

# Event-dependent modal projection: The case of Spanish subjunctive relative clauses\*

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## 1. Introduction

A pressing question in research on modality is how modal expressions determine which possibilities they range over. A growing body of work explores the hypothesis that modal domains are projected from entities (events or individuals, the ‘modal anchors’) made available by the semantic composition. This Modal Anchor Hypothesis (Kratzer 2013) has been recently explored for modal auxiliaries (Hacquard 2006, 2009, 2010, Arregui 2010), counterfactuals (Arregui 2005, 2007, 2009), modal indefinites (Alonso-Ovalle and Menéndez-Benito 2017), mood (Kratzer 2016, Portner and Rubinstein 2020), and imperfective morphology (Arregui et al. 2014). We provide novel evidence for the Modal Anchor Hypothesis by analyzing a class of seemingly exceptional subjunctive relative clauses (RCs) in Spanish, and arguing that their behavior follows straightforwardly if subjunctive is a modal operator (Portner and Rubinstein 2020) that, like modal indefinites (Alonso-Ovalle and Menéndez-Benito 2017), can project its domain from a volitional event.

The interpretation of mood in RCs hasn’t received much attention (but see Farkas 1985, Quer 1998, Truckenbrodt 2019). Most theories of verbal mood to date focus on the distribution of indicative and subjunctive in the complements of attitude predicates (see Portner 2018 for an overview). For instance, as the Spanish examples in (1) illustrate, desiderative verbs in Romance typically require the verb in their complement clause to bear subjunctive morphology (1a), while doxastic verbs normally take indicative-marked clauses (1b).<sup>1</sup> According to a widespread view (see e.g., Giorgi and Pianesi 1997, Villalta 2006, 2008), the

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<sup>1</sup>Italian *credere* ‘believe’ is a notable exception, but see Mari and Portner To appear.

generalization underlying (1) is that subjunctive is licensed only under modal predicates whose semantics involves a (non-empty) ordering source.

- (1) a. Quiero que María { \*está / esté } contenta.  
 want:1SG that María { is:SUBJ / is:IND } happy  
 ‘I want for María to be happy.’  
 b. Creo que María { está / \*esté } contenta.  
 believe:1SG that María { is:INDIC / is:SUBJ } happy  
 ‘I believe that María is happy.’

In contrast with complements, RCs under subjunctive licensors allow for both subjunctive and indicative, as seen in (2). A well-known observation, going back to Quine (1956), links this alternation to the *de dicto* / *de re* distinction. The version of (2) with a subjunctive RC (roughly) conveys that in all the worlds  $w'$  where the speaker's desires are satisfied, she buys a book that has green covers in  $w'$ , with the books potentially varying across the desire-worlds (*de dicto*). The version of (2) with an indicative RC conveys that there is a particular actual book with green covers that the speaker buys in all the worlds that conform to her desires (*de re*).

- (2) Quiero un libro que { tiene / tenga } las tapas verdes.  
 want:1SG a book that { has:IND / has:SUBJ } the covers green  
 ‘I want { a specific book / any book } with a green cover.’

This correlation can be taken to support the (null) hypothesis that mood in RCs has the same licensing conditions as in complement clauses (a hypothesis that has been assumed in various works, e.g., Farkas 1985, Quer 1998, Truckenbrodt 2019, and see Portner 2018 for discussion). On this view, subjunctive in (2) needs to stay in an appropriate intensional context to be licensed. Assuming that the scope of the RC is determined by the scope of the DP it belongs to, this would result in the whole DP being interpreted under *want*, which would yield a non-specific (*de dicto*) interpretation of the indefinite.

This paper focuses on a class of subjunctive RCs, illustrated by (3), which raises a puzzle for this view. The examples in (3) feature a subjunctive RC in the object position of an extensional verb.<sup>2</sup> The indefinite objects in (3) receive a specific interpretation (e.g., (3a) conveys that a particular actual radio was bought). This is expected, since the main verbs

<sup>2</sup>The assumption that *comprar* ‘to buy’ and *enviar* ‘to send’ are extensional is not universally shared. It has been argued by some (see Kratzer 2015, Martin and Schäfer 2017) that these verbs of transfer of possession contribute an intensional component. In Alonso-Ovalle et al. Submitted we show that even if these verbs contribute modality, they would not supply a suitable intensional context for subjunctive. Note also that the construction is possible with non transfer of possession verbs, witness (i) below.

- (i) Sofía bebió una infusión que le calmara los nervios.  
 Sofía drank:3SG a herbal-tea that to.her calmed:SUBJ.3SG the nerves  
 ‘Sofía drank an herbal tea so that it would calm her down.’

in these examples license existential import. The acceptability of a subjunctive RC in the object position of these verbs is puzzling, though, since these clauses are not in the scope of a modal that could license subjunctive mood. At the same time, the rough translations suggest that the RCs in (3) do introduce modality: modality that targets the agent's goals. We will accordingly label these RCs *agent-oriented RCs*.<sup>3,4</sup>

- (3) a. Le compramos a Pedro una radio que le distrajera en  
to.him bought:1PL OBJ Pedro a radio that to.him entertained:SUBJ.3SG in  
el hospital.  
the hospital  
'We bought Pedro a radio to entertain him in the hospital.'  
(adapted from Pérez Saldanya (1999:3284))
- b. Enviamos a un mensajero que entregara el paquete.  
sent:1PL OBJ a messenger that delivered:SUBJ.3SG the package.  
'We sent a messenger to deliver the package.'
- c. Compré un libro que tuviera muchas páginas.  
bought:1SG a book that had:SUBJ.3SG many pages  
'I bought a book and, given what I wanted, it had to have many pages.'

We will argue that the apparent exceptionality of agent-oriented RCs receives a natural explanation if we bring together two independently motivated proposals: (i) that subjunctive mood is a modal operator anchored to an event (Portner and Rubinstein 2020), and (ii) that goal-oriented modality can be reconstructed from the event argument of a volitional verb (Alonso-Ovalle and Menéndez-Benito 2017). The paper is organized as follows. Section 2 characterizes agent-oriented RCs. Sections 3 and 4 discuss the background on mood and modal indefinites, respectively. Section 5 presents the analysis, and Section 6 concludes.

## 2. Characterizing the construction

Agent-oriented RCs are well-documented across Romance (see Quer 1998, Laca 2010, Pérez Saldanya 1999 for Spanish, Farkas 1985 for Romanian, French, and Italian, and Quer 1998 for Catalan), although they are subject to cross-linguistic variation (Farkas 1985). Previous discussions revolve around examples like (3a) or (3b), which can be paraphrased with an infinitival purpose clause (and are thus labelled 'purpose relatives', see Quer 1998).

Farkas (1985) argues that (in Romanian, French and Italian) examples like (3a) or (3b) are *semantically* purpose clauses, but she leaves open whether they might also be purpose

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<sup>3</sup>A note about aspect and tense: in the examples in (3), the main verb bears past perfective morphology. This is to prevent aspect from introducing modality (present / (past) imperfective morphology would yield progressive or generic readings, amenable to a modal account). The RC verb is a past subjunctive form. We note that present subjunctive is also possible in agent-oriented RCs but space constraints prevent us from discussing the different interpretational possibilities associated with present *vs.* past subjunctive.

<sup>4</sup>Throughout the paper, we will focus on examples with indefinite DPs headed by *un*. The construction allows for other weak determiners, for indefinites that do not have predicative uses (*algún*), and for some presuppositional DPs.

adjuncts *syntactically*. In Spanish, finite (non-infinitival) purpose clauses (4) are most commonly introduced by *para* ‘for’ followed by the complementizer *que* (homophonous with the relative pronoun *que*), and they require subjunctive marking (see Quer 2001 for an analysis). This raises the question of whether (3a) and (3b) involve the same construction as (4), with *para* omitted.

- (4) Le compramos a Pedro una radio para que le {distrajera /  
to.him bought:1PL OBJ Pedro a radio so that to.him {entertain:SUBJ.3SG /  
\*distrajo } en el hospital.  
entertain:IND.3SG } in the hospital  
‘We bought Pedro a radio so that it would entertain him in the hospital.’

Quer (1998), focusing on Catalan, shows that examples like (3a) or (3b) do not in fact behave syntactically as purpose adjuncts. All of his arguments carry over to Spanish. We list three: first, (5a) shows that agent-oriented RCs cannot be preposed, unlike purpose adjuncts (5b); second, agent-oriented RCs require a gap (6a), but finite purpose adjuncts do not (6b); third, the construction is available with unambiguous relative pronouns, such as *cuyo* ‘whose’ in (7). (The arguments can be replicated with all the examples in (3).)

- (5) a. \*Que le entretuviera, le compramos una radio.  
that to.him entertain:SUBJ.3SG to.him bought:1PL a radio  
b. Para que le entretuviera, le compramos una radio.  
so that to.him entertain:SUBJ.3SG, to.him bought:1PL a radio  
‘So that it would entertain him, we bought him a radio.’
- (6) a. \*Le compramos una radio que su madre protestara.  
to.him bought:1PL a radio that his mother complain:SUBJ.3SG  
b. Le compramos una radio para que su madre protestara.  
to.him bought:1PL a radio so that his mother complain:SUBJ.3SG  
‘We bought him a radio so that his mother would complain.’
- (7) Le compramos un libro cuya trama le distrajera.  
to.him bought:1PL a book whose plot to.him distracted:SUBJ.3SG  
‘We bought him a book whose plot would distract him.’

To these arguments, we add that agent-oriented RCs are not always interpreted like purpose clauses either. Purpose clauses are future-oriented (they introduce a situation that the agent of the main verb intends to bring about). In contrast, examples like (3c) lack this sense of future realization of the goal. The RC in (3c) instead mentions the criterion that the agent was guided by in selecting the book she bought: (3c) conveys that the agent would have only bought a book that had many pages (at purchase time).

We conclude the characterization of the construction by pointing out that agent-oriented RCs have a restricted distribution. Quer (1998) noted that they are only possible when the

main verb is volitional. The examples in (8) show that they are degraded with non-volitional verbs like *descubrir* ‘discover’ or *tropezar* ‘stumble upon’.

- (8) a. Descubrió una radio que le { \*entretuviera /  
discovered:3SG a radio that DAT:3SG { entertained:SUBJ /  
entretuvo } en el hospital.  
entertained:IND } in the hospital  
(With indicative: ‘She discovered a radio that entertained her in the hospital.’)
- b. Tropezó con un objeto que le { \*gustara / gustó }.  
stumbled:3SG with an object that DAT:3SG { pleased:SUBJ / pleased:IND }  
(With indicative: ‘She bumped into an object that she liked.’)

A further and hitherto unnoticed restriction is that agent-oriented RCs are not possible in the *subject* position of (active) volitional verbs: while (9a) is fully grammatical, an attempt to place a subjunctive RC in the subject position of *visitó* ‘visited’ results in ungrammaticality (9b). Our RCs are nevertheless possible in the subject position of *passive* verbs: while very stilted, (9c) is grammatical.

- (9) a. Le enviamos a Pedro un amigo que le entretuviera en el  
to.him sent:1PL OBJ Pedro a friend that to.him entertain:SUBJ.3SG in the  
hospital.  
hospital  
‘We sent Pedro a friend to entertain him in the hospital.’
- b. Un amigo que { \*entretuviera / entretuvo } a Pedro en el  
a friend that { entertained:SUBJ / entertained:IND } OBJ Pedro in the  
hospital lo visitó:3SG .  
hospital him visited  
Indicative: ‘A friend that entertained Pedro in the hospital visited him.’  
Subjunctive (intended, but unavailable): ‘A friend that would entertain him in the hospital visited Pedro.’
- c. Una radio que le entretuviera en el hospital le fue  
a radio that to.him entertain:SUBJ.3SG in the hospital to.him was  
entregada a Pedro ayer.  
given to Pedro yesterday  
‘A radio that would entertain him in the hospital was given to P. yesterday.’

To summarize, agent-oriented RCs are true relative clauses (not purpose adjuncts). Their interpretation is relativized to an agent’s goals, but they do not always get a purpose-like interpretation. The distribution of agent-oriented RCs is restricted in that they are disallowed with non-volitional verbs and in the subject position of volitional verbs. We aim to derive these properties by marrying two lines of research. We will first assume that mood morphology introduces a modal quantifier (Kratzer 2016, Portner and Rubinstein 2020), and then argue that this operator can project its modal domain from the volitional VP event, as

has independently been argued for some modal indefinites (Alonso-Ovalle and Menéndez-Benito 2017). The next section provides an overview of our assumptions about mood.

### 3. Mood as modality

Kratzer (2006) (see also Moulton 2009) argued that attitude verbs do not introduce modal quantification, but are simply predicates of events.<sup>5</sup> Kratzer (2016) shows that this assumption, paired with the view that modal operators can retrieve their modal domains from events (Hacquard 2006), allows for a straightforward explanation of harmonic modals. In (10a), *should* is said to be harmonic with *advised*, in the sense that the sentence contributes only one layer of modality (it conveys that in all the worlds consistent with the advice, we set up an emergency fund). This follows if the verb *advise* introduces a predicate of events (as in (10b)) and *should* is anchored to the actual advising event that the sentence describes. (10a) then contributes information about the content of the advice.

- (10) a. He advised that we should set up an emergency fund. (Kratzer 2016)  
b.  $\llbracket \text{advise} \rrbracket = \lambda e. \text{advise}(e)$

Kratzer (2016) draws a parallel between modals and moods, focusing on the German reportative subjunctive (realized as Konjunktiv I in written German) as in (11). Kratzer's proposal is that the reportative subjunctive contributes a modal quantifier that, like other modal operators, can select for a particular type of anchor (see Hacquard 2006 on epistemic vs. root modals). The reportative subjunctive, Kratzer proposes, can only project its domain from particulars from which we can recover propositional content.<sup>6</sup>

- (11) Ralph seufzte, dass Ortcutt ein Spion sei.  
Ralph sighed that Ortcutt a spy be.KONJ1  
‘Ralph sighed that Ortcutt was a spy.’ (Kratzer 2016)

This setup paves the way for a theory that treats mood selection as anchor selectivity. Portner and Rubinstein (2020) develop such a theory for mood selection in Romance. Portner and Rubinstein adopt the view that attitude verbs are predicates of events and that modals project their domain from these events. They identify the content of an event with a set of conversational backgrounds (functions from worlds to sets of propositions, Kratzer 1991). The content of a wanting event, for instance, is a pair of backgrounds (a bouletic ordering source and a variant of a doxastic modal base),<sup>7</sup> whereas the content of a believing event is a single background (a doxastic modal base). Like Kratzer (2016), Portner and Rubinstein (2020) take moods to be modal quantifiers. On their account, indicative and

<sup>5</sup>Or events and their theme arguments (Kratzer 2016).

<sup>6</sup>For Kratzer (2016), the relevant particular in this case is the theme argument of a covert instance of a speech verb meaning ‘say’.

<sup>7</sup>Portner and Rubinstein (2020) assume that wanting relates to what they call a *doxastic+* modal base, which provides an expansion of the belief-set of the attitude holder needed to account for well-known puzzles in the domain of belief and desire (see Heim 1992, von Stechow 1999, Rubinstein 2017).

subjunctive in Romance differ in their quantificational force: indicative is a strong necessity modal, which quantifies over all the worlds selected by a modal base; subjunctive is weaker, quantifying over those modal-base worlds that rank best with respect to an ordering source.<sup>8</sup> A simplified version of Portner and Rubinstein’s (2020) denotations for Spanish moods follows (where *content*(*e*) returns the modal backgrounds associated with *e*):<sup>9</sup>

- (12) a.  $\llbracket \text{IND} \rrbracket = \lambda e \lambda p. \text{ALL}(\text{content}(e), e) \subseteq p$   
b.  $\llbracket \text{SUBJ} \rrbracket = \lambda e \lambda p. \text{BEST}(\text{first}(\text{content}(e)), \text{second}(\text{content}(e)), e) \subseteq p$

In (12), the relevant modal backgrounds are supplied by an event argument with a particular kind of content. Indicative combines with events that provide just one modal background, whereas subjunctive requires events that provide two (accessed by the functions *first* and *second*). On this proposal, mood selection patterns follow directly from the semantic composition: *creer* ‘believe’ requires indicative in its complement because believing events provide only one (doxastic) background. In contrast, *querer* ‘want’ requires subjunctive because wanting events involve also a (bouletic) ordering source.

We noted that agent-oriented RCs seemed exceptional, as subjunctive is standardly taken to be licensed only in a subset of intensional contexts. But on the view of mood that Portner and Rubinstein put forward, we expect subjunctive to be grammatical as long as it can combine with an event that provides the right type of content. We will argue that subjunctive in agent-oriented RCs projects its domain from the event argument of the main verb. To support this claim, we will build on research on modal indefinites, for which this mode of projection has been attested (Alonso-Ovalle and Menéndez-Benito 2017).

#### 4. Random choice indefinites and modal projection

The Spanish modal indefinite *uno cualquiera* (henceforth UC) contributes agent-oriented (‘random choice’) modality. The example in (13), for instance, conveys that Juan bought a book and additionally signals that buying any other book would have been compatible with Juan’s goals.

- (13) Juan compró un libro cualquiera.  
Juan bought:3SG a book CUALQUIERA  
‘Juan bought a random book.’

Examples like (13) have an additional ‘evaluative’ reading (that Juan bought a book that the speaker considers unremarkable). The scenarios in (14a) and (14b), from Alonso-Ovalle and Menéndez-Benito (2017), bring out the two possibilities. In the scenario in (14a), I can truthfully utter (13) on its evaluative interpretation but not on its random choice interpretation

<sup>8</sup>Their account thus belongs to theories that relate the subjunctive to modal comparison (Giorgi and Pianesi 1997, Villalta 2006, 2008, Giannakidou and Mari 2021, among others).

<sup>9</sup>More accurately, we could think of subjunctive as a weak necessity modal (von Stechow and Iatridou 2008, Rubinstein 2012), or even a weaker notion like Kratzer’s (1991) Good Possibility (Portner and Rubinstein 2016, 2020, Rubinstein 2020).

tation (as Juan didn't make an indiscriminate choice). In contrast, my utterance of (13) in the scenario in (14b) would be false on the evaluative interpretation but true on the random choice interpretation.

- (14) a. Juan went to the bookstore. He wanted to buy *The Unbearable Lightness of Being*, and did so. I don't think this book is special in any way.  
 b. Juan went to the bookstore, and bought a book at random. The book turned out to be *The Unbearable Lightness of Being*. I think this book is remarkable.

While the evaluative interpretation is always available, the random choice interpretation is not. Importantly for us, the restrictions on the random choice interpretation of UC parallel those displayed by agent-oriented RCs. The random choice interpretation is disallowed with non-volitional verbs and in the subject position of (active) volitional verbs. The minimal pair in (15) illustrates the volitional verb restriction: (15a), with a volitional agent, has both the random choice and evaluative interpretations, but (15b) only has the evaluative reading (as the yeast lacks intentions). The object restriction is illustrated in (16a). This example, where *un estudiante cualquiera* is in the subject position of an active verb, can only convey that an unremarkable student spoke. The example in (16b) shows that the random choice reading is possible in the subject position of passive verbs.

- (15) a. El panadero rompió un molde cualquiera.  
 the baker broke:3SG a baking pan CUALQUIERA  
 'The baker broke a random / unremarkable baking pan.'  
 b. La levadura rompió un molde cualquiera.  
 the yeast broke:3SG a baking pan CUALQUIERA  
 'The yeast broke an unremarkable baking pan.'
- (16) a. Habló un estudiante cualquiera.  
 spoke:3SG a student CUALQUIERA  
 'An average student spoke.'  
 b. Fue destrozado un molde cualquiera.  
 was:3SG destroyed a baking pan CUALQUIERA  
 'A random baking pan was destroyed.'

On Alonso-Ovalle and Menéndez-Benito's account, the modal domain of UC on the random choice interpretation consists (roughly) of the set of worlds compatible with the agent's goals. They associate the sentence in (13) with the truth-conditions in (17).<sup>10</sup>

- (17) true in  $w$  iff there is a past event  $e$  of Juan buying a book  $x$  in  $w$  and for every relevant book  $y$  there is a world  $w'$  compatible with Juan's goals where there is an event  $e'$  of Juan buying  $y$ .

<sup>10</sup>We provide a simplified form of their proposal. Alonso-Ovalle and Menéndez-Benito (2017) argue that only a particular type of goals (what they call 'action goals') are relevant for the interpretation of UC.



How does UC access the agent's goals? Abstracting away from the compositional details, the gist of the proposal is that UC introduces a modal component that can only be anchored to events whose content determines a goal-oriented ordering source. Volitional events provide UC with the right type of content, as shown in (18). From a volitional event  $e$ , UC retrieves a set of worlds in which the circumstances surrounding  $e$  obtain and which are best with respect to the goals of the agent of  $e$ . The modality is thus event dependent.

- (18) If  $e$  is a volitional event, then  $\text{content}(e)$  is the pair  $\langle \text{circumstantial}, \text{goal} \rangle$  where
- a.  $\text{circumstantial}(e)$ : circumstances surrounding  $e$
  - b.  $\text{goal}(e)$ : goals associated with the agent of  $e$

## 5. Agent-oriented RCs: the proposal

The parallelism between agent-oriented RCs and the random choice reading of UC is striking. Like UC, agent-oriented RCs express goal-oriented modality and are restricted to the object position of volitional verbs. As anticipated above, we contend that this parallelism obtains because UC and agent-oriented RCs employ the same mode of projection. In Section 5.1, we will spell out the truth conditions that this assumption yields for our target sentences. We will see that these truth conditions deliver both existential import and goal-oriented modality, two properties that appeared to be incompatible given standard analyses of mood. Section 5.2 discusses the distributional properties of agent-oriented RCs.

### 5.1 Truth conditions

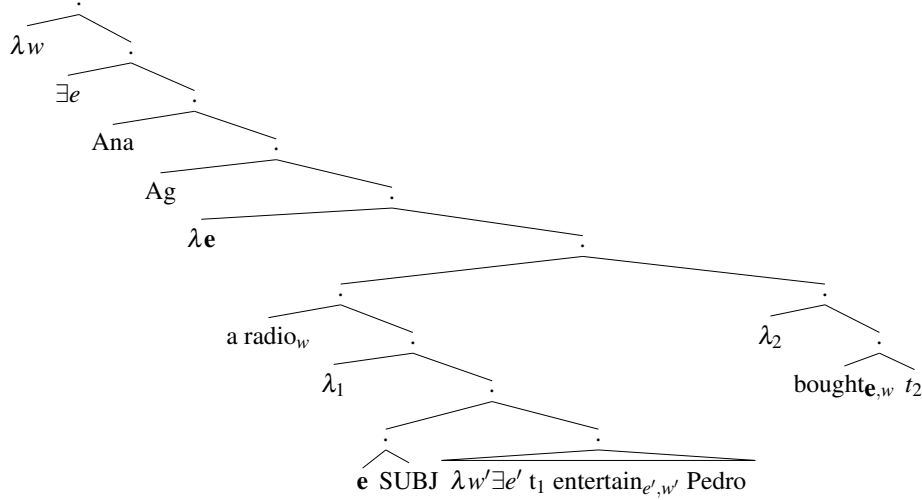
Recall Portner and Rubinstein's (2020) denotation for the Spanish subjunctive (simplified), repeated in (19). Given (19), the modal quantifier introduced by subjunctive needs to combine with an event argument whose content determines a modal base and an ordering source. And given Alonso-Ovalle and Menéndez-Benito's account of UC, volitional events meet this condition, as their content corresponds to a pair of a circumstantial modal base and a teleological ordering source (as in (18)). This will be the source of the goal-oriented modality in our RCs.

- (19)  $\llbracket \text{SUBJ} \rrbracket = \lambda e \lambda p. \text{BEST}(\text{first}(\text{content}(e)), \text{second}(\text{content}(e)), e) \subseteq p$

Let us now spell the details of the composition. We will take an example like (20) to have the LF in (21).

- (20) Ana compró una radio que entretuviera a Pedro.  
Ana bought:3SG a radio that entertained:SUBJ.3SG to Pedro  
'Ana bought a radio that would entertain Pedro.'

(21)



In (21), the world and event arguments of predicates and their binders are syntactically represented (Hacquard 2006), and agents are introduced by a separate functional head (Kratzer 1996).<sup>11</sup> We assume that the event argument of mood in RCs is syntactically represented and obligatorily co-bound with another event in the structure (Alonso-Ovalle and Menéndez-Benito (2017) make the same assumption for UC). In the LF in (21), the event argument of subjunctive can only be co-bound with the event argument of the verb.

Given these assumptions, the semantic composition will yield the truth conditions in (22): that there is an event  $e$  of Ana buying Pedro a radio  $x$  and in all circumstantially accessible worlds that are best given the goals associated with  $e$ ,  $x$  entertains Pedro.<sup>12</sup>

$$(22) \quad \lambda w \exists e \left[ \begin{array}{c} \exists x \left[ \begin{array}{c} \text{bought}_w(e) \ \& \ Ag(Ana, e) \ \& \ Rec(Pedro, e) \ \& \\ Th(x, e) \ \& \ radio_w(x) \ \& \\ \\ BEST(circumstantial, goal, e) \\ \subseteq \\ \{ w' : entertain_{w'}(x)(Pedro) \} \end{array} \right] \end{array} \right]$$

These truth conditions automatically deliver the two seemingly conflicting properties of agent-oriented RCs: that they license existential import (as the modal operator scopes only over the RC) and that they express goal-oriented modality.

Let us now briefly come back to the contrast between ‘purpose-like’ RCs like (20) (which relate to a goal that the agent intended to bring about) and examples like (23) (which intuitively express the criterion that the agent was guided by when selecting the object she acted upon—the agent would have only bought a book with many pages.)

<sup>11</sup>We are leaving Tense and Aspect nodes out for simplicity, and assuming that an existential closure operator closes off the event argument.

<sup>12</sup>We are glossing over how to represent the cross-world identity of the radio that entertains Pedro.

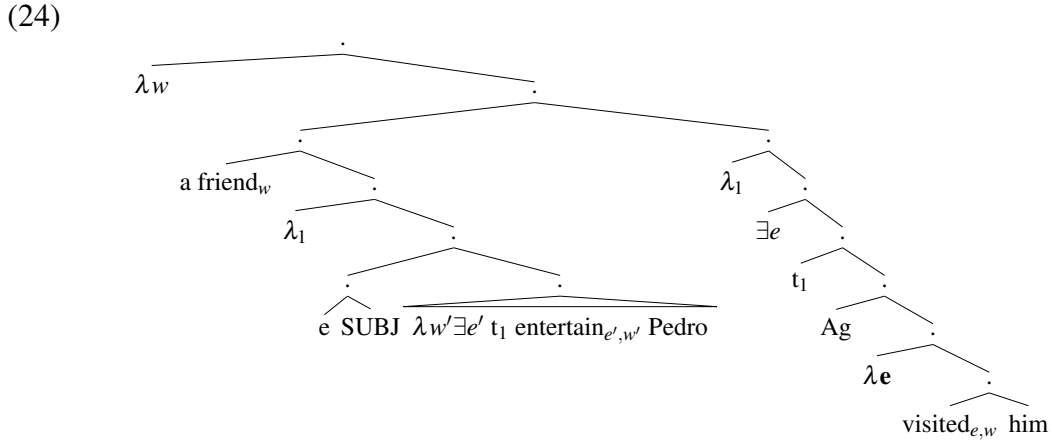
- (23) Compré un libro que tuviera muchas páginas.  
 bought:1SG a book that had:SUBJ.3SG many pages  
 ‘I bought a book and, given what I wanted, it had to have many pages.’

We argue that this contrast is a by-product of the temporal interpretation of the RC, which in turn is partially determined by the aspectual class of its VP (as noted for subjunctive conditionals by Iatridou 2000).<sup>13</sup> In (20), the eventive predicate forces a later-than-matrix interpretation of the RC; in (23), the individual-level predicate requires a simultaneous interpretation (stage-level stative in principle allow for both interpretations). Given this, (20) conveys, roughly, that in the worlds that best conform to the agent’s goals the radio entertains Pedro *after the buying*, while (23) says that in the worlds that best conform to the agent’s goals, the book has many pages *at the time of buying*. This, we contend, gives rise to the intuition that the goal was (only) satisfied by buying a book with many pages.

## 5.2 Distributional restrictions

In this section, we will focus on the distributional restrictions that agent-oriented RCs share with UC, i.e., their unavailability in (i) subject position and (ii) with non-volitional verbs.

We propose that subjunctive in subject position is too high to access the event argument of the main verb. We will assume that the quantificational subject moves above the existential quantifier closing off the event argument (as in (24), the LF for (9b)), and is thus not available for co-binding. (We moreover assume that postverbal active subjects are outside the scope of existential closure, unlike passive subjects.)



Why are agent-oriented RCs incompatible with non-volitional verbs? Non-volitional events do not have agents, and so they cannot evoke agent’s goals or provide a goal-oriented ordering source. This predicts that RCs in the object position of non-volitional verbs should not get a goal-oriented interpretation, but leaves us with the question of why we cannot retrieve some other kind of ordering source from events of discovering or stumbling upon.

<sup>13</sup>More accurately, what matters is whether the relative clause denotes a *settled* property. In Alonso-Ovalle et al. Submitted we show that scheduled future properties pattern with (23) in that they convey the factor guiding the agent’s selection. This work also discusses a number of further contrasts between (20) and (23).

One might imagine, for instance, that these events supply a likelihood/stereotypical ordering source like the one that subjunctive interacts with examples in like (25).

- (25) Es probable que Juan venga.  
Is probable that Juan comes:SUBJ.3SG  
'It is probable that Juan comes.'

We don't have a full-fledged answer to this question, but we would like to make the following suggestion: a stereotypical ordering source determines what the most likely course of events is, given what has happened up till now and general facts about the world. Reconstructing this ordering source would require us to 'look beyond' the properties of the event that we take as anchor. We contend that this kind of zooming out is blocked by the grammar: when we determine a domain of possibilities from an event *e* we can only do so by looking at the intrinsic properties of *e*, i.e., the type of event and the event's participants.

## 6. To conclude

Assuming that subjunctive mood is a modal that can employ a projection mode available to modal indefinites explains the otherwise puzzling properties of agent-oriented subjunctive RCs. If our analysis is on the right track, agent-oriented RCs provide support for analyzing mood as modality and for a compositional approach to attitudes. Of course, in order for our proposal to turn into a general theory of mood in RCs, we would need to apply it to indicative RCs and to the full set of environments in which subjunctive RCs can occur. This includes extensional contexts where subjunctive RCs do not get a goal oriented interpretation, as in (26) (Quer 1998). We hope to be able to do this in future research.

- (26) El que haya hecho esto está loco.  
The that has:SUBJ.3SG done this is crazy  
'Whoever did this is crazy.'

## References

- Alonso-Ovalle, Luis, and Paula Menéndez-Benito. 2017. Projecting possibilities in the nominal domain: Spanish *uno cualquiera*. *Journal of Semantics* 35:1–41.
- Alonso-Ovalle, Luis, Paula Menéndez-Benito, and Aynat Rubinstein. Submitted. Eventive modal projection: the case of Spanish subjunctive relative clauses.
- Arregui, Ana. 2005. On the accessibility of possible worlds. Doctoral dissertation, University of Massachusetts Amherst.
- Arregui, Ana. 2007. When aspect matters: the case of *would* conditionals. *Natural Language Semantics* 15:221–264.
- Arregui, Ana. 2009. On similarity in counterfactuals. *Linguistics and Philosophy* 32:245–278.

- Arregui, Ana. 2010. Detaching *if*-clauses from *should*. *Natural Language Semantics* 18:241–293.
- Arregui, Ana, María Luisa Rivero, and Andrés Salanova. 2014. Cross-linguistic variation in imperfectivity. *Natural Language & Linguistic Theory* 32:307–362.
- Farkas, Donka. 1985. *Intensional descriptions and the Romance subjunctive*. New York: Garland.
- von Fintel, Kai. 1999. NPI licensing, Strawson entailment, and context dependency. *Journal of Semantics* 16:97–148.
- von Fintel, Kai, and Sabine Iatridou. 2008. How to say *ought* in foreign: The composition of weak necessity modals. In *Time and modality*, ed. by Jacqueline Guéron and Jacqueline Lecarme, volume 75 of *Studies in Natural Language and Linguistic Theory*, 115–141. New York: Springer.
- Giannakidou, Anastasia, and Alda Mari. 2021. *Truth and veridicality in grammar and thought*. Chicago: University of Chicago Press.
- Giorgi, Alessandra, and Fabio Pianesi. 1997. *Tense and aspect: From semantics to morphosyntax*. Oxford Studies in Comparative Syntax. Oxford: Oxford University Press.
- Hacquard, Valentine. 2006. Aspects of modality. Doctoral dissertation, Massachusetts Institute of Technology.
- Hacquard, Valentine. 2009. On the interaction of aspect and modal auxiliaries. *Linguistics and Philosophy* 32:279–315.
- Hacquard, Valentine. 2010. On the event-relativity of modal auxiliaries. *Natural Language Semantics* 18:79–114.
- Heim, Irene. 1992. Presupposition projection and the semantics of attitude verbs. *Journal of Semantics* 9:183–221.
- Iatridou, Sabine. 2000. The grammatical ingredients of counterfactuality. *Linguistic Inquiry* 31:231–270.
- Kratzer, Angelika. 1991. Modality. In *Semantik: Ein internationales Handbuch zeitgenössischer Forschung*, ed. by Arnim von Stechow and Dieter Wunderlich, 639–650. Berlin: de Gruyter.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon*, ed. by J. Rooryck and L. Zaring, 109–137. Dordrecht: Kluwer.
- Kratzer, Angelika. 2006. Decomposing attitude verbs. Talk at the Hebrew University of Jerusalem honoring Anita Mittwoch on her 80th birthday. Available at <http://www.semanticsarchive.net/Archive/DcwY2JkM/attitude-verbs2006.pdf>.
- Kratzer, Angelika. 2013. Modality for the 21<sup>st</sup> century. In *The language-cognition interface: Actes du 19<sup>e</sup> Congrès International des Linguistes*, ed. by Stephen R. Anderson, Jacques Moeschler, and Fabienne Reboul, 179–199. Genève: Librairie Droz.
- Kratzer, Angelika. 2015. Creating a family: Transfer of possession verbs. URL [https://works.bepress.com/angelika\\_kratzer/27/](https://works.bepress.com/angelika_kratzer/27/), talk delivered at the Workshop on Modality Across Categories, Universitat Pompeu Fabra, Barcelona.
- Kratzer, Angelika. 2016. Evidential mood in attitude and speech reports. Talk given at the 1st Syncart Workgroup (Siena, July 13, 2016).
- Laca, Brenda. 2010. Mood in Spanish. In *Mood in the languages of Europe*, ed. by Björn Rothstein and Rolf Thieroff, 198–220. Amsterdam: John Benjamins.

- Mari, Alda, and Paul Portner. To appear. Mood variation with belief predicates: Modal comparison and the raisability of questions. *Glossa* .
- Martin, Fabienne, and Florian Schäfer. 2017. Sublexical modality in defeasible causative verbs. In *Modality across syntactic categories*, ed. by Ana Arregui, María Luisa Rivero, and Andrés Salanova, 87–108. Oxford: Oxford University Press.
- Moulton, Keir. 2009. Natural selection and the syntax of clausal complementation. Doctoral dissertation, University of Massachusetts Amherst.
- Pérez Saldanya, Manuel. 1999. El modo en las subordinadas relativas y adverbiales [Mood in relative and adverbial clauses]. In *Gramática descriptiva de la lengua española [Descriptive grammar of the Spanish language]*, ed. by Ignacio Bosque and Violeta Demonte, volume 2, 3209–3322. Madrid: Espasa-Calpe.
- Portner, Paul. 2018. *Mood*. Oxford: Oxford University Press.
- Portner, Paul, and Aynat Rubinstein. 2016. Extreme and non-extreme deontic modals. In *Deontic modals*, ed. by Nate Charlow and Matthew Chrisman, 256–282. Oxford: Oxford University Press.
- Portner, Paul, and Aynat Rubinstein. 2020. Desire, belief, and semantic composition: variation in mood selection with desire predicates. *Natural Language Semantics* 28:343–393.
- Quer, Josep. 1998. Mood at the interface. Doctoral dissertation, Utrecht Institute of Linguistics, OTS.
- Quer, Josep. 2001. Interpreting mood. *Probus* 13:81–111.
- Quine, Willard van Orman. 1956. Quantifiers and propositional attitudes. *The Journal of Philosophy* 53:177–187.
- Rubinstein, Aynat. 2012. Roots of modality. Doctoral dissertation, University of Massachusetts Amherst.
- Rubinstein, Aynat. 2017. Straddling the line between attitude verbs and necessity modals. In *Modality across syntactic categories*, ed. by Ana Arregui, María Luisa Rivero, and Andrés Salanova, 109–131. Oxford: Oxford University Press.
- Rubinstein, Aynat. 2020. Weak necessity. In *The Wiley Blackwell companion to semantics*, ed. by Daniel Gutzmann, Lisa Matthewson, Cécile Meier, Hotze Rullmann, and Thomas Ede Zimmermann, 1–44. Hoboken: Wiley Blackwell.
- Truckenbrodt, Hubert. 2019. Co-anchoring with the matrix clause: French verbal mood and German V2. In *Proceedings of Sinn und Bedeutung 23*, ed. by M. Teresa Espinal, Elena Castroviejo, Manuel Leonetti, Louise McNally, and Cristina Real-Puigdollers, 391–408.
- Villalta, Elisabeth. 2006. Context dependence in the interpretation of questions and subjunctives. Doctoral dissertation, Universität Tübingen.
- Villalta, Elisabeth. 2008. Mood and gradability: An investigation of the subjunctive mood in Spanish. *Linguistics and Philosophy* 31:467–522.
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