

Annotating Events in Spanish

TimeML Annotation Guidelines

Version TempEval-2010

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1 Introduction

This document describes the annotation guidelines for marking up instances of event mentions in Spanish text, according to the TimeML language. TimeML (Pustejovsky et al., 2005) is a specification language for events and temporal expressions. It was first developed in 2002 in an extended workshop called TERQAS (Time and Event Recognition for Question Answering Systems),¹ which focussed on the issue of answering temporally based questions regarding events and entities in news articles. In 2003, TimeML was further developed in the context of the TANGO workshop (TimeML Annotation Graphical Organizer).² In addition, TimeML has been consolidated as an international cross-language ISO standard (ISO WD 24617-1:2007), and has been approved as the annotation language for TempEval, one of the tasks in the SemEval International Workshop on Semantic Evaluations (Verhagen et al., 2007, 2009).

¹<http://www.timeml.org/site/terqas/index.html>

²<http://www.timeml.org/site/tango/index.html>

The current annotation guidelines parallel those for English and Catalan events (see Saurí, Goldberg et al. (2009), Saurí and Pustejovsky (2009), respectively), while focussing on the specifics of events as expressed in the Spanish language. The annotation process will be split into two sequential subtasks. First, identifying what are the events in text, and then characterizing them with their appropriate attributes (e.g., tense, aspect, or polarity). The structure of the present document reflects this division. Section 2 gives an overview of the notion of event as understood in TimeML. Then, sections 3 and 4 address the issue of **event identification**, laying out first what to annotate as events and then describing how much text to mark up as such –i.e., its extent. Finally, section 5 focuses on the task of **attribute annotation**.

2 Events in TimeML

We use *event* as a cover term for situations that *happen*, *occur*, *hold*, or *take place*. Events can be punctual (1) or last for a period of time (2). We also consider as events those predicates describing *states* or *circumstances* in which something obtains or holds true (3).

- (1) El barco **llegó** a las islas Galápagos.
- (2) La compañía adjudicataria **explotará** el recinto durante 60 años.
- (3) Aún **estamos esperando** que nos presenten su programa.

Events may be expressed by means of tensed (4) or untensed verbs (5), nominalizations (6), adjectives (7), or prepositional phrases (8):

- (4) El amor, los sentimientos, la vida misma, un día **explotará**, se hará cenizas.
- (5) Es muy difícil **conciliar** los intereses de la empresa y **satisfacer** las demandas del personal.
- (6) John O'Connor contó la misma noche de las **elecciones** frente a tres testigos que su esposa deseaba jubilarse .
- (7) CC.OO. considera **abusivo** el aumento del 6,28% en las tarifas de los billetes de Cercanías.
- (8) Orías parece consciente de estar **al mando de una nave que se hunde**.

In the interest of highlighting the point being made, in the sentences above there are “markables” (i.e. elements to be marked up in actual annotation) which here are not shown as tagged. In (6), for instance, neither *contó* nor *deseaba jubilarse* are annotated. In practice, however, the annotator will mark up **all** markables during actual annotation. This will be true of many additional examples given as this document proceeds.

3 What to annotate as events

The current section details what expressions will be considered as denoting events. Each subsection focuses on a different part of speech: verbs, nouns, adjectives, prepositional phrases, and other constructions. For your convenience, these guidelines are summarized in tables 1 and 3 (appendix A).

3.1 Events denoted by VERBS

Most verbs express an event, and hence will be marked up as such, including those denoting states. In the examples below, the event-denoting verbs are indicated in bold face.

- (9) a. **Es** muy difícil **conciliar** los intereses de la empresa y **satisfacer** las demandas del personal.
- b. John O'Connor **contó** la misma noche de las elecciones que su esposa **deseaba jubilarse**.
- c. Un espectacular incendio, **causado** por un cortocircuito, **destruyó** ayer por la tarde totalmente el auditorio B del Palacio de Congresos de Madrid.
- d. La pareja guipuzcoana **acude** con piel de cordero, conscientes de las dificultades que **entraña** el compromiso.
- e. **Serán** socios del mismo club, **leerán** los mismos libros, **disfrutarán** con las mismas películas.
- f. La carretera **llega** al río Lau.
- g. **Hemos coincidido** plenamente en las necesidades que el país **tiene** en estos momentos.

There are however some verbs that MUST NOT be annotated as events. These are:

1. **Verbs in temporal expressions.** Constructions like *hace un mes* ('a month ago'), *lo que queda de año* (lit. 'what is left from the current year'), *lo que va de año* (lit. 'what is gone of the current year'), or *la semana que viene* (lit. 'the week that is coming'), are characteristic time expressions in Spanish. The verbs in these expressions (underlined below) will not be tagged as events. Specifically, the constructions to keep in mind are:

- (a) $\left\{ \frac{\text{faltan}/\text{faltaban}/\dots}{\text{pasan}/\text{pasaban}/\dots} \right\} + \text{NP}_{\text{time}} + \left\{ \frac{\text{para}}{\text{de}} \right\} + \text{NP}_{\text{time}}$
- (b) $\text{hace}/\text{hacía}/\text{hará} + \text{NP}_{\text{time}}$
- (c) $\text{lo que} \left\{ \frac{\text{queda}}{\text{sigue}} \right\} \text{de} + \text{día/semana/mes/año/enero...diciembre/lunes...domingo}$
- (d) $\left\{ \frac{\text{el}}{\text{la}} \right\} + \text{día/semana/mes/año/enero...diciembre/lunes...domingo} + \text{que} \left\{ \frac{\text{viene}}{\text{sigue}} \right\}$

2. **Auxiliary verbs.** Auxiliary verbs in Spanish are the following:

- **The verb *haber* when used in compound forms.** Compound forms are constructions involving the auxiliary verb *haber* followed by a main verb in participle form, such as *habían dormido* (see table 6, in the appendix).
- **The form *ser* when used in passive constructions.** That is, constructions involving the auxiliary verb *ser* followed by a main verb in participle form, such as *fueron esperados, ha sido rescatada*.

In constructions of this type, only the main verb, and not the auxiliary form, will be tagged as event, as underlined in the examples above.

3. **Verbs in certain periphrases.** Spanish has a number of verbal periphrastic expressions involving 2 verbs, sometimes connected by a preposition. Most of these constructions will be treated as introducing 2 independent events. That is, each verb will receive an event tag. There are, however, 2 kinds of periphrases in which only ONE of the verbal forms will be annotated as event. These are:

- **The periphrasis expressing future: ‘*ir a + INFINITIVE*’**

The periphrasis ‘*ir a + INF*’ can receive two interpretations: a purely compositional one, built up from the literal meaning of verb ‘*ir*’ and that of the verb in infinitival form (71a), and a second one expressing a future tense (71b). In the first case, we will annotate both verbal expressions as independent events (as underlined below), whereas in the second, only the verb in infinitive will be annotated as event.

- (10) a. Fue a comprar cigarrillos y sacó un cuchillo para asaltar al quiosquero.
 b. Aeroflot va a comprar 22 aviones A-350.

- **Periphrases expressing aspect progressive**

In the Spanish tradition, they are also referred to as periphrases of duration (‘*perífrasis durativas*’.) The main periphrasis conveying this meaning is ‘*estar + GERUND*’, whose complete conjugation is presented in the last row of tables 5 and 6 (appendix B.2). Other periphrases with the same aspectual meaning are the following:

$$(11) \left\{ \begin{array}{c} andar \\ (estar) \\ ir \\ llevar \\ venir \end{array} \right\} + GERUND$$

In these constructions, only the gerund form will be marked up as event, as underlined below, hence leaving the conjugated form untagged. In a way, we are considering the conjugated element as the auxiliary, and the gerundive form as its main verb.³

- (12) a. Durante aquel mes, anduvo mirando condiciones de hipotecas.
 b. La muestra estará viajando por todo el país del 20 de junio al 12 de octubre.
 c. Rockpalast lleva emitiendo directos desde mediados de los 70 hasta nuestros días.

³Thus, the inflection information of the conjugated form (tense, aspect, mood, etc.) will be indicated in the tag of the gerundive form. This will be presented in more detail in section 5, on event attributes.

3.2 Events denoted by NOUNS

Nouns expressing an event can appear in at least two of the contexts listed below. Use them in order to determine whether a given noun denotes an event.

- NOUN *duró varios/pocos minutos/días/...*
- NOUN *fue muy rápido/inmediato/instantáneo/...*
- NOUN *tuvo/tiene/tendrá lugar* TEMPORAL EXPRESSION
- NOUN *empezó/continuó/terminó* TEMPORAL EXPRESSION

State-denoting nouns may be harder to identify. In some cases, not even two of the aforementioned contexts apply. For example, properties like *honradez* ('honesty'), *experiencia* ('experience'), or *incompetencia* ('incompetence') can only appear in the first context, whereas others are more flexible, especially if they express states that come to existence as a result of a previous process (i.e., the so-called resulting states), or that can change into a different situation, such as *estado de sitio* ('siege'), *paz* ('peace'), or *problema* ('problem').

Event-denoting nouns will be marked up according to the following guidelines:

- 1. Functional nouns.** Examples of functional nouns are: *temperatura, talla, peso, población, intensidad*, etc. They take an individual as argument (denoting, e.g., a person, physical location, group of individuals, etc.) and return a specific value on an appropriate scale, which can be numeric or not (e.g., *alto, bajo; grande, pequeño; caliente, frío*, etc.).

Functional nouns will be annotated whenever they are accompanied by their value (13) or a value expressing a difference with regard to the previous value (14). As can be appreciated in the examples below, economics terms such as *ingresos* ('income'), *inflación* ('inflation'), or *déficit* ('deficit') are also functional nouns. Functional nouns to be annotated as events appear underlined, whereas the value-denoting expressions are in bold face.

- (13) a. La reducción de impuestos beneficiará sobre todo a las familias con ingresos inferiores a **los 2.600.000 pesetas anuales**.
b. Los Presupuestos del 2000 prevén un crecimiento del **2,2%** y una inflación del **1,3%**.
- (14) a. Este colectivo verá como la tributación que soportan en el impuesto sobre la renta descende **una media de un punto**, del **27%** al **26%**.
b. El Gobierno ha previsto reducir el déficit público en **más de un billón de pesetas**.

- 2. Sortal states.** Sortal states are generally expressed by:

- Agentive nominals, which are generally deverbal nouns referring to the agents of certain activities or actions (e.g., *patrocinador, ganador, viajero, peatón*).

- Nouns denoting professions, roles, or positions (e.g., *doctor*, *ingeniero*, *ATS*, *investigador*).
- Rigid designators; that is, terms referring to the same entity in all possible worlds; e.g., *el primer presidente socialista de España*.

These elements will be annotated as events ONLY when functioning as the head of a *predicative complement*. A predicative complement is the complement of a verb (or possibly also, a noun) belonging to one of the classes listed below, among others. In the examples that follow, the sortal noun heading the predicative complement is in bold face, whereas the verbal predicate being complemented is underlined. Both elements will be marked up as events.

- Copulative predicates (e.g., *ser*, *estar*, *parecer*, etc.).
(15) Actualmente es **presidente** honorario de la compañía.
- Inchoative predicates (e.g., *pasar a ser*). They express the coming to existence of a situation.
(16) En 1821 Bolívar pasó a ser el primer **presidente** de la República de Bolivia.
- Complements of aspectual predicates (e.g., *empezar*, *seguir*, *continuar*, *terminar*, *acabar*, etc.).
(17) a. Alicia Moreau continuó como **directora** de este periódico hasta 1960.
b. Eddy Scherer siguió de **líder**.
- Change of state predicates, that is, any predicate expressing the coming to be or ending of the position expressed by the sortal state, such as *dimitir*, *nombrar*, *elegir*, etc.
(18) a. Hace ya seis años que dimitió como **presidente** de la Junta de Andalucía.
b. A los 16, Regnier aceptó un cargo como **instructor** en el Colegio Anderson.
- Predicates of evaluation and description (e.g., *considerar*, *describir*, *presentar*, etc.).
(19) a. Lyndon LaRouche lo caracterizó como un **ataque** “institucional de la CIA” en contra del gobierno de Bush y Cheney.
b. Trótula, que ejerció la medicina durante el siglo XI, es considerada la primera **ginecóloga** de la historia.

3. *Periods from specialized calendars*, including sport seasons, academic courses, agricultural periods, etc. The problem with this kind of events is that they tend to be referred to by expressions carrying a strong temporal meaning, such as:

- *Temporada* (‘season’), as in *la temporada futbolística* (‘the soccer season’).
- *Periodo*, *época* (‘period’, ‘epoch’), e.g., *la época de la cosecha* (‘harvesting time’)

We will annotate these expressions as events whenever the season or year does not correspond to the natural partition of the calendar (that is, one of the seasons or a specific year).

- (20) a. Cuba iniciará el **año** escolar el primero de septiembre con una situación favorable.
 b. Aztecas recibe a Pumas en el último partido de la **temporada**.

On the other hand, these expressions will be annotated as time expressions when they refer to vague durations. For example:

- (21) a. Durante **una temporada bastante larga** presentó signos de apatía.
 b. Un crédito provisional se ofrece a los prestatarios que quieren los fondos por **un periodo corto de tiempo**.

Similarly, academic trimesters, semesters, quatrimesters, business quarters, and fiscal years will be annotated as temporal expressions as well. See the appropriate annotation guidelines document.

4. Events expressed by means of time expressions. Some time expressions such as *11-S*, *11-M*, etc., have been recategorized into proper nouns and refer to specific events (in these cases, the terrorist attacks that occurred on September 11th, 2001 and March 11th, 2004, respectively), and not simply to the original date. In TimeML, these expressions will be annotated as **timex3** and not as **events**. Other time expressions that will receive the same treatment are: *Festividad de la Ascención* ('Ascension Festivity' –note, however, that the term *Festividad* here will be tagged as **event**), *Día del Padre* ('Father's Day'), *Día Internacional del Niño* ('International Day of the Childhood'), and *Primero de Mayo* ('Labor Day').

5. The noun 'acuerdo', in the construction *de acuerdo con* ('according to'), introducing a reporting context. For example:

- (22) De acuerdo con lo que **circula** en los medios especializados, "Battle in Seattle" tiene problemas de distribución en los Estados Unidos.

Note that this construction can embed an event expressed by either a verb, bold faced in example (85a), or a noun, bold faced in (85b). In addition to *acuerdo*, we will also mark these embedded elements.

- (23) Para el Ministerio Público, de acuerdo con la **reconstrucción** de los hechos y las **pruebas** de balística, existen graves inconsistencias.

In the case of embedded nouns, however, we will be cautious in considering whether they denote events. For instance, *información* ('information') and *datos* ('data') in (86) will not be annotated as such, since they can be interpreted as information objects. On the other hand, *reconstrucción* and *pruebas* ('tests') in (85b) will be marked up as events.

- (24) a. De acuerdo con la **información** de Tellería, la alianza permitirá establecer un mecanismo de consultas directas.
 b. De acuerdo con los **datos**, en el censo de 1990 existían 2.065.500 profesionales ocupados.

6. All other event-denoting nouns will be marked up as events ALWAYS. For example:

- (25) a. Estados Unidos levantó el **bloqueo** sobre el préstamo solicitado por El Salvador.
b. Sin embargo no hay que olvidar que el saneamiento de la **deuda** del transporte va a ser sufragado fundamentalmente con los impuestos de los ciudadanos.
c. El **estado de sitio** continuó frente a los **intentos** de libre expresión en las calles.
d. Conde y Garro han vivido desde entonces una **relación** intensa, a prueba de bomba.
e. Aquella fue sin duda una **paz** de corto plazo.
f. Describió la **experiencia** como una **pesadilla**.

We recommend annotators to use table 1 and 3 (in appendix A) for a general overview of these conditions during the annotation process.

3.3 Events denoted by ADJECTIVES

Adjectives generally express a property or attribute of an entity, and as such, we consider them as denoting an event of a stative nature. Adjectives can appear in attributive or predicative positions.

Attributive adjectives. They function as pre- or post-modifiers of the noun:

- (26) a. reacción **madura**
b. ambiente **insoportable**
c. militares **culpables**
d. **fallido** golpe de estado

Predicative adjectives. They can appear in three main contexts.

- As the predicative complement of a verb belonging to one of the types listed below, among others (refer to table 3 in appendix A).

- Copulative and pseudo-copulative predicates (e.g., *ser*, *estar*, *parecer*, etc.).

- (27) El ballenato parecía **exhausto** pero los socorristas esperaban que siguiera mar adentro.

The adjective is considered predicative even if the copulative predicate has been ellided, as is the case of *limpias* and *secas* below. This applies to all types of verbs presented here.

- (28) La ropa estaba planchada y las cacerolas **limpias** y **secas**.

- Inchoative predicates (e.g., *pasar a ser*, *acabar*, *resultar*). They express the coming to existence of a situation.

- (29) Ciertos hechos relatados en el libro resultaron **incómodos** para la Casa Real.

- Aspectual predicates (e.g., *empezar, seguir, continuar, terminar, acabar*, etc.).
(30) Los regulares seguían **tristes** por la ausencia del chico Otori.
- Causative predicates (e.g., *dejar*, etc.).
(31) Paramédicos de la UNAM trasladaron al lesionado y lo dejaron **estable** en la enfermería.
- Change of state predicates in general.
- Predicates of perception (e.g., *ver, oír*, etc.).
(32) La cantante salió por la noche a cenar en “Carl’s Jr”, donde se la vio **radiante**, bien **compuesta**.
- Predicates of evaluation and description (e.g., *considerar, describir, presentar, caracterizar, encontrar*, etc.). Predicates of perception (e.g., *ver*) may sometimes be used to express evaluation as well.
(33) a. CC.OO. considera **abusivo** el aumento del 6,28% en las tarifas de los billetes de Cercanías.
b. Quienes estaban allí vieron al ministro muy **nervioso**.
- As the predicative complement of an argument of the main verb, such as: the subject (34a), direct object (34b), or even adverbial complements (34c).
(34) a. Pepe y Juan se casaron muy **contentos** este pasado julio.
b. Le repugnaba dejar las sartenes **aceitosas**.
c. Entraron en la sala con los zapatos **sucios** de barro.
- As the head in verbless clauses that are placed, generally between commas, after the noun they modify. For example:
(35) Las autoridades, [**molestas** con las acusaciones] , han declarado finalmente esta mañana.

When annotating adjectives, the following guidelines apply:

1. **Attributive adjectives.** Adjectives in attributive position will be marked up as event only if they denote modal values of possibility (e.g., *posible, probable, improbable, capaz*) and necessity (e.g., *cierto, seguro, imposible*).
2. **Predicative adjectives.** We will only annotate as events those predicative adjectives that express a non-persistent property of the entity denoted by the noun.

There are indeed many properties of entities that can be considered as non-persistent. People, for instance, can change their nationality, and cars can be painted into a color different from their original one. According to these considerations, the adjectives *sene-galeses* in (36), and *rojo* in (37) would be marked up as events.

(36) Los 75 inmigrantes rescatados de las pateras a la deriva son **senegaleses**.

(37) El coche que conduce Vin Diesel es **rojo**.

However, we will ONLY annotate those events satisfying at least one of the following conditions:

- a. The property they denote is clearly fluid, non-persistent, such as *red* in (38) but not in (37).

(38) Cuando Gurudeva escuchó esto se puso **rojo** de la ira.

- b. The property is presented as temporally bound to a particular point or period of time.

(39) En los años 60 y principios de los 70, el país estaba poco **desarrollado**.

- c. The property is presented as the opinion, knowledge, or belief of somebody, or as a matter under discussion; e.g., *senegaleses* in (40) but not in (41).

(40) El Gobierno de Senegal sostiene que algunos de los que llegan al archipiélago dicen que son **senegaleses** cuando realmente no lo son.

(41) Los tres **senegaleses** explicaron los objetivos básicos de la semana cultural de su país.

- d. The adjective expresses a modal value of possibility (e.g., *possible*, *probable*) or necessity (*cierto*, *seguro*).

Some cases may be hard to evaluate. As a general rule, **in case of doubt do NOT annotate** the adjective.

Furthermore, bear in mind that some of the adjectives presented as candidates susceptible to be tagged as events may, in fact, be participles (and thus verbal forms), and not adjectives –e.g., *cargadas* and *provista* below. These should be treated applying the guidelines for verbs. Refer to section 5.1.3 for criteria on how to distinguish between adjectives and participles.

(42) a. Los anarquistas se presentaron a la reunión con las armas **cargadas**.

b. En ocasiones esperaba durante horas al otro lado de la puerta, **provista** de algún camuflaje razonable.

We recommend annotators to use tables 1 and 3 (appendix A) for a general overview of the guidelines for adjectives during the annotation process.

3.4 Events denoted by PPs

PPs which denote events will be annotated ONLY in two specific situations:

PPs introduced by the preposition *según* ('according to') in contexts of report.
For example:

(43) **Según la OMS**, más de 200 mil personas mueren por año a causa del ruido.

This construction parallels the structure *de acuerdo con*, seen in the section on nouns (section 3.2). The same situation observed there applies here. That is, *según* can embed an event expressed by either a verb, underlined in example (44a), or a noun, underlined in (44b). These elements will be marked as events as well.

- (44) a. **Según** lo que dicen fuentes peruanas, el ejercito, FAP y Armada han perdido peso año por año.
b. **Según** la reconstrucción policial, el empresario fue secuestrado por tres personas el pasado 2 de junio.

As in the case of *de acuerdo con*, we will be cautious in considering whether the embedded nouns denote events. We will not annotate them if they can clearly be interpreted as expressing an information object, such as *resultados* ('results'), *datos* ('data'), *estadísticas* ('statistics'), etc.

PPs functioning as predicative complements. That is, PPs that are complement of verbs belonging to the types listed below, among others (see Table 3 in appendix A).

- Copulative and pseudo-copulative predicates (e.g., *ser*, *estar*, *parecer*, etc.).

(45) Orías parece consciente de estar **al mando** de una nave que se hunde.

- Aspectual predicates (e.g., *empezar*, *seguir*, *continuar*, *terminar*, *acabar*, etc.).

(46) Actualmente, Marcos y los Zapatistas siguen **en la Selva Lacandona**.

- Causative predicates (e.g., *dejar*, *provocar*, etc.).

(47) El discurso dejó a los asistentes **sin palabras**.

Note that not all PPs which denote events will have their preposition head tagged as such, but the verb, noun, or adjective head of the complement of that preposition instead, whenever this is the element conveying the event. We mark up the head preposition only *in case the verb, noun, or adjective head within the PP does not denote the event itself*. The following are examples where the element to be tagged as event is the head of the preposition complement (underlined), and not the preposition (bold face). Example (48) illustrates the case for verbs, (49) for nouns, and (50) for adjectives.

(48) El público se quedó [**sin** ver el programa], ya que la BBC nunca lo emitió.

(49) La noche de inauguración del Festival de Gijón empezó [**con** aplausos], naturalmente.

(50) Se lo describe [**como** muy intenso].

Careful, however, with PPs whose complement denotes an event –in particular, in the case of idioms and other frozen expressions. For example, the noun *prueba* in the PP ‘*a prueba de bomba*’ (51) denotes an event. But this event in itself has not much to do with the event that the whole PP actually expresses, which is the property of stability and robustness of something. Hence, the element to be marked up here is the preposition.

(51) Es una relación [a prueba de bomba]

Refer to tables 1 and 3 (appendix A) for a general overview of the guidelines for PPs during the annotation process.

3.5 Events denoted by OTHER ELEMENTS

Events can also be referred to by other elements, most typically locative adverbs such as *aquí* and *allí* (52). They will be marked up only when functioning as the head of a predicative complement.

- (52) a. Estamos **aquí** para dejarle claro al pueblo de México y al mundo que sin libertad y justicia no hay democracia
b. Dos de cada tres creyentes de esta iglesia están **ahí** porque un amigo, vecino o familiar los invitó.

4 Event extents

This section addresses what to mark as the span, or extent, of the event tag. Since events correspond to situations that occur or hold, they describe not only a specific action or state, but include also their participants (who, to whom, etc.), as well as other relevant entities such as time (when), place (where), etc. However, TimeML adopts a minimalist and highly compositional approach, and thus marks as events only the lexical elements referring to the action or state, disregarding any type of participant or related entity.

4.1 Events expressed by VERBAL CONSTRUCTIONS (sentences, clauses, VPs)

The general rule for events expressed by sentences (53a), clauses (53b), or VPs (53c) is to *annotate only the verbal head of the construction*. In the examples below, the event construction is delimited by square brackets, whereas the extent to mark up is indicated in bold face. Note that the examples may present other event expressions, but this section focuses just on those verbal events delimited by the brackets.

- (53) a. [Solórzano **vendió** la propiedad tres días después].

- b. Cualquier guerra ilegal es viable [si se **prepara** a la opinión pública].
- c. Ramona Maneiro pidió a los políticos [**legalizar** la eutanasia].

There is a variety of verbal constructions expressing events. In some of them, the general rule above applies straightforwardly, others need additional guidance. They are covered in what follows.

Simple forms. These include all verbal tenses constituted by one single verbal form, as presented in table 5 (third column) of appendix B.2. The event tag covers the verbal head (in bold face in the examples below), as stipulated by the general rule.

- (54) a. El Subcomandante Marcos **visitó** a los colonos de Morelia.
 b. Ramona Maneiro **pidió** a los políticos **legalizar** la eutanasia.
 c. La Troba Kung-Fú **tocará** en Nueva York.
 d. **Sonriendo** ante la cámara, **dijo** que se iba.

Compound forms. In Spanish, these correspond to constructions consisting of the auxiliary verb *haber* and the main verb in participle form. For example: *ha cantado*, *habían venido*, etc. These forms include all compound tenses, as presented in table 6 (see appendix).

In constructions of this type, the event tag extends only over the verbal head (which corresponds to the participle form). In the following examples, the span of the verbal construction is underlined, whereas the extent of the event tag is marked in bold face.

- (55) a. Junta y Gobierno han **acordado** la retirada de 22 contenciosos.
 b. Ruiz había **decidido** la semana pasada que no iba a jugar por Panamá.
 c. Si me hubiera **dicho**, yo le habría **ayudado**.

Passive forms. Constituted of the verbal auxiliary *ser* and the main verb in participle form. Like in the previous constructions, the event tag extends only over the verbal head. For example:

- (56) a. Juan Carlos Ferrero y Francisco Clavet fueron **eliminados** hoy en la tercera ronda.
 b. Los dos partidos habían sido **suspendidos** el sábado por la lluvia.

Verbs with pronominal clitics. Some verbs in Spanish must be conjugated with a reflexive pronoun (e.g., *ducharse, escribirse, sentarse, casarse*). When preceding the verb, the reflexive pronoun appears as an independent form (57). However, it is annexed to the verb when positioned after it (58). These two phenomena are known as proclisis and enclisis, respectively. In the following examples, the pronoun is in bold face whereas the verb appears underlined.

- (57) a. **Me** duché en un momento.
 b. **Se** escribían todos los días.

- (58) a. Tienen que sentarse de un modo determinado.
 b. Casémonos el año que viene.

The same situation happens when the direct object (59) or the indirect object (60) is expressed by means of a pronominal clitic:

- (59) a. **Lo** atamos bien.
 b. Atémoslo.
 (60) a. No **le** den nada.
 b. Denle algo para comer.

When annotating events expressed by verbs with clitics, the tag extent will ideally include ONLY the verbal form, in cases of both proclisis and enclisis –hence, spanning only over the underlined fragments in the examples above. Nevertheless, this may not be possible depending on the annotation tool employed for annotating, or the prior tokenization process of the text.

Idioms. Only the main verbal predicate will be tagged as event, as indicated below in bold face.

- (61) a. Ribadesella tiró la casa por la ventana porque el acontecimiento lo merecía.
 b. Se les **ve** el plumero a todos los que silencian los informes del Relator de Derechos Humanos de la ONU.

4.2 Events expressed by NPs

As in the case above, the general rule here is to *mark up only the noun head of the NP*. The following situations can be distinguished.

Regular NPs. The event tag extends only over the head noun, disregarding specifiers, complements, or modifiers. In the following examples, the extent of event-denoting NPs is indicated in square brackets, whereas the event-markable expression is in bold face.

- (62) [Las otrora **presiones** de todo tipo para que los independentistas de la izquierda abertzale hiciesen política], se han convertido ahora en [**prohibiciones**].

Note that restricting the event extent to only the NP head does not prevent to annotate several event-denoting nouns belonging to the same NP, as is the case of *balance* and *elecciones* below. The second noun is the head of its own NP, which is embedded in the PP complement of *balance*.

- (63) [El **balance** inicial de [estas **elecciones**]] es [el **resultado** de toda una estrategia pacientemente urdida y que nada tiene de democrática].

Named events. These are events referred to by proper nouns, such as *la Guerra Civil*, *la Transición*, *la Revolución Industrial*, *el 23F*, or *el 11M*. We will mark up only the head noun (i.e., *Guerra*, *Transición*, *Revolución*, *23F*, and *11M* in the previous examples).

Sortal states. As seen earlier, sortal states are generally expressed by (a) agentive nominals (e.g., *ganador*, *cliente*, *peatón*); (b) nouns denoting professions, roles, or positions (e.g., *médico*, *fontanero*, *director general*, *investigador*, *académico*); and (c) rigid designators (e.g., *el primer Presidente de la República de Bolivia*). We will annotate only the head noun of the construction (in bold face below). Recall, however, that not all of them will be marked up (refer to section 3.2).

- (64) a. En diciembre de 1821 Simón Bolívar se convirtió en [el primer **presidente** de la República de Bolivia].
 b. Alicia Moreau continuó como [**directora** de este periódico] hasta 1960.

4.3 Events expressed by APs

Like VPs and NPs, *event-denoting APs will have only their head adjective annotated as the event*. In the following sentences, the extent of the AP is indicated by brackets, whereas the markable event is in bold face.

- (65) a. Por pedido de la esposa, un juez declaró [**muerto**] al multimillonario Steve Fossett.
 b. Mao Zedong fue [**responsable** de la muerte de más de 70 millones de personas en tiempos de paz, más que ningún otro líder del siglo XX].

4.4 Events expressed by PPs

The element tagged as event is *only the preposition head of the PP*.

As already mentioned above, in some PPs the event of interest is conveyed by their embedded complement. This is for instance the case of the PPs marked with brackets in the phrases ‘*encontrarse [con una guerra]*’, and ‘*acabar [con el conflicto]*’, where *guerra* and *conflicto* are nouns referring to events and thus are the elements to be tagged. The following sentences illustrate this situation for verbal, nominal, and adjectival complements, respectively. They are repeated from an earlier example for the sake of clarity. The underlined element is the expression that will be marked up as event.

- (66) a. El público se quedó [sin ver el programa], ya que la BBC nunca lo emitió.
 b. La noche de inauguración del Festival de Gijón empezó [**con aplausos**], naturalmente.
 c. Se lo describe [**como** muy intenso], de tipo inflamatorio.

On the other hand, other PPs do not embed any event-denoting phrase and, given that they appear as predicative complement, they need to be marked up. Only in these situations, the preposition head will receive the event tag, as indicated by the underlining.

- (67) a. Los pasajeros que quedaron [a bordo] murieron en el siniestro.
 b. Actualmente, Marcos y los Zapatistas siguen [en la Selva Lacandona].

4.5 Events expressed by OTHER ELEMENTS

Whenever appropriate, the locative adverb will be annotated as event. For example:

- (68) a. Estamos **aquí** para dejarle claro al pueblo de México y al mundo que sin libertad y justicia no hay democracia
 b. Dos de cada tres creyentes de esta iglesia están **ahí** porque un amigo, vecino, o familiar los invitó.

4.6 Complex event constructions

There are several constructions in Spanish which involve two event expressions. In some cases, both of them are verbs. In others, NPs, APs, and PPs are also involved. For the sake of simplicity, we present all of them together here. The following subsections will provide guidelines on how to mark them up. In order to facilitate their annotation, table 2 (in appendix A) summarizes these guidelines into a convenient chart.

4.6.1 Verbal periphrases

Spanish has a number of verbal periphrastic expressions to express semantic nuances of some sort. They involve 2 verbs, sometimes connected by a preposition. In most cases, the second verb corresponds to a non-finite form (i.e., infinite, participle, or gerund).

- (69) a. La expectativa de la ciudadanía por el cambio fue tal que **acabó votando** por Evo Morales.
 b. Los afectados **llevaban sin cobrar** desde el abril.
 c. Los quince ministros restantes **hubieran estado por no desaforarlo**.
 d. **Se llegó a decir** que la KGB había mandado a un enano a morir en la luna.

Most of these constructions will be treated as introducing 2 independent events. That is, each verb will receive an event tag, which will be annotated following the general guidelines provided above for simple, compound and pronominal forms. In the examples below, the span of the periphrasis is in bold face, the square brackets delimit the two verbal forms, whereas the extent of the event tag is underlined.

- (70) a. La expectativa de la ciudadanía por el cambio fue tal que [acabó] [votando] por Evo Morales.
 b. Los afectados [llevaban] [sin cobrar] desde el abril.
 c. Los quince ministros restantes [hubieran estado] [por no desaforarlo].
 d. [Se llegó] [a decir] que la KGB había mandado a un enano a morir en la Luna.

There are, however, 2 kinds of periphrases in which only ONE of the verbal forms will be annotated as event. These were already introduced in section 3.1 but are repeated here for the sake of clarity.

1. *Periphrases expressing future: ‘ir a + INFINITIVE’*

The periphrasis ‘*ir a + INF*’ can receive two interpretations: a purely compositional one, built up from the literal meaning of verb ‘*ir*’ and that of the verb in infinitival form (71a), and a second one expressing a future tense (71b). In the first case, we will annotate both verbal expressions as independent events (as underlined below), whereas in the second, only the verb in infinitive will be annotated as event.

- (71) a. Fue a comprar cigarrillos y sacó un cuchillo para asaltar al quiosquero.
 b. Aeroflot va a comprar 22 aviones A-350.

2. *Periphrases expressing aspect progressive*

In the Spanish tradition, these periphrasis are also referred to as durative periphrases (‘*perífrasis durativas*’). The main one is ‘*estar + GERUND*’, whose complete conjugation is presented in the last row of tables 5 and 6 (appendix B.2). Other periphrases with the same aspectual meaning are the following:

$$(72) \left\{ \begin{array}{l} andar \\ (estar) \\ ir \\ llevar \\ venir \end{array} \right\} + GERUND$$

Only the gerund form will be marked up as event, as underlined below, hence leaving the conjugated form untagged.

- (73) a. Durante aquel mes, anduvo mirando condiciones de hipotecas.
 b. La muestra estará viajando por todo el país del 20 de junio al 12 de octubre.
 c. Rockpalast lleva emitiendo directos desde mediados de los 70 hasta nuestros días.

4.6.2 Constructions with predicative complements

These consist of a verb (or noun) belonging to one of the classes listed in table 3 (appendix A) and which have an event-denoting NP (74), AP (75), or PP (76) as complement.

- (74) a. Juan Carlos I es [el sucesor designado por Franco para la Jefatura del Estado].
 b. El balance inicial de estas elecciones es [el resultado de toda una estrategia pacientemente urdida].
- (75) a. El Olympique de Marsella no estará [presente en la Audiencia del Atlético de Madrid].

- b. El sector pesquero se **mostró** [optimista con las medidas anunciadas].
- (76) a. En Argentina, las economías regionales **están** [en manos de pequeños productores].
- b. El discurso **dejó** a los asistentes [sin palabras].

In these examples, the main predicate is in bold face, the predicative complement is in square brackets, and the elements to tag as events are underlined. As can be seen, both the verbal predicate and the predicative complement are marked up. All of the involved elements (verb, NPs, APs, or PPs) will be annotated according to the rules specified in the previous sections.

4.6.3 Aspectual constructions

These consist of an aspectual verb (e.g., *empezar*, *acabar*, *finalizar*, *mantener*) or noun (*comienzo*, *final*), and an event-denoting complement, which can be expressed by either a VP (77a-b) or an NP (77c). Both the aspectual predicate and its complement will be tagged as independent events (as underlined). The sentences in (77) illustrate cases in which the aspectual predicate is a verb, whereas the sentences in (78) exemplify cases involving aspectual nouns.

- (77) a. El Milán ya **ha** empezado a negociar por Eto'o.
- b. Recientemente terminó de preparar el espectáculo que lleva por nombre “Duerme”.
 - c. Las comunidades indígenas continúan a la espera de una solución al desplazamiento forzado.
- (78) a. Lucescu mostró su enfado tras el final del partido en el que su equipo perdió ante el FC Barcelona.
- b. Hoy se cumplen 104 días desde el inicio de la huelga de hambre de Patricia Troncoso Robles, en defensa de los derechos humanos de todos los presos políticos mapuche.

4.6.4 Light verb constructions

These events involve a verb of very light semantic content (e.g., *hacer*, *tener*, *tomar*, *coger*, *poner*, *dejar*) and a nominal event acting as its selected complement. In these situations, both the verbal and nominal elements are tagged as independent events (as underlined), given that they both contribute relevant information.

- (79) a. Las comunidades de la zona de Intag tomaron la decisión de dismantelar las instalaciones de la empresa minera Ascendant Copper Corporation.
- b. Las aerolíneas AeroSur y Taca se dieron un abrazo de cooperación.

4.6.5 Causative constructions

Examples of causal predicates are the following verbs, in their causative senses: *causar*, *engendrar*, *hacer (que)*, *inducir*, *producir*, *resultar*, *tener como resultado*. Two different constructions can be distinguished here:

1. **EVENT**_{e₁} *causar*_{e₂} **EVENT**_{e₃}. The causal expression (*e₂*), its logical subject (*e₁*) and its event complement (*e₃*) are tagged as independent events.

(80) El fuego_{e₁} que causó_{e₂} el apagón_{e₃} de Barcelona empezó en una planta de REE y Endesa.

2. **ENTITY** *causar*_{e₁} **EVENT**_{e₂}. Both the causal expression (*e₁*) and its event complement (*e₂*) are tagged as independent events.

(81) Una rata causó_{e₁} el fuego_{e₂} que arrasó 350 hectáreas.

4.6.6 Constructions with functional nouns

In the following 3 constructions, the functional noun will be marked up as event, together with the main verb of its clause. Some examples are provided below for different types of constructions, where all the markable expressions are underlined. In addition, the functional noun is in bold face and the main verbal predicate of its clause, in italics.

1. **INDIVIDUAL** *tener un/a* **NOUN**_{functional} *de X*.

The annotated elements are underlined:

- (82) a. Bielorrusia tiene una **población** de 10 millones de habitantes.
b. Los protones y los neutrones se crearon cuando el universo tenía una **temperatura** de 100.000 millones de grados.

2. **NOUN**_{functional} *ser (de)/estar sobre/... X*.

- (83) a. La **población** de Cataluña está por los 7 millones de habitantes.
b. La casa a sido tasada y su **valor** actual es de 400.000 euros.

3. **NOUN**_{functional} *subir/bajar/pasar/... Z (de X) (a Y)*.

- (84) a. Seis meses después, el **precio** del petróleo bajó un 75%.
b. Agrium Inc. pasó de un **precio** de 112,45 dólares en junio a 41,61 dólares en el cierre de ayer.

Note that in all these 3 constructions, the annotation guidelines adheres to the guidelines for this type of nouns (established in section 3.2).

4.6.7 Contexts of report introduced by structures like ‘*de acuerdo con*’ or ‘*según*’ (‘according to’).

These construction can embed an event expressed by either a verb, underlined in example (85a), or a noun, underlined in (85b). In addition to *acuerdo*, we will also mark these embedded elements.

- (85) a. De **acuerdo** con lo que circula en los medios especializados, “Battle in Seattle” tiene problemas de distribución en los Estados Unidos.
- b. Para el Ministerio Público, de **acuerdo** con la reconstrucción de los hechos y las pruebas de balística, existen graves inconsistencias.

In the case of nouns, we will be cautious in considering whether the embedded noun denotes an event. For example, *información* (‘information’) and *datos* (‘data’), in examples (86), will not be annotated as events, since we will consider they are interpreted as information objects. On the other hand, *reconstrucción* and *pruebas* (‘tests’) in (85b) will be marked up.

- (86) a. De **acuerdo** con la información de Tellería, la alianza entre Sinriesgos y Teletec permitirá establecer un mecanismo de consultas crediticias directas.
- b. De **acuerdo** con los datos censales, en el censo de 1990 existían 2.065.500 profesionales ocupados.

For annotating complex constructions in general, annotators are strongly encouraged to use table 2 in appendix A for guidance.

4.7 Multiword expressions

We consider as multiword expressions the following constructions:

- **Idioms** (section 4.1).
- Some **named events** expressed by several lexical items; e.g., *La Guerra Civil española* (section 4.2).
- Some **sortal states** expressed by several lexical items; e.g., *profesora emérita de matemáticas* (section 4.2).

The tag extent will comply with the general guidelines for annotating VPs, NPs, APs, and PPs. However, the annotator will indicate that the event is expressed by means of a multiword expression (see the annotation tool manual for further details).

4.8 Expressions referring to several event instances

Some event-denoting expressions refer to two or more instances of the same event type. For example, sentence (87) has only one verb (in bold face) which nevertheless denotes two separate events, each of them anchored to a different temporal expression –i.e., *lunes* vs. *martes*.

(87) Esta semana, Pepe **dió** clases el lunes y el martes.

Another example:

(88) Pepe **da** clases dos veces por semana.

In the case of events denoted by nouns, multiple instances can be expressed with the use of plural:

(89) En los últimos cincuenta años, en EE.UU. ha habido varias **caídas** del PIB per cápita.

Because there is only one expression, we can introduce only one event tag, even though there is need for more than one event reference. We will mark the event expression following the guidelines just presented for annotating event extents, and then indicate how many event instances the expression is referring to. If the precise number is not clear (for instance, in the case of plural nouns, as in example (89) above), we will write down the comment: `cardinality=plural` –note that it contains no blank spaces, and it is all in lower case. For further details, refer to the annotation tool manual.

5 Event attributes

There are ten different attributes which need to be marked up for event tags when annotating Spanish data. Some of these attributes are shared with other languages, some others are not. English, for example, has the attribute `modality`, which is not employed for Spanish. On the other hand, Romance languages like Spanish, Catalan, and Italian, have the attribute `mood`.

1. Part of speech (`pos`)
2. Verb form (`vform`)
3. Tense
4. Aspect
5. Mood
6. Polarity
7. Class
8. Type
9. Genericity
10. Cardinality

In the current annotation edition (to be used for the TempEval 2010 contest), attributes **type**, **genericity**, and **cardinality** will be disregarded.

The function and possible values for each of the event attributes that are relevant here are laid out in the following subsections. It is worth noticing that the first 5 attributes listed above (**part of speech**, **verb form**, **tense**, **aspect**, and **mood**) reflect grammatical features of the event-denoting expressions. The set of tables in Appendix C provide a complete overview of the values for each of these 5 attributes in the whole verbal (as well as non-verbal) system for Spanish.

5.1 Attribute part of speech (pos)

This attribute captures syntactic distinctions among the expressions that are marked up as events. It can have the following values: **VERB**, **NOUN**, **ADJECTIVE**, **PREP**, **OTHER**, which are distinguished using standard criteria in linguistics. Below, we provide some examples of each part of speech for the sake of guidance:

1. **VERB:** Including both finite and non-finite forms. Sentences in the first example have finite forms signaled in bold face, whereas those in the second illustrate the use of non-finite forms.

- (90) a. El público riojano es muy caliente y ese día **explotó**.
b. Por otra parte, se está **intentando** implicar al sector privado en las mejoras.
- (91) a. El homicida fue detenido en Sajonia, sitio al que llegó **buscando eliminar** a la víctima.
b. El ministro tunecino tomó la palabra para **agradecer** la hospitalidad recibida.

2. **NOUN:** For example:

- (92) a. El grueso de los **ataques** iraquíes fueron contra la refinería de Abadam.
b. El ministro tunecino tomó la palabra para agradecer la **hospitalidad** recibida.

3. **ADJECTIVE:** For example:

- (93) a. Cuando Gurudeva escuchó esto se puso **rojo** de la ira.
b. Los noventa minutos del encuentro fueron muy **aburridos**.

Special attention must be paid to this part of speech. Sometimes, it is hard to distinguish between adjectives and participles. In (94a), for example, the participle *car-gadas*, conjugated in number and gender, is employed in a typically adjectival context –compare with *sucias* in (94b).

- (94) a. Los anarquistas se presentaron a la reunión con las armas **cargadas**.
 b. Entraron en la casa con las botas **sucias** de barro.

In order to decide whether an element is an adjective or a verb (participle), a dictionary look-up can help. Moreover, there are some tests that can be applied here, such as:

- Adjectives tend to accept the prefix *in-* (or one of its alternative forms: *im-* and *i-*) whereas participles do not:

- (95) a. esperado – inesperado
 b. preparado – *impreparado

- Adjectives tend to accept a prenominal position, whereas participles do not:

- (96) a. el esperado alumno
 b. *el preparado alumno

- Some pseudo-copulative verbs (e.g., *volverse*, *ponerse*) are only compatible with adjectives but not with participles:

- (97) a. Juan se volvió aburrido.
 b. *Juan se volvió preparado.

4. PREPOSITION: For example:

- (98) a. El público se quedó **sin** ver el programa, ya que la BBC nunca lo emitió.
 b. Lleva al público en un viaje imaginario **a** bordo de un yate.
 c. Por otro lado, la debilidad de la peseta pone **en** riesgo nuestra integración en la UE.

5. OTHER: That is, locative adverbs when functioning as the head of a predicative complement.

- (99) a. Estamos **aquí** para dejarle claro al pueblo de México y al mundo que sin libertad y justicia no hay democracia.
 b. Dos de cada tres creyentes de esta iglesia están **ahí** porque un amigo, vecino, o familiar los invitó.

5.2 Attribute verb form (vform)

The name of this attribute, **vform**, stands for *verb form*. It encodes information of non-finite verbal elements. Its values for annotating Spanish data are:

- **INFINITIVE**: For events in infinitival form, either simple (100) or complex (101), and either belonging to the regular paradigm (examples *a* below) or to the paradigm of periphrases of progression (examples *b*).

- (100) a. **Cantar** es **unirse** al sonido del universo.

- b. José Feliciano justifica **estar cantando** reguetón.
- (101) a. El futuro primer ministro belga se disculpa por **haber cantado** la Marsellesa en vez del himno belga.
- b. La idea surgió después de **haver estado discutiendo** sobre varias propuestas.
- **GERUNDIVE**: For gerundive forms, either simple (102a), or complex (102b). Note that the simple form must not be preceded by the auxiliary *estar* (as in: *estaban cantando*).
- (102) a. **Cantando** pasan las penas.
- b. Y **habiendo cantado** el himno, salieron al monte de las Olivas.
- **PARTICIPLE**: For participle forms (103), which cannot be preceded by either the auxiliary *haber* (as in the case of compound verbal forms, e.g., *haber cantado*) or the auxiliary *ser* (for passive constructions, e.g., *siendo cantado*).
- (103) Una vez **cantado** su nombre y **recibida** la boleta, su mujer lo acompañó a la mampara de votación.
- **NONE**: For all events expressed by means of a finite verbal form, noun, adjective, preposition, or locative adverbial.

5.3 Attribute tense

The **tense** attribute captures standard distinctions in the grammatical category of verbal tense. In the Spanish system, it can have any of the following values: **PRESENT**, **PAST**, **FUTURE**, **NONE**.

- **PRESENT**: For events expressed by means of a verb conjugated in present. In Spanish, this includes the grammatical tenses listed below. Note that in the case of compound forms, the tense is determined by the conjugation of the auxiliary verb. That is why the forms of, e.g., *pretérito perfecto compuesto* (in English, Perfect tense) are here treated as denoting present. This principle applies to all compound forms.

Indicative mood:

- Presente (e.g., *canto*, *cantas*, ...).
- Pretérito perfecto compuesto (e.g., *he cantado*, *has cantado*, ...).⁴

Subjunctive mood:

- Presente (e.g., *cante*).
- Pretérito perfecto (e.g., *haya cantado*).

- **PAST**: For events expressed by means of a verb conjugated in a past form. In Spanish, this includes the following grammatical tenses:

⁴Note that the present is the tense of the auxiliary verb, the element tensed in this grammatical form.

Indicative mood:

- Pretérito perfecto simple (e.g., *canté, cantaste, ...*).
- Pretérito imperfecto (e.g., *cantaba, cantabas, ...*).
- Pretérito pluscuamperfecto (e.g., *había cantado, habías cantado, ...*).
- Pretérito anterior (e.g., *hube cantado, hubiste cantado, ...*).

Subjunctive mood:

- Pretérito imperfecto (e.g., *cantara, que cantase*).
- Pretérito pluscuamperfecto (e.g., *hubiera cantado*).

- **FUTURE:** For events expressed by means of a verb conjugated in a future form. In Spanish, this includes the following grammatical tenses:

Indicative mood:

- Futuro simple (e.g., *cantaré, cantarás, ...*).
- Futuro compuesto (e.g., *habré cantado, habrás cantado, ...*).

Subjunctive mood:

- Futuro simple (e.g., *cantare*).
- Futuro compuesto (e.g., *hubiere cantado*).

Periphrastic future:

- Composed of ‘*ir a + INFINITIVE*’ (e.g., *voy a cantar*).

- **NONE:** For events expressed by means of a verb in conditional or imperative mood, or a non-finite form (infinitive, gerund, or participle), as well by means of any non-verbal form (i.e., noun, adjective, PP, or locative adverbial).

5.4 Attribute aspect

Capturing standard distinctions in the grammatical category of verbal aspect. In the Spanish system, it can have any of the following values: **IMPERFECTIVE**, **PERFECTIVE**, **IMPERFECTIVE_PROGRESSIVE**, **PERFECTIVE_PROGRESSIVE**, **NONE**.

- **PERFECTIVE:** For events which are presented as completed. They are expressed by means of a verb conjugated in a perfective form (e.g., *pretérito perfecto simple* and *compuesto*, etc.). Refer to the tables in Appendix C to see what are these forms.⁵

⁵As can be appreciated, TimeML does not distinguish between aspects perfect and perfective, and assumes instead the traditional view which considers aspect perfect as a subtype of aspect perfective.

- **IMPERFECTIVE**: For events with (unmarked or) imperfective aspect. They are expressed by means of verbs conjugated in, e.g., *presente de indicativo* or *pretérito imperfecto*, etc. Refer to Appendix C.
- **PERFECTIVE.PROGRESSIVE**: For events which are marked for both perfective and progressive. This is the case of periphrases expressing aspect progressive (section 4.6.1), when used with the auxiliary form conjugated in a perfective tense. Refer to the tables in Appendix C to review the whole paradigm.
- **IMPERFECTIVE.PROGRESSIVE**: For events which are marked Similar to the previous value, this is the case of periphrases expressing aspect progressive, when used with the auxiliary verb conjugated in an imperfective tense. Refer to the tables in Appendix C to review the whole paradigm.
- **NONE**: For those events expressed by means of any non-verbal form (noun, adjective, PP, or locative adverbial), a verb in imperative mood, or a verb in participle. Refer to Appendix C.

5.5 Attribute mood

It captures the grammatical mood of the expression denoting the event. It can have any of the following values: **INDICATIVE**, **SUBJUNCTIVE**, **CONDITIONAL**, **IMPERATIVE**, **NONE**.

- **INDICATIVE**: For events expressed by means of verbal forms in indicative mood.
- **SUBJUNCTIVE**: For events expressed by means of verbal forms in subjunctive mood.
- **CONDITIONAL**: For events expressed by means of verbal forms in conditional mood.
- **IMPERATIVE**: For events expressed by means of verbal forms in imperative mood.
- **NONE**: For events expressed by means of a non-finite verb (infinitive, gerund, participle), or by means of a non-verbal form (noun, adjective, PP, or locative adverbial).

5.6 Attribute polarity

The polarity of an event instance is represented by the boolean attribute **polarity**. **Polarity** should be set to **negative** for event instances which are negated. This should be done for any negative example, such as these below, where the negation of the event in bold face is introduced by different means (underlined).

- (104) a. No **terminaron** el artículo.
 b. Nunca **terminaron** el artículo.
 c. Nadie les **avisó**.

Polarity should be set to **positive** otherwise.

5.7 Attribute modality

It is generally considered that languages like Spanish and Catalan have no distinctive grammatical elements (like modal auxiliaries in English) to mark the modality of the event being expressed. Instead, modality in these languages is expressed by means of subordination constructions involving specific predicates (e.g., *poder* 'be able/be allowed', *tener que* 'have to', *necesitar*, 'need', etc.) and the item denoting the event at hand. For example:

- (105) *poder jugar* 'to be able/allowed to play'
 tener que menjar 'to have to eat'
 necesitar dormir 'to need to sleep'

Subordination relations of this kind are annotated in TimeML by means of SLINK (subordination link) tags. This is how it will be done in the current annotation for Catalan. Refer to the appropriate guidelines document for that.

5.8 Attribute class

Each event should be marked up as belonging to one of the following classes:

- Reporting
- Perception
- Aspectual
- I.Action
- I.State
- State
- Occurrence

Note, however, that, due to the polysemous nature of words, the same predicate can often be classified in different ways, depending on the context in which it is used. The following subsections describe each class in detail.

Reporting. Reporting events describe the action of a person or an organization declaring something, narrating an event, informing the addressee(s) about a situation, and so on. Some verbs which express this kind of event are *decir*, *informar*, *comentar*, *explicar*, and *afirmar*. The preposition *según* when used in contexts of reporting, as in (106c), belongs to this class as well.

- (106) a. Magna **dice** que aún no hay acuerdo con General Motors.
 b. Las agustinas de Terrassa **comentaron** a las de Barcelona que habían recibido una carta de Argel.
 c. La conclusión definitiva es tan evidente, **según** el presidente del PP, que carece de sentido seguir pidiendo elecciones.

Perception. This class includes events involving the physical perception of another event. Such events are typically expressed by verbs like *ver*, *mirar*, *vislumbrar*, *contemplar*, *observar*, *oír*, and *escuchar*.

- (107) a. Tal vez **vieron** las joyas que llevaba mi mujer.
 b. Mi teoría fue tomando cuerpo, a través de las palabras que todos pudieron **oír**.

Aspectual. In languages such as English and Spanish, there is a grammatical device of aspectual predication for focusing on different parts of the temporal structure of a given event, including the event's beginning, intermediate, or final part. This device consists on a predicate which selects an event as its argument, and points to some structural aspect of the event. Note that this predicate can be either a verb (e.g. *empezar*) or a noun (e.g. *comienzo*). We will classify as aspectual events those predicates expressing:

- Initiation: *empezar*, *comenzar*, *ponerse a*, *echar a*, *romper a*, *originar*, *iniciar*.
- Reinitiation: *reiniciar*, *reanudar*, *relanzar* (in its metaphoric sense, as in *relanzar las ventas* or *relanzar la actividad*).
- Termination: *parar*, *cancelar*, *acabar*, *terminar*, *cesar*, *interrumpir*, *dejar*, *abandonar*, *bloquear*, *suspender*, etc.
- Culmination: *rematar*, *completar*.
- Continuation: *continuar*, *seguir*, *perseguir*, *persistir*, *mantener*, *permanecer*, *perseverar*.

In the following examples, the aspectual predicate is in bold face, while its event argument is underlined:

- (108) a. Hace ya más de cuarenta años que **empezamos** a construir estructuras de ladrillo.
 b. La edad en la que ellas deberían **empezar** a pensar en la prevención sería la del inicio de la menopausia.

I_Action. **I_Action** stands for *intensional action*. **I_Actions** are dynamic events selecting for an event-denoting argument, which must be explicitly present in the text. The label *intension* is used for historical reasons here, and so, currently, **I_Actions** and **I_States** actually cover more than what is denoted by *intension*.

The class **I_Action** compares with classes **Reporting**, **Perception**, **Aspectual**, and **I_State** (this last one described next) in that all five refer to events that select for a second event as their complement, where this second event is commonly expressed by a subordinated clause, a nominalization, or an untensed VP.

Nevertheless, classes **Reporting**, **Perception**, and **Aspectual** differ from **I_Action** due to their very specific semantics. And **I_Actions** and **I_States** can be distinguished by the fact that the former are dynamic events, whereas the second are stative.

For the most part, the events that should be tagged as **I_Actions** form a closed class. The following list, where **I_Actions** are in bold face and the events they select for are underlined, is representative (but not exhaustive) of the types of events included in this class:

- *Intentar, tratar de, pretender, luchar por:*
 - (109) a. Además, fracasé en ciertas ocasiones cuando **intenté** contratar personas para mi empresa.
 - b. El clan **pretendía** convertir en efectivo sus propiedades en Haití.
- *Investigar, indagar, estudiar:*
 - (110) a. La corporación **estudiará** un conflicto de competencias planteado en el caso de Vásquez.
 - b. La **investigación** del crimen se empantanó en el seguimiento de innumerables pistas que parecen no conducir a ningún lado.
- *Retrasar, demorar, posponer, aplazar, entorpecer:*
 - (111) Los serbios piden a Ifor **retrasar** la entrega de sus barrios de Sarajevo a los croatas bosnios.
- *Evitar, impedir, prevenir:*
 - (112) Se apunta que el mal tiempo **impidió** ayer el análisis de una roca que debía iniciar el explorador.

Explicit performative predicates like some of those exemplified below (e.g., *pedir, exigir, ordenar, autorizar*, etc.) are also included here.

- *Pedir, ordenar, persuadir, exigir, solicitar, rogar, imponer, instar, autorizar:*
 - (113) a. Kinkel, no obstante, **instó** a Letonia y Estonia a que integren a la población de origen ruso.
 - b. Le **solicitó** la entrega de los secuestrados, a cambio de “un tratamiento menos riguroso”.
- *Prometer, ofrecer, asegurar, proponer, acordar, decidir:*
 - (114) Los Quince **acordaron** pedir a la OMC en Ginebra un retraso de una semana para presentar alegaciones.
- *Nombrar, nominar, proclamar, declarar, designar*
- *Reivindicar, alegar, sugerir.*

I_State. *I_State* stands for *intensional state*. Like *I_Actions*, *I_State* events select for an argument expressing any sort of event. Unlike *I_Actions*, however, the *I_State* class is used for events which are states.

Also like *I_Actions*, the event complement selected by *I_States* can be expressed by subordinated clauses (115-116), nominalizations (117), or untensed VPs (118). They appear in square brackets in the following examples:

(115) No le interesa la política, pero **intuye** que [ganará el Partido Nacional].

(116) **Esperamos** que [la exposición no defraude sus expectativas].

(117) Los detenidos salieron de esa vivienda con la citada caja fuerte camuflada y visores **preparados** para [su instalación en armas largas].

(118) La oposición acusa al Gobierno de haber sido **incapaz** de [eliminar las rigideces de la economía].

The following list of *I_State* predicates is, once again, representative but not exhaustive.

- *Creer, pensar, sospechar, imaginar, dudar, sentir, intuir, estar seguro:*

- (119) a. Los demócratas **creemos** que [el Estado se construye desde abajo].
 b. Los peritos judiciales **sospechan** que [también se lucró en la compra venta de Promociones Hoteleras].
 c. Muchas veces se **duda** que [exista el maltrato].
 d. De lo que estoy **seguro** es que [no me retiro definitivamente].

- *Querer, amar, gustar, desear, ansiar, codiciar:*

- (120) a. No soy rencoroso y **deseo** que [otros tampoco lo sean].
 b. Hollywood está representado por grupos de presión que **ansían** [dominar el mercado].
 c. Nestlé ha frenado también sus **ganans** de [diversificarse].

Given that all *I_States* necessarily require an event-denoting argument, the predicate *querer* in an example like (121) would NOT be considered an *I_State*.

(121) Pepe quiere gazpacho.

- *Esperar, aspirar, planear:*

- (122) a. Los promotores de esta iniciativa **planean** [convertir la ciudad en un plató cinematográfico].
 b. **Esperamos** que [la exposición no defraude sus expectativas].
 c. **Aspiramos** a [ser la primera fuerza sindical].

- *Temer, odiar, preocuparse, tener miedo, tener pavor:*

- (123) a. Los conservadores **temen** que [las reformas aperturistas socavarán el sistema de gobierno clerical].

- b. Los mossos tienen **miedo** de [vigilar edificios y cárceles].
- *Necesitar, exigir, requerir*
- *Estar listo, estar preparado, estar impaciente*
- (124) a. La milicia croata ha estado **impaciente** por [actuar].
- b. Los detenidos salieron de esa vivienda con la citada caja fuerte camuflada y visores **preparados** para [su instalación en armas largas].
- *Ser capaz, ser incapaz*
- (125) La oposición acusa al Gobierno de haber sido **incapaz** de [eliminar las rigideces de la economía].

State. States describe *circumstances* in which something obtains or holds true. Note that the class **State** does **not** contain states that have been tagged as **I_States**.

Occurrence. This class includes all of the many other kinds of events that describe something that happens or occurs in the world. Some examples are given as illustration:

- (126) a. Tropas fronterizas **buscan** a los agentes norcoreanos que **desembarcaron** de un minisubmarino.
- b. Un fotógrafo que **visitó** la casa el pasado verano **indicó** a France Presse que en la mansión se **conservaba** una quincena de obras de Dalí.

5.9 Attribute type

Attribute not applicable for the TempEval 2010 annotation task.

5.10 Attribute genericity

Attribute not applicable for the TempEval 2010 annotation task.

5.11 Attribute cardinality

Attribute not applicable for the TempEval 2010 annotation task.

The cardinality will be indicated as integer, except for cases where the number of events is higher than 10 (127a), or when the context expresses an indefinite number of plural events (127b).

- (127) a. Bomberos de Barcelona realiz el año pasado **16.686 servicios**, **694** menos que en 1999.
- b. Estabilizados **varios incendios** mientras persiste el riesgo extremo de fuego.

In these situations, the annotators will add the following comment: **event_expression: cardinality=plural**.

A Identifying events and their extents

Event-denoting expressions. Table 1 summarizes the situations in which events can or cannot be marked up as events, classified by part of speech. Code \forall means *in all cases*, code \exists means *only in some cases*, and code \emptyset means *never*. A small comment is added when considered necessary.

Table 1: When to annotate event-denoting expressions.

Construction	Annotate	Comment
Verbs	\exists	Annotate all, except for: (a) verbs in temporal expressions (e.g., <i>hace un día</i> .) (b) auxiliary verbs, i.e., <i>estar</i> and <i>haber</i> when used as such. (c) verbs in certain verbal periphrasis. See first row in table 2.
Nouns		
- <i>Functional nouns</i>	\exists	Annotate when they are accompanied by their value, or a value expressing a difference with regard to the previous value.
- <i>Sortal states</i>	\exists	Annotate only when functioning as the head of a predicative complement.
- <i>Specialized calendars</i>	\exists	Annotate when the season does not correspond to a natural partition of the calendar.
- <i>Time expressions recategorized as Proper Nouns</i>	\emptyset	
- <i>The noun 'acuerdo' in the construction 'de acuerdo con'</i>	\forall	
- <i>Others</i>	\forall	
Adjectives		
- <i>Attributive adjectives</i>	\exists	Annotate only when expressing epistemic modality (e.g., <i>posible</i> , <i>cierta</i> , etc.)
- <i>Predicative adjectives</i>	\exists	Annotate when the adjective expresses a property which is: (a) non-persistent, clearly fluid, or (b) temporally bound to a point in time, or (c) the opinion or knowledge of somebody, or a matter under discussion, or (d) of an epistemic nature (e.g., <i>probable</i>).
PPs		
- <i>PPs introduced by the P "según" (contexts of report)</i>	\forall	
- <i>Predicative complements</i>	\forall	
- <i>Others</i>	\emptyset	
Locative adverbs		
- <i>Predicative complements</i>	\forall	
- <i>Other</i>	\emptyset	

Complex event constructions. Table 2 lists the different complex constructions identified in section 4.6, and indicates what constituents of these constructions need to be marked up as events, which appear underlined.

Table 2: Complex constructions: What elements to annotate.

Construction	What to annotate	Examples
Verbal periphrases	Both elements are annotated as independent events, except for the following periphrases: – Future: <i>ir a</i> (in present tense) + INFINITIVE – Progressive: $\left\{ \begin{array}{c} andar \\ estar \\ ir \\ llevar \\ venir \end{array} \right\} + \text{GERUND}$	Underlined are the extents of the elements to annotate: <i>Aeroflot va a <u>comprar</u> 9 aviones.</i> $\left\{ \begin{array}{c} Ando \\ Estoy \\ Voy \\ Llevo \\ Vengo \end{array} \right\} analizando el tema...$
Constructions with predicative complements	Annotate both: – the verbal predicate – the complement	<i><u>es</u> razonable, <u>está</u> dispuesto</i> <i><u>es</u> el <u>presidente</u></i> <i><u>está</u> a cargo, parece <u>en</u> desacuerdo</i>
Aspectual constructions	Annotate both: – the aspectual predicate – the complement	<i><u>parar</u> de <u>interferir</u></i> <i><u>empezar</u> la <u>construcción</u></i> <i><u>estallar</u> una guerra</i>
Light verb constructions	Annotate both: – the light verb – the nominal complement	<i><u>tomar</u> una <u>decisión</u></i> <i><u>dar</u> un <u>beso</u></i> <i><u>dar</u> <u>conversación</u></i>
Causal constructions	Possible constructions: – <u>EVENT</u> <i>causes</i> <u>EVENT</u> – <u>ENTITY</u> <i>causes</i> <u>EVENT</u>	<i>Un <u>fuego</u> <u>causó</u> el <u>apagón</u>.</i> <i>Una rata <u>causó</u> el <u>fuego</u>.</i>
Functional Nouns	Possible constructions: – N_{funct} <i>es/está</i> por X – <u>ENTITY</u> <i>tiene</i> un/a N_{funct} de X – N_{funct} <u>cambio-de-estado</u> (X) (PP _{de}) (PP _a)	<i>El <u>valor</u> actual <u>es</u> de 300M.</i> <i>Bielorrusia <u>tiene</u> una <u>población</u> de 10M.</i> <i>El <u>precio</u> del petróleo <u>bajó</u> un 75%</i>
Contexts of report (e.g., <i>según, acuerdo</i>).	Annotate both: – The element introducing the context (e.g., <i>según</i>) – The embedded verb or noun, if denoting an event.	<i>De <u>acuerdo</u> con lo que <u>circula</u>,...</i> <i><u>Según</u> la <u>reconstrucción</u> policial, ...</i>

Constructions with predicative complements. Table 3 lists some of the predicate classes that accept predicative complements.

Predicate class	Example
Copulative	<i>ser, estar, parecer</i>
Inchoative	<i>pasar a ser, convertirse</i>
Aspectual	<i>empezar, seguir, interrumpir, acabar</i>
Change of state	<i>aumentar, disminuir; dimitir, nombrar</i>
Causative	<i>causar, convertir</i>
Evaluation/description	<i>considerar, describir, presentar, evaluar</i>
Perception	<i>ver, oír</i>

Table 3: Predicative contexts.

B Spanish tense system

B.1 Nomenclature

The table below presents the English translation assumed here for each of the terms in the Spanish tense system.

Spanish term (Real Academia. <i>Esbozo</i> , 1973)	English translation	Example
Indicative		
Presente	Present	<i>canto</i>
Pretérito imperfecto	Imperfect	<i>cantaba</i>
Pretérito pluscuamperfecto	Pluperfect	<i>había cantado</i>
Pretérito perfecto simple	Past Simple	<i>canté</i>
Pretérito perfecto compuesto	Perfect	<i>he cantado</i>
Pretérito anterior	Past Anterior	<i>hube cantado</i>
Futuro simple	Future	<i>cantaré</i>
Futuro compuesto	Future Perfect	<i>habré cantado</i>
Conditional		
Condicional simple	Conditional	<i>cantaría</i>
Condicional compuesto	Conditional Perfect	<i>habría cantado</i>
Subjunctive		
Presente	Present	<i>cante</i>
Pretérito perfecto	Perfect	<i>haya cantado</i>
Pretérito imperfecto	Imperfect	<i>cantara</i> (or <i>cantase</i>)
Pretérito pluscuamperfecto	Pluperfect	<i>hubiera</i> (or <i>hubiese</i>) <i>cantado</i>
Futuro simple	Future	<i>cantare</i>
Futuro compuesto	Future Perfect	<i>hubiere cantado</i>
Imperative		
Presente	Imperative	<i>canta</i>
Non-finite		
Infinitivo	Infinitive	<i>cantar</i>
Infinitivo compuesto	Infinitive Perfect	<i>haber cantado</i>
Gerundio	Gerund	<i>cantando</i>
Gerundio compuesto	Gerund Perfect	<i>habiendo cantado</i>
Participio	Participle	<i>cantado</i>

Table 4: Nomenclature for Spanish tenses.

B.2 Simple and compound forms

The following tables exemplify simple and compound tenses in Spanish, for both the regular paradigm and the periphrases of progression, which here we have included as part of the general verbal system.

Mood	Tense	Regular Paradigm	Periphrases of Progression
Indicative	Presente Pretérito imperfecto Pretérito perfecto simple Futuro simple	<i>canto</i> <i>cantaba</i> <i>canté</i> <i>cantaré</i>	<i>estoy cantando</i> <i>estaba cantando</i> <i>estuve cantando</i> <i>estaré cantando</i>
Conditional	Condicional simple	<i>cantaría</i>	<i>estaría cantando</i>
Subjunctive	Presente Pretérito imperfecto	<i>cante</i> <i>cantara</i>	<i>esté cantando</i> <i>estuviera cantando</i>
Imperative	Presente	<i>canta</i>	<i>esté cantando</i>
Non-finite forms	Infinitivo Gerundio Participio	<i>cantar</i> <i>cantando</i> <i>cantado</i>	<i>estar cantando</i> <i>estando cantando</i> <i>?estado cantando</i>

Table 5: Simple tenses in Spanish.

Mood	Tense	Regular Paradigm	Periphrases of Progression
Indicative	Pretérito pluscuamperfecto Pretérito perfecto compuesto Pretérito anterior Futuro compuesto	<i>había cantado</i> <i>he cantado</i> <i>hube cantado</i> <i>habré cantado</i>	<i>había estado cantando</i> <i>he estado cantando</i> <i>hube estado cantando</i> <i>habré estado cantando</i>
Conditional	Condicional compuesto	<i>habría cantado</i>	<i>habría estado cantando</i>
Subjunctive	Pretérito perfecto Pretérito pluscuamperfecto Futuro compuesto	<i>haya cantado</i> <i>hubiera cantado</i> <i>hubiere cantado</i>	<i>haya estado cantando</i> <i>hubiera estado cantando</i> <i>hubiere estado cantando</i>
Non-finite forms	Infinitivo compuesto Gerundio compuesto	<i>haber cantado</i> <i>habiendo cantado</i>	<i>haber estado cantando</i> <i>habiendo estado cantando</i>

Table 6: Compound tenses in Spanish

C Values for attributes pos, vform, tense, aspect, and mood

C.1 Verbal forms

Indicative forms. pos=VERB, vform=NONE, mood=INDICATIVE. Furthermore, attributes tense and aspect are assigned as follows:

Tense: Aspect:	PRESENT	PAST	FUTURE
IMPERFECTIVE	Presente <i>canto</i>	Pretérito imperfecto <i>cantaba</i>	Futuro simple <i>cantaré</i>
PERFECTIVE	Pret. perfecto comp. <i>he cantado</i>	Pret. perfecto simple <i>canté</i> Pretérito pluscuamperf. <i>había cantado</i> Pretérito anterior <i>hube cantado</i>	Futuro compuesto <i>habré cantado</i>
IMPERF._PROGR.	“Presente progresivo” <i>estoy cantando</i>	“Pret. imperfecto progr.” <i>estaba cantando</i>	“Fut. simple progr.” <i>estaré cantando</i>
PERF._PROGR.	“Pret. perfecto comp. progr.” <i>he estado cantando</i>	“Pret. perfecto simple progr.” <i>estuve cantando</i> “Pret. pluscuamperf. progr.” <i>había estado cantando</i>	“Fut. perfecto progr.” <i>habré estado cantando</i>

Here and in the coming tables, we treat periphrases denoting progressive aspect (those in quotations above) as realizations of specific grammatical tenses, although they are not typically treated as such in the Spanish tradition. We do that taking advantage of the expressivity of TimeML, which was originally created for English, and therefore had the value PERFECTIVE.PROGRESSIVE already available for the attribute **aspect**. The progressive-denoting periphrases are: “**andar/estar/ir/llevar/venir** + GERUND”. Their values for **tense** will be assigned according to the conjugation of the auxiliary form (*estar* or *anar*).

Subjunctive forms. pos=VERB, vform=NONE, mood=SUBJUNCTIVE. Furthermore, attributes tense and aspect are assigned as follows:

Tense: Aspect:	PRESENT	PAST	FUTURE
IMPERFECTIVE	Presente <i>cante</i>	Pretérito imperfecto <i>cantara</i>	Futuro simple <i>cantare</i>
PERFECTIVE	Pretérito perfecto <i>haya cantado</i>	Pluscuamperfecto <i>hubiera cantado</i> <i>hubiese cantado</i>	NA
IMPERFECTIVE_PROGR.	“Presente progresivo” <i>esté cantando</i>	“Pretérito imperfecto progr.” <i>estuviera cantando</i>	NA
PERFECTIVE_PROGR.	“Pretérito perfecto progr.” <i>haya estado cantando</i>	“Pluscuamperfecto progr.” <i>hubiera estado cantando</i>	NA

Conditional forms. pos=VERB, vform=NONE, mood=CONDITIONAL.

Conditional forms do not have tense. They can be used to express conditionality in the past, the present, and the future. Instead, the distinction among different conditional forms has to do with aspect. Hence, attributes **tense** and **aspect** are assigned as follows:

Aspect:	Tense:	NONE
IMPERFECTIVE		Condicional simple <i>cantaría</i>
PERFECTIVE		Condicional compuesto <i>habría cantado</i>
IMPERFECTIVE_PROGRESSIVE		“Condicional simple progr.” <i>estaría cantando</i>
PERFECTIVE_PROGRESSIVE		“Condicional compuesto progr.” <i>habría estado cantando</i>

Imperative forms. pos=VERB, vform=NONE, mood=IMPERATIVE. Imperative forms do not have either tense or aspect. Hence:

Aspect:	Tense:	NONE
NONE		<i>canta, cantad</i>

Infinitives. pos=VERB, vform=INFINITIVE, mood=NONE. Like any other non-finite verbal form (i.e., gerunds, participles), infinitives will have the attributes **mood** and **tense** set to NONE. Infinitives and gerunds, however, present distinctions concerning **aspect**.

Aspect:	Tense:	NONE
IMPERFECTIVE		Infinitivo <i>cantar</i>
PERFECTIVE		Infinitivo compuesto <i>haber cantado</i>
IMPERFECTIVE_PROGRESSIVE		“Infinitivo progresivo” <i>estar cantando</i>
PERFECTIVE_PROGRESSIVE		“Infinitivo compuesto progresivo” <i>haber estado cantando</i>

Gerunds. pos=VERB, vform=GERUNDIVE, mood=NONE. Like any other non-finite verbal form (i.e., infinitives and participles), gerunds will have the attributes **mood** and **tense** set to NONE. Gerunds and infinitives, however, present distinctions concerning **aspect**.

Aspect:	Tense:
	NONE
IMPERFECTIVE	Gerundio simple <i>cantando</i>
PERFECTIVE	Gerundio compuesto <i>habiendo cantado</i>

Participles. pos=VERB, vform=PARTICIPLE, mood=NONE. Like other non-finite verbal form (i.e., infinitives and gerunds), participles will have the attributes **mood** and **tense** set to NONE. Moreover, gerunds do not present any distinction at the **aspect** level, either.

Aspect:	Tense:
	NONE
NONE	Participio <i>cantado</i>

C.2 Non-verbal forms

In the case of events expressed by means of non-verbal forms, only the attribute **part of speech** (pos) is not set to NONE, as illustrated in what follows.

Nouns:

pos=NOUN
vform=NONE
tense=NONE
aspect=NONE
mood=NONE

PPs:

pos=PREPOSITION
vform=NONE
tense=NONE
aspect=NONE
mood=NONE

Adjectives:

pos=ADJECTIVE
vform=NONE
tense=NONE
aspect=NONE
mood=NONE

Others:

pos=OTHER
vform=NONE
tense=NONE
aspect=NONE
mood=NONE

D TimeML attributes and values for events in Spanish

Attribute:	Possible values:
Part of speech (<i>pos</i>)	ADJECTIVE NOUN VERB PREP OTHER
Verb form (<i>vform</i>)	INFINITIVE GERUNDIVE PARTICIPLE NONE
Tense	FUTURE PAST PRESENT NONE
Aspect	IMPERFECTIVE PERFECTIVE IMPERFECTIVE_PROGRESSIVE PERFECTIVE_PROGRESSIVE NONE
Mood	INDICATIVE SUBJUNCTIVE CONDITIONAL IMPERATIVE NONE
Polarity	NEG POS
Class	OCCURRENCE PERCEPTION REPORTING ASPECTUAL STATE I_STATE I_ACTION

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