (1) *It is hot in Chicago. ← Chicago is hot.*

Besides the difficulty of dealing with the preposition linked to the extraposition of the locative, C. Fillmore's analysis presents a number of other problems, already noted by D. Bolinger (1973, 1977), B. Darden (1973), and N. Ruwet (1990). The main one is that most weather expressions do not have direct equivalents of the explicit locative in the surface subject position, as shown in (2).

- (2) *It rained in London. ← *London rained.*

Moreover, fronted locatives may co-occur with an impersonal pronoun, as in (3b), thus making it impossible for the pronoun to result from the extraposition of the locative. According to D. Bolinger (1973), this proves that the pronoun *it* does not copy the locative but gets purely specified in reference to it.

- (3) a. *California is pleasant.*
 b. *In California it is pleasant.*

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As has been noted by J. Gut-Klos (1976), there is also a profound semantic difference between the impersonal constructions and the personal ones with the locative subject⁴: the impersonal sentences, like (3b), denote temporary states, while personal ones, like (3a), denote permanent states⁵.

Another take on the subject is proposed by O. Fernández-Soriano (1999), who considers that Spanish meteorological predicates are impersonal event predicates that select for a locative as an external argument. She claims that both lexical weather verbs, as in (4), and light verbs⁶ com-

⁴ It should be noted, however, that the remark of J. Gut-Klos (1976) holds exclusively for weather phenomena encoded as states. Dynamic phenomena do not allow such alternating structures:

(i) *In Paris, it rains.*
 (ii) **Paris rains.*

As we will show *infra*, sentences where the locative appears in the subject position do exist but the dynamic predicate is transformed into a stative one. These sentences, therefore, correspond to categorical judgments attributing a characteristic to a specific spatial location, as in (iii).

(iii) *Paris is rainy.*

⁵ For a detailed critique of C. Fillmore's position, see K. Paykin (2003).

⁶ Note that among these light verbs no mention is made of the existential verb *haber*

bined with an adjective or noun with a meteorological meaning, as in (5), involve an unmarked locative *PP* topic in preverbal position (O. Fernández-Soriano 1999 : 103), position usually occupied by agentive subjects.

- (4) *En Madrid llueve / nieva.*
in Madrid rains / snows
'It rains / snows in Madrid.'
- (5) *En Barcelona hace frío / calor / está nublado.*
in Barcelona makes cold / heat / is cloudy
'It is cold / hot / cloudy in Barcelona.'

Other evidence that the locative is the subject of both constructions, besides its preferred preverbal position, comes from the fact that it is the locative that rises in raising constructions, as in (6). It should be noted that, according to O. Fernández-Soriano, this locative can be either spatial or temporal (7).

- (6) *En Salamanca parece haber nevado mucho.*
in Salamanca seems to-have snowed a lot
'It seems it has snowed a lot in Salamanca.'
- (7) *A veces nieva sin hacer frío.*
sometimes snows without make cold
'Sometimes it snows without being cold.'

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The exact syntactic position of this spatio-temporal argument is, however, rather controversial and depends among other things on the analysis of weather verbs as belonging to the unergative or unaccusative class⁷.

1.2. Unarticulated constituents vs sub-syntactic structure

Already D. Bolinger (1973, 1977) noted that the particularity of weather expressions lies in the superfluous character of spatial precision. Indeed, when no specification is provided, the sentence *It is raining* is interpreted as referring to the location of the speaker. This possibility of attributing a spatial interpretation to a sentence without explicit localizing element led J. Perry (1993) to postulate the existence of what he calls "unarticulated constituents". Considering that the spatial localization is semantically mandatory for the interpretation of any sentence, if a locali-

'there be', which is also frequent in Spanish weather expressions such as *hay nubes* (there are clouds 'it's cloudy'). However, this verb is analyzed as belonging to the stative subtype of impersonal predicates.

⁷ For a recent discussion, see K. Paykin (2010) for French, English and Russian, and M. Meulleman & N. Stockman (2013) for Spanish.

zing complement is absent, the spatial localization should come from the unarticulated constituent.

It is K. Taylor (2001)⁸, however, who allocates a special place to weather constructions postulating that spatial anchoring is part of the lexical sub-syntactic structure of weather verbs. His hypothesis is based on the profound difference between the interpretation of sentences containing ordinary action verbs, like *dance*, and of those with weather verbs. According to K. Taylor, for a sentence like the one in (8a), the spatial localization is metaphysical and comes from our knowledge of the world, which is not the case for (8b).

- (8) a. *Mary is dancing.*
- b. *It is raining.*

Indeed, any person dancing will necessarily dance somewhere. This “somewhere”, however, is not linked to the localization of the speaker as in the case of example (8b), where the spatial interpretation is directly connected to the presence of the speaker. Therefore, according to K. Taylor (2001), for weather verbs, the locative is a real argument of the verb on the sub-syntactic level. Moreover, “the sub-atomic structure of the verb *rain* marks explicitly *rainings* as a type of change affecting places” (K. Taylor 2001:53).

The fundamental difference between weather predicates, on the one hand, and other predicates, on the other, pointed out by K. Taylor (2001), has been challenged by F. Recanati (2002) who argues that the two predicate types derive their spatial interpretation exclusively from our metaphysical knowledge of the world. Therefore, for F. Recanati, localization should stay an unarticulated constituent for sentences containing weather verbs as well as other action verbs, as its specification should never be considered as obligatorily expressed. The absence of any difference between the localization of a dancing event and a raining event is illustrated by the example of a rain-machine, imagined in the context of the earth being subject to extreme dryness. Such a machine will emit a special signal as soon as it rains anywhere on the surface of our planet. According to F. Recanati, if the machine starts emitting its signal, we can say *It is raining*, and it will necessarily mean that it is raining somewhere and not necessarily where the machine or the speaker is located, just like *Mary is*

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⁸ Already A. Pfänder (1963) pointed out that there is a fundamental difference between sentences like *A man is walking* and *It is raining* in terms of space specification, as, in the latter, the “real” subject of the verb is a noun denoting a specific place in the world that we are thinking about. The fact that it is difficult to envisage the locative as a real subject of the verb does not diminish the importance of the differentiation argument defended by A. Pfänder.

dancing means that Mary is dancing somewhere. What F. Recanati seems to overlook is that his example of a rain-machine provides a context where the interpretation *hic-nunc* of the speaker still holds but in a very general way. In fact, pragmatically, the spatial localization of the speaker gets expanded to include our entire planet and, therefore, the example does not constitute a real counter-argument against K. Taylor's (2001) analysis. As we will show in what follows, a locative specification in the case of atmospheric phenomena can become mandatory and thus cannot be considered as an unarticulated constituent characterized by its optionality.

1.3. Information structure

From a discourse-pragmatic or information-structure point of view, since F. Brentano (1874) and A. Marty (1908), there seems to be a general consensus in considering weather sentences as typical instances of thetic judgments⁹, *i.e.* judgments that lack a binary topic-comment articulation and that do not ascribe a property to an entity as do ordinary categorical judgments. Instead, they have a logically simple “sentence focus”, as the focus encompasses both the subject and the predicate (*cf.* K. Lambrecht 1994), and merely assert a state or an event.

Indeed, weather phenomena are often expressed through non-canonical syntax, *i.e.* with non-referential or dummy subjects (*cf.* S. Kuno 1972), either with impersonal predicates¹⁰, as in (9a), or through existential constructions, as in (9b). Interestingly, these two structures correspond to the two sub-types of thetic judgments, namely “event-centered” and “entity-centered” respectively (*cf.* H.-J. Sasse 1987). The event-centered sub-type “fails to contain a referential *NP*, and thus fails to tell something about an entity”, while the entity-centered sub-type “introduces an entity but fails to report an event about it” (H.-J. Sasse 1987: 526-527).

- [270] (9) a. *Il pleut.*
b. *Il y a du vent*¹¹.

⁹In fact, the mere conception of one-term judgments has stemmed from the analysis of meteorological sentences, like *It is raining*, impossible to be decomposed into a two-term standard judgment where we first postulate the existence of an entity and then subsequently attribute a property to it.

¹⁰As has been observed first by N. Ruwet (1990), there are many lexical “gaps”, as not all weather phenomena can be expressed by lexical weather predicates. In addition, many cross-linguistic differences can be observed with this respect even between closely related languages (*cf.* among others B. Bauer 2000, D. Glynn 2006).

¹¹Surprisingly, in the literature on thetic judgments, one finds references to weather phenomena in the case of impersonal predicates but never in the case of existential constructions.

However, as observed by H.-J. Sasse (1987) and reformulated in the information structure framework by K. Lambrecht (2000:619), not all thetic judgments are expressed through non-canonical morpho-syntactic or semantic constructions but may exhibit canonical SN-SV structures, as in Russian (*cf.* example (10a))¹² or in English (*cf.* example (10b)).

- (10) a. *Idët dožd'*.
 goes rain
 ‘It is raining.’
 b. *The sun is shining.*

A. Mettouchi & M. Tosco (2011) argue that atmospheric phenomena predication are cross-linguistically thetic not because weather utterances manifest non-canonical subjecthood or agent-demotion strategies in grammatical terms but since they always involve partial or total backgrounding of either the entity or the process, thus resulting in the absence of categorical predication. Indeed, various types of weather constructions available across languages, illustrated under (11) with their English equivalents, show a “global apprehension of the predication” instead.

- (11) a. ‘the rain rains’
 b. ‘the sky rains’
 c. ‘the rain falls’
 d. ‘it rains’
 e. ‘it is rain’

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As W. Chafe (1976:50) argued, many thetic sentences contain sentence-initial spatio-temporal frame-setting adverbials, which are often considered as a kind of “topics”. In thetic sentences these topics are not what the sentence is about, but they “limit the applicability of the main predication to a certain restricted domain”. This led N. Erteschik-Shir (1997:26-27) to contest the idea that thetic sentences lack a topic as they imply either an overt or a covert localizer or “stage topic”, label referring to “the Time/Place at which the event expressed by the sentence takes place”. According to N. Erteschik-Shir (1997:103), this “stage topic” (*sTOP_t*) is necessary for truth evaluation since a sentence like *It isn't snowing* “can only be assessed as a predication of a stage topic. No other topic is available for assessment. [...] the locational phrase provides the stage topic of which the rest of the sentence is predicated”. According to K. Lahousse (2003), covert stage topics are “licensed if their interpreta-

¹² However, the SV word order *dožd' idët* is also found without any clear difference.

tion is recoverable either from the deictic discourse context”, as in (12), or “from the preceding narrative context”, as in (13).

- (12) *sTOP_t Il pleut.*
- (13) *Nous sommes arrivés en Espagne. sTOP_t Il pleuvait.*
(K. Lahousse 2003)

2. SPATIO-TEMPORAL LOCATIVES IN WEATHER PHENOMENA PREDICATIONS

In this article, our quest is double: (i) to decipher whether spatial and temporal locatives have a privileged status in the weather domain and, if so, whether their behavior is identical, and (ii) to verify whether all atmospheric utterances put forth a thetic judgment as has been argued previously. In what follows, we will operate a fundamental distinction between traditional weather constructions and formally possessive constructions. For the former, we will take into account not only impersonal weather verbs, as in (14), but also existential and copular constructions with an adjective or an adverb, as in (15). These constructions can all be viewed as a type of thetic encoding as their subject is impersonal and therefore cannot qualify as a real topic. We will, however, also include personal constructions, as in (16), which correspond to what we call “categorical” encoding, as the subject is referential and can be potentially seen as a topic¹³. Formally possessive constructions can be considered as a particular type of categorical encoding as their semantic subject is referential, referring to a human experiencer or to a place, which therefore appear as explicit topics, as in (17).

- (14) *It is hailing.*
- (15) a. *There is wind.*
b. *It is sunny.*
- (16) *The sun is shining.*
- (17) a. *We are having lots of wind today.*
b. *The west-coast is having storms tonight.*

¹³ Many scholars have pointed out that weather predicates exhibit great intra- and cross-linguistic diversity (*cf.* among others N. Ruwet 1990, M. Salo 2011, P. Eriksen *et alii* 2010). Typologically, the impersonal verb constructions correspond to P. Eriksen’s *et alii* (2010) predicate type, while existential and copular constructions correspond to their argument type and personal constructions to their predicate-argument type.

2.1. Encoding through traditional weather constructions

The use of the present tense in the encoding of atmospheric events entails a different reading as compared to other events. In French, the simple present with non-atmospheric event verbs such as in (18a) is ambiguous as it can either have an ongoing or a habitual reading. Moreover, the process can take place anywhere regardless of the speaker's location¹⁴. In contrast, (18b) is necessarily ongoing and refers to the moment of the utterance. In addition, when no specific location is mentioned, the denoted phenomenon necessarily takes place at the location of the speaker¹⁵.

- (18) a. *Marie danse.*
 b. *Il pleut. / Il fait beau. / Il y a du vent.*

However, the simple present with weather expressions may express a habitual reading with a frequency indication, as in (19a). In this case, the explicit mention of a space or time span precision becomes mandatory. On the contrary, for events that are not natural phenomena, the adjunction of a frequency adverb does not entail the explicit mention of the spatio-temporal location, as in (19b).

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- (19) a. *Il pleut souvent / Il fait souvent beau / Il y a souvent du vent à Paris // en automne.*
 b. *Marie danse souvent.*

When an atmospheric event gets encoded through what can be called a categorical structure, *i.e.* a definite subject followed by a non-weather verb, as in (20), the use of the simple present usually entails the same here- and now-reading as with an impersonal construction. It is possible, however, to imagine a situation under which (20a) gets interpreted as a categorical judgment attributing a defining property to the entity 'sun', as explicated in (20b).

- (20) a. *Le soleil brille.*
 b. *Le chien aboie, les étoiles scintillent, le vent souffle, le soleil brille, ...*

Just like in the case of impersonal atmospheric constructions, the mentioning of a frequency adverb entails the mandatory presence of a

¹⁴ However, the habitual reading is the first one to come to mind.

¹⁵ Interestingly, as pointed out by B. Lamiroy (1995:282), weather verbs are the only impersonal verbs that are compatible with *être en train de*.

spatio-temporal argument. This argument appears more naturally in the initial position, as in (21b), than in the post-verbal position, as in (21c), to avoid the interpretation of the definite subject as the topic. Indeed, the sought interpretation provides a characteristic of a place or a time span, to which a particular type of weather is attributed, and cannot easily concern the sun, which would get characterized through the fact of shining or of shining somewhere.

- (21) a. ??*Le soleil brille souvent*.
- b. *A Paris / En été, le soleil brille souvent*.
- c. ?*Le soleil brille souvent à Paris / en été*.

Therefore, the habitual reading always gives rise to a categorical judgment where the topic is a spatial or temporal location characterized through a certain type of weather, be it expressed through a personal (categorical) or an impersonal (thetic) construction.

In English, the particularity of the present tense with atmospheric phenomena can be observed in a slightly different way. The ongoing reading of non-atmospheric events imposes the use of the present progressive, as in (22a), while the habitual reading involves the use of the simple present, as in (22b). The atmospheric phenomenon can be encoded as an ongoing event through the progressive, as in (23a), while the simple present can hardly have a habitual reading. Like in French, the habitual reading is possible in the presence of a spatio-temporal location, as in (23c). The constructions involving the verb *to be* get both the ongoing and the habitual readings through the use of the simple present, as in (24) and (25).

- (22) a. *Mary is dancing*.
- b. *Mary (often) dances*.
- (23) a. *It is raining*.
- b. ?*It rains*.
- c. *It often rains in New York / in the fall*.
- (24) a. *There is a thunderstorm with thunder and lightning*.
- b. *It rains almost every day in the rainforest and there are often thunderstorms*.
- (25) a. *It is windy*.
- b. ??*It is often windy*.
- c. *It is often windy in Los Angeles / in this season*.

The ongoing reading of atmospheric phenomena encoded through personal constructions requires the use of the progressive, as in (26a). Unlike in impersonal constructions, the use of the simple present is possible here with only one reading, under which a defining property is attri-

buted, for instance, to the entity ‘sun’, as in (26b). Just like in French, the addition of a frequency adverb requires the explicit mentioning of the spatio-temporal locative argument.

- (26) a. *The sun is shining.*
b. *The sun shines.*
- (27) a. ??*The sun often shines.*
b. *The sun often shines in Los Angeles / in early spring.*

In Russian, atmospheric phenomena in the present get expressed either through verbless sentences or through a personal construction, the use of an impersonal verb being extremely rare. In a verbless construction, the absence of a frequency adverb implies an ongoing reading, as in (28), while the presence of such an adverb requires an explicit spatio-temporal locative and results in a habitual reading, as in (29).

- (28) *Tuman. / Vetrenno.*
fog / windy
'There is fog. / It is windy.'
- (29) *V Paríže // Vesnoj často tuman / vetrenno.*
in Paris // in-spring often fog / windy
'In Paris // In spring there is often fog / it is often windy.'

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Whenever a weather phenomenon gets encoded through a personal structure, the ongoing reading denoting a meteorological event is available with both VS and SV word orders, as in (30).

- (30) a. *Idět dožd'./ Dožd' idět.*
goes rain / rain goes
'It is raining.'
- b. *Svetit solnce. / Solnce svetit.*
shines sun / sun shines
'The sun is shining.'

With non-weather entities, in the case of neutral prosody, the VS order corresponds to a thetic judgment, as in (31a), while the SV order results in a categorical judgment, considering that the subject gets transformed into the topic, as in (31b). This distinction gets neutralized with weather entities.

- (31) a. *Idět poezd.*
goes train
'There comes / goes a train.'

- b. *Poezd idët.*
 train goes
 'The train is coming / going.'

Like in French and English, the habitual reading in Russian requires the addition of a frequency adverb and of a spatio-temporal indication. However, habitual sentences also impose a rather fixed word order. Since habitual sentences express categorical judgments, whose topic is a place or a time span, it is the locative argument that needs to be in the initial position. Moreover, the weather noun should occupy a post-verbal position, thus clearly indicating its non-topical nature.

- (32) a. **Dožd' často idët v Tule.* / **Dožd' idët často v Tule.*
 rain often goes in Tula / rain goes often in Tula
 b. ??*Idët dožd' často v Tule.* / ??*Idët často dožd' v Tule.*
 goes rain often in Tula / goes often rain in Tula
 c. ??*V Tule dožd' idët často*¹⁶.
 in Tula rain goes often
 d. *V Tule často idët dožd'.* / *V Tule idët často dožd'.*
 in Tula often goes rain / in Tula goes often rain
 'It often rains in Tula.'

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Thus, it appears that in all three languages the presence of an explicit spatio-temporal locative is optional with atmospheric predicates in an ongoing reading, while it is obligatory in a habitual reading. The status of the locative depends on the information structure of the sentence and not on the syntactic structure, impersonal or personal. If we have an ongoing reading of the atmospheric phenomenon, the sentence is thetic, as no property is assigned to an entity. Indeed, example (33a) cannot be paraphrased by "Paris is a rainy place", nor (34a) by "London is a windy place". However, in the habitual reading, an atmospheric property is ascribed to a place and / or a time span, which therefore function as true topics of a categorical judgment. Example (33b) can indeed be paraphrased by "Paris is a rainy place" or "Fall is a rainy season" and (34b) by "London is a windy place" or "Fall is a windy season"¹⁷.

- (33) a. *It is raining (in Paris).*
 b. *It often rains in Paris / in the fall.*

¹⁶ The sentence is, however, perfectly acceptable in a contrastive context.

¹⁷ As has been noted, in the case of non-atmospheric events, it is the human subject that takes up the role of a topic, be it in an ongoing or habitual reading.

- (i) a. *Mary is dancing (in Paris).*
 b. *Mary often dances (in Paris).*

- (34) a. *It is windy (in London).*
 b. *It is often windy in London / in the fall.*

In the absence of explicit spatio-temporal locatives in the ongoing reading of weather utterances, atmospheric events get linked to the “here” and “now” of the speaker. Interestingly, in all three languages, the presence of the adverb ‘here’ is awkward in an ongoing reading, as in (35), except in a contrastive context, as in (36). Indeed, the ongoing reading makes the explicit mention of ‘here’ denoting the exact place of the utterance impossible. In the case of the habitual reading, under which the link with the speaker’s location at the moment of the utterance is lost, the adverb ‘here’ is, on the contrary, necessary to refer to the location associated with the speaker, as in (37). This location, however, goes beyond the precise spatial coordinates of the speaker.

- (35) a. ??*It is raining here. / ??There is wind here. / ??It is sunny here.*
 b. ??*Il neige ici. / ??Il y a du vent ici. / ??Il fait soleil ici.*
 c. ??*Zdes' dožd'. / ??Zdes' vetrovno.*
 here rain / here windy
 ‘It rains here. / It is windy here.’
- (36) a. *It is raining here, while the sun is shining at the other side of the mountain.*
 b. (phone call) A: *A Londres il fait beau. B: Ici il neige.* [277]
 c. *V Moskve sneg, a zdes' solnce.*
 in Moscow snow, but here sun
 ‘It is snowing in Moscow, but here it is sunny.’
- (37) a. *It often rains here. / It is often windy here. / There is often fog here.*
 b. *Il neige souvent ici. / Il fait souvent beau ici. / Il y a souvent du brouillard ici.*
 c. *Zdes' často dožd' i gustoj tuman.*
 here often rain and thick fog
 ‘It rains often here and there is often thick fog.’

Similarly, in all three languages, the explicit mentioning of the adverb ‘now’ is awkward with an ongoing reading, unless we are dealing with a contrastive context, which can be implicit, as in (38), or explicit, as in (39). However, contrary to the deictic space adverb ‘here’, the time adverb ‘now’ cannot appear with weather predicates in the habitual reading unless it means ‘lately’. Logically, the same weather event can occur repeatedly in the same place, while it cannot occur repeatedly at the same moment¹⁸. Moreover, the habitual ‘now’ is necessarily contrastive and the

¹⁸ As already noted, the word order in Russian reflects the information structure and the preferred word order in this categorical context will be Time — Place — V — S.

utterance still requires the explicit mentioning of a spatio-temporal locative that can authorize a categorical judgment. The weather predicate has to be a property of a particular place or season.

- [278]
- (38) a. *?It is snowing now. / ?There is wind now. / ?It is sunny now.*
 b. *?Il pleut maintenant. / ?Il y a du vent maintenant. / ?Il fait du soleil maintenant.*
 c. *?Moroz i solnce sejčas.*
 frost and sun now
 'It is frosty and sunny now.'
 - (39) a. *It is snowing now but five minutes ago it was raining.*
 b. *Il pleut maintenant, alors qu'il y a une minute il faisait soleil.*
 c. *Utrom byl dožd', a sejčas moroz.*
 in-the-morning was rain, but now frost
 'In the morning it rained, but now there is frost.'
 - (40) a. *??It often rains now. / ??There is often wind now. / ??It is often sunny now.*
 a'. *It often rains now in Paris / in May. // There is often wind now in Paris / in May. // It is often sunny now in Paris / in May.*
 b. *??Il pleut souvent maintenant. / ??Il y a souvent du vent maintenant. / ??Il fait souvent soleil maintenant.*
 b'. *Maintenant il pleut souvent à Paris / au mois de mai. // Maintenant il y a souvent du vent à Paris / au mois de mai. // Maintenant il fait souvent soleil à Paris / au mois de mai.*
 c. *??Sejčas často tuman / idět dožd' / vetrenno.*
 now often fog / goes rain / windy
 'There is often fog now. / It often rains now. / It is often windy now.'
 c'. *Sejčas v Peterburge často tuman / idět dožd' / vetrenno.*
 now in Petersburg often fog / goes rain / windy
 'There is often fog / It often rains / It is often windy now in Petersburg.'

Thus, even though in the absence of explicit spatio-temporal locatives the ongoing reading implies that the event is linked to the speaker's location and the moment of the utterance, the explicit presence of the deictic space and time adverbs 'here' and 'now' is emphatic and not redundant as long as they appear in contrastive contexts. Both space and time indications behave in a similar way with this respect. However, in the past it becomes apparent that there is a fundamental difference between space and time indications in the assertion of weather events. As shown by examples (41) and (42), it seems impossible to locate an atmospheric phenomenon whose existence has been stated previously, unlike other events. The exact moment of occurrence of a weather phenomenon, however, can be predicated separately, as in (43), since the grammatical tense already

assures a first temporal anchoring before the precise temporal coordinates are given as the focus of a true categorical judgment.

- (41) a. *Il y a eu un meurtre hier. Ce meurtre a eu lieu rue Monge.*
b. *Des triplets sont nés hier. Les naissances ont eu lieu à l'hôpital Cochin.*
- (42) a. *Il a plu hier. *La pluie d'hier a eu lieu à Paris.*
b. *Il y a eu un orage hier. *Cet orage était à Lille.*
- (43) *Il y a eu un orage à Lille qui a fait beaucoup de dégâts. Cet orage a eu lieu le 20 janvier.*

Another fundamental difference between spatial and temporal coordinates of atmospheric phenomena is that while the latter can be very precise, the former cannot, contrary to what happens with non-atmospheric phenomena. A simple explanation can be that the spatial coordinates of any non-natural event imply the presence of a human participant, necessarily located in a precise way, although the actual event predication abstracts away from this participant (cf. D. Van de Velde 2006). Atmospheric phenomena, in their turn, do not have precise spatial coordinates, even when they are linked to the location of a speaker.

- (44) *Il y a eu un meurtre rue Monge à 15h30.*
- (45) a. **Il y a eu des averses rue Monge hier.*
b. *Il y a eu des averses à Paris à 15h30.*

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In this respect it is interesting to note that cross-linguistically atmospheric utterances frequently contain spatial locatives meaning ‘outside’. In Russian, for example, we find a multitude of comparable expressions, such as literally ‘in yard’, ‘behind window(s)’ or ‘on street’. As all atmospheric phenomena take place outside, it would be difficult to claim that these locatives serve to locate or ground the phenomena. With non-weather phenomena that also typically take place outside, such as ‘letting out a dog’, it is impossible to use these adverbs as shown in (47).

- (46) a. *It is raining outside. / It is sunny outside.*
b. *Il pleut dehors. / Il y a du soleil dehors.*
c. *Na dvore / na ulice / za oknom dožd' / vetrenno.*
on yard / on street / behind window rain / windy
'It is raining / windy outside.'
- (47) a. *He lets his dog out ??outside.*
b. *Il promène son chien ??dehors.*
c. *On vyzgulivaet sobaku ??na dvore / ??za oknom.*
he walks dog on yard / behind window

We claim that the presence of ‘outside’ with atmospheric events signals the fact that the speaker is an external observer who is inside at the moment of observation. This hypothesis is confirmed by the fact that this kind of generic adverb is extremely odd with a habitual reading, where the topic is a certain geographical entity characterized by a weather phenomenon, independently from the presence of any observer.

- (48) a. ??*In Paris it often rains outside.*
 b. ??*A Paris il pleut souvent dehors.*
 c. ??*V Paríži často za oknom idět dožd'.*
 in Paris often behind window goes rain

2.2. Encoding through a formally possessive construction

Until now, we have analyzed traditional weather constructions, which can put forth both thetic and categorical judgments. In what follows, we will examine formally possessive constructions, which present a categorical encoding. The main structures we will deal with here are the structures with the verb ‘have’ in English and French, as illustrated in (49), and the possessive *PP* configuration in Russian, as found in (50).

[280]

- (49) a. *We are having some heavy rain lately.*
 b. *Nous avons beaucoup de pluie depuis un mois.*
 (50) *U nas sneg, slabye morozy.*
 at us snow, weak frosts
 ‘It is snowing here and slightly freezing.’

When used with weather phenomena, this English construction is primarily used in the present progressive¹⁹ to denote multiple atmospheric events that happen over time, as in (51a), but also to denote an instantaneous ongoing reading, as in (51b). Just like with traditional weather

¹⁹ The English verb *have*, when functioning as a real possessive verb with possessed items, thus denoting a state, cannot be used in the progressive (*cf.* Z. Vendler 1957), as in (i). With event readings, however, the use of the progressive is perfectly possible, as in (ii), as it refers to a dynamic relation between an event and its participant or beneficiary. When used with a plural noun, the present continuous denotes a time span that includes the time of the utterance but goes beyond it, as in (iii). With atmospheric phenomena, this verb can be used in the progressive not only with events, like rain or storm, but also with states, such as sun, as in (iv).

- (i) **We are having a house / a car.*
- (ii) *We are having a party / a fight / a robbery.*
- (iii) *We are having lots of parties lately.*
- (iv) *We are having lots of rain / sun.*

constructions, English uses simple present for frequency readings, as in (51c).

- (51) a. *We are having lots of storms / rain / sun lately.*
- b. *We are having a particularly heavy rain today.*
- c. *We often have a lot of wind here.*

The subject of the possessive verb is not interpreted as a real possessor but functions as a localizing element for the process in question. The plural subject, most often the first person plural, is preferred since it easily refers to a group used metonymically to denote a particular place (*cf.* (52a)). However, the singular is rather awkward²⁰. The first person singular seems particularly difficult, as illustrated in (52b). If the possessive construction is used to locate a weather phenomenon in a contrastive context, the use of the singular can be felicitous, as long as it specifies a place different from that of the speaker (*cf.* (52c)).

- (52) a. *They (The British / My sisters) often have rain.*
- b. **I am having lots of rain lately.*
- c. *He (My oldest son / *My neighbor) is having lots of rain lately.*

Indeed, in French and English, the subject of the verb ‘have’ can also be a spatial locative, as in (53). Russian provides yet another indication that a human “possessor” functions as a localizing element since the possessive construction can be contrasted with an explicit locative construction, as in (54).

- (53) *Paris / This town is having a lot of wind lately.*
- (54) *Na Urale sneg, a u nas žara.*
in Ural snow, but at us heat
‘There is snow in the Urals, but we have lots of heat.’

In the case of the ongoing reading, the subject cannot be considered as a true topic and the utterance gives rise to a thetic judgment, thus making the formally possessive construction comparable to the traditional weather constructions. However, when the possessive structure takes a frequency adverb, spatial locatives function as topics, which gives rise to categorical judgments ascribing a certain type of weather to a particular place. Indeed, both utterances in (55) can be paraphrased by “Belgium is a rainy place”.

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²⁰The difficulty of using persons in the singular can be linked to the impossibility of providing precise spatial coordinates for atmospheric events.

- (55) *We often have rain in Belgium. / Belgium often has rain.*

Contrary to the habitual reading in traditional weather constructions, the expression of an explicit spatio-temporal locative is optional in the habitual possessive construction. In this case, it is the subject that provides spatial indications through his or her identification with a certain place or region. Therefore, example (56a) does not mean that rain is persecuting the speakers wherever they go, but it tells something about the place with which they get identified, which can be made explicit through an apposition, for example, such as in (56b), *les Belges*. Notice that the speakers do not have to be in Belgium at the moment of the utterance. The localization of the atmospheric phenomenon is thus completely independent from the actual location of the speaker at the moment of the utterance.

- (56) a. *Nous avons souvent de la pluie.*
 b. *Nous, les Belges, avons souvent de la pluie.*

If we can argue that the personal pronoun in the possessive structure functions more or less as the equivalent of an explicit spatial locative, it is impossible to make it refer to a temporal moment or a time span. Indeed, [282] (57a) can only refer to a specific location and cannot denote a time period corresponding to one's life. Moreover, the ongoing reading is impossible with a subject denoting a time span, as in (57b). However, in the habitual reading, a temporal locative can function as the topic of a categorical judgment.

- (57) a. *They (My grand-parents) had a lot of rain.*
 b. **This month of May is having lots of rain.*
 c. *The month of May often has lots of rain.*

This suggests that there is a fundamental difference between spatial and temporal locatives in the ongoing reading.

CONCLUSIONS

Thus we can argue that, despite great internal and cross-linguistic morpho-syntactic diversity in the encoding of weather phenomena, their linguistic expression is characterized (i) by the fact that there is no perfect correlation between the syntactic type of encoding and the type of judgment put forth, and (ii) by the particular behavior of spatial (and to a lesser extent temporal) locatives, at least in some Germanic, Romance and Slavic languages.

As we have shown, there exist all kinds of mismatches between formal encoding and information structure. Weather utterances, independently from their syntactic encoding, which might be formally thetic or categorical, can convey both thetic and categorical judgments. In the case of a thetic reading, they contain an often implicit spatio-temporal locative, which is part of the existential assertion of the atmospheric phenomenon. In the categorical reading, they have a true spatio-temporal topic, which is characterized by a true predicate denoting a kind of climatological property of a given place or a seasonal time-span. Contrary to what has generally been argued, the categorical judgment (topic-comment structure) is not problematic as such in weather statements.

Moreover, our analysis showed that there is a fundamental difference between spatial and temporal locatives in atmospheric sentences. For the existential reading, we have seen that, regardless of the syntactic encoding, the spatial coordinates of weather phenomena resist exact identification. In contrast, the temporal coordinates of atmospheric phenomena can be very specific, exactly as with any other event.

As has been noted by N. Gerritsen (1990:219), although natural phenomena “take place outside the realm of human behavior, an observer is often necessarily implied”. Indeed, it is this observer who is often necessary and responsible for the spatio-temporal localization of the atmospheric condition. However, this observer is no longer essential (and not even possible) in the habitual reading, for which we have seen that spatial topics can be encoded through locative *PP*’s, personal pronouns and even human groups identified with a specific region. Although temporal topics are possible, they are restricted to certain lexical *NPs* denoting time-spans such as seasons²¹.

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²¹ Therefore, we cannot fully agree with K. Taylor’s (2001:53) claim that “rainings” are “a type of change affecting places”. They can also denote changes affecting a seasonal time span.

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