A semantic reappraisal of nuclearity in eventive sentences: A theoretical proposal and implications for L2 English intonation teaching

Andrea M. Perticone
Instituto de Investigación en Humanidades, Universidad del Salvador (USAL), Buenos Aires
andrea.perticone@usal.edu.ar

Abstract

This study examines an exception to the rule of broad focus in English, known as the *Last Lexical Item Rule*, which predicts that the nucleus falls on the final lexical item in an intonation phrase containing all new information. Some constructions, known as *event sentences*, deviate from this pattern: when the verb is intransitive and denotes appearance, disappearance, or change, the subject often receives the nuclear accent. This pattern can be challenging for Spanish-speaking learners, whose native intonation favors nucleus placement on the final word. This chapter pursues two equally important aims: one is theoretical and the other one, pedagogical. Firstly, it proposes a reinterpretation of eventive sentences through the concept of *eventiveness*, linking nuclearity to a semantic feature, [+change of state], typically found in unaccusative verbs. It suggests that this feature is assigned by the verb to the subject, which functions as a patient or undergoer, and becomes associated with the prosodic feature [+nucleus]. This approach explains why even transitive surface structures may receive subject nucleus placement if used intransitively. Additionally, this proposal highlights how different nuclear placements in the same sentence can signal different communicative intentions: eventive vs. categorical. Finally, it outlines pedagogical implications, showing how the theoretical approach proposed can help L2 learners more accurately master this distinction in order to predict nucleus placement accurately and convey meaning effectively.

Keywords: eventiveness**;** nucleus placement; unaccusative; semantics

1. Introduction

The *nucleus*, also known as *tonic*, has been defined in different ways. The term itself originates in the British school of intonation

(Halliday, 1967; Crystal, 1969; O'Connor & Arnold, 1973; Wells, 2006; Cruttenden, 2007, among others) to refer to the seat of the last or most prominent pitch accent in the intonation phrase (IP). The location of the nuclear accent is often referred to as *nucleus placement*. *Tonicity* refers to the speaker's decision (conscious or unconscious) about where to place the nucleus in the IP. It expresses what the speaker considers new, contrastive, or important information.

There have been several attempts to account for the location of the nucleus within the IP. The earliest ones propose that tonicity is driven by syntax. Some of these accounts do not assume the concept of nucleus or tonicity in exactly the same ways the British school does, since they model intonation as a sequence of pitch events, and although they contemplate focus, there is no requirement that the most prominent accent be IP-final. This conception allows for multiple pitch accents per phrase, each potentially important for interpretation, without privileging one as the nucleus. Nevertheless, they do envision nuclear stress as a product of rule-based derivations from syntactic structure.

As an example, Chomsky and Halle (1968) claim that the placement of the nucleus, which they call *sentence stress*, can be predicted by rule solely on the basis of grammar and the structure of syntactic trees. Working within a generative phonology framework, they claim that nuclear stress falls on the rightmost lexical node in deep structure. This model has been met with objections from functionalists (cf. Halliday, 1967), who often refer to context-sensitive examples where the rule does not apply, given that it does not take into account the informational status of words, the contexts in which the IPs are uttered or their metafunctions in discourse.

Other authors, such as Gussenhoven (1984), have attempted to refine grammar-based accounts. For example, his *Sentence Accent Assignment Rule* or *SAAR* regards tonicity as rule-governed but subject to an *accentability hierarchy*, by which nouns are more accentable than adjectives, which in turn are more accentable than verbs, with function words being the least accentable items. These rules are valid as long as IPs are focus-neutral, i.e. when the speaker does not express contrastive focus, when no elements in the IP have already been introduced in one way or another, or when the context

does not pre-empt a new information interpretation. Given these conditions, the SAAR states that the nuclear accent should be assigned to the rightmost lexical item in the sentence that is not a lexical verb or function word.

A further attempt to account for nucleus assignment by rule is that by Selkirk (1984), who proposes that prosody is organized hierarchically with phonological constituents that, although they do not directly mirror syntactic structure, they are derived from it under certain constraints. The type of domain (utterance, IP, phonological phrase, prosodic word, foot and syllable) determine where pitch accents, boundary tones, pauses and rhythmic prominence can occur. Moreover, her concept of focus projection (Selkirk, 1995) explains that a pitch accent on a word can indicate focus not only on that word but also on larger constituents (like a phrase or sentence) under certain conditions. According to these rules, focus can project from a head to its phrase or from a constituent to its phrase, unless blocked by focus-sensitive elements or discourse conditions. In this way, prosody is conceived of as being shaped both by syntax and by information structure.

These views on nuclear placement rules normally remain within the theoretical realm, and none of them can account for all types of observable nuclear patterns. On the other hand, in the field of applied linguistics, there are other accounts that are more oriented towards non-linguists, either degree students or individuals training to become teachers of English as a foreign or second language. The most widely spread authors usually resort to grammar-based explanations of nuclearity, although there are also discourse-oriented approaches such as Brazil's (1997), but the latter does not rely on the concept of focus explicitly, nor does it delve into exceptions to the last lexical item rule.

This chapter is guided by two complementary aims, one theoretical and one pedagogical. From a theoretical perspective, it advances a novel semantic reappraisal of so-called eventive sentences by relating patterns of nucleus placement to the notion of eventiveness and, more specifically, to the semantic feature [+change of state], a relation that has not been articulated or developed in prior work on nucleus placement. It is argued here that this feature, typically associated with unaccusative verbs, is assigned by the verb to its subject argument,

which bears the theta role of patient or undergoer, and that it correlates with the prosodic feature [+nucleus]. This account provides an explanation for cases in which subject nuclearity arises even in surface structures that are formally transitive but construed intransitively. The proposal further shows how alternative nuclear placements within the same sentence give rise to different interpretive outcomes, distinguishing eventive from categorical readings.

When predicting nuclearity, learner errors may fall into two categories: they may assign the nucleus to the last lexical word (or even to a function word in final position) in eventive sentences (a case of L1 transfer) or they may anticipate the nucleus to the subject position in non-eventive broad focus sentences (an overgeneralization error). While these difficulties emerge most clearly in L2 acquisition contexts, they also reveal a limitation in existing theoretical descriptions of nuclearity, which fail to provide a principled, predictive account of subject prominence in broad focus utterances.

Against this background, the second aim of the chapter is pedagogical. It explores how the semantic account proposed here can be exploited in the teaching of English intonation to help L2 learners develop more reliable criteria for identifying eventiveness and, consequently, for predicting nucleus placement. By grounding instructional practice in a feature-based theoretical framework, the chapter seeks to show how learners can be guided towards more accurate use of intonation as a resource for conveying meaning effectively.

2. Literature review

2.1 Focus and nucleus placement in EFL accounts

In the field of EFL, particularly in intonation manuals aimed at learners of English, the traditional approach to tonicity assumes that nuclear accent placement is driven mostly by grammatical or syntactic factors, although the semantic level can also play a role. Thus, pedagogical accounts of tonicity attribute the location of the nucleus to factors such as grammatical category. The nucleus is said to signal the focus of attention, and together with any prenuclear accents that may be present in the IP, marks the scope of focus, i.e. the range of lexical items necessary to carry the *minimal message*. The minimal message can be defined as the string of words which is essential to

convey the speaker's communicative intent. In other words, focus, the stretch of information which the speaker considers most relevant for communicative purposes, is manifested in the accenting of certain words, while failure to provide accents is an indication that the speaker assumes those words are not relevant to convey the message.

The link between nucleus placement and scope of focus is determined by the information status of lexical items within the IP. Wells (2006:109) distinguishes between *new information* and *given information*, the latter being information that can be recovered by the listener. Cruttenden (2007:81) prefers the term *old information* and classifies it into four types: *verbatim* (a repetition of exactly the same words), *paraphrastic* (a reformulation in other words), *implicit* (it can be inferred from prior discourse or knowledge of the world), and *physical evidence* (referring unambiguously to a visible object in the interaction).

An IP is said to be in *broad focus* when all lexical items in it are new or unpredictable; IPs containing old or predictable information are said to be in *narrow focus*. Since all new elements are accented, in broad focus IPs, the nucleus typically aligns with the last lexical item (LLI), while in narrow focus IPs, it may fall earlier. A nucleus on the LLI means that tonicity is neutral; a nucleus on a non-final lexical item signals that tonicity is marked. Therefore, it would seem a straightforward conclusion that cases of broad focus are associated with neutral tonicity, whereas instances of narrow focus are associated with marked tonicity.

However, the broad focus rule is not absolute and, indeed, the term 'rule' itself is a misnomer of sorts, since there may be cases of marked tonicity even if the IP is in broad focus. Canonical pedagogical models, notably O'Connor and Arnold (1973) and Wells (2006), acknowledge cases of non-final nuclei or even nuclei on function words, such as instances of contrastive focus. They also feature a number of structures that defy the expectation of the LLI rule, among which event sentences stand out as particularly difficult for many learners.

2.2 Event Sentences: Traditional accounts and pedagogical limitations

Event sentences place the nucleus earlier than the LLI. These structures tend to pose more difficulties to speakers of Spanish than any other exception. In transcription tasks, learners with explicit knowledge of nuclear placement rules are likely to make erroneous predictions of nuclearity in such structures. Error rates can be as high as 90%, with some individuals reaching a 100% error rate, while their predictions may be up to 100% correct in other cases of exceptions to the LLI rule[1]. As expected, error rates tend to be higher in spontaneous oral production.

It is worthwhile to examine the accounts given by authors of the most widely used books on L2 English intonation teaching (O'Connor & Arnold, 1973; Ortiz Lira, 1998; Wells, 2006). Event sentences have been defined in various ways in the intonation literature. Cruttenden (2007:75) explains that in event sentences, sometimes called *presentation sentences*, "the verb is intransitive and typically denotes appearance or disappearance". In these cases, it is the noun phrase in the syntactic subject that receives the nucleus, although the IP is in broad focus. This is shown in examples (1) and (2) (capitals signal the nuclear word).

(1) Watch out! That CHIMNEY's falling down
(2) (What happened in the afternoon?) A WIND got up

Cruttenden (2007:75) adds that this pattern occurs most frequently "when the subject is not human and that its occurrence with human subjects seems limited to verbs of (dis)appearance", as in examples (3) and (4).

[1] These figures come from an unpublished exploratory study carried out by the author, in which participants were asked to predict nucleus placement in a set of short texts. Besides event sentences, other exceptions to the LLIR included Noun+short predictable relative clause, existential constructions with *There*+ noun+ predictable to-infinitive, *Wh*- adjectival objects and final context-setting adverbials of time and place. Error rates for each type of exception were calculated on the basis of the number of exceptions detected over the total number of occurrences. The text also contained non-exceptional broad focus IPs and narrow focus IPs.

(3) (What happened while I was out?) The MILKMAN called
(4) (What's all the fuss about?) A CRIMINAL's escaped

He compares these nuclear patterns with human subjects followed by intransitive verbs which do not denote (dis)appearance, as in examples (5, 6) (2007:76)

(5) (Why can't I use the bathroom?) Because John's SHAVING
(6) (Why was the teacher so cross?) Because a boy SWORE

He also states that "it is occasionally even possible to have nucleus placement on the subject in cases where a transitive verb is involved, provided the semantic relationship between the verb and its object is very close", as in example (7), which features, in Cruttenden's view[2], a transitive verb:

(7) The TRAIN'S run off the rails

It should be noted, however, that this is as far as Cruttenden's account goes. He does not delve any further into how 'closeness' between the transitive verb and its object is defined or determined. For many learners, who lack the tacit knowledge of the native speaker, it may be difficult to ascertain at face value whether a given verb-object relationship is more or less 'close'.

Ortiz Lira (1998:57) also presents event sentences as consisting of a "non-pronominal subject followed by an intransitive predicate". He does not provide further analysis nor explanation, but presents examples (8-14).

(8) An ACCIDENT happened
(9) The CAR broke down
(10) The WATER'S running
(11) The BABY'S crying
(12) The KETTLE'S boiling
(13) There's a BUS coming

[2] The classification of 'run off the rails' as a transitive construction by Cruttenden can be confusing for learners, since *the rails* is object only to the preposition, not to the verb.

(14) My HEAD aches

A close inspection of the verbs employed shows that although all of them are intransitive, they do not convey the same semantic features, since *happened, break down, boil*, and *come* are telic[3] verbs, whereas *cry* and *ache* may be telic or atelic, depending on the context. These different semantic features are not elaborated upon. Once again, a potential cause of difficulty for learners can be envisaged at this point.

Ortiz Lira also cites Ladd's (1980:91) claim that "names seem to be much less accentable than other NPs in identical contexts", as in example (15), thus attributing nuclearity not to verb type but to proper names:

(15) Jesus WEPT

Ortiz Lira also provides translations into Spanish, noting the predicate+argument order, with the nuclear accent in final position, as in examples (16-19):

(16) Se derramó la LECHE
(17) Se cortó la LUZ
(18) Empezó el SEMINARIO
(19) Me fallaron los FRENOS

Unfortunately, Ortiz Lira does not analyze this any further, although Spanish V-S order can offer a clue as to the type of verb involved in eventive sentences.

Finally, in his popular intonation handbook, Wells (2006) mentions event sentences as exceptions to the LLI rule, and explains that they are "sentences describing an event, where the verb is intransitive". Without any further explanation, he goes on to state that the nucleus "tends to be located on the subject, provided it is lexically filled, even if the verb contains apparently new information" (2006:174). As evidence, he presents examples (20-23):

[3] Telicity (Smith, 1991) is an important concept in semantics and aspectual classification. It refers to whether or not an action or event has a natural endpoint or inherent goal.

(20) The PHONE's ringing
(21) The CAR won't start
(22) The HANDLE's fallen off
(23) The BRAKES have failed

Wells also argues that "descriptions of the weather count as event sentences", as in example (24), and that "so do statements relating to unpleasant bodily sensations", as in examples (25, 26). Taken together, these claims group phenomena that are semantically quite heterogeneous, giving the impression that "event sentences" constitute a loosely defined class rather than a category grounded in a shared explanatory principle. For learners, this can make the classification appear *ad hoc*, and may foster the impression that virtually any sentence describing a situation or occurrence could qualify as an event sentence, thereby obscuring the criteria by which eventiveness is to be identified.

(24) It's a funny day: the SUN is shining, but there's a WIND springing up.
(25) My ARM's hurting
(26) My NOSE is all red

Once again, it is interesting to notice that the verbs *shine* and *spring up* are semantically different, although Wells seems to treat them as being the same type. *Shine* is atelic, whereas *spring up* is telic; however, Wells does not delve into this distinction, which may offer learners a lead to nuclearity, although telicity by itself does not warrant nuclearity on the subject.

In Wells' (2006) view, the tonicity of eventive sentences "is paradoxical, since they are in broad focus", and can be thought of as answers to the general question *What's happened?* or *What's the matter?* He argues that one possible explanation is that the verb or adjective in an event sentence "is predictable from the context, so it does not need to be in focus", so that in example (27),

(27) The PHONE's ringing

the verb *ring* is predictable because "it is what telephones typically do" (2006:175). This explanation suggests, then, that the IP *The PHONE'S ringing* is in narrow focus and not in broad focus as the author has just claimed a few lines earlier; the contradiction is evident. This account is therefore far from satisfactory for many learners, since event sentences are, by definition, in broad focus; that is why they are regarded as exceptional. Wells goes on to contrast the IP in (27) with example (28),

(28) The phone's EXPLODED

and argues that the verb *exploded* is "not truly given and thus demands the nucleus." Such formulations, which do not unpack verb semantics, may not be enlightening enough for learners.

Tench (1996) presents event sentences as cases or marked tonicity, following Halliday (1967). He refers to them as clauses that end in a "common intransitive verb of motion of happening" (1967:64) and provides examples (29-34):

(29) The DOCTOR'S coming
(30) (Don't worry). JOHN'S going
(31) An ACCIDENT has happened
(32) A QUESTION was raised
(33) DISCUSSIONS took place
(34) The POSTMAN called

Tench goes on to claim that "the verbs *come* and *go* do not add anything of significance" (1967:64) and therefore typically remain non-nuclear, even when in final position (thus giving the impression that it is position, and not the semantics of the verb, that determines nuclearity). He adds that the remaining verbs are also relatively "insignificant", in the sense that they are predictable: accidents happen, questions tend to be raised, and so on. The main information, states Tench, is *the doctor, John, an accident, a question, discussions* and *the postman*, while the verbs "simply fill the obligatory slot of predicator", being semantically empty since they do not add extra

information[4]. In this sense, examples (29-34) contrast with examples (35-40), since the verbs in the latter "inform; they are not merely fillers".

(35) The doctor's RUNNING
(36) (Don't worry). John's EATING
(37) An accident is being INVESTIGATED
(38) A question was ANSWERED
(39) Discussions were ANNOUNCED
(40) The postman FELL

As can be seen in the examples presented so far, both in theoretical and pedagogical literature, event sentences are often treated as edge cases where the LLI Rule appears to fail. While these have been attributed to "eventiveness" or the semantic salience of the subject, the classification remains under-theorized. Both Cruttenden (2007) and Wells (2006) suggest that certain verb types may license subject nuclearity, but neither offers a predictive mechanism that can guide language learners. Moreover, the grouping of such verbs under the label "intransitive verbs of appearance or misfortune" seems impressionistic and taxonomically unstable: sometimes, what counts as (dis)appearance or (mis)fortune is not an inherent property of the event itself, as in *Your MOTHER's just called*, but may vary depending on the speaker's subjective appraisal of the situation. Even the label "event" is underspecified and can be confusing for learners; *John and Mary walked in the park* could be well said to be an event of some sort, although from the point of view of tonicity, this is not an eventive sentence.

Therefore, traditional accounts, while descriptively adequate, remain theoretically unsatisfying. They treat eventiveness as a surface property, without accounting for the underlying grammatical or semantic mechanisms that guide the placement of the nuclear accent. Furthermore, this categorization has limited pedagogical value for

[4] The author can attest to the difficulty that such formulations present to many learners, who tend to take descriptive labels and accounts at face value. Moreover, verbs such as *come* and *go* cannot be said to be irrelevant, as Cruttenden suggests. On the contrary, they are highly relevant insofar as they encode the semantic feature [+change of state].

second-language learners, who must infer from disparate examples a rule with many exceptions and few predictive cues.

The problem is especially salient for Spanish-speaking learners of English. In Spanish, the nucleus tends to align with the syntactic right edge of the intonation phrase. Both broad and narrow focus are typically realized via word order rather than nuclear accent shift (Hualde, 2014; Ortiz Lira, 1995, 1998, 2000). For example, a broad focus sentence like *Se cayó un PUENTE* assigns nuclear prominence to the last word in the IP. Unlike English, Spanish relies less on prosody and more on syntactic inversion (e.g., subject–verb or verb–subject alternations) to indicate information structure (Zubizarreta, 1998). This cross-linguistic contrast can be a source of error in L2 English.

Two frequent error types can be identified in L2 English tonicity. The first type, more frequent at initial stages of acquisition, consists in the transfer of the Spanish tendency to final-position tonicity. Whichever word needs to be nuclearized, the tendency will be to move the word to final position, whenever possible, so that once in that slot, it may receive the nucleus. The transfer of this Spanish pattern onto English may result in inappropriate renderings, e.g., substituting *The president DIED* for *The PRESIDENT died*, thereby misrepresenting the intended discourse function. A second error type involves an unduly early assignment of the nucleus, on the wrong assumption that one or more lexical items towards the rightmost edge of the IP constitute old information. Thus, many learners often make predictions for nucleus placement that ultimately fail. When asked to justify their choices, it is clear from their answers that learners often fail to distinguish between different types of intransitive verbs, and consequently, they are not aware of one single semantic feature of verbs which, in this proposal, is the defining marker of eventiveness.

In order to show how this distinction could be used to promote such awareness, it is necessary first to delve deeper into intransitive verbs and distinguish unergatives from unaccusatives. This distinction will allow for a consideration of the different theta role types these verbs assign to their arguments, following Fillmore (1968) and Chomsky (1981). This will pave the way for the main proposal in this article: that the theta role of theme, patient or experiencer, assigned by the unaccusative verb, will be marked with a feature [+change of state],

originated in the verb, and that this semantic feature is accompanied by a prosodic feature [+nuclear accent]. Thus, the identification of unaccusative verbs by learners, and its [+change of state] feature, will be a predictor of the theme/patient/experiencer theta role of the subject, and therefore, a predictor of nuclearity and eventiveness.

3. A reappraisal of eventiveness and subject nuclearity

3.1. From surface verbs to deep structure: The Unaccusative Hypothesis, verb semantics and subject theta role

The Unaccusative Hypothesis (Perlmutter, 1978) posits a fundamental distinction among intransitive verbs based on the syntactic and semantic nature of their sole argument. According to this hypothesis, intransitive verbs fall into two classes: *unergatives* and *unaccusatives*. Unergative verbs, such as *run*, *talk*, *shout*, *work*, *dance*, *swim,* assign to their single argument the theta role of agent, as in example (41). The argument originates in the external argument position and is assigned its theta role there.

(41) Cinderella DANCED. (Agentive subject)

On the other hand, unaccusative verbs, such as *appear, arrive, break*, *fall*, *die*, *collapse*, *boil*, *explode*, *come*, assign to their single argument the theta role of patient, sufferer or experiencer; that is, an entity that undergoes a change of state, position or location, as shown in example (42). In syntactic terms, the subject originates in an internal position (typically the complement of V) and subsequently raises to subject position at surface structure.

(42) (At ten o'clock,) CINDERELLA arrived. (Theme/patient/experiencer subject)

The Unaccusative Hypothesis' main insight is that not all surface subjects are structurally equivalent. In unaccusative constructions, although the subject appears in the canonical subject position, it derives from a lower syntactic position, similarly to the direct object in transitive clauses.

However, the real explanatory power of the Unaccusative Hypothesis emerges when it is connected to the semantic level;

specifically, the thematic roles of patient or sufferer assigned to the sole argument of unaccusative verbs. As argued by Levin & Rappaport Hovav (1995) and Dowty (1991), unaccusative subjects tend to lack agentive control, volition, or causation, and are instead defined by their susceptibility to undergo a change of state, condition, location or position. Their semantic features include [+change of state], [+affectedness] and [–volition].

3.2. The semantic feature [+change of state] as marker of eventiveness and nuclearity

The underlying objecthood of the unaccusative subject is central to this proposal. It may be hypothesised that, when the subject originates in the object position, the unaccusative verb assigns the semantic feature [+change of state] to its argument. At the prosodic level, this would be signalled by the assignment of the feature [+nucleus]. When the argument moves up the syntactic tree (or to the left of the verb in a structural view), it carries with it both features, emerging at the surface level as a nuclearized constituent. In other words, the surfacing subject bears the most relevant eventive load, making it the most likely candidate for nuclear accent in eventive sentences. This contrasts with unergative subjects, whose external position and agentive role align with unmarked nuclear placement patterns.

This analysis provides a syntactic-semantic justification for the nucleus placement observed in English event sentences. Rather than appealing to vague semantic labels like "appearance" or "misfortune," unaccusativity allows for a principled prediction: when the subject bears the eventive theta-role, that is, it carries the semantic feature [+change of state], it is more likely to receive nuclear prominence than the verb itself, since the latter has transferred its eventive qualities to its argument.

Therefore, it may be argued that, in eventive utterances, nuclearity on the subject indicates that the entity undergoes a change of state, condition or position. In example (43), the nuclear accent marks the emergence of an event affecting the theme (the storm): the change of state marked by the nuclear accent is given by the transition from absence to presence:

(43) A STORM struck

In example (44), the accent on *president* foregrounds the entity undergoing a change of state: from presence to absence (or from the state of being alive to being dead).

(44) The PRESIDENT died.

The key notion is that unaccusative verbs inherently encode eventiveness, making the subject semantically and informationally prominent, even when it appears syntactically early in the IP. This explains why, at surface level, nucleus placement seems to shift leftwards to the subject position, despite the sentence being in broad focus.

A nuclearised subject in a broad focus IP can also have a psycholinguistic function. From a language processing standpoint, it may be hypothesised that, the moment a hearer perceives an incoming syntagm, such as *A STORM…* or *The PRESIDENT…*, the nucleus on the noun signals to the listener that there is a high degree of probability that the entity has suffered some change in its state or condition. This, of course, will be confirmed or rejected as the listener processes the incoming words. The final communicative impact will be resolved on the basis of the boundary tone[5], which signals the proximity of the end of the informational focus. Nuclearity on the subject, then, can be said to prime the listener into a high probability that what is about to be communicated is the undergoing of some change of state.

A conceptualization of eventive sentences in terms of the change of state encoded in the verb offers learners a predictive principle: when a verb is unaccusative, its subject is assigned both [+change of state] and [+nucleus] features; the subject becomes central to the event, and the nuclear accent is likely to occur early, even in broad focus.

[5] A boundary tone is an intonational feature, manifested in pitch height or direction, which signals the end of an intonational phrase, typically indicating whether the utterance is complete, continuing, or interrogative.

3.3. Thetic versus categorical utterances: Effects of nuclearity on meaning

The syntax–semantics link presented so far sets the stage for a reinterpretation of eventive sentences as *thetic utterances*. In such utterances, there is no topic-comment separation; rather, the whole event is asserted holistically (Kuroda, 1972; Sasse, 1987). Since the subject of unaccusative verbs fulfills both the structural role of moved internal argument and the semantic role of patient or undergoer of a change of state, it attracts nuclear prominence under a thetic interpretation. An interpretation of event sentences as thetic statements can explain why the subjects in these utterances are not assigned, through tonality, their own IP domains, as shown in example (45).

(45) The GAS pipe broke.

When the same sentence is treated as a categorical utterance, each constituent is assigned an IP of its own, as in (46).

(46) |The GAS pipe | BROKE|

In the categorical version, the gas pipe is presented as already shared information, i.e. as an entity which has been selected from the area of speaker-hearer convergence. This sharedness, which coincides with the theme, tends to be signalled with a falling-rising pitch contour (H*L-H% pitch accent), while the rheme tends to contain information (marked with H*L-L%) which the speaker assumes to be not yet present in the area of convergence. The falling pitch contour that tends to accompany the rheme signals the speakers' expectation that this information will come to enlarge the area of convergence. At the level of the ideational function (Halliday, 1978), a categorical version would fit a context in which the notion of *gas pipe* has already been introduced in the interaction. Alternatively, at the level of the textual metafunction, *gas pipe* is introduced as a topic, about which the speaker is going to predicate some inherent of semi permanent attribute, state or activity.

A comparison of these two different treatments of the same sentence, and the different meanings and contexts of situation they

project, can help learners better understand the significance of eventive sentences and become more aware of the change of state suffered by the entity referred to in the subject. In this way, they may make more successful predictions for nuclear placement.

3.4. Nuclearity in IPs with ergative verbs used unaccusatively: The role of [+change of state]

It is worthwhile to reassess some of the examples presented by Wells (op. cit.) and Tench (op. cit.) in their accounts of event sentences and analyse these cases in light of the [+change of state] feature proposed in this work. As shown in examples (10), (11), (20) and (24), copied below for ease of reference, these authors list sentences with verbs such as *run, cry, ring* and *shine,* as cases of eventiveness.

(10) The WATER'S running
(11) The BABY'S crying
(20) The PHONE's ringing
(24) It's a funny day: the SUN is shining, but there's a WIND springing up.

As mentioned in Section 2.2, these authors explain nucleus placement on the subject by referring to the predictability of the verb, given that it frequently collocates with the subject noun. One criticism that can be made to this view is that the predictability of the verb often originates not in the semantic features of the verb itself but from world knowledge; as put by the authors themselves, we all know that the sun normally shines, and phones normally ring. In this view, then, these sentences should not be considered strictly eventive, and in intonation manuals, they would be more appropriately presented separately, as cases different from *The car broke down, Cinderella arrived* or *The kettle's boiling*. Moreover, (10), (11), (20) and (24) could even be regarded as cases of narrow focus in approaches where the concept of old information includes predictability from world knowledge or frequency of collocation. The 'predictability of the verb' account does not mesh with a strict interpretation of predictability, by which a predictable lexical item acquires the status of old information, since eventive utterances contain all-new information by definition

(Cruttenden, 2007). It may be the case that Wells and Tench use the term 'predictability' in a loose sense, depending on each case; however, from a pedagogical perspective, a polysemic use of the term can be challenging for learners. Considering two types of predictability, one given by word informational status and another one afforded by knowledge of the world, might prove confusing and hinder an effective prediction of appropriate nuclear accent placement.

Although it is true that the verbs in examples (10), (11), (20) and (24) can be treated as light verbs in frequent collocations, a different account can be put forward, thereby circumventing the issue of predictability type. Despite the unergative nature of the verbs *run, cry, ring* and *shine*, these sentences can be interpreted as encoding the [+change of state] feature nonetheless, albeit in a less direct way. The contexts in which these examples may be uttered tend to be such that a passage or transition from one state to another one is implied. This transition may not be present in the physical world, but in the discourse setting: the emergence of an entity such as water, a baby's cry or the sun's rays may only take place metaphorically, as they enter the scene set by current discourse. This means that eventiveness can not only be instantiated in the physical world, but may also be manifest in the subjectivity of the speaker, who reflects this subjective emergence in their choice of nuclear placement.

This account may be extended to sentences with the verb be + adjectival phrase, as in examples (47-49.a).

(47) Your BUTTON'S loose (change of state: it was tightly sewn at some time but now it isn't)
(48) Your SHOELACES are undone (from being properly tied up to untied)
(49) Her EYES are red (Something's happened to her eyes; has she been crying?)

A contrast may be established between the eventive use in (49.a) and the descriptive use of the structure in (49.b).

(50) Her eyes are GREEN (They always are)

In this case, it cannot be said that *red* is predictable; on the contrary, redness is a non inherent attribute of eyes. However, her eyes being green is an inherent attribute, unlike redness, which is temporary and context-dependent. Therefore, a categorical meaning of the sentence, i.e. | *Her eyes* | *are GREEN* | or, alternatively, |*Her eyes are* GREEN|, would be used when the speaker's communicative aim is to describe a permanent, inherent attribute.

The examples so far show how a semantic approach can be more helpful to learners in establishing that the entity in the subject has undergone a change of state or condition. Instead of considering the different types of verbs and verb phrases, an interpretation in terms of [+change of state] offers a more economical way of predicting nuclearity.

3.5. Transitive verbs used unaccusatively

The explanatory power of the feature [+change of state] is such that it even allows accounting for subject nuclearity in broad focus IPs with transitive verbs, as in examples (51-52):

(51) (A motorist recounts a flat tyre incident). Fortunately, A NEIGHBOUR spotted us, came up to check the tyre, and gave us a hand. (adapted from Dickerson, 1989:86)
(52) (Guard enters prison cell, addresses prisoner): Mr. TORRANCE wants to see you. Follow me. (Copus, 2009)

In both examples, *neighbour* and *Mr. Torrance* can be conceptualised as entities resulting from a change of state, i.e., from absence to presence. *Neighbour* is a more evident, physical presence, whereas *Mr. Torrance*, who is not physically present in the discourse context, reflects a more abstract or discourse-constructed emergence into relevance: a pragmatic 'coming into being' as a figure of authority within the immediate interactional context. Such use of nuclearity on the subject reflects the speaker's construction of reality. In other words, whether an occurrence constitutes a case of change of state or not depends on the speaker's apprehension of the world as well as his/her communicative intent. The eventiveness potential in a given context of situation may be more or less directly expressed in language use: unaccusative verbs are its most direct representation,

whereas non unaccusative verbs used unaccusatively may reflect different speaker estimations of eventiveness. Such less transparent cases of eventiveness offer an additional unexplored line of enquiry within the field of exceptions to the so-called LLI rule; however, due to space constraints, this issue will not be pursued further in this work.

4. Conclusion and pedagogical implications

This study re-examines traditional accounts of nuclearity in eventive sentences, highlighting a number of problems which often posit difficulties for learners of L2 English intonation. It has been shown that explanations provided in popular intonation manuals and books are sometimes superficial or vague. Besides, authors often conflate different surface forms under a single 'event sentence' label, without systematising different structural subtypes. This results in limited explanatory power. Learners often struggle to determine consistently in which cases verbs qualify as denoting 'appearance' or 'misfortune', particularly when the speaker uses these semantic features in an abstract, non physical way, as in *Your MOTHER phoned* or *OBJECTIONS were raised*. The challenge is therefore twofold: (a) to redefine these sentences in terms of deeper linguistic structure, and (b) to propose criteria that allow language users to predict, rather than merely describe, nucleus placement in eventive utterances.

This work proposes that teaching nuclearity in eventive sentences entails fostering learners' ability to determine whether a given structure should be used as an eventive sentence or as a categorical one, depending on the communicative aim and taking into account semantic criteria. More precisely, they should be able to recognise the semantic feature [+change of state], which is implicit in unaccusative verbs. Examples containing unaccusative verbs would be best presented separately from other cases of eventiveness; yet they should be the very first step in the teaching of the topic. Once learners have become familiar with the concept of change of state, the account can be extended to other verb types and constructions. It is essential that learners and users in general develop an awareness of [+change of state] even when such a change does not manifest itself physically but metaphorically. This second stage in the teaching of eventive nuclearity would probably take a longer period of time before learners

can appropriate the concept and the ways in which it may be instantiated in different cases and contexts.

By incorporating the semantic underpinnings of unaccusativity into instruction, learners can be trained to identify which verbs assign their only argument internally, and to associate that feature with early nucleus placement. If learners are taught to recognize that a verb or verb phrase encodes a change of state, and that its subject is the patient or undergoer of this change, they can make more informed predictions about where the nucleus should fall. This approach transforms intonation instruction from a rule-of-thumb exercise into a principled, feature-driven task grounded in linguistic knowledge.

The theoretical insights presented here have concrete implications in the context of English intonation instruction for Spanish-speaking learners. One of the most persistent errors observed in intonation instruction is the overgeneralization of the LLI rule, which leads learners to place the nucleus on the final lexical item regardless of verb type or semantic structure. For instance, learners might incorrectly produce *A bridge COLLAPSED* or *Your mother's just ARRIVED*, relying on linear position rather than semantic salience. This tendency may be reinforced by the learners' native language, whose nuclear accent typically falls on the last constituent of the clause unless contrastive focus is involved. Spanish uses syntactic rearrangement, such as clefting, topicalization and VS order, to mark eventiveness, whereas English relies heavily on nucleus placement. This cross-linguistic mismatch can contribute to persistent tonicity errors among learners.

In translation and interpretation contexts, the framework proposed would allow practitioners to better capture the difference between thetic judgments and categorical judgments and render them appropriately into Spanish, as well as produce them accurately when they translate from Spanish into English. In utterances such as *A COUP has taken place, A MISSILE landed*, *PEACE talks broke down. A CEASEFIRE was declared*, translators can interpret subject nuclearity as reflecting [+change of state], and thus highlight the patient or undergoer nature of the subject, the focal point of the utterance's informational structure, in their Spanish renderings by exploiting syntactic alternatives in order to convey eventiveness. In accordance with the Unaccusative Hypothesis, the Spanish subject is

left in its original object location, so that it may receive the nucleus, as in *Hubo un golpe de ESTADO, Cayó un MISIL, Fracasaron las negociaciones de PAZ, Se declaró un alto el FUEGO*, thus signalling the patient role of the subject in an all-new information context. Renderings such as *Un golpe de Estado ha tenido LUGAR, Un misil CAYÓ, Las negociaciones de paz FRACASARON, Un alto el fuego se DECLARÓ* would not convey eventiveness. In fact, nucleus placement on the last lexical items in these examples might entirely change the communicative intent of the original, transforming alarming, unexpected and circumstantial news-breaking events into casual, matter-of-fact comments on current (and maybe frequent) affairs.

References

Brazil, D. (1997). *The Communicative Value of Intonation in English.* Cambridge University Press.

Chomsky, N. (1981). *Lectures on Government and Binding: The Pisa Lectures*. Foris Publications.

Chomsky, N., & Halle, M. (1968). *The Sound Pattern of English*. Harper & Row.

Copus, N. (Director). (2009). *The Day of the Triffids* [TV miniseries]. BBC.

Cruttenden, A. (2007). *Intonation* (2nd ed). Cambridge University Press.

Crystal, D. (1969). *Prosodic Systems and Intonation in English*. Cambridge University Press.

Dickerson, W. R. (1989). *Stress in the Speech Stream: The Rhythm of Spoken English*. Student Text. University of Illinois Press.

Dowty, D. R. (1991). Thematic proto-roles and argument selection. *Language, 67*(3), 547–619. https://doi.org/10.2307/415037.

Fillmore, C. J. (1968). The case for case. In E. Bach & R. T. Harms (Eds.), *Universals in linguistic theory* (pp. 1–88). Holt, Rinehart & Winston.

Gussenhoven, C. (1984). *On the Grammar and Semantics of Sentence Accents*. Foris.

Halliday, M. A. K. (1967). *Intonation and Grammar in British English*. Arnold.

Halliday, M. A. K. (1978). *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. Edward Arnold.

Hualde, J. I. (2014). *Los Sonidos del Español*. Cambridge University Press.

Kuroda, S.-Y. (1972). The categorical and the thetic judgment: Evidence from Japanese syntax. *Foundations of Language, 9*(2), 153–185.

Ladd, R. (1980). *The Structure of Intonational Meaning: Evidence from English.* Indiana University Press.

Levin, B., & Rappaport Hovav, M. (1995). *Unaccusativity: At the Syntax–lexical Semantics Interface*. MIT Press.

O'Connor, J. D. & Arnold, G. F. (1973). *Intonation of Colloquial English.* Longman.

Ortiz Lira, H. (1995). Nucleus placement in English and Spanish: A pilot study of patterns of interference. In J. Windsor Lewis (Ed.), *Studies in General and English Phonetics. Essays in Honour of Professor J. D. O'Connor* (pp. 255-265). Routledge.

Ortiz Lira, H. (1998). Word stress and sentence accent. *Cuadernos de la Facultad, Monografías Temáticas*, Nro. 16. Facultad de Historia, Geografía y Letras, Universidad Metropolitana de Ciencias de la Educación, Chile.

Ortiz Lira, H. (2000). La acentuación contextual en español. *Onomázein*, *5*, 11-41.

Perlmutter, D. M. (1978). Impersonal passives and the unaccusative hypothesis. *Proceedings of the Berkeley Linguistics Society*, *4*, 157-189.

Sasse, H. J. (1987). The thetic/categorical distinction revisited. *Linguistics, 25*(3), 511–580. https://doi.org/10.1515/ling.1987.25.3.511.

Selkirk, E. (1984). *Phonology and syntax: the relation between sound and structure.* MIT Press.

Selkirk, E. (1995). Sentence prosody: Intonation, stress and phrasing. In J. A. Goldsmith (Ed.), *The Handbook of Phonological Theory* (pp. 550–569). Blackwell.

Smith, C. S. (1991). *The Parameter of Aspect*. Kluwer Academic Publishers.

Tench, P. (1996). *The Intonation Systems of English*. Cassell.

Wells, J. C. (2006). *English Intonation: An Introduction*. Cambridge University Press.

Zubizarreta, M. L. (1998). *The Prosody-Syntax Connection*. MIT Press.