

## Modal Selectivity in the Nominal Domain: Spanish *Uno Cualquiera*\*

Luis Alonso-Ovalle & Paula Menéndez-Benito

McGill University, Universitat Pompeu Fabra

### 1. Introduction: Random choice, modal harmony, and modal selectivity

Modal indefinites are existential determiners that trigger modal inferences. Some of them, which we can call ‘random choice indefinites’, indicate that an agent made an indiscriminate choice (Choi 2007, Choi & Romero 2008, Rivero 2011a,b, Alonso-Ovalle & Menéndez-Benito 2011, 2013, a.o.). Spanish *uno cualquiera* belongs to this class. The sentence in (1), for instance, conveys (i) that Juan took a card, and (ii) that he chose it indiscriminately.<sup>1</sup>

- (1) Juan cogió una carta cualquiera.  
Juan took a card CUALQUIERA  
‘Juan picked a random card.’

The random choice component of *uno cualquiera* brings in modality by evoking alternative actions that the agent could have undertaken. In (1), *uno cualquiera* signals that Juan *could* have taken a different card. This modal component can be embedded under modal operators. For instance, the sentence in (2), with the epistemic necessity modal *tener que*, can convey that Juan must have gone to see a movie that he picked randomly.

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<sup>1</sup>The sentence in (1) can also convey that the speaker thinks that the card is not outstanding (see, e.g., Rivero 2011b). This evaluative interpretation is available for all the examples that we will discuss in the paper, and is the only one possible with non-agentive verbs. In this paper, we will ignore the evaluative interpretation of *uno cualquiera* and focus on its random choice interpretation.

- (2) Juan tiene que haber ido a ver una película cualquiera.  
 Juan must that have gone to see UNA film CUALQUIERA  
 ‘Juan must have gone to see a random movie.’

Under some modals, another possibility arises: *uno cualquiera* can convey a free choice effect with respect to the worlds that the modal ranges over (a *harmonic interpretation*). Imperatives are a case in point: (3) can be interpreted as telling the addressee to bring a book and pick it randomly (*embedded random choice interpretation*), or as telling her to bring a book while allowing her to pick *any book* (*harmonic interpretation*).<sup>2</sup>

- (3) ¡Tráeme un libro cualquiera!  
 bring-me a book CUALQUIERA  
 ‘Bring me a random book!’

One might hypothesize that the harmonic interpretation is a pragmatic inference that arises from the embedded random choice reading (if the speaker requires the addressee to choose a book randomly, it seems reasonable to conclude that she will be satisfied with any book). This, however, is not the case: there are contexts where (3) gets a harmonic interpretation and there is no trace of the random choice interpretation. Juan can, for instance, utter the order in (3) in the scenario in (4) without intending María to go against her habits. In this context, then, (3) would not be interpreted as a request to pick randomly.

- (4) Juan wants María to bring him a book to read on his trip. He does not care what book she brings him, but he knows that she will make a careful selection.

*Uno cualquiera* does not trigger harmonic interpretations with all types of modals (we will refer to this property as the ‘modal selectivity’ of *uno cualquiera*.) For instance, the epistemic sentence in (2) cannot be interpreted as saying that, according to our evidence, Juan must have gone to see a movie, and that he might have gone to see any movie. The sentence cannot describe the scenario in (5), where the random choice reading is false and the harmonic reading is true. Similarly, the ability sentence in (6) cannot mean that Juan is able to lift any of these stones. (In that, (6) contrasts with its counterpart with the free choice determiner *cualquiera*, in (7), which does have that interpretation.)

- (5) We found a movie ticket in Juan’s coat pocket and concluded that he must have gone to the movies. We have no idea what movie he watched— the title of the movie was not readable. But, knowing Juan, we are sure that he selected the movie carefully.
- (6) Dada su fuerza, Juan puede levantar una cualquiera de estas piedras.  
 given his strength, Juan can lift a CUALQUIERA of these stones  
 ‘Given his strength, Juan can lift a random stone.’

<sup>2</sup>Following Kaufmann 2012, we take imperatives to correspond to necessity modals. See also Aloni 2007, among others.

- (7) Dada su fuerza, Juan puede levantar cualquiera de estas piedras.  
 given his strength, Juan can lift CUALQUIERA of these stones  
 ‘Given his strength, Juan can lift any of these stones.’

The data above raise two questions: (i) How can *uno cualquiera* interact with a higher modal to give rise to a harmonic interpretation? (ii) Why are harmonic interpretations available only with some modals? These questions are not new. The issue of how modal indefinites interact with modal auxiliaries is central to the literature on these items (see, e.g., Kratzer & Shimoyama 2002, Alonso-Ovalle & Menéndez-Benito 2008, 2010, Chierchia 2013, Aloni & Port 2013, Fălăuș 2009, 2014, a.o.), and the modal selectivity pattern of other modal indefinites has been addressed in recent work (Fălăuș 2014, Chierchia 2013, Aloni & Franke 2013). But our investigation of *uno cualquiera* will lead us to seek new answers to these questions. Building on our previous work on *uno cualquiera* (Alonso-Ovalle & Menéndez-Benito 2013), we assume that the random choice component of *uno cualquiera* projects a modal domain from the decision taken by the agent (Section 2.1). We derive this interpretation by positing that *uno cualquiera* is a nominal quantifier anchored to an event argument (Section 2.2). On this proposal, we expect different interpretations (random choice vs. harmonic) depending on what event *uno cualquiera* takes as anchor. When the anchor is the event argument of the verb, we will get the random choice interpretation (Section 2.3). When *uno cualquiera* shares its anchor with that of a higher modal, we will get the harmonic interpretation (Section 2.4.1). This hypothesis will help us address the modal selectivity problem (Section 2.4.2): we contend that *uno cualquiera* requires anchors of a particular type, and harmonic interpretations are only possible when the anchor of the modal satisfies this requirement. Our discussion of the modal selectivity pattern will be programmatic in nature: we will show that our proposal makes concrete predictions regarding modal selectivity and illustrate these predictions with some case studies, but a full-fledged evaluation of the proposal is left to future research.

## 2. The proposal

### 2.1 Background: the random choice interpretation

In Alonso-Ovalle & Menéndez-Benito 2013, we investigated the modality expressed by the random choice interpretation of *uno cualquiera*, and argued that this interpretation does not amount to agent indifference.<sup>3</sup> To see why, consider the scenario in (8).

- (8) There are two face-down cards in front of Juan. Juan knows that one of them is the ace of spades and the other one is the queen of hearts. He wants to take the ace, but he does not know whether the ace is the card on the right or the card on the left. He takes a card at random.

<sup>3</sup>See von Stechow 2000 for the same claim for *whatever*. See also Alonso-Ovalle & Menéndez-Benito 2013 for a criticism against the counterfactual account of *uno cualquiera* in Choi & Romero 2008.

On an agent indifference account, the sentence in (1), repeated below as (9), would convey that Juan took a card and that for every card  $x$ , there is a world compatible with his preferences where he took  $x$ . This condition is not met in (8), as in all the worlds compatible with his preferences, Juan takes the ace of spades. However, (9) is intuitively true in (8).

- (9) Juan cogió una carta cualquiera.  
 Juan took a card CUALQUIERA  
 ‘Juan picked a random card.’

While Juan wanted to take the ace, he could not *decide* to do so, because he didn’t know how to take the ace. He could only decide to take a card — *any* card — and hope it would turn out to be the ace. In Alonso-Ovalle & Menéndez-Benito 2013, we claim that what makes (9) true in (8) is that Juan’s decision was compatible with him taking any card. On this view, (9) is predicted to be true in the actual world iff the two conditions in (10) are satisfied (for any volitional event  $e$ ,  $d_e$  is the decision by the agent of  $e$  that led to  $e$ ).<sup>4</sup>

- (10) a. There is an actual event  $e$  of Juan taking a card  $x$ , and  
 b. for every (relevant) card  $x$  in  $w_0$ , there is a world compatible with  $d_e$  where there is an event  $e'$  of Juan taking  $x$  that fulfills  $d_e$ .

In (10b), the modal domain consists of worlds compatible with the decision taken by the agent. This raises the question of how *uno cualquiera* can access the decision. In what follows, we will develop an implementation where *uno cualquiera* can access the decision by projecting its modal domain from the event argument of the verb.

## 2.2 The basic components

According to some recent work on verbal modality (Hacquard 2006, 2009, Arregui 2009, Kratzer 2011, 2013, 2014), modal domains are anchored to parts of the evaluation world (situations, events or individuals). On this view, modal domains are projected via domain fixing functions, which take a part of the world (the anchor) and yield a set of worlds (the modal domain). We contend that *uno cualquiera* projects a modal domain by means of the domain fixing function  $f$  in (11) below.

- (11) a.  $f(e)$  is defined only if  $e$  has a (possibly improper) part  $d$  that establishes a goal.  
 b. If defined,  $f(e) = \left\{ w \left| \begin{array}{l} \text{there is a duplicate } \text{dup}_d \text{ of } d \text{ in } w \text{ and there is an} \\ \text{event that fulfils the goal associated with } \text{dup}_d \text{ in } w \end{array} \right. \right\}$

This proposal builds directly on unpublished work by Kratzer (Kratzer 2013, 2014) on transfer of possession verbs (verbs like *owe*, *offer* or *promise*). Kratzer argues that verbs in

<sup>4</sup>This formulation differs slightly from the one in Alonso-Ovalle & Menéndez-Benito 2013. Space reasons prevent us from discussing the differences between the two formulations here.

this class convey modality at the sub-lexical level, and that their modal domain is anchored to their event argument. This modal domain consists of worlds that contain a duplicate of the anchor and where the normative conditions associated with the anchor are satisfied. For instance, in (12) (from Kratzer 2013) the modal domain is a set of worlds containing a duplicate of the actual offer made by Lord Peter and where the normative conditions of the offer are fulfilled (i.e., the offer is accepted and honoured).

(12) Lord Peter offered Harriet a cup of tea.

Our denotation for *uno cualquiera* is in (13).<sup>5</sup> We let *uno cualquiera* take an event argument, its modal anchor. After combining with the anchor, *uno cualquiera* takes a function  $R$  of type  $\langle e, \langle v, st \rangle \rangle$ ,<sup>6</sup> corresponding to the type of transitive verbs (as illustrated in (14)). The output of this combination is a function of type  $\langle e, \langle s, t \rangle \rangle$ , which maps an event  $e'$  and a world  $w$  to true if the two conditions underlined in (13) obtain. Like run-of-the-mill existential determiners, *uno cualquiera* introduces an existential claim. On top of that, *uno cualquiera* conveys a modal component, where the modal domain is determined from the anchor via the domain fixing function in (11) above.

$$(13) \quad \llbracket \text{una carta cualquiera} \rrbracket = \lambda e \lambda R \lambda e' \lambda w. \underbrace{\exists x \left[ \begin{array}{c} \text{CARD}_w(x) \ \& \\ R_w(x)(e') \end{array} \right]}_{\text{existential component}} \ \& \ \forall y \underbrace{\left[ \begin{array}{c} \text{CARD}_w(x) \ \rightarrow \\ \exists w' \in f(e) \exists e'' \left[ \begin{array}{c} R_{w'}(y)(e'') \ \& \\ \text{FULFILS}_{w'}(e'')(e) \end{array} \right] \end{array} \right]}_{\text{modal component}}$$

$$(14) \quad \llbracket \text{coger} \rrbracket = \lambda x \lambda e \lambda w. \text{TAKE}_w(x)(e)$$

### 2.3 Deriving random choice

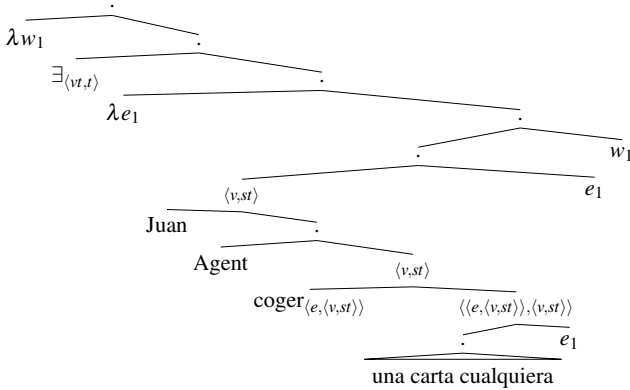
We take the sentence in (1) to have the LF in (15), where world and event arguments (and their binders) are syntactically represented (Hacquard 2006).<sup>7</sup> We propose that the anchor of *uno cualquiera* must be co-indexed with another event variable in the structure. In (15) it can only be co-indexed with  $e_1$ , the event argument of the verb. This is a valid anchor for *uno cualquiera*:  $f(e)$  is defined whenever  $e$  is a volitional event. We assume that for any  $e$ ,  $d_e$  takes place at the onset of the preparatory stage of  $e$  (see Grano 2011). A decision  $d_e$  determines a goal (a decision to act is a commitment to satisfy a goal). Thus, any volitional event has a part that determines a goal: its decision part. For any volitional event  $e$ , then,  $f(e)$  yields the set of worlds that contain a duplicate of  $d_e$  and where the goal associated with  $d_e$  is fulfilled.

<sup>5</sup>Read 'FULFILS<sub>w'</sub>(e'')(e)' as 'in  $w'$ ,  $e''$  fulfils the goal associated with (part of)  $e$ '.

<sup>6</sup>The basic types are:  $e$  for individuals,  $s$  for worlds,  $v$  for events and  $t$  for truth values.

<sup>7</sup>For simplicity, we are leaving out Tense and Aspect nodes, and assuming that an existential closure operator closes off the event argument.

(15)



Given this, the sentence in (1) is predicted to be true iff (i) there is an actual event  $e$  of Juan taking a card and (ii) for every actual card  $x$ , there is a world in the set of worlds that contain a duplicate of Juan’s actual decision  $d_e$  and where the goal associated with  $d_e$  is fulfilled, where the event that fulfils that goal is an event of Juan taking  $x$ . This captures the random choice interpretation.

## 2.4 Modal harmony and modal selectivity

The account above makes concrete predictions for sentences where *uno cualquiera* is in the scope of a higher modal:

(i) **Harmonic Readings.** On the harmonic interpretation, *uno cualquiera* has the same modal domain as the higher modal. In the framework that we are adopting, all modals project their domain from an anchor. Thus, we predict that a harmonic interpretation will arise if *uno cualquiera* projects its domain from the same anchor as the modal, using the same mode of projection.

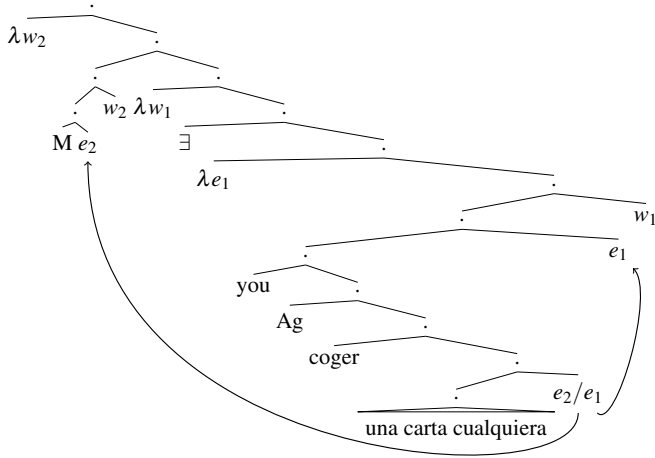
(ii) **Modal Selectivity.** Via the definedness condition imposed by  $f$ , *uno cualquiera* requires its anchor to establish a goal. If the anchor of the modal does not meet this constraint the harmonic reading should be blocked.

In what follows, we will show that these predictions are borne out in the modal examples presented in Section 1. Section 2.4.1 illustrates how harmonic readings are derived in imperatives, and section 2.4.2 briefly discusses why these readings might be blocked with epistemic and ability modals. Further research is needed to assess to what extent these predictions hold up across different types of modal auxiliaries.

2.4.1 Harmonic interpretations

Consider again the imperative in (3). We assume that this sentence has the LF in (16), where ‘M’ stands for the modal operator.

(16)



In this structure, the modal anchor of *uno cualquiera* can be co-indexed either with the event argument of the verb ( $e_1$ ) or with the anchor of the modal ( $e_2$ ). These two indexing configurations correspond to two interpretational possibilities. Local co-indexing gives rise to an embedded random choice interpretation, derived in exactly the same way as in non-modal sentences (see Section 2.3). The long-distance configuration will only be interpretable if the anchor of the modal is of the type of that *uno cualquiera* requires (i.e., an event that establishes goals). If so, this configuration will yield a harmonic interpretation.

We contend that the anchor of the modal in (16) meet the selectional restrictions imposed by *uno cualquiera*. Hacquard (2006) makes a distinction between true deontics (which, like imperatives, put an obligation on the addressee), and subject-oriented deontics (which pattern with circumstantials). She argues that true deontics project their domain from the order uttered by the speaker. Following up on this, we assume that imperatives also project their domain from the order, and assign them the (simplified) semantics in (17).<sup>8</sup>

$$(17) \quad \lambda e : \text{ORDER}(e). \lambda w \lambda p. e \sqsubseteq w \ \& \ \forall w' [w' \in f^*(e) \rightarrow p(w')]$$

<sup>8</sup> $e \sqsubseteq w'$  says that  $e$  is part of  $w$  and  $f^*$  is a domain fixing function that takes an order  $e$  and yields the set of worlds where  $e$  is obeyed.

An order determines a goal on the part of the speaker. Given this, the selectional conditions imposed by *uno cualquiera* are satisfied by the anchor of the modal in (16). Thus, the long-distance co-indexing in (16) is interpretable. This configuration yields the interpretation in (18).<sup>9</sup>

$$(18) \quad \lambda w. \mathbf{e}_2 \sqsubseteq w \ \& \ \forall w' \in f^*(\mathbf{e}_2) \exists e' \exists x [\text{CARD}_{w'}(x) \ \& \ \text{TAKE}_{w'}(x)(e') \ \& \ \text{AG}(e') = \text{AD}] \ \& \\ \forall y \left[ \begin{array}{c} \text{CARD}_{w'}(y) \rightarrow \exists w'' \in f(\mathbf{e}_2) \ \& \\ \exists e'' [\text{TAKE}_{w''}(y)(e'') \ \& \ \text{AG}(e'') = \text{AD} \ \& \ \text{FULFILS}(e'')(\mathbf{e}_2)] \end{array} \right]$$

The domain fixing function of the modal,  $f^*$ , takes the order  $\mathbf{e}_2$  and yields the set of worlds where this order is obeyed. The first conjunct in (18) requires that in all of these worlds the addressee take a card. The domain fixing function contributed by *uno cualquiera*,  $f$ , also takes  $\mathbf{e}_2$  as an argument. Given (11),  $f(\mathbf{e}_2)$  is the set of worlds that contain duplicates of the order  $\mathbf{e}_2$  and where there is an event that fulfils (the goal of)  $\mathbf{e}_2$ . (We take an event to fulfil the goal of an order  $e$  if  $e$  is an event of obeying  $e$ ). The second conjunct in (18) requires that for every card  $x$  there be a world in  $f(\mathbf{e}_2)$  where the order is obeyed by the addressee taking  $x$ . This is the harmonic interpretation.

The local co-indexing configuration yields the interpretation in (19), corresponding to the embedded random choice reading.

$$(19) \quad \lambda w. \mathbf{e}_2 \sqsubseteq w \ \& \ \forall w' \in f^*(\mathbf{e}_2) \exists e' \exists x [\text{CARD}_{w'}(x) \ \& \ \text{TAKE}_{w'}(x)(e') \ \& \ \text{AG}(e') = \text{AD}] \ \& \\ \forall y \left[ \begin{array}{c} \text{CARD}_{w'}(y) \rightarrow \exists w'' \in f(\mathbf{e}') \ \& \\ \exists e'' [\text{TAKE}_{w''}(y)(e'') \ \& \ \text{AGENT}(e'') = \text{AD} \ \& \ \text{FULFILS}(e'')(\mathbf{e}')] \end{array} \right]$$

As in (18), the first conjunct in (19) conveys that in all the worlds where the order is obeyed, there is an event of the addressee taking a card. The second conjunct imposes a condition on the decisions triggering each of those possible events: for any card  $x$ , the decision of the agent should be compatible with the addressee taking  $x$ . In short: the addressee is required to pick a card and make an indiscriminate decision as to which card to pick.

## 2.4.2 Impossible harmonic interpretations

As we have seen, the epistemic sentence in (2) cannot have a harmonic interpretation. Following Kratzer (2011), we assume that the anchor of an epistemic modal is a situation that provides the evidence that the claim is based on. In (2), the anchor could be, e.g., a situation containing a movie ticket in Juan's pocket (as in the scenario in (5)). This kind of anchor does not establish goals and, as a result, does not satisfy the selectional restrictions imposed by *uno cualquiera*. Thus, long-distance co-indexing is not interpretable in (2) and therefore the harmonic interpretation is correctly predicted to be impossible.<sup>10</sup>

<sup>9</sup>Variables in bold type represent the objects that they stand for. 'AD' stands for the addressee.

<sup>10</sup>Epistemic *possibility* modals seem to allow for a harmonic interpretation (Rivero 2011a). In unpublished work (Alonso-Ovalle & Menéndez-Benito 2015) we explore the possibility that these are pseudoharmonic readings that arise via an inference drawn on the basis of the unremarkable interpretation of *uno cualquiera*.

The anchors of ability modals are plausibly situations containing the individual being described, at a particular time (Kratzer 2012). On this view, the anchor of the ability modal in (6) would be Juan considered at the time of utterance. As this anchor is not an event that establishes goals, we predict the harmonic reading to be impossible in (6).

### 3. Further research

A crucial component of our analysis is the claim that *uno cualquiera* projects its modal domain from an event argument. While the paper focus on *uno cualquiera*, this research invites the following hypothesis that all modal indefinites project their modal domain from a situation or event. On this view, at least some of the parameters of variation attested within the class of modal indefinites would fall out from (i) the constraints that indefinites impose on their anchors, and (ii) the domain fixing functions that they introduce. This sets the stage for a research program that investigates the range of anchors that modal indefinites can combine with, and the extent to which the selectional restrictions that indefinites impose on their anchors overlap with the restrictions imposed by verbal modals.

Luis Alonso-Ovalle, Paula Menéndez-Benito  
 luis.alonso-ovalle@mccgill.ca, paula.menendez@upf.edu

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