Building negative events

Antonio Fábregas & Raquel González Rodríguez
University of Tromsø & University of Castilla-La Mancha

Abstract. The existence of negative events is controversial in the literature, among other things because their formal representation in (Neo)-Davidsonian approaches does not comply with what is expected of pure logical negation. The goal of this article is, first, to provide empirical evidence in favour of the existence of negative events as distinct from negated events, and second, to propose a formal syntactico-semantic analysis of them that avoids the problems of Neo-Davidsonian approaches. We will argue that a framework where events lack time and world parameters and get instantiated as situations anchored to times and worlds (such as Ramchand 2014, to appear) not only accounts for the properties of negative events, but actually predicts that they should exist. We will show that an analysis of negative events as situations instantiating an event that is not initiated is enough to account for their distribution, aspectual properties and restrictions.

Keywords: negation, events, situations, auxiliaries, aspect, imperatives

> "Is there any point to which you would wish to draw my attention?"
> "To the curious incident of the dog in the night-time."
> "The dog did nothing in the night-time."
> "That was the curious incident," remarked Sherlock Holmes.
> *The Memoirs of Sherlock Holmes* (1893)

1   Introduction: do negative events exist?

This paper focuses on a proposal that has been pointed out in the literature but has, to the best of our knowledge, been under-researched: the existence of negative events. The possibility of having negative events goes back (at least) to the 1970s. Stockwell, Schachter & Partee (1973: 250-251) pointed out that negative verbal phrases such as *no paying taxes, not getting up early, not going to church,* etc. could be treated as events and, specifically, "negative events". Horn (1989: 51-55) also considers the issue of negative events, concluding that their existence cannot be determined from linguistic evidence, especially if there is no agreement about what an event is. These opposite intuitions about negative events coexist nowadays in the literature (Asher 1993; Kamp & Reyle 1993; Przepiórkowski 1999; de Swart & Molendijk1999; Weiser 2008; Higginbotham 2000; Arkadiev 2015), although important advances in our understanding of what counts as an event, how many different classes of Aktionsart there are, how they should be represented, and the interaction between negation and event existential quantification have been achieved.

   The first goal of this paper will be to provide direct empirical evidence for the existence of negative events as objects that have distinct properties from negated events. A case of negative event is *not stop at the red light* in (1).

(1)   I saw you not stop at the red light.

   The scholars that defend the existence of negative events acknowledge that their existence faces two related problems (Arkadiev 2015): (i) purely logical negation does not yield the relevant interpretation; (ii) because of that, the extension of the set of events denoted by a negative event is too broad. Consider why. On the assumption that at some level the event is existentially quantified, there seem to be just two possibilities

in the standard Neo-Davidsonian frameworks to account for the scope of negation in a negative event:

(2)   a. ¬∃e[P(e)]
        b. ∃e[¬P(e)]

In (2a), the negative operator scopes above the existential quantifier over events. This representation is too weak: if (2a) was the right representation of a negative event, a police officer would be able to use (1) to truthfully describe the situation where a person is sitting next to the traffic light, as what (2a) entails is that there was no event P, P being 'stop at the traffic light', and whoever was sitting next to the traffic light indeed has not stopped at the traffic light, as she was not in motion. (2b) would still be too weak: the existence of any event, provided it is not an event of 'stopping at the traffic light', should be enough to satisfy the truth conditions of (1). If a driver stops at the traffic light while talking to the co-pilot, (1) should be satisfied, as in that scenario there is an event ('talking to the co-pilot') which is not 'stopping at the traffic light'. Thus, if negative events indeed exist, the immediate question is what is the semantic representation that will correctly capture their truth conditions.

This article is divided in the following parts: in the next section, we provide evidence that negative events exist. In §3 we overview their empirical properties; although this article concentrates on Spanish data, our conclusions should apply cross-linguistically. In §4, we introduce Ramchand's (2014, to appear) proposal, where situations are crucially taken to be ontologically different from events; we will argue that this distinction is necessary to analyse negative events. §5 presents our analysis, where we will show that once situations and events are taken to be distinct objects, the existence of negative events and their properties naturally follow. §6 offers some conclusions.

2   Negative events vs. negated events: preliminary evidence

The literature has made two proposals regarding the role of negation when it modifies a verbal phrase. On the one hand, Asher (1993) and Kamp & Reyle (1993) propose that if negation modifies a verbal phrase, there is no event, since it is refuted; on the other hand, Przepiórkowski (1999), de Swart & Molendijk (1999) and Weiser (2008) argue that there is an event, but a negative one. Our proposal is that both accounts are right. We defend that negation can be used to negate that the event took place or to affirm that a negative event took place, in line with Klein (1994: 49). Thus, a negative sentence such as the one in (3) can receive two interpretations, which are paraphrased in (3a) and in (3b). In the former, negation refutes that the event took place and therefore, there is no event. We have a negated event. In the latter, a negative event took place, the one of not eating.[1]

(3)   The boy didn't eat.
        a. 'It did not happen that the boy eat.'
        b. 'It happened that the boy did not eat.'

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[1] As our analysis proceeds, it will become clear that in our view the terms 'negative event' and 'negated event' are misnomers, and that term like 'non initiated event' and 'negated situation' would be more direct labels for the distinction we are dealing with. However, we will continue to use this more usual terminology for expository convenience.

Although the paraphrases in (3) capture the difference interpretations that we are proposing, it is not evident at all what the difference is between both readings. In other words, how should things be in the world in order to have different true values in (3a) and (3b)? The answer to this question is not obvious. Therefore, the distinction between negative events and negated events cannot rely on a sentence like (3). But, we will argue, there are environments that clearly support that distinction and, as a result, the existence of negative events.

2.1   Scalar periphrases

The first piece of evidence in favour of distinguishing between negated events and negative events comes from the behaviour of negation in scalar periphrases[2] like Spanish <*llegar a* 'to became to' + infinitive>. Carrasco Gutiérrez (2006), (2008) proposes that this periphrasis behaves as an additive discourse marker similar to *incluso* 'even'. This type of markers relates arguments that point toward the same conclusion; for example, (4) contains two predicates that constitute arguments for the conclusion 'the individual was very angry'. In the same way the periphrasis in (5) relates the situation described by the lexical verb as an additional argument to the same conclusion.

(4)   Gritó   e   incluso dio   una patada al   hombre.
       he.yelled and even   gave a   kick   to.the man
       'He yelled and even kicked the man.'
(5)   Gritó   y llegó   a dar   una patada al   hombre.
       he.yelled and became to to.give a   kick   to.the man
       'He yelled and went so far as to kick the man.'

Note that the event denoted by the infinitive points to the same conclusion that the one introduced previously. Moreover, that event introduced by the periphrasis is the stronger argument from a discursive point of view.

Carrasco Gutiérrez points out that in this periphrasis, the negative particle *no* 'not' can precede the auxiliary verb (see (6a)) or the infinitive (see (6b)):

(6)   a. Juan   estaba   muy contento, pero no llegó   a ir   a la   fiesta.
          Juan   was   very happy   but not became to to.go to the party
          'Juan was very happy, but he did not go so far as to go to the party.'
       b. Juan   estaba   muy enfadado y   llegó   a no ser   educado.
          Juan   was   very angry   and became to not to.be polite
          'Juan was very angry and went so far as not to be polite.'

When negation precedes the auxiliary (<*no llegar a* + infinitive>), an event is negated. Let us illustrate this point:

(7)   Juan was very motivated; he enrolled in all subjects and bought the textbooks. However,…
       … no llegó   a asistir   a clase.
          not became   to to.attend to class
       '… he did not go so far as to attend class.'

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[2] Although we use Spanish data throughout the article, our proposal should apply to other languages.

This construction includes three predicates which constitute arguments for the conclusion 'Juan was highly motivated', as is shown in (8):[3]

(8)   to enrol in all subjects < to buy the textbooks < to attend class

In (7), the first two arguments point toward the conclusion that 'Juan was highly motivated' because the events denoted by them took place. In contrast, the last argument is negated and, consequently, it reverses the argumentative orientation, as is shown by the presence of *sin embargo* 'however'.

In contrast, when the negative particle precedes the infinitive (<*llegar a no* + infinitive>), a negative event is asserted, because the last argument of the sequence, which is, indeed, a negative event, took place. Let us compare (7) to (9):

(9)   Juan was unmotivated; he enrolled in only three subjects; he forgot to buy the textbooks and…
       … llegó   a no asistir   a clase
          become to not to.attend to class
       '… went so far as not to attend class.'

The conclusion associated with (9) is that John was not motivated. The arguments that invite this conclusion are illustrated in (10):

(10)   to enrol in only three subjects < to forget to buy the textbooks < not to attend class

It must be noted that the strongest argument in (9) is not, as in (7), *asistir a clase* 'to attend class', but the negative event of not attending class. Negation does not deny that the event has taken place. All the arguments are affirmed and, as a consequence, the argumentative orientation is not reversed, as is shown by the impossibility of introducing *sin embargo* 'however':

(11)   Juan was unmotivated; he enrolled in only three subjects; he forgot to buy the textbooks and…
       … #sin embargo, llegó   a no asistir   a clase
          however   become to not to.attend to class
       '… however, went so far as not to attend class.'

2.2   Different interpretations with modal periphrases

The existence of negative events is also supported by the behaviour of modal periphrases like *poder* 'can' and *deber* 'must'. Note that with these periphrases both the auxiliary and the main verb can be preceded by negation, but crucially with distinct interpretations.[4] Consider the examples in (12):

(12)   a. No puede llover.
          not it.can to.rain
          'It is not possible that it rains.'
       b. Puede no llover.

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[3] These predicates are ordered from weakest to strongest from an argumentative point of view.
[4] For a detailed analysis of the scope relations between modals and negation see Picallo (1990), Cormack and Smith (2002) and Iatridou and Zeijlstra (2013), among others.

it.can   not   to.rain
'It is possible that it does not rain.'

While in (12a) we assert that there is no possible situation where it rains, in (12b) we assert something different: that there is a possible situation where it will not rain. In this second case, we contend, what one asserts is the possibility of a negative event taking place.

The distinction is even clearer with root modals. Compare the two sentences in (13):

(13)   a. No puedes hablar.
          not you.can to.talk
          'You are not allowed to talk.'
       b. Puedes no hablar.
          you.can not to.talk
          'You are allowed not to talk.'

In (13a), what we deny is that the addressee has permission to talk: we deny that the permission applies to him or her. The crucial interpretation for our purposes is the one in (13b): here we must assert that the addressee has permission to perform an action. What is the action? Not to talk, that is, to participate in an event of not talking.

Notice, finally, that two negations are possible in this context, one modifying the auxiliary and one modifying the main verb; thus, each one of the negations must be denying different things:

(14)   No puedes no pagar impuestos.
       not you.can not to.pay taxes
       'You are not allowed not to pay taxes.'

(14) asserts that the addressee does not have permission to perform a particular action: the action of not paying taxes.

2.3   Negative imperatives

The literature on negated imperatives is too extense to review it here (see, among many others, Zanuttini 1997; Portner 2007; Zanuttini, Pak & Portner 2012). What is crucial for our purposes is the interpretation of (15):

(15)   No hables.
       not you.talk.subj
       'Don't talk!'

Assuming that an imperative conveys an order, it is clear that (15) is not interpreted as 'there is no order that you should talk', as this reading is too weak and would be felicitous if the speaker wanted to communicate that the addressee does not need to talk, but is allowed to. (15), however, is stronger: it is interpreted as requesting from the addressee that he or she won't talk. The negated imperative, then, is the order that a negative event must take place.

3 Negative events: properties

Once we have shown preliminary evidence that negative events must exist, we will review here their properties in order to show that they are distinct from negated events. First, we will show that the aspectual properties of negative events contrast with those of negated events in systematic ways; this is additional support for their existence as objects distinct from negated events. Then, we will move to showing that negative event readings are available to the extent that the event can be controlled by the subject.

3.1 The aspectual and temporal properties of negative events

Here we will show that the temporoaspectual properties of negative events contrast with both those of negated events and their positive counterparts.

3.1.1 State-like properties

One first property of negative events is that they display properties of stative predicates that their positive counterparts lack. One such property is the (strict) subinterval property: "while processes involve a lower bound on the size of subintervals that are of the same type, states have no such lower bound. [...] If for a certain time interval I it is true that, for example, Eva is standing at the window, sleeping, or the like, this is also true for every subinterval of I." (Maienborn 2005; see also Bennett & Partee 1972). Consider the examples in (16). The stative predicate in (16a) does not denote change. As a result, if it is true that the boy has a toy for a time interval I, it is also true for any subinterval of I, no matter how small. In contrast, this does not happen in (16b), where if we go down to a small enough level of granularity, the event won't be described as 'running in the park', because in a single instant the child is not moving:

(16) a. El niño tiene un juguete.
the child has a toy
'The child has a boy.'
b. El niño corre por el parque.
the child runs in the park
'The child runs in the park.'

Negative events also meet, like states, the strict subinterval property. Negative events like 'not building houses' (see (17a)) and 'not cleaning the floor' (see (17b)) clearly differ from the corresponding positive predicates, which are dynamic (see (18)) regarding this property:

(17) a. As the sale of houses had dropped, the managers of that building company had to fire many employees, lost money and…
… llegaron a no construir casas
became to not to.build houses
'… went so far as not to build houses.'
b. When I told the cleaning lady that I would not raise her salary, she pouted and…
… llegó a no limpiar el suelo.
became to not to.clean the floor
'… went so far as not to clean the floor.'

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(18) a. Construyeron casas.
      they.built   houses
      'They built houses.'
   b. Limpiaron el   suelo.
      they.cleaned the floor
      'They cleaned the floor.'

'Building houses' or 'cleaning the floor' do not meet the strict subinterval property, as there are intervals short enough that do not involve any proper building or cleaning –as there is no movement or change in a single instant–. However, any subinterval, no matter how short, of 'not building houses' is also 'not building houses'.

Next, it has been shown (Marín 2004, inter alia) that the periphrasis *parar de* 'to stop of' combines with atelic dynamic durative verbs and rejects states (see (19)).

(19) a. Juan paró   de leer.
      Juan stopped of to.read
      'Juan stopped reading.'
   b. Juan paró de correr.
      Juan stopped of to.run
      'Juan stopped running.'
   c. *Juan paró   de estar enfermo.
      Juan stopped of to.be sick
      'Juan stopped being sick.'

Negative events systematically reject this periphrasis, patterning with states again.

(20) a. *Paró   de no leer.
       he.stopped of not to.read
      'He stopped not reading'
   b. *Paró   de no correr.
       he.stopped of not to.run
      'He stopped not running.'

In contrast, negative events are compatible with *dejar de* 'to leave of', which does accept (among others) stative verbs.

(21) a. Dejó de estar   enfermo.
      he.left of to.be   sick
      'He stopped being sick.'
   b. Dejó   de no leer.
      he.left of not to.read
      'He stopped not reading' (= He started reading again)

Third, it can be shown that negative events are compatible with temporoaspectual modifiers that their positive counterparts reject. In the literature, in fact, it has been pointed out that negation is a stative operator (Mittwoch 1997 and de Swart & Molendijk 1999) because of how events in combination with negation accept *for*-phrases. Here we will argue that the empirical facts used to argue for this proposal in actuality restrict to negative events, not to negated ones.

Mittwoch's and Swart & Molendijk's proposals build on the behavior of *for* and *until* phrases. The former are compatible with atelic (see (22a)) but not with telic predicates (see (22b)); the latter can appear only with durative predicates, as is shown by the contrast in (23). Both are allowed by stative verbs (see (24)), and crucially they become compatible with the predicates in (22b) and (23b) if we introduce a negation (see (25)):

(22) a. El niño corrió durante una hora.
       the child ran   for   one hour
       'The child run for one hour.'
   b. #El niño {leyó el libro/ llegó   al   parque} durante una hora.[5]
       the child read the book / arrived to.the park   for   one hour
       'The child {read the book/ arrived to the park} for one hour'.
(23) a. El niño {corrió/ leyó el libro} hasta las cinco.
       the child ran / read the book until the five
       'The child {ran/ read the book} until five.'
   b. *El niño llegó al   parque hasta las cinco.
       the child arrived to.the park   until the five
       'The child arrived to the park until five.'
(24) El niño tuvo fiebre {durante dos horas / hasta el   lunes}.
    the child had fever for   two hours / until the Monday
    'The child had fever {for two hours/ until Monday}.'
(25) a. El niño no {leyó el libro/ llegó   al   parque} durante una   hora.
       the child not read the book/ arrived to.the park   for   one hour
       'The child didn't {read the book/ arrive to the park} for one hour.'
   b. El niño no llegó al   parque hasta las cinco.
       the child not arrived to.the park   until the five
       'The child didn't arrive to the park until five.'

The existing proposals explain these contrasts by arguing that negation yields a durative predicate and, specifically, a state. Thus, the predicates in (25a) and (25b) are not accomplishments (*leer el libro* 'to read the book') nor achievements (*llegar al parque* 'to arrive to the park') but states (*no leer el libro* 'not read the book' and *no llegar al parque* 'not arrive to the park'). Since states are atelic and durative, *for* and *until* phrases can occur in (25).

Our claim is that this change in the compatibility with temporoaspectual modifiers takes place with negative events, but not with negated events. The reason is that there is an event in the former, not in the latter. Consider the following examples:

(26) a. El professor no estuvo enfermo durante una semana.
       the teacher   not was   sick   for   one week
       'The teacher wasn't sick for one week.'
   b. No corrió durante una hora
       not he.ran for   one hour
       'He didn't run for one hour.'
   c. No vio   el documental   durante una hora.
       not he.watched the documentary for   one hour
       'He didn't watch the documentary for one hour.'

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[5] Note that *El niño leyó el libro durante una hora* is gramatical under the interpretation in which the telos is not achieved.

Note that the presence of *for*-phrases forces the negative event reading: what the *for*-phrase measures is the duration of the time period during which the negative event takes place. In a negated event, the interpretation is that there is no time period during which the event takes place, and a non-existent time period cannot have a duration. Thus, the association between the *for*-phrase and the negative event reading is intuitive. The following contrast confirms that the *for*-phrase is compatible only with the negative event reading:

(27) a. La empresa llegó   a no vender casas durante dos meses.
        the company became to not to.sell houses for   two months
        'The company went so far as not to sell houses for two months.'
   b. *La empresa no llegó   a vender casas durante dos meses.
        the company not became to to.sell houses for   two months
        'The company didn't went so far as to sell houses for two months.'

It is important to note right away that the *for*-phrase in (27) is event-external and should be placed in the domain of viewpoint aspect, as pointed out in Csirmaz (2008). Consider the examples in (28), (29) and (30):

(28) John is a professional athlete that is normally able to run 100 meters in 17 seconds; however, for some time he was depressed and did not train. Consequently...
   ...llegó   a no correr 100 metros en 30 segundos durante un   año.
      became to not to.run 100 meters in 30   seconds   for   one year
   '... he went as far as not to run 100 meters in 30 seconds for a whole year.'
(29) No dormí ocho horas durante un   mes.
   not I.slept eight hours for   one month
   'I didn't sleep eight ours for one month.'
(30) John is a professional swimmer that is able to hold his breath under water for at least two minutes. But at some point he became a smoker, and lost this capacity. Consequently...
   ...llegó   a no aguantar la respiración durante un minuto durante más
      became to not to.hold   the breath   for   one minute for   more
      de un año.
      of   one year
   '… went as far as not to his breath for one minute for more than one year.'

In the three cases, the relevant *for*-phrase that measures the period during which the negative event holds is external to an event-internal aspectual modifier: in (28) that modifier is characteristic of telic events (*in 30 seconds*), showing that in principle the event itself should not be compatible with an atelic modifier: the *for*-phrase is introduced at the level of viewpoint aspect. In (29) and (30), we furthermore show that the presence of an event-internal modifier that measures the duration of the event does not block the presence of the event-external modifier that measures the duration of the state of affairs during which the negative event is true: a QP in (29) (*eight hours*) and a PP in (30) (*for one minute*).

3.1.2 Eventive properties

However, negative events are events after all, and it can be shown that they have not been turned into states. Here we will highlight three properties that show that they still denote events (as opposed to states). Consider first the fact that negative events, unlike states, can be selected as infinitives by perception verbs.

(31) a. Te   he   visto cantar.
          you.ACC I.have seen to.sing
          'I've seen you sing.'
       b. *Te   he   visto saber   inglés.
          you.ACC I.have seen to.know English
          'I've seen you know English.'

Consider (32), where the durative modifier forces a negative event reading, as we have seen:

(32) a. Lo   vi   no saludar a la novia durante toda la boda.
          him.ACC I.saw   not to.greet to the bride for   all the wedding
       b. Lo   vi   no parar un momento durante tres horas.
          him.ACC I.saw   not to.stop a moment   for   three hours

Second, anaphoric reference by *esto sucede* 'this happens' can be associated to an eventive predicate but not to a stative one (see (33)).

(33) a. María tenía gripe. *Esto sucedía   cuando vivía   con su madre.
          María had   flu.   This happened when   she.lived with her mother
          'María had flu. This happened when she lived with her mother.'
       b. María se tropezó. Esto sucedió   cuando bajaba   las escaleras.
          María SE tripped. This happened when   she.went.down the stairs
          'María tripped. This happened when she went down the stairs.'
(34) Juan esperó a María durante dos horas. %Esto sucedió en su aniversario.
      Juan waited to María for two hours. This happened in their anniversary

The behaviour of negative events in this context patterns again with events and unlike states. Consider (35):

(35) El   paciente no durmió durante una semana. Esto sucedió   cuando se
      the   patient not slept   for   one week.   This happened when   SE
      le   administró   la   nueva droga experimental.
      him-DAT   administered the new   drug   experimental
      '[It was the case that] the patient didn't sleep for a week. This happened when he got administered the new experimental drug.'

In contrast, as we expect, if the first sentence in (35) is taken as a negated event, which requires to eliminate the durative modifier ('It was not the case that the patient slept'), the *this-happened* anaphor is out.

Third, events, unlike states, can be refered to by the *do-so* anaphor in pseudo-cleft sentences:

(36) a. *Estar enfermo fue lo que hizo Juan.
to.be sick was that what did Juan
'To be sick is what Juan did.'
b. Comprar el periódico fue lo que hizo Juan.
to.buy the newspaper was that what did Juan
'To buy the newspaper was what Juan did.'

Negative events behave like 'regular' events also in this respect, as is illustrated in (37). Notice that this example is, again, grammatical only in the negative event interpretation ('it is the case that Juan fails to sell houses').

(37) No vender casas fue lo que hizo Juan para que lo despidieran.
not to.sell houses was that what did Juan so that him.ACC they.fired
'Not to sell houses is what Juan did to get fired'

Thus, the state-like properties of negative events cannot be an effect of negation turning the event into a state, but rather have to follow from their nature as negative events and the properties of these objects as opposed to their positive counterparts. In our analysis, the state-like properties of negative events will follow directly from the scope of their negation: as we will see, in our analysis they are events whose initiation has been inhibited, therefore forcing a reading where they do not involve any change.

3.2 Presence of a subject-control component

Not every event can have a negative event counterpart. This section will argue that, empirically, the negative event interpretation is licensed only with predicates where the entity denoted by the subject is responsible for controlling that the event comes into existence. If the predicate does not license that reading, or in cases where the event does not license it, the negative event reading is impossible. If we go back to (1), here the negative event reading is associated to the fact that the addressee controls the event of stopping at the red light, that is, that he/she decides whether the event of stopping at the red light takes place or not.

In what follows, we will show that this restriction determines whether a predicate can get a negative event reading. This can be shown through three types of contrasts: (i) with verbs that describe events without a controller, negative event readings are out; (ii) in verbs alternating between a causative and inchoative reading, the negative event reading is restricted to the first and (iii) indirect causers are not compatible with negative event readings.

Let us start showing that predicates denoting events that cannot be controlled cannot get a negative event reading. Consider a predicate like *toparse con* 'to bump into'; this predicate strongly implies that the action of meeting someone or finding something was not intended, and was completely uncontrolled by the individual denoted by the subject; if someone bumps into his boss, it is clear that he or she was not looking for her, and nothing in the situation made it foreseeable that this should happen. As there is no expectation that the event should have taken place, a negative event interpretation is ungrammatical:

(38) a. *Juan llegó a no toparse con su jefe.
Juan became to not to.bump into his boss
Intended: 'Juan went as far as not to bump into his boss.'

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b. Juan no llegó a toparse con su jefe.
      Juan not became to to.bump into his boss
      'Juan didn't eventually bump into his boss.'

Further evidence comes from 'accidental discovery' scenarios. We can agree that in a normal context, to discover a new chemical element is not something that one can control. Hence the awkwardness of (39):

(39) *Juan llegó a no descubrir un nuevo elemento químico.
      Juan became to not to.discover a new element chemical
      Intended: 'Juan went as far as not to discover a new chemical element.'

The situation is even clearer with predicates involving copulative verbs. Compare the predicates *estar en coma* 'to be in a coma' and *estar en forma* 'to be in (good) shape, to be fit'. Semantically, the first predicate involves a situation that is completely outside the control of the subject; the second is a situation that the subject needs to control to some extent. The possibility of having a negative interpretation with each predicate correlates with this property.

(40) The athlete was demotivated before the race. He stopped training enough, he ate all kinds of unhealthy things and...
      ... llegó a no estar en forma para la carrera.
          became to not to.be in shape for the race
       '... went as far as not to be in shape for the race.'

(41) The patient was recovering well. He started partially reacting to external stimuli, he moved one finger and...
      *...llegó a no estar en coma tras un tiempo.
          became to not to.be in coma after some time
      Intended: 'managed not to be in a coma after a while.'

Another contrast comes from evaluative adjectives (Stowell 1991) vs. regular adjectives. Evaluative adjectives, when interpreted as denoting types of human behaviour, are agentive: the following sentence shows that they can trigger a negative event reading, unlike adjectives that cannot be interpreted agentively.

(42) The teacher had lost her patience; she stopped correcting extra homework, she was not answering e-mails in the weekends and...
      a. ... llegó a no ser amable en clase.
            became to not to.be nice in class
      b. ... *llegó a no ser inteligente.
             became to not to.be intelligent

Consider now the second parameter: predicates that alternate between causative and inchoative readings. In the inchoative reading, the subject suffers the result of a change, while in the causative reading the subject initiates and controls that change. Correlatively the negative event reading is blocked with the inchoative reading.

(43) a. *La leche llegó a no hervir.
         the milk became to not to.boil

Intended: 'The milk became as far as not to boil.'
  b. La matron llegó   a no hervir la   leche.
     the midwife became to not to.boil the milk
     'The midwife went as far as not to boil the milk'
(44) a. *Los precios llegaron a no aumentar.
        the prices   became to not to.raise
  b. El gobierno   llegó   a no aumentar los precios.
     the government became to not to.raise   the prices
(45) a. *Lázaro llegó   a no resucitar.
        Lazarus became to not to.resurrect
  b. La bruja llegó   a no resucitar   al   cadáver.
     the witch became to not to.resurrect the corpse[6]

There is a contrast between alternating and non-alternating (apparently) inchoative verbs. Non alternating (unaccusative) predicates do allow systematically the negative event reading, as shown below:

(46) a. Juan llegó   a no entrar.
        Juan became to not to.come-in
  b. Juan llegó   a no salir   de   casa.
     Juan became to not to.come-out from home
  c. The new product was completely useless with the virus; it was difficult to
     administer to patients, and in those patients that actually got it...
     .., el   virus llegó   a no morir.
        the virus became to not to.die
  d. John wanted to destroy the tree, so he started hitting it to make it fall.
     However, it was impossible to break its trunk, and...
     ... sus hojas llegaron a no caer.
        its   leaves became to not to.fall

Interestingly, Ramchand (2008) has argued that non-alternating unaccusative predicates are in actuality structurally causative, which explains why, despite their inchoative appearance, cannot be causativised. Thus, in (46c), for instance, the virus would be the entity whose internal properties –without any necessary volitionality– make it possible that the dying event takes place.

(47) *Juan murió a   Pedro.
     Juan died   ACC Pedro

Thus, the noted contrast would be one between unaccusative predicates that can be causativised –which lack a causative layer– and unaccusatives that cannot be causativised –because they already contain a causative layer–. They therefore conform

---

[6] Some alternating predicates where the inchoative reading is marked with *se* in Spanish do allow the negative event reading:
  (i)   Pese a sus esfuerzos, el barco llegó a no hundir-se.
            despite to their efforts, the boat became to not sink-SE
However, Koontz-Garboden (2009) has convincingly argued that *se*-marked inchoative predicates in Spanish are built above the causative version, not the other way round, and are reflexives of sorts. Following this theory, these predicates would contain a causative layer, so they would in fact pattern with the causative predicates, preserving the correlation.

to the generalisation that in order to get a negative event reading, the subject must be defined as the controller that initiates the event.

Consider now the third factor, the kind of subject one gets. The generalisation that determines the distribution of negative event has to do with whether the subject can control the event or not, but control does not imply volitionality or even conscious control. Thus, we predict that some entities that according to Folli & Harley (2005) and Ramchand (2008) possess properties that can be responsible for some particular event(s) coming into existence should be able to act as subjects of negative events. In contrast, non direct causers (Alexiadou et al. 2013) should be out in negative event readings.

This is what happens with the instrumental subject in *Las tijeras cortaron la hoja* 'The scissors cut the sheet'. As shown in (48), this kind of subject does allow the negative event reading, because even though it is not a conscious voluntary agent, the subject controls, through its teleological properties, the cutting event:

(48) The presentation of the new material was a success; the sheets made with it were light, it was shown that they could hold a three kilo box, and when someone in the audience tried to cut it with a pair of scissors...
...las   tijeras   llegaron   a   no   cortar   la   hoja.
  the   scissors   became   to   not   to.cut   the   sheet
'The scissors went as far as not to cut the sheet.'

In contrast, indirect causers are out with negative event readings:

(49) The authorities were totally irresponsible during the crisis; they did not think about reinforcing the hospital system, they did not give antibiotics to the population and...
*el riesgo   de   tormenta   llegó   a   no   justificar   la   evacuación.
the risk   of   storm   became   to not   to.justify   the   evacuation
'The storm risk went as far as not to justify the evacuation.'

Consequently, the generalisation seems to be solid: only when the situation is initiated by a subject that, consciously or unconsciously, volitionally or non volitionally, triggers the event, is the negative event reading grammatical. Keeping in mind this particular property, and having shown that negative events do have distinct properties in contrast to negated events, let us move to the analysis.

4   Events and their instantiation in temporally-anchored situations

We now move to the background necessary for our analysis of negative events. Here, we will discuss how a Neo-Davidsonian event semantics could try to account for this type of events. We will point out the problems that this approach makes and then, we will introduce Ramchand's (to appear) semantic ontology, which includes not only events but also situations.

Since Davidson's (1967) work, there is a general consensus in assuming events as primitives in the semantic ontology. According to Neo-Davidsonian event semantics, propositions are descriptions of events and verbal arguments and adjuncts are predicates of the event (Davidson 1967; Parsons 1990). Thus, the sentence in (50a) has the logical form in (50b), which describes an event of running where John is the runner:

(50) a. John ran.
      b. ∃e [RUN (e) & AGENT (e, John)]

Crucially, in this account, event arguments are endowed with time and world indices, so they are directly anchored by tense and mood.

It might seem easy to capture the difference between negated events and negative events by Neo-Davidsonian logic forms. Recall that according to our proposal, if negation modifies the verbal phrase (see (51a)), the negative particle can negate the event or yield a negative event. The first situation can be represented with negation taking scope over the existential quantifier over events (see (51b)). Thus, it is refuted that the event takes place and as a result, there is no event. The second situation is captured by negation directly preceding the verb (see (51c)). As the existential quantifier is not within the scope of negation, an event occurs, in particular, a negative event.

(51) a. John didn't run.
      b. ¬∃e [RUN (e) & AGENT (e, John)]
      c. ∃e [¬RUN (e) & AGENT (e, John)]

However, the semantic representation in (51c) faces several problems (Higginbotham 2000, Arkadiev 2015). This interpretation does not arise from the purely logic negation, which denotes the complementary set of a given set. If we apply this definition to (51c), negation should denote the complementary set of events of running, but the resulting set is too broad; in other words, (51c) should be true in too many circumstances. Given that, Arkadiev (2015) claims that for negative events it is necessary to invoke a different type of negation, which expresses contrariness, since negative events tend to convey an unfulfilled expectation: that the positive event took place (Stockwell, Schachter & Partee (1970); Higginbotham 2000). As Arkadiev acknowledges, it would be hard to develop an account following this track because of the multiple flavours that negation can get depending on the context. As a result, we think that a traditional Neo-Davidsonian approach is not enough to account for negative events.

We will put forward an analysis of negative events that avoids the aforementioned problems and accounts for the properties described in the previous section. We will assume a more complex semantic ontology and, in particular, one that includes not only events but also situations. This moves has been independently motivated by Ramchand (to appear), who shows that this proposal has advantages in deriving –rather than stipulating– the order of auxiliaries in English and the distinct readings of modal and aspectual verbs. Let us introduce Ramchand's proposal now and postpone the development of our analysis until next section.

4.1   Splitting events from situations

According to Ramchand, events and situations are both necessary in the ontology and one cannot be reduced to the other. Each one of them is defined as in (52) and (53), respectively:

(52) Events, E[7]:
   • Events are essences that 'exist' independently of world, time, or place instantiation (events lack time, world and place parameters)
   • They can be compositionally built up.
   • They can be related to each other via the 'essential' relations of CAUSE, PART-OF and IS-IDENTICAL-TO.
   • They can be related to entities in the domain of individuals via the 'essential' relation HOLD-OF, which represents property ascription (either of a static or changing property).

(53) Situations, s:
   • Situations are particular states of affairs that exist in a particular world, at a particular time interval.
   • They form part of a mereology (subpart relation notated $\leq_s$), where the world is the top element.
   • Situational variables are notated with world and time parameters $s_{w,t}$.

[from Ramchand to appear: chapter 2]

It is worth highlighting that the main difference between events and situations is that only the latter have temporal and word-related information, because they are independent of their instantiation. Actually, notice that Ramchand uses the capital letter E to refer to events instead the common e. Her reason is precisely to emphasize the fact that events in her ontology do not denote particular events, but event essences. Existential quantification of the event, then, does not entail time / world instantiation. Situations, in contrast, do have world and time parameters. Ramchand defines the relation between event essences and situations as follows:

(54) Instantiation:
   A situation s is said to *instantiate* an event E if it is the playing out of E in actual worldly space and time.
   If $\exists s_{t1,w1}$ such that INSTANTIATE($s_{t1,w1}$, E), then $\exists s_{t1,w1}'$ such that INSTANTIATE ($s_{t1,w1}'$, E), and for all $s_{t1,w1}$ such that INSTANTIATE($s_{t1,w1}$, E), $s_{t1,w1}' \leq s_{t1w1}$
   (If there is a situation that instantiates an event, then there is always a smallest such that instantiates that event)

[from Ramchand to appear: chapter 2]

Thus, Instantiation is "an extension of E to s that gives it worldly properties, and moreover, there is always a mereologically minimal extension of E for any particular world and time. We will call this INSTANTIATE* for convenience". Furthermore, Ramchand assumes Champollion's (2015) proposal regarding the closure of the event variable. Champollion proposes that verbs denote sets of sets of events, as is illustrated in (55):

(55) [[kiss mary]] = λf ∃e[kiss(e) ∧ f(e) ∧ the(e) = Mary]

It is crucial to highlight at this point that the event essence E is not just a different way of calling the traditional Davidsonian variable *e*. In Davidson, *e* contains world and

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[7] Ramchand uses the capital letter E to distinguish this type of events from the variable e, which refers to particular events.
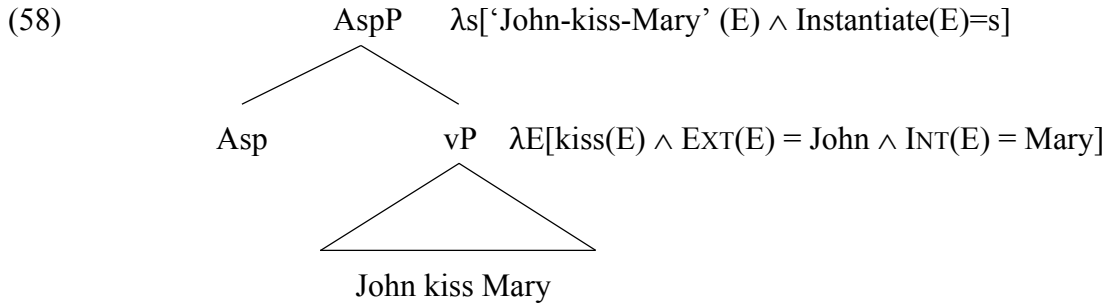
time parameters, at the same time that it gets directly associated to theta-roles and Aktionsart. In this system, there is no object that both assigns theta roles, defining an eventuality, and takes time and world as properties. This is critical in our account, as we will see: none of the two objects assumed here, s and E, corresponds to *e*.

Consider now (56), which is the representation of an event essence in Ramchand's terms. When Instation applies to this essence, we get (57), where INSTANTIATE* introduces the existential clousure of the s (Ramchand to appear: chapter 2):

(56) [[John kiss Mary]] = $\lambda E[kiss(E) \wedge \text{EXT}(E) = John \wedge \text{INT}(E) = Mary]$

(57) [[John kiss Mary]] = $\lambda f \exists s[\exists E[kiss(E) \wedge \Theta_1(E) = John \wedge \Theta_2(E) = Mary]$
       $\wedge$ INSTANTIATE*$(s,E) \wedge f(s)]$

According to Ramchand, the event essences are built up at the vP level. Situations belong to a different syntactic domain, above vP, where aspect, mood and tense are defined. In her view, the syntactic head that maps events into situations is AspP. AspP, then, is a transitioner in Ramchand & Svenonius' (2014) terms, a head that signals that the derivation enters into the domain of a different sort: in our case, it signals the boundary between events (E) and situations (s). The representation in (58) is simplified for expository purposes.

(58)   AspP $\lambda s['\text{John-kiss-Mary'} (E) \wedge \text{Instantiate}(E)=s]$

        Asp   vP $\lambda E[kiss(E) \wedge \text{EXT}(E) = John \wedge \text{INT}(E) = Mary]$

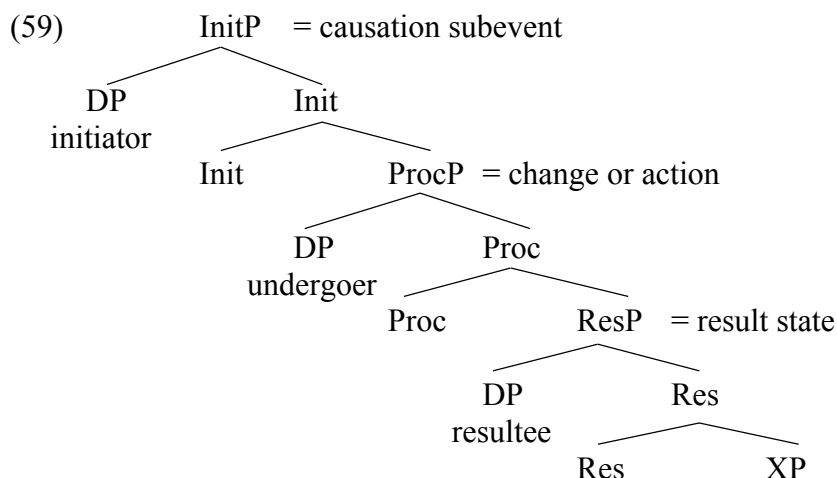   John kiss Mary

4.2   The internal structure of events

In addition to distinguish between situations and events, Ramchand (2008) proposes a fine grained structure at the vP level. Specifically, she argues that the event-structure syntax involves three functional projections:

a) InitiationP, which specifies the causation subevent
b) ProcessP, which introduces the change or process
c) ResultP, which codifies the result state of the event.

Depending on the predicate, the structure will involve the three projections or only some of them; for example, the syntactic structure of a predicate such as *correr* 'to run' lacks ResP, since the process denoted does not involve any result state. The hierarchically relation between these three projections is shown in (59):

(59)　　　　　　InitP　= causation subevent

```
(59)            InitP     = causation subevent
              /       \
           DP          Init
        initiator     /    \
                   Init      ProcP  = change or action
                           /      \
                        DP          Proc
                     undergoer     /     \
                                Proc       ResP    = result state
                                         /      \
                                       DP          Res
                                    resultee      /    \
                                                Res      XP
```

As can be seen in (59), the specifier of each projection is occupied by a particular event participant. The initiator of the event is placed in the specifier of the cause projection, that is, the InitP. Crucially for our purposes, the initiator does not carry any entailment of volitionality or even conscious control; it is simply the entity whose properties, or any kind, set the event in motion. This leads Ramchand to place here agents, instrumental subjects and (direct) causers.

The entity undergoing the change or process denoted by the event is placed in the projection that specifies the change or process, ProcP. The entity that holds the result state occupies the specifier of ResP. It is also important to point out that the syntactic structure in (59) is associated to a combinatorial semantics: the causative subevent leads to the process-denoting subevent and the process-denoting subevent leads to the result-state subevent.
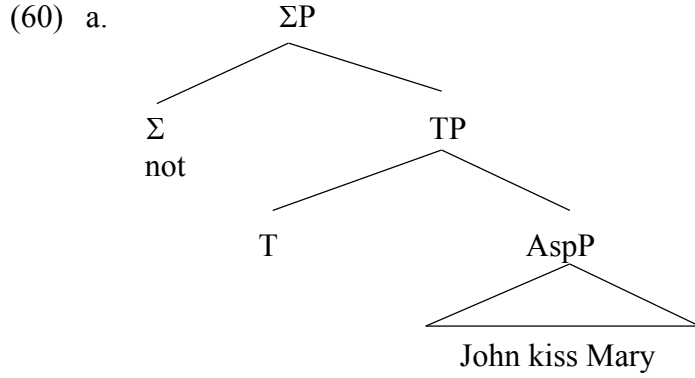
With this background in mind, let us move to the specific proposal.

5　　Analysing negative events

Our claim is that, while a traditional Neo-Davidsonian semantics cannot account for the existence of negative events, Ramchand's proposal in fact predicts that negative events should exist. As negative events exist (see §2, §3), their existence supports Ramchand's proposal.
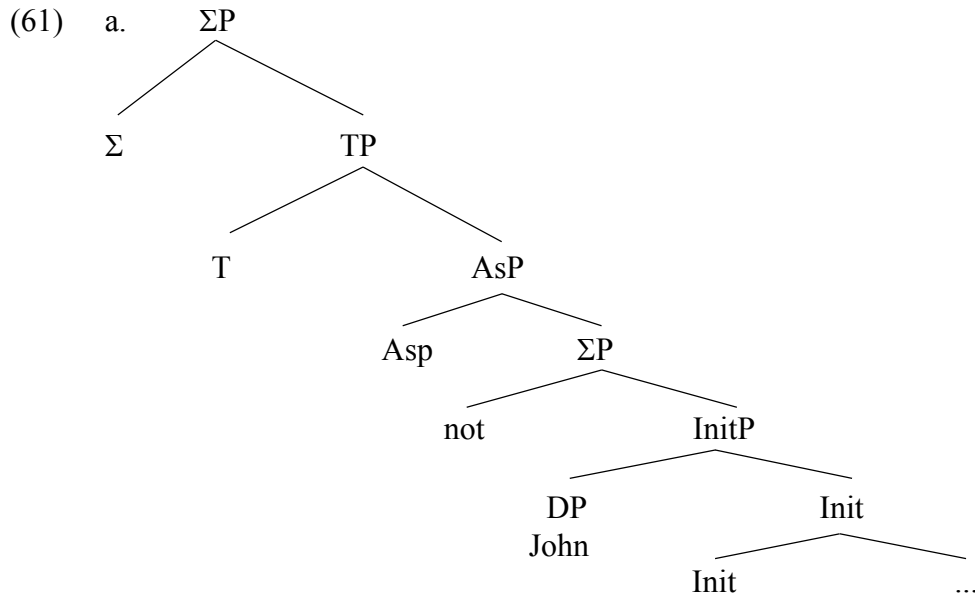
An approach in which events and situations are taken to be distinct objects automatically predicts new possibilities regarding the scope of negation: specifically it predicts that negation can operate at the event level (E) or at the situation level (s). Within Ramchand's framework, the distinction between negated events and negative events does not need to be related to the existential closure of the event –which moreover does not entail any temporal anchoring–. This is precisely our proposal. We argue that negation can occupy two different positions in the preverbal area, which correspond to different scope relations with respect to the situation and produce the two readings discussed here, negated and negative.

In the negated event reading, negation occupies Laka's (1990) Polarity Phrase (ΣP), which is located above TP. At this level, which is above AspP, the negative operator takes scope over the existential closure of the situational variable. The result is that it is negated that the situation takes place (see (60)): 'it is not the case that X'.

(60) a.

```
                    ΣP
             _____|_____
            |             |
            Σ             TP
           not        ____|____
                     |         |
                     T        AspP
                          _____|_____
                         |           |
                         John kiss Mary
```

b. [[John does not kiss Mary]] = λf¬∃s[∃E[kiss(E) ∧ Θ₁(E) = John ∧ Θ₂(E) =
Mary] ∧ INSTANTIATE*(s,E) ∧ f(s)][8]

   In the negative event reading, negation is placed in a Polarity Phrase that is lower
than the sentential one. Specifically, we contend that it is above the projection in which
causative subevents are codified, that is, InitP. Thus, this negation takes narrow scope
with respect to the existential closure of the situation: the result is that there is a specific
situation that instantiates the event. However, negation here takes scope over the
causative projection. Negation affects the causative relation between the initiator (InitP)
and the process projection (ProcP), since it is refuted that the entity introduced by the
external argument (the specifier of InitP) initiates the process. At the AspP level, the
resulting event essence is instantiated in a situation that exists in a particular world, at a
particular time interval.

(61)   a.

```
        ΣP
   _____|_____
  |           |
  Σ           TP
          ____|____
         |         |
         T        AsP
              _____|_____
             |           |
            Asp          ΣP
                    _____|_____
                   |           |
                  not         InitP
                         _____|_____
                        |             |
                        DP           Init
                       John      ____|____
                                |         |
                               Init       ...
```

b. E [¬ Init'(E1) & State (E1) & E= E1--> E2 & P (E2) & Subject (John, E1)]

Thus, the meaning of the negative event 'not stop at the traffic light' in *I saw you not
stop at the traffic light* is, in our account, 'I saw the situation that instantiates the event
of you not initiating the event of stopping at the traffic light'.

---

[8] We do not take into account the interaction between negation and tense, which it is an independent and
complex issue. See Partee (1973) and Ogihara (2003), among others.

For perspicuity, compare the two interpretations of the sentence *John didn't stop at the traffic light*. In the negated event reading (60), we have an event essence 'stop at the traffic light' and a situation that instantiates that event at a particular time, in a particular world. At the TP level, that situation gets existentially bound. Polarity dominates TP, which gives negation wide scope over the existential quantifier over the situation ($\neg\exists s...$): this conveys the interpretation 'there is no situation s that instantiates the event of stopping at the traffic light', which corresponds to a negated event.

In contrast, in the negative event reading (61), we have a polarity head which is below TP and above InitP. Negation has, then, narrow scope over the existential quantifier over situations that is introduced at TP and therefore, a situation exist. Since negation takes wide scope with respect to InitP, it refutes that the initiator leads to the process reversing the polarity value of the causative relation between the causative subevent and the process-denoting subevent. This produces the negative event reading: there is a situation which instantiates the event essence 'John does not initiate the event of stopping at the traffic light coming into existence'.

5.1   Accounting for the properties of negative events

Once we have explained our analysis, we will show how it accounts for the properties of negative events discussed in previous sections.

5.1.1 Interpretation of a negative event

We pointed out that Davidsonian approaches to event semantics faced two problems when capturing the interpretation of negative events. The first time is that in those approaches, negation would not trigger the complementary reading that it is normally associated to in logical terms. The second is that the resulting semantic formula was too weak, as it would be compatible with any situation where the event was not instantiated or where there was a second event in addition to the one under the scope of negation.

Our approach avoids both problems. By taking scope above InitP, negation gives the complementary function to Init: 'not initiate'. This immediately accounts for the reading intuitively associated to a negative event. A sentence like *I saw you not stop at the traffic light* is only true in a context where there is a situation that instatiates an event where the addressee fails to initiate the stopping event. Thus, situations where the addressee is responsible for stopping but there are additional events are not compatible with the semantics of that sentence. Moreover, situations where there is a stopping event but it has not been initiated by the addressee are also predicted to be truthfully described by the sentence. This is intuitively correct.

Imagine a situation where the addressee is taking a driving test; next to him, the instructor is sitting. The car stops at the traffic light, but the person that initiated that event was not the student, but the instructor, who saw that the student had not noticed the red traffic light. In this context, intuitively, the examiner can say *You have failed; I saw you not stop at the traffic light*.

5.1.2 Position with respect to the auxiliaries

Our account immediately predicts that, when there is more than one verb, the negation that gives the negative event reading will be immediately before the event-denoting verb, and following all aspectual and modal auxiliaries, which are introduced above AspP (see, among others, Eide 2006). The polarity phrase that yields the negative event

reading is immediately above InitP, and therefore, below the aspectual and modal auxiliaries.

(62) a. ø   Puedes   no   hablar.   (Negative)

             can.2sg   not   to.talk

       [ΣP...   [MoodP [Asp   [ΣP   [InitP...

  b. No   puedes   hablar   (Negated)

      not   can.2sg   to.talk

      [ΣP...   [MoodP [AspP   [InitP...

(63) a. ø   Llegó a   no   hablar   (Negative)

             arrived to   not   to.talk

      [ΣP...   [MoodP [Asp   [ΣP   [InitP...

  b. No   llegó a   hablar   (Negated)

      not   arrived to   to.talk

      [ΣP...   [MoodP [AspP   [InitP...

5.1.3 Aspectual properties

As we have shown in section 3.1, negative events share properties with states as well as with events. In our account, as negative events are interpreted when an event essence in which a particular entity does not lead to the process denoted by the verb is instantiated in a situation, it is straightforward to account for their stative properties. The fact that the entity denoted by the external argument does not initiate the change or process explains the following characteristics:

- Negative events fulfil the (strict) subinterval property. The event essence does not contain time parameters, so unless it is instantiated in a situation with temporal anchoring, it will not denote any kind of change across time. At the AspP level, event essences are instantiated and as a result, there could be a dynamic situation. This kind of situation will be obtained if the event essence involves a change or process. This requirement is not satisfied by negative events because it is refuted that the change has been initiated. Consequently, any instant included in the situation will denote exactly the same state of affairs: one in which a particular entity is not leading to a process.
- Negative events are incompatible with *parar de* 'to stop of'. On the assumption (Marín 2004) that *parar de* rejects states but accepts activities because it is sensitive to the dynamicity of its complement, we expect precisely that this periphrasis should reject a negative event, given the structure in (74), where its complement denotes a situation where there is no dynamicity because the process has not been initiated.
- Negative events also allow *for*-phrases that measure the duration of the situation, not the internal event. In this, as we noted, they contrast with negated events. This contrast is immediately accounted for by our analysis. These *for*-phrases are introduced in the situation-domain, above AspP. This explains why they measure the interval of time during which the event essence holds or, more precisely, the interval during which the situation of an entity not leading to a process holds. Since this type of situation has atelic properties –because it does

not involve any change– and it is higher than the vP, the *for*-phrases can appear with both telic and atelic events without yielding ungrammaticality.

In contrast, in the negated event reading, the high polarity phrase scopes above the existential closure of the situation. Hence, it conveys the meaning that the situation does not exist; as something that does not exist cannot have a duration, we immediately predict that negated events will not be able to co-occur with *for*-phrases introduced at the situation-domain.
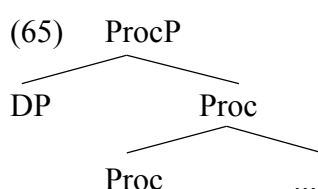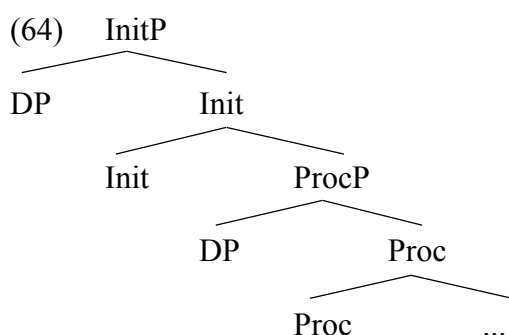
However, in our analysis negative events are instantiated as not-initiated events in specific situations. Therefore, they can be selected as infinitives by perception verbs provided that the main verb is itself eventive. This is simply due to the fact that there is an event essence contained in the negative event, and that event essence is instantiated in a situation.

- Anaphoric reference by *Esto sucedió* 'this happened' is possible with negative events. This is not surprising if the anaphor is sensitive to the existence of a situation that instantiates an event. In a negated event, as we showed, the anaphor is not possible: in that reading, there exists no situation. The anaphor is also not possible when the situation contains a state: in that case, the vP-essence is not an event.

5.1.4 Predicate restrictions

Let us finally address why the negative event interpretation always requires the present of an entity responsible for the event coming into existence. This requirement follows naturally from our analysis: provided that negation refutes that the initiator, which is placed in the specifier of InitP, leads to the change or process denoted by the verb, InitP must be present at the vP level in order to allow the negative event reading. This automatically accounts for why predicates that denote events which happen without control of the subject are excluded from a negative event reading.

Following Ramchand's (2008) proposal about alternating and non-alternating unaccusative verbs, we capture the contrast that we found between verbs that reject causativisation, like *arrive* or *die*, and verbs that allow it, like *boil* or *resurrect*. In the first case, at the event level, the verb is headed by InitP (64); in the second case, the inchoative reading lacks InitP, so the context required for a negative event interpretation is not met (65).

(64) InitP
```
        InitP
       /     \
     DP       Init
            /      \
         Init      ProcP
                  /     \
                DP      Proc
                       /    \
                    Proc    ...
```

(65) ProcP
```
     ProcP
    /     \
  DP      Proc
         /    \
      Proc    ...
```

Finally, with respect to the types of subject allowed, following Ramchand, agents, instruments and inmediate causers are merged in spec, InitP. In contrast, indirect causers –we assume– are introduced at a higher layer that does not involve InitP, simply because the entailment that the event is initiated by the internal properties of the indirect causer does not hold.[9]

5.2   Predictions

In this section we will show that the proposed analysis makes also some predictions that are borne out. First, we will focus on the possibility of having two preverbal negations at the same time; second, we will discuss the negation of imperatives; third, we will concentrate on the licensing of negative polarity items.

5.2.1 Double negation

First, our account predicts that a sentence could contain two preverbal negations. Since negation occupies different positions depending on whether it takes scope over or below the existential closure of the situation, there is nothing that prevents having both negations at the same time. This prediction is borne out. Consider the following example:

(66)   John was so angry with Mary that I thought that he was psychotic. However,…
        …no   llegó   a   no   saludarla.
          not   become   to   not   to.greet.her
      '… he didn't go so far as not to greet her.'

In (66) there is a negation before the auxiliary verb and another after it. The former is placed in the higher Polarity Phrase, negating the situation, while the latter occupies the lower Polarity Phrase and refutes the causal relation between the causative subevent and the process-denoting subevent. Thus, it is refuted that there exists a particular situation in which John does not initiate the event of greeting Mary; consequently, John eventually greeted Mary.

     The same situation is found in modal periphrases. Two negations can co-occur in these constructions:

(67)   No   puedo   no   asistir   a   la   reunion.[10]
      not   I.can   not   to.attend   to   the   meeting

---

[9] Note that if our explanation is on the right track, it constitutes evidence in favour of the proposal, that goes at least back to Bolinger (1973), that weather verbs do include a subject –possibly a spatio-temporal entity– whose internal properties trigger the meteorological event (as independently suggested by the grammaticality of sentences like *It snowed without raining*). Note that (i) is grammatical:

(i)   It might not rain.

[10] Note that the possibility of having two preverbal negations in (66) and (67) cannot be explained in the same way that (i), where the first negation is associated to a quantifier phrase (see Etxepare and Uribe-Extebarria 2016):

(i)   No   todos   no   quieren   trabajar   en   el   campo.
          not   all   not   want   work   in   the   land.
          'Not all don't want to work in the land.'
             [from Extepare and Uribe-Etxebarria 2016]

'I am not allowed not to attend the metting.'

In (67), it is negated that there exists a situation that allows the speakers does not lead to the event of going to the meeting. This sentence expresses that the addressee does not have the permission to perform the event of not attending the meeting.
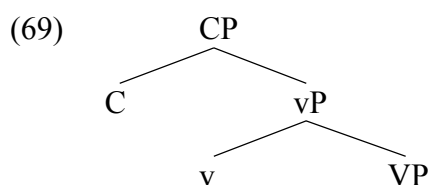
5.2.2 Imperatives

Our account also throws some light on why negative imperatives must convey the order of performing a negative event and cannot be interpreted as negated orders. Remember that the negative event reading is associated to a low polarity phrase below TP; the negated event reading involves a high polarity phrase above TP.

The compulsory reading of imperatives as negative events is immediately accounted for in our analysis if imperatives, as claimed by some authors, lack TP. Here we will focus on Biezma's (2008) analysis of imperatives, but see also Zanuttini (1997) and Pirvulescu & Roberge (2000).

Biezma capitalises on two well-known facts of imperatives: first, they do not have past tense forms; second, even in strongly non pro-drop languages like English, imperatives appear without overt subjects.

(68) a. *Spoke! / *Didn't speak!
      b. Speak! / Don't speak!

Both properties are expected if imperatives lack a TP layer and involve a structure, roughly, as (69):

(69)
```
            CP
          /    \
        C        vP
               /    \
              v       VP
```

Biezma associates the (very poor) imperative inflection in languages that have any with little v, a claim we will remain neutral about because it is orthogonal to our purposes here.

Note that Biezma's proposal assumes a Neo-Davidsonian framework where verbs have time parameters; adapting (70) to Ramchand's framework, AspP is compulsory in order to map the event domain to a situation domain with world parameters that can be used to build the imperative semantics at CP.

(70) [CP   [AspP [InitP ...   ]]]]

Now, let us introduce negation; as there is no TP layer, this negation will forcefully take scope over InitP, and not over the existential closure of the situation, because that happens at TP.

(71) [CP   [AspP [ΣP   [InitP]]]]

By force, and without the need to posit two kinds of negation, we immediately derive the fact that a negative imperative will be interpreted as a negative event. Of

course, the necessity of having an InitP layer is automatically satisfied by an imperative, to the extent that orders are only felicitous if they apply to events that can have an initiator that sets them in motion.[11,12]

5.2.3 Negative polarity licensing

Our account, in contrast to a potential proposal where negative events are instances of constituent negation, makes a prediction with respect to the licensing of negative polarity items. Being merged as a polarity phrase in the spine of the tree, negative event negation should be able to license NPIs, which cannot be licensed by constituent negation (72).

(72) *[No more than three students] went anywhere.
      (cf. No more than three students didn't go anywhere)

This prediction is borne out, as shown in (73)-(75); as the low polarity phrase still c-commands the arguments introduced at the vP-level, we expect negation to license them as NPIs.

(73) I saw you not stop at any red light.
(74) You must not talk to anybody.
(75) You may not eat anything.

6   Conclusions

In this article we have discussed evidence that negative events exist next to negated events, proposing a number of contexts where sentences differ in both form and interpretation displaying both types of negation. We have shown that negative events come associated to a number of properties, aspectual and otherwise.

Our analysis does not need to propose that there are two kinds of negation; rather, there are two positions in the spine of the clause where negation can be merged, and each one of them takes scope over distinct items, by pure syntactic constituency. The negated event reading involves negation scoping above the existential closure of the situation; the negative event reading involves negation scoping below existential closure and above the causative subevent. The existence of negative events, thus, constitutes an

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[11] An important component in the study of imperatives is the observation that true imperative morphology is frequently unavailable in negative contexts such as (71). Zanuttini (1997) famously argued that the unavailability of morphological imperatives under negation was due to an intervention effect: negation acts as a head that prevents v to head-move to C, where the imperative spell out is licensed. Note that in our account this explanation can be maintained in its essential form: as in the case of Zanuttini's proposal, negative imperatives involve introducing an additional head between C and the verbal complex. We differ from Zanuttini, however, in the height at which negation is introduced: we have argued that imperatives consistently lack TP, which forces a negative event reading. We leave for further research the question of what this structure implies for the materialisation of negative-imperative morphology cross-linguistically (subjunctives in Spanish, infinitives in Italian, etc.).

[12] An alternative account of the compulsory reading could be assumed to follow the performative hypothesis (Ross 1970) in a modern version where C contains an ORDER operator and negation is placed above T. However, note that this account does not explain the fact that English is pro-drop precisely in imperative contexts. In contrast, Biezma's approach predicts it, and given the absence of a T element, negation would be interpreted as low.

argument in favour of an account where events and situations are distinct objects in the ontology, and the vP level is split up into different projections.

There are several open questions that this novel view of negative events brings up. Among them, perhaps the most central one is the nature of the polarity phrase. It has always been considered a puzzling fact of negation that, unlike tense or determiner, it seems to be a functional head that does not have a unique designated position in the spine of the clause, or, for that matter, in the extended projection of one single category. Our proposal puts this problem in the center, as two polarity phrases can be present at the same time in the same clausal spine. We have nothing but speculations at this point, but a suggestive future avenue of research would be to explore the idea that there are no designated polarity phrases in UG and particular grammars use other kinds of projections, such as FinP or InitP, to introduce polarity markers such as the negative adverbial *no*. However, we are at no position here to make claims about this matter. We hope, at least, to have been able to show that negative events exist in natural languages and that their syntactico-semantic properties can be formalised in a parsimonious way.

Author contact data
Antonio Fábregas: antonio.fabregas@uit.no

Raquel González Rodríguez: Raquel.Gonzalez@uclm.es

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