

## RESEARCH

Generic and action-dependent abilities in Spanish  
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This paper is concerned with the semantics of Spanish *ser capaz* 'be capable' (henceforth SC). Specifically, it aims to account for the distribution SC displays and the range of meanings it expresses in the realm of abilities, viewed as kinds of dispositions. We put forth the following generalization: Whenever imperfective aspect interacts with SC, two possible readings arise, one that is purely abilitative and another one that expresses an accidental or unpredictable state of affairs. Our claim is that both interpretations derive from a circumstantial modal base that includes the subject's inner circumstances, albeit with a different ordering source that is brought about via the interaction of imperfective aspect and the syntax-semantics of the modal. Thus, we propose that the purely abilitative SC contains an ordering source that ranks as better worlds those in which the subject appeals to her strength of the body, intellect or character; the accidental reading is the result of covert movement of the adjective *capaz* 'capable' over the imperfective-bearing copula *ser* 'be', which triggers a change of ordering source in the modal.

**Keywords:** capacities; abilitative modality; circumstantial modality; epistemic modality; imperfective; actuality entailment

## 1 Introduction

This paper is concerned with the semantics of the Spanish abilitative modal expression *ser capaz* 'be capable' (henceforth SC), which has been shown to have both a purely abilitative reading, (1a), and another less-well behaved interpretation, (1b), which does not seem to appeal to the same abilities as (1a).

- (1) a. Ayer mi hermana fue capaz de solucionar el enigma.  
yesterday my sister was.PFV capable of solve the enigma  
'Yesterday my sister was capable of solving the enigma.'
- b. Sandra es capaz de denunciar a su vecina cualquier día  
Sandra is capable of report to her neighbor any day  
'Sandra is capable of reporting her neighbor any day.'

The novel empirical generalization that we put forth in this paper is that whenever SC occurs with imperfective morphology (in the broadest sense, to include simple present interpreted generically), two possible interpretations of the prejacent arise: (i) one that is compatible with a generic ability interpretation, and (ii) one that is consistent with an action-dependent ability (in the sense of Mari & Martin 2007; 2009, to be specified below), along with an accidental (or no-choice) flavor.

Our main theoretical claims can be summarized as follows:

- a) SC has a circumstantial modal base that includes propositions that describe the subject's inner circumstances. Depending on the ordering source, either a purely abilitative reading or an accidental reading emerges.
- b) As an abilitative modal where the subject has control over the output, we follow Portner (2009) and others in assuming a double layer of modality, which includes an existential and then a universal modal. The pure abilitative reading obtains through an ordering source that ranks as better worlds those where the subject appeals to her strength of the body, character or intellect.
- c) The accidental reading is the result of the interaction between the semantics of the modal and of the imperfective (past or present) as realized on the copula, viewed as a universal modal over most normal worlds.
- d) Accidental readings under the imperfective past can be viewed as conveying action-dependent abilities. Therefore, we open the possibility that such abilities are not only conveyed by means of the boundedness constraint triggered by perfective aspect, as previously shown for French *Passé Composé* by Mari & Martin (2007; 2009).

This paper contributes new empirical data to the various interactions between imperfective aspect and abilitative modality, thus contributing to current work on abilities, dispositions and modality in general. It also contributes to the ongoing discussion on actuality entailments to the extent that SC is here used as a probe into the nature of actuality entailments.

## 2 SC in the literature

Using a set of empirical diagnostics, this section delves into the characterization of SC as a modal expression with two main interpretations. We further show that SC requires that the prejacent expresses an unusual or remarkable state of affairs, which seems comparable to the unlikelihood presupposition of English *even*. The section finally assesses how previous work on SC has dealt with its main properties and highlights those aspects of SC that have not been (well) captured.

### 2.1 Readings of SC

In previous literature, and especially in Castroviejo & Oltra-Massuet (2015b; 2016), two readings have been identified for SC, one that is purely abilitative, (2a) and (3a), and another one which does not seem to refer to generic abilities, and which has been referred to as epistemic, (2b) and (3b).

- (2) *Portuguese* (Oliveira 2000)
  - a. Ele foi capaz de chegar a horas.  
he was able of arrive to hours  
'He was able to arrive on time.'
  - b. Ele é capaz de chegar amanhã.  
he is able of arrive tomorrow  
'He may arrive tomorrow.'
- (3) *Spanish* (Castroviejo & Oltra-Massuet 2015b)
  - a. Hobbes fue capaz de traducir la obra completa de Homero a los 86 años.  
Hobbes was.PFV capable of translate the work complete of Homer to the 86 years  
'Hobbes was capable of translating the complete works of Homer at 86.'

- b. Mi hijo es capaz de haber resuelto el caso sin acudir a la  
 my son is capable of have resolved the case without turn-to to the  
 policía.  
 police  
 'My son is capable of having solved the case without going to the police.'

This distinction, noted in Portuguese through the use of *may* as the literal translation of *be capable*, is further motivated with data from Spanish, where SC selects for a perfective prejacent (SC + have + past participle). While in section 4, the characterization as epistemic will be qualified (and renamed as "accidental" or "no-choice"), we use some of the diagnostics discussed in the literature on the abilitative-epistemic dichotomy to call the reader's attention into this ambiguity.

Let us start by presenting a sentence in the present tense, (4), which can have the two purported readings.

- (4) Hobbes es capaz de traducir las obras completas de Homero.  
 Hobbes is capable of translate the works complete of Homer  
 'Hobbes is capable of translating Homer's collected works.'

In the purely abilitative reading, the sentence characterizes Hobbes' disposition to translate Homer's works. In the non-abilitative reading, the sentence describes the possibility of an event of Hobbes' translation of Homer's works in a future time, which is viewed as something unusual or exceptional. These two interpretations can be identified through a series of grammatical tests.

First, only the purely abilitative reading is compatible with perfective aspect on SC (realized either as the *Pretérito fue* 'was.PFV' or the Present Perfect *ha sido* 'has been'), as shown in (5).

- (5) Hobbes fue capaz de traducir las obras completas de Homero.  
 Hobbes was.PFV capable of translate the works complete of Homer  
 'Hobbes was capable of translating Homer's collected works.'

If the copula is inflected for the Spanish *Pretérito*, the meaning obtained is that of an accomplished event undertaken by the agent, who has had the ability to carry it out.

Second, whenever SC selects for a prejacent that is under the scope of an aspectual operator (perfect or progressive), the indisputable abilitative reading is no longer available, (6).

- (6) Este filósofo es capaz de haber traducido/ estar traduciendo las obras  
 this philosopher is capable of have translated be translating the works  
 completas de Homero.  
 complete of Homer  
 'This philosopher is capable of having translated/being translating Homer's  
 collected works.'

Note that the copula is inflected in the present tense, while the prejacent has different aspectual properties, so it is counterintuitive to interpret these sentences as conveying that the agent has the ability to have translated or be translating the book.

Third, free choice adverbials such as *cualquier día de estos* 'one of these days' are possible with SC, but they hardly describe a generic ability, (7).

- (7) Este filósofo es capaz de traducir las obras completas de Homero  
 this philosopher is capable of translate the works complete of Homer  
 cualquier día de estos.  
 any day of these  
 'This philosopher is capable of translating Homer's collected works any day.'

Fourth, the purely abilitative reading exhibits stronger commitment to the truth of the prejacent than the other reading, as illustrated in (8) (where we couple up the aspectual constraints in each reading to make the differences emerge).

- (8) a. Con toda seguridad, el águila es capaz de volar bajo el sol  
 with all security the eagle is capable of fly under the sun  
 sin ser deslumbrada.  
 without be blinded  
 'Most certainly, eagles are capable of flying under the sun without being blinded.'
- b. ??Con toda seguridad, mi hijo es capaz de haber resuelto el caso.  
 with all security my son is capable of have solved the case  
 ([intended] 'Most certainly, my son is capable of having solved the case.')

In sum, there seems to be a clear-cut distinction between two readings, one which is unquestionably abilitative and another one that expresses a different kind of possibility, to be further characterized in 4.2 as an accidental or no-choice interpretation.

Both uses of SC share, though, a key meaning component, characterized as an *unusual* flavor in Castroviejo & Oltra-Massuet (2015b). As discussed in Castroviejo & Oltra-Massuet (2016: 33), in the abilitative, the prejacent cannot just describe a capacity, as in (9), but must express an unusual ability.

- (9) El águila es capaz de volar #(bajo el sol sin ser deslumbrada).  
 the eagle is capable of flying under the sun without be blinded  
 'Eagles are capable of flying #(under the sun without being blinded).'

Likewise, in the other reading, the need for the *unusual* component is exemplified in (10).

- (10) Pedro es capaz de haber jugado al baloncesto #(sin pelota).  
 Peter is capable of have played to the basketball without ball  
 'Pedro is capable of having played basketball #(without a ball).'

Once we add a modifier that indicates that the prejacent does not express a regular event, SC is felicitous.<sup>1</sup>

Next, we briefly review previous accounts of these data and highlight their major drawbacks.

## 2.2 A structural account for the two readings

So far, we have shown that SC can give rise to two slightly different meanings, which correlate with the grammatical properties of the construction, such as the overt expression of aspect above or below the adjective *capaz*.

In a first attempt to make these correlations explicit, Castroviejo & Oltra-Massuet (2015b) propose to treat SC as an ambiguous modal, just like English *may*. SC is a root

<sup>1</sup> Note that without the modifier, (10) could equally be fine with the same interpretation containing an unusual component, e.g. in a context where Pedro hates playing basketball or does not even know how to play it, but would dare play it to obtain something in return.

modal when it appears right above VP, in which case it yields the purely abilitative reading. By contrast, when it occurs above AspP, it is a high modal that has an epistemic flavor. This proposal is developed in the spirit of Hacquard (2006; 2009; 2010), but the analysis is not made fully explicit.

The main problem of this sketchy analysis is that it fails to capture the fact that SC is not really a full-fledged epistemic modal. It is structurally not as high as a typical epistemic auxiliary, such as English *might*, which selects for propositions rather than (event) predicates and whose thematic subject is the agent of the assertion, rather than the agent of the VP event. In terms of Lechner (2005) as cited in Davis et al. (2009), SC keeps expressing *personal modality*, even in its non-purely abilitative reading. That is, even when SC does not express a generic ability of the subject, it must be understood as a circumstantial modal, given that the relevant circumstances are those of the subject of the VP event. This can be made explicit by making the conversational background explicit, as in *conociendo a mi hijo* 'knowing my son', in (11).

- (11) Castroviejo & Oltra-Massuet (2016)  
 Conociendo a mi hijo, es capaz de haber resuelto el caso.  
 knowing to my son is capable of have solved the case  
 'Knowing my son, he's capable of having solved the case.'

Even if we are considering the information that we know—which would be compatible with an epistemic interpretation—this knowledge is necessarily relative to the agent of the VP event. This is not expected under a purely epistemic interpretation.

A second problem concerns the fact that SC is not analyzed as a copular construction containing an adjective (*capaz* 'capable') and a copula (*es* 'is'), but rather as an auxiliary. However, structural theories of modals, especially the one defended by Hacquard, which combines the Kratzerian view on modals (cf. Kratzer 2012: for a compilation of the classic texts) with a Cinquean syntax (Cinque 1999), only refers to auxiliaries. So, their claims may not, and need not, extend to modal expressions that are not auxiliary verbs. Moreover, by treating SC as a modal auxiliary, we lose track of the potential compositional meaning deriving from its two components, the copula and the adjective.

A third problematic issue concerns the empirical coverage of Castroviejo & Oltra-Massuet (2015b; 2016). There is a piece of important data that this account is not able to explain, namely the interpretation of SC under the imperfective past, as shown in (12).

- (12) De joven, tu abuela era capaz de ganar la lotería y  
 of young your grandmother was.IPFV capable of win the lottery and  
 volver a casa con las manos llenas de dinero.  
 come back to house with the hands full of money  
 'As a young woman, your grandmother was capable of winning the lottery and  
 come back home with her hands full of money.'

The interpretation that obtains is one where this grandmother was unpredictable. It does not convey that she used to appeal to her capacities to win the lottery. This reading is analogous to (13), which only differs in the form of the copula, now in the present tense.

- (13) Tu abuela es capaz de ganar la lotería.  
 your grandmother is capable of win the lottery  
 'Your grandmother is capable of winning the lottery.'

Sentences such as (13) were considered epistemic in Castroviejo & Oltra-Massuet (2015b). However, it does not make much sense to call (12) epistemic, too. It does not refer to a

conjecture the speaker makes about the past, neither does it express the speaker's past conjecture. Therefore, if (12) and (13) convey the same kind of modal meaning, it may not be correct to treat (13) as epistemic after all.

Castroviejo & Oltra-Massuet (2016) focus on the differences between SC and other expressions that at first blush refer to capacities, viewed as a kind of disposition. One of its contributions is to restrict the modal base to "specialized intrinsic capacities." This is meant to capture that SC only refers to internal capacities (rather than external ones, e.g. calling an election or certifying a marriage), which, in addition, are unusual. It is for this reason that the unusual component is hard-wired into the modal base, making it highly specific.

This is a different strategy from the one proposed in Castroviejo & Oltra-Massuet (2015a), which consists in postulating a null morpheme with the semantics of English *even* in the syntax of SC. This morpheme is responsible for the unusual readings and for the interactions with negation (which we do not discuss here for reasons of space), as well as for some unwanted predictions, such as the possibility that it interacts with other operators in a way that is not attested.

In order to overcome such unwanted predictions and problems posed in previous treatments of the compositionality of SC, its unusual component, and the interaction of aspect and modality, in the remainder of this paper we address the following questions:

- Is it possible to provide a compositional account that yields the two readings?  
How should the two readings be fully characterized?
- What exactly is this unusual flavor and how is it triggered?
- What is the role of aspect in the computation of the modality of SC?

However, before turning to these research questions, let us first review the previous literature on abilitative modality.

### 3 Theoretical background

In this section we frame abilitative modality within the study of modals more generally, so as to establish the fundamentals that our proposal for SC will be based upon. As will be discussed, abilitative modals are not prototypical modals and their contribution is not straightforwardly accounted for within modal logic. In this regard, we pay special attention to what the previous literature has said about English *be able*, which appears as a purely abilitative modal, albeit displaying crucial differences with SC.

In the Kratzerian view (Kratzer 1981; 1991; 2012), modals come in two main modal bases, epistemic and circumstantial, which correspond to the traditional divide between epistemic and root modals.<sup>2</sup> In (14), *might* lexicalizes the former, while *can* realizes the latter.

- (14) Kratzer (1981)
- a. Hydrangeas might be growing here.
  - b. Hydrangeas can grow here.

Epistemic modality evaluates the prejacent (i.e., the modalized clause without the modal) against various sources of information, while circumstantial modality considers "material conditions which cause or allow an event to happen" (Hacquard 2012; 1494). In

<sup>2</sup> Other classifications have been proposed. For instance, Portner (2009) presents a different way of cutting the pie, where *circumstantial* is divided between priority (which includes deontics) and dynamic (which includes volitional and quantificational modals). We do not think anything in this paper favors one over the other, so we assume the classic view for simplicity.

(14a), the speaker is conjecturing that hydrangeas might grow here in view of what is known. In contrast, (14b) conveys a different possibility, namely one that depends on the circumstances that are responsible for the hydrangeas to grow in this particular location (climate, quality of the soil, etc.). These two modal bases can in turn be intersected with an ordering source (stereotypical, deontic, bouletic, teleological) to give rise to specific modal flavors.

Abilitative modality is typically considered circumstantial, although authors such as Portner (2009) classify it under the subgroup of volitional dynamic modals, and establish a distinction between ability, disposition and opportunity. Two cases of ability *can* are exemplified in (15):

- (15) Portner (2009: 196)
- a. John can swim.
  - b. Mary can see the ocean.

Portner argues that in (15a), *can* refers to the subject's intrinsic abilities, while in (15b), it is concerned with the situation Mary finds herself in. In both cases, the subject is viewed as a volitional agent or causer, "a sentient individual who is willfully involved in the event or events described by the main predicate" (Portner 2009: 200). This selectional requirement is ensured in the semantics by making abilitative modals take a subject as their argument (instead of a whole proposition). This is why such modals are examples of *personal modality* (Lechner 2005; Davis et al. 2009; Kaufmann 2012). (16) is a denotation for abilitative *can* that illustrates this point. It takes the subject ( $x$ ) as an argument, as well as a dispositional modal base ( $f_{dispo}$ ) and a property-denoting VP ( $P$ ).

- (16) Kaufmann (2012: 80)
- a.  $\llbracket \text{can}_{control} \rrbracket = \lambda f_{\langle s, \langle e, \langle st, t \rangle \rangle} \lambda P \lambda x \lambda w. (\exists w' \in \cap f(w)(x)) [w' \in P(x)]$
  - b.  $f_{dispo}$  is a function from a world  $w$  and individual  $x$  into a set of propositions that describe the inner make-up of the individual  $x$  in  $w$ . (Their intersection is the set of worlds in which  $x$  has the same dispositions and abilities as in  $w$ .)

Abilitative modals raise three main issues in the semantics of modality: (i) the control over the outcome, (ii) the effort component and (iii) the actuality entailment. These are briefly sketched in the remainder of this section.

### 3.1 Control

In the 1970s, Kenny (1975; 1976) argued that ability cannot be analyzed as the possibility operator  $\diamond$  in modal logic. The main difficulty is related to abilities not distributing over disjunction. Let us illustrate this with an example, (17).

- (17) Portner (2009: 201)
- a. He can hit the board.  
He has the ability to hit the board.
  - b. He can hit the top half of the board.  
He has the ability to hit the top half of the board.
  - c. He can hit the bottom half of the board.  
He has the ability to hit the bottom half of the board.

If John has the ability to hit the board, then he has the ability to hit either the top half or the bottom half. However, it does not follow that he can hit the top half or he can hit the bottom half, which should be the case since (17a)  $\leftrightarrow$  ((17b)  $\vee$  (17c)). As put by Port-

ner, the main difficulty for a  $\diamond$  analysis is that it allows for the possibility that hitting be accidental e.g. the top half of the board, while both *can* and *have the ability* involve control on the part of the subject.

One way to overcome this issue has been to propose that abilitative modality requires two layers of quantification, an existential one and a universal one. The first one chooses an action, and the second one ensures the outcome. Portner (2009) states that Kratzer's (1991) notion of *good possibility* brings about the desired reading.

- (18) A proposition  $p$  is a good possibility in  $w$  with respect to a modal base  $f$  and an ordering source  $g$  iff there is a world  $u \in \cap f(w)$  such that for all  $v \in \cap f(w)$ : If  $v \leq_{g(w)}(u)$ , then  $v \in p$ .

In prose,  $p$  is a good possibility iff there is some world compatible with a modal base  $f$  and an ordering source  $g$  such that for all better worlds,  $p$  is true in those worlds.

This solves part of the singularity of abilitative modality, namely the fact that  $p$  is not the result of chance, but rather the result of it being evaluated against all better worlds than the world of evaluation, which is in turn compatible with a modal base that includes the speaker's inner make-up. Hence, to encode a good possibility in abilitative modals, we have to include this double layer of quantification.

### 3.2 Effort

Another widely discussed property of abilitative modals is an effort component analogous to implicative verbs such as *manage* (Karttunen 1971).

- (19) a. John managed to solve the problem.  
 b. John solved the problem.  
 c. Solving the problem was difficult to achieve.

According to Karttunen, (19a) implies (19b) and presupposes (19c).<sup>3</sup>

In his article on English *be able*, Bhatt (1999) proposes two different interpretations for the abilitative modal. In his account, aspect plays a key role. When the perfective combines with the modal, in a past episodic reading, (20a), the result is equivalent to the implicative verb *manage*, (21a). By contrast, there is a generic reading in (20b), which he represents with an underlying imperfective aspect that yields a modal meaning similar to *had the ability*, (21b).

- (20) Bhatt (1999: 1)  
 a. Yesterday, John was able to eat five apples in an hour. (Past episodic)  
 b. In those days, John was able to eat five apples in an hour. (Past generic)
- (21) Bhatt (1999: 5)  
 a. PST (PFV(*can*) [VP]) = managed-to  
 b. PST (IPFV(*can*) [VP]) = had-ability-to

We will go back to aspect in the next subsection. Focusing on the effort inference, the equivalence with implicative verbs can be tested for abilitative *can* or *be able* across languages. We illustrate it for English (Bhatt 1999), (22), and Greek (Giannakidou & Staraki 2013), (23). (22a) is not acceptable out of the blue, but it can make sense in the proper

<sup>3</sup> There is yet another inference, irrelevant to our purposes, according to which the subject "at least attended the act described" (Karttunen 1971: 351). We refer the interested reader to Francez and Baglini's (2015) recent account for references and discussion.



context. Once it is clear that such a simple activity as breathing may be difficult, (22b), then *be able* is licensed.

- (22) a. #Timmy is able to breathe.  
 b. Timmy had a terrible car accident as a result of which he lost control over most of his muscles. Thankfully, he is able to breathe.

As to Greek *bori* 'can', in (23), it has to be accommodated that standing up is difficult in order to accept the sentence.

- (23) *Greek* (Giannakidou & Staraki 2013: 254)  
 O Janis borese na sikothi.  
 the John can.PFV.PST.3SG SBJV.COMP stand-up.PFV.NPST.3SG  
 'John was able to stand up—it was a difficult thing!'

As pointed out by Giannakidou & Staraki (2013), in an analysis of abilitative modals such as *can* or *be able* as mere existentials, it is difficult to devise how the effort inference arises. That is why they support a denotation of ability *can* (and its cross-linguistic translations) as a universal modal, as in Giannakidou (2001). Additionally, the modal base includes only those worlds in which people have abilities to do things, "in which an agent has tried and therefore knows that he has the ability to do *p*" (Giannakidou & Staraki 2013: 267). Ability is thus viewed as a prerequisite for the action denoted by the prejacent. To put it another way, the prejacent denotes an action that is carried out under certain circumstances that require invoking the agent's skills. Hence, it takes effort to carry it out.

This idea is also recast in the view laid out in the previous subsections, whereby abilitative modals have two layers of modality, one of them universal, and where the modal base contains the subject's abilities.

### 3.3 Actuality

One of the most discussed issues in abilitative modality, and which teases apart different readings of the same lexical item *can* or *be able*, is whether or not the modalized expression gives rise to the implication that the prejacent is true in the actual world, a so-called actuality entailment (Bhatt 1999). In the previous literature, we find scopal (3.3.1), ontological (3.3.2) and pragmatic accounts (3.3.3). We sketch them in turn.

#### 3.3.1 Structural accounts

As previously shown, Bhatt (1999) argues that English *be able* is ambiguous between two readings, paraphrased as 'have the ability' and 'manage to', respectively. The main difference between them is whether or not the actuality of the prejacent is entailed. More specifically, he proposes an underlying modal verb ABLE, which yields the implicative interpretation found in *manage*. The other interpretation is obtained by supplying a generic operator, realized as imperfective morphology across languages, which prevents the actuality entailment.

For instance, in (24) (Bhatt's (27a)), the presence of a generic operator, GNR, on top of ABLE is responsible for the inference that a fireman did not necessarily eat five apples (even if he had the ability to do it).

- (24) a. (In those days,) a fireman was able to eat five apples.  
 b. LF: GNR (ABLE (eat-5-apples)) (fireman)

Actuality entailments are expected, because *be able* is implicative, but the presence of imperfective morphology, which underlies a GNR operator, cancels them. Since GNR does not require verifying instances (Krifka et al. 1995), the actuality inference is not triggered.

Later on, Piñón (2003) makes a proposal that also involves combinations of operators, but focuses on a slightly different distinction, specifically 'have the ability' versus 'have the opportunity.' The first reading, exemplified in (25a) and paraphrased as in (25b) (his (1a) and (2a), respectively), does not bring about the actuality entailment.

- (25) a. In her early twenties, Rebecca was able to swim across Lake Balaton.  
b. In her early twenties, Rebecca had the ability to swim across Lake Balaton.

Certainly, from (25a) it does not follow that Rebecca actually swam across Lake Balaton. The sentence in (26) (his (7b)) is an example of *opportunity able*. In this example, it is entailed that Rebecca swam across Lake Balaton.

- (26) Yesterday afternoon, Rebecca was able to swim across Lake Balaton.

In Piñón's (2003) account, this difference in readings has to do with the scopal interactions between Tense and modality, along the lines of (27) and (28):

- (27) a. ability  $\rightsquigarrow$  Tense [Modal]  
b. opportunity  $\rightsquigarrow$  Modal [Tense]
- (28) a. No Actuality Entailment: at some time in the past it was possible for Rebecca to swim across Lake Balaton.  
b. Actuality Entailment: it is possible for Rebecca to carry out the action of swimming across Lake Balaton at some point in the past.

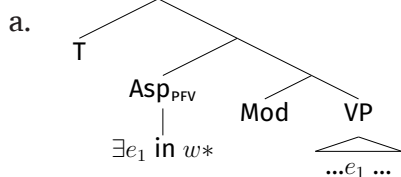
In sum, here, instead of GNR appearing in certain contexts as a reflex of imperfective aspect, the ordering of Tense and the possibility modal at LF is key to yielding ability or opportunity.

Building on Bhatt, and extending the analysis to all modals with circumstantial modal bases (i.e. root modals), Hacquard (2009) argues that the key component in deriving actuality inferences is the structural position of AspectP and whether it is realized as perfective or imperfective aspect. This analysis is proposed to account for the difference in French aspectual morphology, which arguably correlates with the presence or absence of the entailment (but see Mari & Martin 2007; 2009).

- (29) *French* (Hacquard 2009: 288)
- a. Jane a pu soulever cette table, #mais elle ne l'a pas  
Jane has can.PST.PFV lift this table but she NEG it has NEG  
soulevée.  
lifted
- b. Jane pouvait soulever cette table, mais elle ne l'a pas  
Jane can.PFV.IPFV lift this table but she NEG it has NEG 't  
soulevée.  
lifted  
'Jane was able to lift this table, but she didn't lift it.'

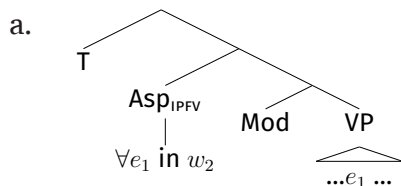
More specifically, in her account, if Aspect is merged between Tense and the root modal, two possible outcomes obtain. If Aspect is realized as perfective (PFV), (30), the preajcent will be inferred to be true in the actual world. If it is realized as imperfective (IPFV), (31), actuality is not entailed.

(30) Hacquard (2009: 285)



b. There is an actual event (which in some/all accessible worlds ...)

(31) Hacquard (2009: 286)



b. In all ‘generic’ worlds  $w_2$ , all events in  $w_2$  (are such that in some/all accessible worlds ...)

In particular, Hacquard proposes a pragmatic principle, called *Preservation of Event Properties*, which ensures that the same event maintains its properties across worlds. Therefore, if there is an event in the actual world, as posited in (30), which holds true in the (circumstantial) modal worlds, this event is taken to also hold in the actual world. By contrast, in (31), IPFV, analyzed as a universal modal, does not allow for such a reading for the same reason imperfective sentences without the modal lack actual instantiations. The idea is that a structure like (31) conveys that in all most normal worlds and all past events  $e$ , there is an accessible modal world where  $e$  takes place. Since the actual world need not be among the most normal ones, actuality is not entailed.

### 3.3.2 Ontological account

Mari and Martin (2007; 2009) propose to analyze actuality entailments with French modals in a different way. They show that a strict structural account à la Hacquard (2009) does not yield the expected readings in French, (32).<sup>4</sup>

(32) Mari & Martin (2007: 5)

Notre nouveau robot a meme pu repasser les chemises à un stade  
 our new robot has even could.PFV iron the shirts at a stage  
 bien précis de son developpement. OK Mais on a supprimé cette  
 well precise of its development mais one has suppressed this  
 fonction (qui n’a jamais été testée) pour des raisons de rentabilité.  
 function which NEG.has never been tested for some reasons of profitability  
 ‘Our new robot could even iron shirts at a particular stage of its development.  
 But we suppressed this function (which was never tested) for profitability  
 reasons.’

<sup>4</sup> They also argue that a strict structural analysis cannot account for a wider range of phenomena, which includes object-experiencer verbs like *encourager* ‘encourage’ and illocutionary verbs like *inviter* ‘invite’. We address the interested reader to the original sources.

The key component here is that the inference can be cancelled if the context makes it possible to understand ability as temporally bounded. Given this kind of data, they present an alternative analysis that does not bear on the syntactic position of Aspect with respect to the modal, but rather on an ontological distinction between two types of abilities/dispositions, generic abilities and action-dependent abilities. The former are inspired by Kenny (1976) and have the following properties:

- (33) Generic abilities (Mari & Martin 2007: 8)
- a. Do not require verifying instances.
  - b. Ascribed to an agent *i* iff *i* can repeat the action whenever s/he wants to.
  - c. By default unbounded (temporally persistent).
  - d. A positive explanatory factor: "s/he was able to do it, so s/he did it."

Mari and Martin assume that the modal expressions *have the ability* and *avoir la capacité* denote exclusively generic abilities, but *be able to* and *être capable de* have a broader extension.

They propose that Action-dependent abilities are characterized as follows:

- (34) Action-dependent abilities (Mari & Martin 2007: 9)
- a. Ontologically depend on the corresponding action.
  - b. A unique and non-repeatable performance suffices to imply the corresponding action-dependent ability.
  - c. Have the same temporal boundaries as the action on which they depend and are thus bounded.
  - d. No explanatory factor: "S/He did it, so s/he was able to do it."

In this account, *be able to* and *être capable de* can denote both generic abilities and the corresponding action-dependent abilities. There is no need to assume two lexical entries, but rather a single lexical entry with an underspecified semantics. The relevant reading is picked out through contextual factors like tense, aspect or rhetorical relations.

Schematically, in (35), the first sentence expresses an action-dependent ability, (35a), while the second one expresses a generic ability, (35b).

- (35) Thalberg (1972)
- a. Brown *was able to* hit three bull's-eyes in a row.
  - b. Brown *had the ability to* hit three bull's-eyes in a row.

(35a) can be accidental and Brown may not be able to repeat the action of hitting three bull's-eyes in a row. By contrast, in (35b), hitting three bull's-eyes in a row is temporally persistent and repeatable.

To predict when actuality is entailed, the semantic component that plays a crucial role is the so-called *Boundedness Constraint* of the French *Passé Composé*, which ensures that there has to be an event which reaches its final boundary. They assume that modal verbs are stative and introduce a state *s* which corresponds to a generic or an action-dependent ability.

The proposal, as stated in Mari & Martin (2009: 9), is that "the Actuality Entailment is triggered when the eventuality described by the infinitive is the only one which can satisfy the *Boundedness Constraint* associated to the Perfect. If another eventuality can satisfy it, the Actuality Entailment is not compulsory."

This theory is aimed at explaining cases where the French modal *pouvoir* 'can' is in *Passé Composé* and, yet, actuality is not entailed, as in (32) above. To explain the felicity of the

follow-up, the authors argue that the adverbial in italics specify that the generic ability is bounded in this context. Therefore, the *Boundedness Constraint* of the *Passé Composé* is satisfied by the modal and there is no need to pick up the eventuality of the infinitival. Since generic abilities do not need verifying instances, actuality is not necessary.

### 3.3.3 Pragmatic account

Rubio Vallejo (2017) advances a different proposal to account for the facts of Spanish *poder* 'can', which, unlike French, accepts a seemingly unconstrained lack of actuality under perfective aspect (see also Borgonovo & Cummins 2007; Borgonovo 2011), (36). That is, in Spanish, unlike in French, there is no need for the context to specify that the ability is temporally bounded.

- (36) *Spanish* (Rubio Vallejo 2017: 45)  
 Juan pudo coger el bus... pero no quiso/ y tuvo un viaje fantástico.  
 Juan can.PST.PFV take the bus but not want and had a trip wonderful  
 'Juan was able to take the bus... but he didn't want to/and he had a wonderful trip.'

In his pragmatic account, Rubio Vallejo takes into consideration whether a modalized sentence such as (36) (without the follow-up) is a partial or a total answer to the *Question Under Discussion* (Ginzburg 1996; Roberts 1996). If it is an answer to (37), then we remain agnostic as to whether the prejacent was actualized, "because the focus is on the possibility itself."

- (37) *Spanish* (Rubio Vallejo 2017: 49)  
 ¿Pudo Juan coger el tren?  
 can.PST.PFV Juan take the train  
 'Was Juan able to take the train?'

The author is more interested in a situation in which the modalized sentence is a partial answer to a question such as (38), because pragmatic enrichment is then at stake.

- (38) *Spanish* (Rubio Vallejo 2017: 49)  
 ¿Cogió Juan el tren?  
 take.PST.PFV Juan the train  
 'Did Juan take the train?'

In his account, a quantity implicature can generate the counterfactual interpretation, since the speaker has preferred to utter a weaker (modalized) proposition. In such a case, the modal base is interpreted to refer to opportunity/ability. By contrast, if the modal base is teleological and there are no known impediments, the actuality effect can be derived through an informativeness principle.

While each account supersedes the previous one in empirical coverage, we will suggest in subsection 4.3.2 that only Mari and Martin's analysis can easily extend to the behavior of SC under PFV. On the other hand, in subsection 4.4, we will describe a novel actuality effect in the case of SC, which obtains under IPFV.

## 4 Proposal

Our proposal elaborates on the classic ideas in Kratzerian modality for auxiliary modals (e.g. Kratzer 1981; 1991; Portner 2009; Kratzer 2012), but also includes the ontological enrichment advanced in Mari & Martin (2007; 2009), and takes into consideration the non-auxiliary character of SC. For one, we have a distinguished copula and adjective.

Recall that our empirical generalization is that Spanish *capaz* 'capable' is ambiguous between a control and an accidental reading whenever the copula *ser* 'be' is inflected as a

generic present or imperfective past. By contrast, under the perfective, SC always yields a control reading.

In a nutshell, we propose that SC involves a double layer of modality (Portner 2009 and others before him), as shown in (39).

- (39) a. Juan es capaz de subir al Everest.  
 John is capable of climb to the Everest  
 'John is capable of climbing Mt. Everest.'
- b.  $\lambda w.\exists u \in \cap f_{dispo}(w)(j)\forall v \in \cap f_{dispo}(w)(j)[v \leq_{g(w)(j)} u \rightarrow \text{climb}(j, \text{MtE})(v)]$

In the purely abilitative reading, the ordering source  $\cap g(w)$  contains worlds where the agent uses her strength (physical, intellectual, etc.) to grant that  $p$  is actualized. By contrast, in the accidental reading, *capaz* absorbs the ordering source of the imperfective/generic operator IPFV, so that the best worlds are just the most normal ones. The difference in the information encoded in  $\cap g(w)$ , we contend, gives rise to the two different readings.

We now proceed step by step and motivate this analysis.

#### 4.1 What's in the Modal Base?

In view of the data presented in Section 3, we can highlight some distributional differences between SC and other circumstantial modals such as *can*, *be able*. Here we focus exclusively on the content of the modal base.

##### 4.1.1 Circumstances

While SC is also a personal modal just like *can* and *be able*,<sup>5</sup> it does not have an opportunity reading when it occurs under the perfective aspect (Piñón 2003). Clearly, the translation of (26) in (40) using SC instead of *be able* cannot be paraphrased as having the opportunity.

- (40) Ayer por la tarde, Rebeca fue capaz de cruzar el Lago  
 yesterday for the afternoon Rebecca was.PFV capable of cross the lake  
 Balaton a nado.  
 Balaton at swim  
 'Yesterday afternoon, Rebecca was capable of swimming across Lake Balaton.'

<sup>5</sup> We leave aside the true epistemic *capaz* that occurs in Latin American Spanish varieties, where the copula is sometimes absent, and the adjective overtly precedes the complementizer *que* 'that', (i).

- (i) *Latin American (varieties of) Spanish* (Grández-Ávila 2010)
- a. (Walsh *Cuento para tahúres y otros relatos policiales* [Argentina 1951–61])  
 Todo el mundo lo va a creer, y yo mismo, si mañana lo leo en el diario, es  
 all the world CL goes to believe and 1SG self if tomorrow CL read in the newspaper is  
**capaz que** lo creo.  
 capable that CL believe.1SG  
 'Everybody will believe it, and I myself, if tomorrow I read this in the paper, (it)  
 is possible/likely that I believe it.'
- b. (Donoso *El obscuro pájaro de la noche* [Chile 1970])  
**Capaz que** hasta resulte un buen senador.  
 capable that even turns.out.SBJV a good senator  
 'Maybe/ Possibly he even turns out to be a good senator.'

We also disregard examples that receive divergent acceptability judgments in European Spanish, such as SC with weather predicates, (ii).

- (ii) *Spanish* (Castroviejo & Oltra-Massuet 2015b)  
 Es capaz de llover.  
 is capable of rain  
 '(lit.) It is capable of raining.'

SC relies on the subject's circumstances, but not just any circumstance. Consider first some additional differences with other circumstantial modals. Take Thomason's (2005) comment on his example (41) as a starting point.

(41) I can't write a check.

The reasons why the speaker cannot write a check may vary, e.g. his balance is negative or he cannot find his checkbook. Similar reasons could be behind *be able*, (42).

(42) (<http://www.consumeraffairs.com/debt/telecheck.html>)  
That didn't do any good and now they have probably flagged me and I won't be able to write a check anywhere.

By contrast, the modal SC in (43) is infelicitous in most scenarios. The motivations that license *can* and *be able* in (41) and (42) are not adequate in the context of SC. Understanding the circumstances under which (42) is acceptable should help us determine the lexical semantics underlying SC. For instance, it may be felicitous in a situation where writing a check is something the speaker is ashamed to do or where the speaker is severely injured, so she does not have the physical strength to do it.

(43) No soy capaz de extender un cheque.  
NEG am.1SG capable of issue a check  
'I'm not capable of writing a check.'

The reasons for not having climbed Mount Everest, (44), cannot be that the climbing material got stolen or the bad weather. It has to be the subject's strength, self confidence, courage, or alike.

(44) No he sido capaz de escalar el Everest.  
NEG have.1SG been capable of climb the Everest  
'I haven't been capable of climbing Mt. Everest.'

Conversely, the bad weather or the lack of the right climbing material could be the reasons for not climbing Mount Everest in (45).

(45) I couldn't/wasn't able to climb Mount Everest.

Additionally, *tener la capacidad* 'have the capacity' covers a wider range of capacities than SC, so (46a) ≠ (46b).

(46) a. El presidente tiene la capacidad de convocar elecciones.  
the president has the capacity of call elections  
'The president has the capacity to call an election.'  
b. El presidente es capaz de convocar elecciones.  
the president is capable of call elections  
'The president is capable of calling an election.'

Note that the capacity of calling an election is externally assigned (it is not intrinsic), so (46b) cannot convey (46a). In fact, (46b) is acceptable. However, the possibility that the president calls an election in this example does not really depend on the external assignment of this capacity, but on his own determination.

All this suggests that the circumstances that SC is concerned with are not just external circumstances. Here we build on Kratzer's (2012) description of German *imstande sein* 'to be able' as relying on circumstances "concerned with the strength of the body,

character or intellect.” This is much more constrained than the circumstances that *können* ‘can’ relies on, which go from intellectual capacities, to possibilities in view of outside circumstances, to physical abilities (in a chronological order of semantic development, according to Deggau 1907, as cited by Kratzer 2012).

To encode this idea, we build on Kaufmann’s (2012) take on circumstantial modal bases for a personal modal that has control over the outcome of the prejacent, and we add to that a specific abilitative ordering source that ensures that the best worlds are those where the subject applies her strength of the body, character or intellect, as suggested in (47).

- (47) a.  $f_{dispo}$  is a function from a world  $w$  and individual  $x$  into a set of propositions that describe the inner make-up of the individual  $x$  in  $w$ . (Their intersection is the set of worlds in which  $x$  has the same dispositions and abilities as in  $w$ .)
- b.  $g_{AB}$  is a function from a world  $w$  and individual  $x$  into a set of propositions that describe states of affairs where  $x$  applies her strength of the body, character or intellect.

We want to put forth that the content of the modal base can explain the more constrained distribution of SC (with respect to *can*, *be able* or *have the capacity*). Recall example (9), repeated below for convenience.

- (48) El águila es capaz de volar #(bajo el sol sin ser deslumbrada).  
 the eagle is capable of fly under the sun without be blinded  
 ‘Eagles are capable of flying #(under the sun without being blinded).’

Flying is an inner capacity of eagles, but, to many speakers, the sentence is not fully acceptable without the follow-up. Example (46b) cannot be interpreted, either, as conveying that the president has the intrinsic capacity of calling an election. Rather, it has to be the result of some voluntary effort that invokes strength of the body or intellect (hence the oddity of its purely abilitative interpretation). In generic statements—and even more so when the subject denotes a natural kind term—the intuition is that the prejacent can be true on special occasions, when the subject wants to fulfill a certain goal. This result is obtained while keeping the content of  $f$  fairly underspecified and similar to other circumstantial modals. This idea is not fundamentally different from the one in Castroviejo & Oltra-Massuet (2016) regarding specialized intrinsic capacities; it is just notionally less *ad hoc* in that here we are distributing a core meaning for all circumstantial modals in  $f$  and the difference is located in  $g$ .

#### 4.1.2 The *even* flavor

By restricting ourselves to circumstances concerned with the strength of the body, character or intellect of the subject, we can explain why SC does not occur in contexts where other broader circumstantial modals, such as *poder* ‘can’, are allowed to appear. In fact, we want to put forth that the *even* flavor of SC may be a straightforward result of the fact that the worlds in the modal base describe very specific inner circumstances, namely those that require that the VP agent resorts to her strength (typically, in order to fulfill some goal).

Before going back to the eagle example in (48) above, let us consider (49), where the copula is inflected for past tense and perfective aspect to avoid a generic interpretation of the construction.



- (49) El águila fue capaz de volar (bajo el sol sin ser deslumbrada).  
 the eagle was.PFV capable of fly under the sun without be blinded  
 'The eagle was capable of flying (under the sun without being blinded).'

Observe that (49) is acceptable even without the follow-up, because it expresses an event that was carried out by virtue of the inner circumstances of that particular eagle (it is an episodic rather than generic statement). (49) expresses an action-dependent ability (Mari & Martin 2007; 2009). The perfective aspect picks up the eventuality in SC, so that the ability has the same duration as the flying event. However, note that as an action-dependent ability, it can be accidental and non-repeatable. Therefore, since we know that flying is inherent in eagles, the assertion of (49) without the follow-up suggests that this particular eagle was in a bad shape and had to apply extra physical strength to fly.

We assume that, when the copula is in the present tense, as in (48), a generic interpretation obtains. Flying is an intrinsic capacity for eagles, so the sentence without the follow-up gives rise to a reading where eagles fly in highly ranked worlds where these animals appeal to their physical strength. Certainly, flying requires strength, but it is also the result of some general physical conditions that define the species as a kind (for instance, having wings). Therefore, to make an SC sentence felicitous, it has to be that the subject pushes his/her inherent properties (usually, to fulfill some goal).

Indeed, we usually apply strength to fulfill a goal or to face a challenge. Therefore, the prejacet in SC constructions will tend to describe an event that is compatible with the subject applying strength and with the existence of a goal or challenge. The possibility of the prejacet being true can repeat itself as many times as we can imagine, but it cannot coincide with an inherent or intrinsic property. The event described by the prejacet will always be more specific (and hence informative) than the general property contained in the modal base. Imagine for a moment that I have a pet eagle. If I utter (50), where I am not discussing eagles as a natural kind, but my specific eagle, the sentence can only be interpreted as though my pet does not have the intrinsic capacities of a regular eagle. Nevertheless, if it pushes its inner properties, it manages to fly, so it is viewed as quite an achievement (for this specific eagle).

- (50) Mi águila es capaz de volar.  
 my eagle is capable of fly  
 'My eagle is capable of flying.'

Let us now consider a contrast between SC and *be able* regarding effort. As Bhatt (1999) argued for in the case of the English abilitative modal (see 3.2), for it to be acceptable, it must be the case that the actualization of the prejacet takes some effort. We can compare (22)—repeated below for convenience—with the direct translation into Spanish.

- (51) a. #Timmy is able to breathe.  
 b. Timmy had a terrible car accident as a result of which he lost control over most of his muscles. Thankfully, he is able to breathe.

- (52) *Spanish* (Castroviejo & Oltra-Massuet 2016)  
 [Manuel tuvo un terrible accidente de coche cuyo resultado fue la  
 Manuel had a terrible accident of car whose result was the  
 pérdida de control de sus músculos.] ?/# Por suerte, es capaz de respirar.  
 loss of control of his muscles by luck is capable of breathe  
 'Manuel had a terrible car accident as a result of which he lost control over most of his muscles. Thankfully, he is capable of breathing.'

In Castroviejo & Oltra-Massuet (2015a), this contrast has been viewed as SC conveying more than just effort, a meaning comparable to that of English *even* (unexpectedness, unlikelihood). Here we propose a different route. Certainly, effort is needed, which is compatible with our explanation. If some/most native speakers find (52) odd, we contend, it is because of the generic interpretation of the copula. In fact, we are assuming the following structure:

(53) [ GNR/IPFV capaz [Manuel breathe ] ]

As we will elaborate on in 4.3.3, following standard explanations, GNR/IPFV is interpreted as a modal that quantifies over most normal worlds. So here, (53) conveys that in most normal worlds, there is a world  $u$  compatible with Manuel's inner make-up such that for every better world  $v$ , Manuel breathes in  $v$ . Therefore, there is no need for verifying instances. So some speakers may have a hard time interpreting Manuel's event of breathing as an event that is happening at the time of utterance, which seems to be possible with *be able* and *can*. Rather, (53) seems to convey that in case it is necessary (i.e. whenever the goal is presented), it will be possible for Manuel to make an effort and breathe. However, this interpretation is quite counterintuitive.

Interestingly, sentences such as (53) improve when they include aspectual particles such as *ya* 'already' and *todavía* 'still', (54).

(54) Manuel ya/todavía es capaz de respirar.  
 Manuel already/still is capable of breathe  
 'Manuel is already/still capable of breathing.'

F. Martin (p.c.) suggests that this has to do with the fact that such particles ensure that SC denotes a generic ability by making clear that it exists independently of its specific manifestation. Another option would be that these aspectual particles remove the generic interpretation triggered by the present tense of the copula. We leave a further development of this idea for future research.

Summing up our findings so far, the modal base of SC is concerned with inner circumstances of the event's agent. More specifically, the prejacent describes an event in which the agent has pushed his/her intrinsic capacities. We now discuss the reading that was called "epistemic" in the previous literature, and which we will characterize as accidental, in line with literature on Tagalog and St'át'imcets.

## 4.2 The accidental reading

In this subsection we aim to provide an alternative characterization of the reading that Castroviejo & Oltra-Massuet (2015b) called "epistemic," in view of the descriptive problems pointed out in subsection 3.3.1 and additional empirical evidence from Tagalog and St'át'imcets. In a nutshell, this reading involves the inner circumstances of the subject, but the subject does not have control over the event, unlike in pure abilitative readings. We call it *accidental* reading.

### 4.2.1 Distribution

In subsection 2.1, we discussed a number of tests from the previous literature that establish a difference between a purely abilitative reading and a putative epistemic reading. We have shown that treating the latter as epistemic is problematic. Here we want to focus on certain properties that suggest that in all cases where we have this seemingly non-abilitative reading, we actually have personal modality (hence, we refer to the inner circumstances of the subject), where the meaning conveyed is lack of control or unpredictability. Let us start with the example in (55).

- (55) *Spanish* (Castroviejo & Oltra-Massuet 2016: 48)  
 Cualquier día, Paula es capaz de matar a su suegra.  
 any day Paula is capable of killing to her mother-in-law  
 'Any day Paula is capable of killing her mother-in-law.'

(55) conveys that the subject may be part of an eventuality that cannot be predicted by the speaker. Matching adverbials such as the free choice *cualquier día* 'any day', which expresses an indiscriminate or indifferent interpretation (Quer 1998; Giannakidou 2001: a.m.o.), are compatible with this notion of accidentality that seems to be at odds with ability.

Another illustration is the case in (56). Since the modal base only includes inner circumstances of the subject, the sentence cannot convey the fact that the president has the (externally assigned) capacity to call an election. However, the example can have a regular abilitative reading (if placing ballot boxes so that people can vote depends on e.g. the president's courage) or an accidental reading (one in which placing the ballot boxes may depend on the president's random will to do so). That is, (56) can felicitously convey that the president may be unpredictable enough so as to let the people vote.

- (56) El presidente es capaz de poner las urnas.  
 the president is capable of put the ballot boxes  
 'The president is capable of placing ballot boxes (so that people can vote).'

Our main claim regarding this reading is the following:

- (57) The cases formerly characterized as epistemic are better analyzed as conveying a so-called accidental reading.

Therefore, going back to the diagnostics discussed in subsection 2.1, whenever we find that SC selects for a VP in the perfective aspect, we expect a reading whereby the VP subject might have behaved unpredictably. Recall (6), repeated below for convenience.

- (58) Este filósofo es capaz de haber traducido/ estar traduciendo las obras  
 this philosopher is capable of have translated is translating the works  
 completas de Homero.  
 complete of Homer  
 'This philosopher is capable of having translated/being translating Homer's  
 collected works.'

Indeed, translating Homer's complete works is seen as an unpredictable event, something that lacks any control, from the point of view of the speaker. It is not something that requires the VP agent's strength.

We claim that this duality between the pure abilitative and the accidental interpretation—which is also found in other languages (see e.g. subsection 4.2.2)—can be accounted for by analyzing accidental SC as a modal expression that lies structurally higher than a pure abilitative modal, but structurally lower than a pure epistemic modal (see subsection 4.3.3).

Alongside this claim, we put forth the empirical generalization that this reading may occur both when the copula is in the simple present, and also when it appears in the imperfective past form. The key condition is that accidental SC may occur whenever IPFV (analyzed as a generic or as an imperfective past form) is present. This is shown in (59).

- (59) a. Teresa es capaz de ganarle a su hermano.  
 Theresa is capable of win.CL to her brother  
 'Teresa is capable of defeating her brother.'

- b. Teresa era capaz de ganarle a su hermano.  
 Theresa was.IPfV capable of win.CL to her brother  
 'Teresa was capable of defeating her brother.'

Both (59a) and (59b) can express a purely abilitative reading, but they can also convey that at a non-past time starting from the present, (59a), or the past, (59b), which cannot be determined, it is possible for Teresa to beat her brother.

Note that the occurrence of the accidental reading under IPfV in the past suggests that this must be unrelated to the possibility of an epistemic flavor, since epistemic readings are expected only when the copula is in the present tense, so that the speech time is identified with the time of the conjecture. That is, in (55) and (59a), it could be said that in view of what the speaker knows (of the VP agent) at the time of utterance, Paula may kill her mother-in-law or Teresa may beat her brother. However, this does not hold for (59b), which does not have anything to do with conjectures. The claim that (55) is an epistemic modal is thus untenable if it should be semantically analogous to e.g. (59b) except for the modal time.

Before moving on to other dual abilitatives cross-linguistically, let us refer back to the *even* flavor of SC, as realized for the accidental interpretation. We repeat the relevant example for convenience:

- (60) Pedro es capaz de haber jugado al baloncesto #(sin pelota).  
 Peter is capable of have played to.the basketball without ball  
 'Pedro is capable of having played basketball #(without a ball).'

As will be elaborated in 4.3.3, the accidental reading shares the same modal base as abilitative SC,  $f_{dispo}$  (i.e. one that concerns the subject's inner circumstances), however, it does not have the same ordering source. Therefore, the *even* flavor cannot be derived in the same fashion. Here we assume that the ill-formedness of (60) without the follow-up has to do with the fact that playing basketball is not something that can be deemed accidental or unpredictable under normal circumstances. Hence, we must conclude that this intuitive notion of an *even* flavor characterizes in fact two different phenomena depending on whether the reading that obtains is abilitative or accidental.

#### 4.2.2 Antecedents

In this subsection we want to bring together the notion of unpredictability with the characterization of other abilitative modals in the literature. One such case is Dell (1982/1983), who discusses a prefix in Tagalog which makes the root verb become systematically ambiguous between an abilitative and an involuntary action (AIA). This is illustrated in (61).

- (61) Tagalog (Dell 1982/1983: 177)  
 Na-kunan ni Ben ng litrato si Luisa.  
 AIA-PfV.take GEN Ben GEN picture NOM Luisa  
 a. Ben managed to take a picture of Luisa.  
 b. Ben involuntarily took a picture of Luisa.

Another case in point is the so-called "no-choice" reading of *ka...-a* in St'át'imcets, as analyzed by Davis et al. (2009). As in the Tagalog example, this morpheme covers readings that range from ability to lack of control, as illustrated in (62) and (63).

- (62) St'át'imcets (Davis 2006)  
 cúy' = ljkacw = ha ka-cwák-a lh = ma7g'úlm'ecw = as?  
 going.to = 1SG.SBJ = YNQ CIRC-wake-CIRC COMP = daybreak = 3CONJ  
 'Are you going to be able to wake up at dawn?'

- (63) *St’át’imcets* (Davis 2006)  
 qwaqwx-mín = lhkan      ta = scwelálhp = a, ka-cwák = kan-a      aylh.  
 nightmare-RED = 1SG.SBJ DET = ghost = EXIS CIRC-wake = 1SG.SBJ-CIRC then  
 ‘I had a nightmare about a ghost, then I woke up suddenly.’

*ka-...-a*, which is glossed as CIRC (for circumstantial modality) is interpreted either as an abilitative in (62), or as conveying the notion of ‘suddenly’, as in (63). Davis et al. (2009) argue that there is a difference in force that yields the two interpretations. Specifically, the abilitative reading corresponds to an existential circumstantial modal, whereas the no-choice reading is the result of universally quantifying over worlds in a circumstantial modal base. That is, “all the facts of the world conspire to make the event inevitable” (Davis et al. 2009: 230).

Unlike Tagalog and *St’át’imcets*, the accidental reading of SC does not arise under perfective aspect. In fact, none of the above could be expressed through SC. Nevertheless, the lack of control or lack of prediction is indeed conveyed by SC in (55). Therefore, we assume that universal quantification does play a role in yielding the accidental reading. However, we will derive it compositionally from the interaction with the universal quantification issuing from aspect. As argued for in Section 4, we are assuming a double layer of quantification for SC (existential plus universal), and what ensures the subject’s control over the event is the ordering source, which appeals to the subject’s strength. In the accidental reading, we will argue, the ordering source is merely stereotypical (ranking higher those worlds that are most normal, as conveyed by IPFV), and this is what gives rise to the accidental interpretation. Since the different ordering source is dependent on the presence of IPFV, our analysis predicts that the accidental reading is not possible under the perfective.

### 4.3 Generic and action-dependent abilities

The analysis we present relies on the notion of generic ability and action-dependent ability in Mari & Martin (2007; 2009). We argue that this ontological difference is instrumental in explaining the pure abilitative and the accidental readings of SC, as long as we take into consideration the semantics of aspect encoded in the copula and its composition with the modal adjective.

#### 4.3.1 The adjective *capaz*

We assume that *capaz* is a modal adjective with the denotation in (64). It has existential force and the modal base only includes circumstances concerned with the VP agent’s strength of the body, character, or intellect.

- (64)  $[[\text{capaz}]] = \lambda P_{\langle e, st \rangle} \lambda x \lambda w. \exists u \in \cap f_{\text{dispo}}(w)(x)$   
 $\forall v \in \cap f_{\text{dispo}}(w)(x) [v \leq_{g_{AB}(w)(x)} u \rightarrow P(x)(v)]$ , only defined if  $f_{\text{dispo}}$  is a function from a world  $w$  and individual  $x$  into a set of propositions that describe the inner make-up of the individual  $x$  in  $w$ , and  $g_{AB}$  is a function from a world  $w$  and individual  $x$  into a set of propositions that describe states of affairs where  $x$  applies her strength of the body, character or intellect.

As other circumstantial modals, *capaz* does not take full propositions as an argument, but a property, which corresponds to the denotation of the infinitival clause, (65).<sup>6</sup>

<sup>6</sup> To be precise, we should analyze the infinitival clause as a property of events, and sever the external argument from its verb, as in Kratzer (1996). This could be done by assuming an analysis of modals as event-rather than world-relative, as in Hacquard (2010). For the sake of simplicity, we will not pursue this route here, and leave the full-fledged characterization for future research.

- (65)  $\llbracket \text{capaz de ganar} \rrbracket = \lambda x \lambda w. \exists u \in \cap f_{\text{dispo}}(w)(x)$   
 $\forall v \in \cap f_{\text{dispo}}(w)(x) [v \leq_{g_{AB}(w)(x)} u \rightarrow \text{win}(x)(v)]$ , only defined if  $f_{\text{dispo}}$  is a function from a world  $w$  and individual  $x$  into a set of propositions that describe the inner make-up of the individual  $x$  in  $w$ , and  $g_{AB}$  is a function from a world  $w$  and individual  $x$  into a set of propositions that describe states of affairs where  $x$  applies her strength of the body, character or intellect.

SC does not have the same behavior as a modal auxiliary. For one, it is a compositional combination of a lexically rich adjective and a copula, which bears aspect. Hence, in the purely abilitative reading, we are assuming that the copula translates semantically as IPFV or PFV, which is interpreted on top of the adjective *capaz*, as represented in (67) for (66) (and abstracting away from tense).

- (66) María era/fue capaz de ganar.  
 María was.IPFV/PFV capable of win  
 'María was capable of winning.'

- (67) a. [ IPFV [ *capaz* [ María win ] ] ]  
 b. [ PFV [ *capaz* [ María win ] ] ]

As will be further developed in section 4.3.3, imperfective aspect translates as universal quantification over worlds (or rather situations, as argued for in Arregui et al. 2014, although this distinction is not relevant for our purposes). Hence, SC in the present, which bears generic aspect, as well as in the imperfective past, presents an interaction between two modals.

#### 4.3.2 Perfective aspect

Let us take (68) as a starting point, with the corresponding LF in (69).

- (68) María fue capaz de ganar.  
 María was.PFV capable of win  
 'María was capable of winning.'

- (69) [ PST [ PFV [ *capaz* [ María win ] ] ] ]

Skipping the step by step derivations for reasons of space,<sup>7</sup> this could translate as the existence of a past event (i.e. an event whose running time is included in the past) and a world compatible with María's inner circumstances such that in all better worlds (i.e. those in which María appeals to her strength of the body, character or intellect), this is an event of María winning.

There is nothing particularly interesting or different from what has been said about other abilitative modals under the perfect, except for the fact that the modal base is more specific than in other circumstantial modals.

As to the actuality entailments (recall subsection 3.3), the data regarding SC may seem less clear than the facts reported by Mari & Martin (2007) for French *pouvoir* 'can', but we believe the following scenario is equivalent to Mari and Martin's robot case in (32).

<sup>7</sup> As pointed out in fn 6, a semantics that includes events is necessary to express the composition of aspect and the modal sentence.

- (70) La gimnasta fue capaz de hacer el triple salto mortal mientras  
 the gymnast was.PFV capable of do the triple jump mortal while  
 duró el efecto del elixir, OK aunque nunca llegó a hacerlo.  
 last.PFV the effect of.the elixir OK although never arrive.PFV to do.CL  
 ‘The gymnast was capable of performing a triple mortal jump while the effect of  
 the elixir lasted, OK although she ended up never performing it.’

We can conclude from this that, even under the perfective aspect, actuality is not an entailment (although it is much more salient and the preferred reading).<sup>8</sup> This fact aligns us with an explanation in terms of the *Boundedness Constraint* associated with the perfective (Mari & Martin 2007; 2009). In such a case, this constraint is satisfied by the boundedness of the general ability, which is limited by the amount of time in which the gymnast experienced the effect of the elixir, and so it does not have to pick up the eventuality denoted by the infinitival. A structural account such as Hacquard’s (2009) would predict the necessary actuality of SC under the perfective aspect, and it would also come with the assumption of *Preservation of Event Properties*, which may not be independently motivated. As to Rubio Vallejo’s (2017) pragmatic account of Spanish *poder* ‘can’, the problem would be with the claim that the actuality effect emerges from the teleological interpretation of the modal base, while the counterfactual is the result of an abilitative reading. This cannot be the key difference for the case of SC, since—we contend—its modal base is restricted to the inner circumstances of the subject in both actual and counterfactual readings.

Let us now turn to the behavior of SC under imperfective (and generic) aspect.

#### 4.3.3 Imperfective aspect

The main idea we would like to put forward in this subsection is that the combination of IPFV as realized in the copula and the adjective *capaz* ‘capable’ yields both a generic ability reading and an accidental reading (the one called epistemic in Castroviejo & Oltra-Massuet 2015b), which is nothing more and nothing less than an action-dependent ability interpretation under a universal modal.

To understand the interpretive effects of SC in the present tense and in the imperfective past, we adopt Arregui et al. (2014), and others before them, in analyzing imperfective aspect (ipfv) as a modal operator. For the purposes of this paper (and to enforce compatibility with the modal treatment of SC), we assume an oversimplified denotation for IPFV, which is meant to highlight that it translates as a universal modal with a stereotypical ordering source, as shown in (71).<sup>9</sup>

- (71)  $\llbracket \text{IPFV} \rrbracket = \lambda p \lambda w. \forall w' \in \text{BEST}(f(w), g_{\text{STY}}(w)): w' \in p$   
 where  $\text{BEST}(f(w), g_{\text{STY}}(w))$  is short for the set  $\{v: v \in \cap f(w) \text{ and there is no } v' \in \cap f(w) \text{ such that } v' \leq_{g_{\text{STY}}(w)} v\}$ , following the notation in Portner (2009), and the stereotypical ordering source  $g_{\text{STY}}(w)$  is a function from a world into a set of propositions that describe most normal states of affairs.

Leaving aside the details on how IPFV combines with tense, we take IPFV to introduce universal quantification over most normal worlds.

<sup>8</sup> Additional and more accurate empirical research is needed to further motivate this point, but this is not the focus of the present article.

<sup>9</sup> We refer the interested reader to Cipria & Roberts (2000); Lenci & Bertinetto (2000); Arregui et al. (2014), among many others, for an actual denotation and derivation of the different uses of imperfective aspect across languages.

To account for the ambiguity of SC under IPFV, between an abilitative and an accidental reading, we propose that the interaction between the two modals (IPFV and the modal adjective *capaz* 'capable') yields two different LFs, as sketched in (72).

- (72) a. [ IPFV [ capaz [ SBJ VP ] ] ]  
 b. [ capaz [ IPFV [ SBJ VP ] ] ]

(72a) gives rise to the pure abilitative reading under IPFV, (73).

- (73)  $\lambda w. \forall w' \in \text{BEST}(f(w), g_{STY}(w)) \exists u \in \cap f_{dispo}(w')(\llbracket \text{SBJ} \rrbracket)$   
 $\forall v \in \cap f_{dispo}(w')(\llbracket \text{SBJ} \rrbracket) [v \leq_{g_{AB}(w')} u \rightarrow \llbracket \text{VP} \rrbracket(\llbracket \text{SBJ} \rrbracket)(v)]$

In all most normal worlds there is a possibility that relies on the subject's inner circumstances such that in all better worlds in which the subject applies her strength of the body, character or intellect, the subject carries out the VP event in such better worlds. Whenever the goal presents itself, the VP agent has the disposition of carrying out the event denoted by the VP. This results in a generic ability, a possibility that holds in every normal world and is, thus, repeatable, although not necessarily actualized.

(72b), by contrast, gives rise to the accidental reading, as characterized in subsection (40). In this inverse scope scenario, we propose that *capaz* has moved along with its existential quantifier. However, the second layer of modality, the universal modal, does not move along, but rather collapses with the universal denotation of IPFV, such that the ordering source in *capaz* is no longer  $g_{AB}$  but rather  $g_{STY}$ , as represented in (74).

- (74)  $\lambda w. \exists u \in \cap f_{dispo}(w)(\llbracket \text{SBJ} \rrbracket) \forall v \in \cap f_{dispo}(w)(\llbracket \text{SBJ} \rrbracket) [v \leq_{g_{STY}(w)} u \rightarrow \llbracket \text{VP} \rrbracket(\llbracket \text{SBJ} \rrbracket)(v)]$

That is, there is a possibility that relies on the subject's inner circumstances such that in all most normal worlds, the subject carries out the event denoted by the VP in such worlds. Note that here we do not have two universal quantifiers, which would be expected if *capaz* moved entirely above IPFV. Instead, we propose that only one universal quantifier is preserved, and the ordering source that remains is that of IPFV, not the abilitative one in the lower *capaz*. Building on Davis et al.'s (2009) analysis in which universal quantification yields the no-choice interpretation, we likewise would like to argue that universal quantification (in our case, obtained through the semantics of IPFV) is partly responsible for this reading (along with the change in the content of  $g(w)$ ). In this interpretation, all normal worlds conspire to make this possibility inevitable, because the actuality of the VP event no longer depends on the subject's control. This is not a repeatable possibility, but rather a potential event that may take place without the subject's control, that is, a one-time possibility. Hence, we consider it an action-dependent ability.

Imagine a scenario in which we are talking about Kilian Jornet, who is a fantastic athlete. Given his physical conditions, we can truthfully utter (75).

- (75) Kilian Jornet es capaz de escalar el Everest.  
 Kilian Jornet is capable of climb the Everest  
 'Kilian Jornet is capable of climbing Mount Everest.'

(75) conveys that in all most normal worlds, given Kilian's circumstances concerned with his strength of the body, character or intellect, there is a possibility that he climbs Mount Everest. He can make an effort and climb Mount Everest in every normal world (in which the goal of climbing this mountain is presented).

Now, imagine we want to convey that Kilian is so unpredictable that he could end up climbing Mount Everest. This would be the reading we have called "accidental" in



subsection 4.2, and which corresponds to (74). This means that there is a possibility dependent on Kilian’s inner circumstances such that in all most normal worlds, Kilian climbs Mt. Everest in such worlds. Hence, the lack of choice has to do with the fact that the possibility of the event taking place holds in all of these normal worlds, which are compatible with Kilian’s inner circumstances, but which are ranked higher not depending on his effort, but on general characteristics of normal worlds. In order to bring about this reading, we have to assume that the modal adjective *capaz* has covertly moved above the universal modal IPFV.

The main support for this analysis in terms of scope interaction comes from the empirical generalization spelled out in subsection 4.2, namely that this ambiguity only arises when the copula bears IPFV. Additional empirical evidence for this otherwise covert movement can be found in sentences such as (76), where *capaz* is fronted and the only possible interpretation is the accidental one.<sup>10</sup>

- (76) ¡CAPAZ eres de caerte de la silla!  
 capable are.2SG of fall.CL of the chair  
 ‘(lit.) You are capable of falling of the chair.’  
 [intended] ‘Falling of the chair is some unpredictable event in which you could participate.’

Summing up, we have argued that when the copula bears IPFV in SC, two possible readings arise. One is purely abilitative, in that the subject has control over the event denoted by the prejacent. The other one is accidental, in that the subject carries out the event denoted by the prejacent in most normal worlds (i.e. all worlds conspire to make the prejacent true).

#### 4.4 Consequences of the proposal

Several consequences follow from our main proposal, which can be summarized as follows:

- SC is not a modal auxiliary, but a copula followed by a modal adjective *capaz* ‘capable’. Unlike modal auxiliaries, the copula in SC bears aspect (PFV or IPFV).
- The modal base in SC is always  $f_{dispo}(w)$  irrespective of aspect. This conversational background contains propositions that describe the inner circumstances of the subject. The modal force is always double, it includes an existential and a universal quantifier.
- When the copula bears IPFV (interpreted as a generic reading in the present or an imperfective past), two readings are possible. One is the result of the surface order IPFV *capaz*, and is purely abilitative ( $g_{AB}(w)$ ). The second one, we have argued, involves the inverse order, *capaz* IPFV, whereby the universal quantifier denoted by IPFV collapses with the universal quantifier in *capaz*, the stereotypical ordering source in IPFV replaces the abilitative ordering source ( $g_{STY}(w)$ ), and so the accidental reading arises.

First, the modal in the accidental reading is higher than the one that yields the generic ability. Therefore, it is syntactically higher than the plain abilitative, which squares with the idea that the accidental reading is close to an epistemic one (recall that epistemic modals are higher than root/circumstantial ones). Alongside with being structurally higher, we claim that its ordering source is not  $g_{AB}(w)$ , but  $g_{STY}(w)$ . By contrast, the modal

<sup>10</sup> This is *Focus Fronting* rather than *Contrastive Topic*. We leave the details of these differences for future research.

base is the same,  $f_{dispo}(w)$ , which makes SC a personal modal that relies on the internal circumstances of the subject. We cannot say that SC has an epistemic reading, because the worlds that are considered in the modal base refer exclusively to the VP agent. However, it is true that the accidental reading invites the conjecture about when the (unpredictable) event might take place.

In fact, once *capaz* moves higher than IPFV, a dissociation between the time of evaluation and the modal time obtains. Although this has to be examined in more depth, we assume that the time of the possibility and the time of the VP event are different in the accidental reading. The VP time is forward-shifted, just like in epistemic modals. The fact that *capaz* has become a full-fledged epistemic modal in the Latin American Spanish varieties (see fn 5) suggests that European Spanish SC is in the midst of a semantic change. In American Spanish varieties, *capaz* can move above TP and have a full proposition as its argument. Interestingly, its interpretation is epistemic, and there is no accidental reading. This correlates with the fact that it is no longer a personal modal. Hence, pending further research, it could be said that the modal base in this case contains propositions compatible with what is known.

Second, we expect the interpretation of the prejacent to be either a controlled event or an accidental event, thus indicating which scopal composition we have (IPFV > *capaz* or *capaz* > IPFV). Consider again the sentence in (77). Depending on the context (i.e., what María is winning), we may derive different possible interpretations.

- (77) María es capaz de ganar  
 María is capable of win  
 'María is capable of winning'
- a. el partido.  
 the game  
 the game.'
- b. la lotería.  
 the lottery  
 the lottery.'

In the case of (77a), it may either be that we are considering María's physical condition or else how lucky she is. If the former, a generic ability obtains (in every normal world there is a world in which she appeals to her strength to win). If the latter, an action-dependent ability (and hence, the accidental reading) obtains (there is a possibility of winning that happens in all normal worlds, not under her control). As to (77b), since it does not make much sense to assume that in every normal world there is a possibility that María wins the lottery by virtue of her strength, we tend to interpret that there is a single possibility that this happens in all normal worlds. The only possible interpretation is an action-dependent ability (with an accidental flavor).

Crucially, accidentality or unpredictability is only triggered by IPFV. Under PFV, (78) conveys that María has won the lottery by virtue of her strength. *Capaz* has not risen above the copula and, thus, the ordering source is  $g_{AB}(w)$ . Therefore, this example is odd.

- (78) ?#María fue capaz de ganar la lotería.  
 María was.PFV capable of win the lottery  
 'María was capable of winning the lottery.'

Third, cases in which SC selects for a prejacent in the perfective, where the VP event is thus bounded (as in (6) above), can only be interpreted as an action-dependent ability, not a generic one. Therefore, they involve an accidental interpretation, and the structure in (79b).

- (79) a. María es capaz de haber ganado.  
 María is capable of have won  
 'María is capable of having won.'
- b. [ *capaz* [IPFV [PFV [María win]]]]

The interpretation of (79a) would be along the following lines: there is a world  $w'$  compatible with María's inner circumstances in the actual world such that in all most normal worlds  $w''$  accessible from  $w'$ , there is a bounded event of María winning.

Empirical support for this analysis comes from acceptable sentences such as (80), involving the lottery, and which sound odd under the perfective, i.e., without the accidental component (as shown in (78)).

- (80) María es capaz de haber ganado la lotería.  
 María is capable of have won the lottery  
 'María is capable of having won the lottery.'

Of course, this apparently unusual combination of IPFV and PFV has to be made compatible by assuming that the two morphemes are not in complementary distribution. Here IPFV is viewed as a modal operator that fills in the ordering source  $g_{STY}(w)$  in an otherwise doubly-layered abilitative modal *capaz*, while PFV is an aspectual operator that indicates that the relevant event is bounded.

Fourth, we can reveal an interesting empirical outcome that seems to follow from the idea that the accidental reading is the result of moving CAPAZ above IPFV, namely the existence of an actuality effect in cases such as (81):

- (81) De joven, Kilian era capaz de escalar el Everest.  
 of young Kilian was.IPFV capable of climb the Everest  
 'As a young man, Kilian was capable of climbing Mount Everest.'
- a. PST > IPFV > *capaz* ↗ actuality effect  
 b. PST > *capaz* > IPFV ↘ actuality effect

The novel empirical observation is that the reading in (81b) entails that Kilian did climb Mount Everest once, despite the fact that the copula bears imperfective morphology. Let us consider (81) in more detail. (81a) conveys that in all normal past worlds, there was a world compatible with Kilian's inner circumstances such that in all better worlds where he appealed to his strength, he climbed Mount Everest. That is, (81a) describes a generic ability in the past. There is no PFV, no boundedness constraint, and nothing ensures that Kilian did climb Mount Everest (the generic allows for non-verifying instances). Now, (81b) conveys that there is a past possibility compatible with Kilian's inner circumstances such that in all normal worlds accessible from this possibility, Kilian climbed Mt. Everest. This is a no-choice interpretation in the past. As such, we have argued, it describes an action-dependent ability. Only because the subject carries out the action, can we say that she has the ability.

(82) is an example whose more salient (and reasonable) interpretation is PST *capaz* IPFV with an actuality effect.

- (82) Luis era capaz de caerse de la silla cuando menos lo  
 Luis was.IPFV capable of fall.CL of the chair when less CL  
 esperabas.  
 expected.IPFV.2SG  
 'Luis was capable of falling of the chair when you didn't expect it.'

In (82), the sentence unambiguously refers to accidental SC, because falling is not something that the VP agent typically controls or something that depends on her strength. The

speaker is describing Luis in the past and one of his features is that he could unpredictably fall. The only way the speaker can make this assertion is because she is acquainted with at least one verifying instance. Otherwise, there are no grounds that motivate a truthful assertion of this sort.

This piece of data is interesting because despite the presence of IPFV, it requires the actuality of the event. The speaker may not utter (82) to convey a non-instantiated ability, but rather to express that an action took place, and hence the VP subject had the ability to carry it over.

In principle, there is no trace of a PFV operator that may anchor the VP event in the actual world, which would be Hacquard's (2009) way of explaining an actuality entailment (by appealing to her *Preservation of Event Description*). We cannot resort to Mari and Martin's (2007; 2009) *Boundedness Constraint*, either, to force the actuality of the prejacent whenever the VP event is the only eventuality that can be bounded. The question presents itself: How can we derive an actuality effect without PFV? Pending a full-fledged derivation of this effect, our intuitive explanation is the following: for a speaker to truthfully assert e.g. that climbing Mount Everest was an unpredictable possibility (81b), it can only be because the speaker knows that Kilian climbed it at least once. Let us briefly compare the felicity conditions for past possibilities in different modals without actuality entailments. In deontics (e.g. *Guillem was allowed to eat chocolate*), the speaker may state that  $p$  was a possibility, because the ordering source ranks the worlds in which rules are satisfied as higher ranked. These rules are made by external law-makers, so the possibility exists, irrespective of whether the speaker knows whether the subject has made  $p$  true. In the case of a past ability (e.g. *Pep was able to ride his bike*), the speaker can state that the subject can make  $p$  true without knowing if he actually did, because the speaker can evaluate the subject's inner circumstances in combination with his strength as actualized in comparable situations as the one described by  $p$ . This is the idea behind the fact that generics do not require verifying instances. By contrast, for a speaker to truthfully assert that  $p$  was a past accidental possibility related to the subject's inner circumstances, the speaker's only source of information can be that she has seen/ known one of the verifying instances. To put it in another way, since the kind of ability that is denoted in (81b) or (82) is dependent on a past action, the existence of this possibility relies on the previous actuality of the dependent action. Therefore, an interpretation such as (81b) or (82) can only be truthfully uttered if the eventuality denoted by the prejacent was actualized at least once.

Fifth, we should consider whether or to what extent this proposal is compatible with the facts of Tagalog and St'át'imcets, as reported in 4.2.2. Remember that the abilitative vs. accidental interpretation is explained as a difference in force. Specifically, in the abilitative reading, the quantifier is existential ( $\exists$ ) and in the accidental/no-choice, a universal quantifier ( $\forall$ ) expresses that all worlds conspire to make the prejacent true. The present analysis is different in assuming that SC includes a double layer of quantification, and explains the different output through the content of the ordering source ( $g(w)$ ). This is predicted by the interaction between IPFV and the two readings, which does not hold for Tagalog and St'át'imcets. Since both readings occur irrespective of aspect, and the accidental reading covers a wider range of situations (including sudden events), we may wonder whether an analysis along the lines of the one defended in this paper would be suitable.

Summing up, in this section we have elaborated on the consequences of our proposal that both generic and action-dependent abilities are possible when IPFV is present, and that the availability of the two interpretations has to do with the scope interactions

between the modal adjective *capaz* and the IPFV morpheme, here viewed as a universal modal operator over worlds with a stereotypical ordering source.

## 5 Conclusions

In this paper we have analyzed the Spanish modal expression *ser capaz* 'be capable' (SC) under the lens of the research on abilities viewed as kinds of dispositions. Our focus has been on the distribution and interpretation of SC, which does not parallel *have the capacity*, as may seem right at first sight.

We have proposed that the modal base in SC contains the subject's inner circumstances only. In this sense, it is a more restricted circumstantial modal than e.g. *poder* 'can'. In its purely abilitative reading, the ordering source contains propositions that describe situations in which the subject appeals to her strength of the body, character or intellect. The prejacent is true by virtue of these properties of the subject, so it cannot describe just a regular capacity, but rather a strength-requiring eventuality. To account for the subject's control over the output, we have assumed that SC has two layers of modality: an existential modal followed by a universal, which ensures that in all better worlds the prejacent is true.

Our second contribution has to do with a characterization of two different readings of SC, which had previously been identified as abilitative vs. epistemic. Here we have offered a more convincing analysis that is based on the novel observation that the latter reading only arises under imperfective aspect (be it past or generic present). We have put forth the idea that the universal quantification of the IPFV morpheme, when scoping under the existential quantifier conveyed by *capaz*, collapses with the universal quantifier in *capaz* and fills in its own stereotypical ordering source. This gives rise to a no-choice or accidental (rather than epistemic) reading. Roughly, beyond the action-dependent abilities that are usually expressed under perfective aspect and the generic abilities that obtain under IPFV, we have argued that action-dependent abilities can also occur under IPFV, but only with an accidental flavor.

We have left the spell-out of some compositional details for future research, especially in two main areas. First, we have not provided any principled explanation for the process by which two universal modals collapse and one of them introduces its own ordering source. Beyond the interpretive outcome, we have not provided any independent evidence of similar processes. Second, due to space limitations, we have not provided details regarding the contribution of tense and aspect in the case of the accidental reading, where there is a dissociation between the modal time (present or past) and the event time (future from the modal time). From the point of view of semantic theory, we have contributed new empirical observations to the ongoing debate on actuality entailments, even though we need to further elaborate on the consequences the ideas here presented have for a full-fledged account of actuality effects, and for a structural explanation that maps syntactic position and semantic interpretation.

## Abbreviations

1 = first person, 2 = second person, 3 = third person, AIA = abilitative/involuntary action prefix, ASP = Aspect, CIRC = circumstantial modal, CL = clitic, COMP = complementizer, CONJ = conjunctive (subjunctive) subject, DET = determiner, EXIS = existential, GEN = genitive, GNR = generic, IPFV = imperfective, LF = Logical Form, MOD = modal, N- = non- (e.g. NPST = non-past), NEG = negation, negative, NOM = nominative, PFV = perfective, PL = plural, PST = past, RED = redirective (relational) transitivizer, SBJ = subject, SBJV = subjunctive, SC = *ser capaz* 'be capable', SG = singular, T = Tense, VP = Verb Phrase, YNQ = Yes-no question.

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## Competing Interests

The authors have no competing interests to declare.

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