Projecting Possibilities in the Nominal Domain:
Spanish *Uno Cualquiera.*

Abstract Recent research argues that modal verbs project their domain of quantification from a part of the evaluation world—their 'modal anchor' (Hacquard 2006, 2009, Arregui 2009, Kratzer 2009, 2015, 2013). Based on the behaviour of the Spanish modal indefinite *uno cualquiera*, we contend that modal nominals can do the same.

Uno cualquiera contributes modality: *Juan cogió una carta cualquiera* ('Juan picked a random card') conveys that Juan picked a card and that he chose it indiscriminately — he could have picked any other. This 'random choice' interpretation is ruled out with non volitional predicates (Choi & Romero 2008) and when *uno cualquiera* is in the subject position of agentive verbs. When *uno cualquiera* is embedded under some modals, another possibility arises: *uno cualquiera* introduces a distribution effect with respect to the worlds that the modal ranges over. For instance, *Coge una carta cualquiera!* ('take any card!') can be interpreted as conveying that any card is a permitted option. However, this harmonic interpretation is not available with all kinds of modals.

We claim that this pattern can be derived if *uno cualquiera* is a nominal quantifier with a modal component that is anchored to an event. On this proposal, different interpretations arise depending on what event *uno cualquiera* takes as anchor. We argue that random choice modality is linked to the decision taken by the agent of the event described by the sentence. When the anchor of *uno cualquiera* is the event argument of the verb, *uno cualquiera* can access the decision that triggered this event, yielding the random choice interpretation. The selectional constraints that *uno cualquiera* imposes on its anchor restrict the types of modals that allow for harmonic interpretations.

1 Introduction.

Some indefinites trigger modal inferences in sentences that contain no other modal expressions. Cross-linguistically, these modal indefinites convey two types of inferences (Haspelmath 1997). Some of them, often called 'epistemic indefinites', signal that the speaker does not know which individual satisfies the existential claim.

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Others, which we will dub 'random choice indefinites', indicate that an agent made an indiscriminate choice. For example, the Spanish sentence in (1), with the random choice indefinite *uno cualquiera*, conveys that Juan bought a book and that he chose it indiscriminately.[1] This interpretation brings in modality by evoking alternative actions that Juan could have undertaken (Choi & Romero 2008, Rivero 2011a,b, Alonso-Ovalle & Menéndez-Benito 2011, 2013b).[2]

(1)   Juan compró un libro cualquiera.
       Juan bought a   book CUALQUIERA
       'Juan bought a random book.'

While there is by now a substantial amount of work on epistemic indefinites, random choice indefinites are comparatively less studied.[3] This paper aims to better our understanding of random choice indefinites by zooming in on the behaviour of Spanish *uno cualquiera*. Sections 1.1 and 1.2 give an overview of the properties of *uno cualquiera* that we will focus on. Section 1.3 lays out our research questions, and provides a preview of our answers.

1.1 The Random Choice Interpretation.

Intuitively, the sentence in (1) compares Juan's actual book purchase—say his buying *War and Peace*—with other alternative, non-actual, book purchases by him—say, his buying *Ulysses* or *Don Quixote*. The sentence in (1) signals that, for Juan, all these

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1 As illustrated in (i-a), *uno cualquiera* DPs are headed by the indefinite determiner *un*, which can be replaced by plural numerals or the determiner *otro* ('other'), and the free choice item *cualquiera*, which doubles up as a determiner in its reduced form *cualquier*, as in (i-b) (See Rivero 2011a). The determiner *cualquier* differs significantly from *uno cualquiera* in both interpretation and distribution. (See Rivero 2011a for a discussion of the differences between *uno cualquiera* and *cualquier*.) In this paper, we will not discuss *cualquier* and we will not attempt to derive the interpretation of *uno cualquiera* compositionally from *un* and *cualquiera*.

(i)   a.   [DP un ({ dos, tres … }) / otro [NP libro(s) [cualquiera]]]
       b.   [DP cualquier [NP libro]]

2 We use *random* in the English translations only for convenience. We do not want to claim that *a random book* conveys exactly the same meaning as *un libro cualquiera*. The random choice meaning component is often referred to as 'agent indifference' (see, for instance, von Fintel 2000, Tredinnick 2005 and Choi 2007.) We think that this label is misleading for the case of *uno cualquiera*, since, as we will see, this indefinite is appropriate in scenarios where the agent is not truly indifferent. For this reason, we have decided to talk about 'random choice' rather than 'agent indifference.'

3 For recent overviews of work on modal indefinites, see Alonso-Ovalle & Menéndez-Benito 2013c, 2015, To appear. Some references on random choice indefinites are Choi 2007, Kim & Kaufmann 2007, Choi & Romero 2008, Rivero 2011a,b, Alonso-Ovalle & Menéndez-Benito 2011, 2013b, Chierchia 2013, Fălăuş 2014, 2015.

alternative actions count as 'the same' as the actual action—he would have picked *any* book. A substantial part of this paper will be devoted to spelling out what this comparison amounts to.

Alongside with the random choice interpretation, the sentence in (1) has an additional interpretation, which can be paraphrased as 'Juan bought a book that is not special or remarkable.' We will dub this the 'unremarkable' interpretation of *uno cualquiera*. The scenarios in (2) and (3) bring out the two possibilities.

(2)   *Scenario.* Juan went to the bookstore. He wanted to buy *The Unbearable Lightness of Being*, and did so. I don't think this book is special in any way.

(3)   *Scenario.* Juan went to the bookstore, and bought a book at random. The book turned out to be *The Unbearable Lightness of Being*. I think this book is remarkable.

In the scenario in (2), I can truthfully utter (1) on its unremarkable interpretation (since I consider the book that Juan bought unremarkable) but not on its random choice interpretation (as Juan didn't make an indiscriminate choice). In contrast, my utterance of (1) in the scenario in (3) would be false on the unremarkable interpretation but true on the random choice interpretation.

While the unremarkable interpretation is always possible, the random choice interpretation has a restricted distribution. First of all, for this interpretation to obtain, the sentence has to describe a volitional event (Choi & Romero 2008). If that condition is not met, *uno cualquiera* only has the unremarkable interpretation. Copular sentences are a clear case. The sentences in (4) convey that the subject is unremarkable within the class of individuals denoted by the noun phrase: (4-a) says that Juan is a regular clerk and (4-b) that Juan is a student just like the rest.

(4)   a.   Juan es un oficinista cualquiera.
            Juan is a clerk   CUALQUIERA
            'Juan is an unremarkable clerk.'
      b.   Juan es un estudiante cualquiera.
            Juan is a student   CUALQUIERA
            'Juan is an unremarkable student.'

Similarly, in a sentence like (5) (from Choi & Romero 2008), where *uno cualquiera* combines with a non-agentive predicate, we only see the unremarkable interpretation.[4]

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4 Choi & Romero (2008) do not discuss the unremarkable interpretation, and mark the sentence in (5) as deviant.

(5) Ayer   Juan tropezó   con un objeto cualquiera.
     yesterday Juan stumbled with an object CUALQUIERA
     'Yesterday, Juan stumbled on an unremarkable object.'
                                        (Choi & Romero 2008: 78, our translation)

The minimal pair in (6) makes the same point. The baker may have broken the pan intentionally, but the yeast lacks intentions. Accordingly, the sentence in (6-a) has both the random choice and unremarkable interpretations, while the one in (6-b) only has the unremarkable interpretation.[5]

(6)   a.   El panadero destrozó   un molde   cualquiera.
           the baker   destroyed a   baking pan CUALQUIERA
           'The baker destroyed a random baking pan.'
      b.   La levadura destrozó   un molde   cualquiera.
           the yeast   destroyed a   baking pan CUALQUIERA
           'The yeast destroyed an unremarkable baking pan.'

Volitionality is a necessary but not a sufficient condition for the random choice interpretation to obtain: this interpretation is unavailable when *uno cualquiera* saturates the agent role of action verbs, as in (7) below, which conveys that an unremarkable student spoke.[6]

(7)   Habló un estudiante cualquiera.
      spoke a   student   CUALQUIERA
      'An unremarkable student spoke.'

Table 1 on page 5 summarizes the distributional restrictions of the random choice interpretation of *uno cualquiera*. We will not say much about the unremarkable

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5 This pair is modelled after similar contrasts with ability attributions presented in Hackl 1998.

6 Choi (2007) and Choi & Romero (2008) make similar observations for Korean. Choi (2007) notes that Korean *amwu-N-na* is odd in the subject position of episodic sentences, and claims that this is because this item needs to be interpreted under the scope of a volitional agent. Choi & Romero (2008) point out that *amwu-N-na* can appear in subject position of passive sentences, as in (ii) below. They note that this shows that the relevant licensing factor is semantic agentivity, not syntactic subjecthood. The passive counterpart of (6-a), in (iii) below, also has a random choice interpretation.

(ii)   amwu-na   John-eykey mac-ass-ta.
       AMWU-OR John-by   hit-PAST-DEC
       'Anyone was hit by John.'

(iii) Fue destrozado un molde   cualquiera.
       was destroyed a   baking pan CUALQUIERA
       'A random baking pan was destroyed.'

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interpretation, but will briefly come back to it in Section 5.

interpretation	restrictions	
	available	*unavailable*
random choice	object of volitional verbs	subject of volitional verbs non-volitional verbs
unremarkable	unrestricted	

Table 1   The distribution of the random choice and unremarkable interpretations of *uno cualquiera*

1.2   Modal Harmony and Modal Selectivity.

The random choice and the unremarkable interpretations described above can be embedded under modal operators. For instance, the sentence in (8), which contains a necessity modal with an epistemic interpretation, has the two interpretations in (9).

(8)   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.'

(9)   a.   *Embedded Unremarkable Interpretation:* In all the worlds compatible with our evidence, Juan went to see an unremarkable movie.
       b.   *Embedded Random Choice Interpretation:* In all the worlds compatible with our evidence, Juan went to see a movie and picked it indiscriminately.

Under some modal operators, a third interpretational possibility arises. Consider, as illustration, the case of imperatives.[7] The command in (10) can be interpreted as telling the addressee to bring a book, while allowing her to bring *any* book. On this interpretation, *uno cualquiera* induces a distribution effect on the worlds that the imperative operator ranges over (the set of worlds compatible with the addressee's obligations): for every (relevant actual) book x, there is a permitted world where the addressee brings x. We will refer to this interpretation as the 'harmonic' interpretation of *uno cualquiera*, since the modal component that *uno cualquiera* brings into play is parasitic on the domain of a higher modal operator.

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7 Following Kaufmann 2012, we are assuming that imperatives are necessity modals. See Han 2011 and Charlow 2014 for an overview of accounts of imperatives.

(10) ¡Tráeme   un libro cualquiera!
      bring-me a   book CUALQUIERA
      'Bring me any book!'

One might hypothesize that the harmonic interpretation of (10) is a pragmatic inference that arises from the random choice interpretation: if the speaker requires the addressee to pick a book and to choose it indiscriminately, it seems reasonable to conclude that the speaker would be satisfied with any book. This hypothesis, however, is on the wrong track. To see why, consider the scenario in (11).

(11) *Scenario.* Pedro wants Juan to bring him a book to read on the train. He doesn't care which book Juan brings him. But he knows that Juan will make a careful selection—Juan would never choose a book indiscriminately.

Pedro can utter the sentence in (10) in the scenario in (11) without intending Juan to go against his habits. In this context, then, (10) would not be a request to choose indiscriminately.

Does the sentence in (10) also have an embedded random choice interpretation? There are certainly cases where an imperative like (10) can be used to ask an agent to make an indiscriminate choice. Suppose that María has been looking at the menu for 20 minutes, and she is still undecided about what to order. Exasperated, I utter the command in (12).[8] In this context, (12) would be interpreted as a request to pick a dish indiscriminately.

(12) ¡Basta!   ¡Escoge un plato cualquiera!
       enough! pick   UN dish CUALQUIERA
      'Enough! Pick a random dish!'

However, it is hard to find contexts where the embedded random choice interpretation obtains but the harmonic one does not. While scenarios where an agent is allowed to choose freely but not required to choose indiscriminately are rather natural, situations where the opposite is the case are markedly strange. These scenarios would be rather uncooperative, with the authority imposing conflicting requirements: the agent would be asked to make an indiscriminate decision in a situation where not every outcome is allowed. Consider, for instance, the situation in (13).

(13) *Scenario.* King Cruel is known for his sadistic tendencies. He wants his servant to bring him a book at random, but he will punish her if she brings him any book other than the *Black Magic Compendium*.

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8 Thanks to Laia Mayol for suggesting this type of scenario to us.

In this scenario, the king could utter the command in (10). However, note that unless the servant knows in advance that the king will not accept every book, she will tend to interpret (10) as giving her freedom of choice. A possible way of interpreting these data is to say that (10) or (12) have both a harmonic interpretation and an embedded random choice interpretation, but that the random choice interpretation normally goes hand in hand with the harmonic one, for pragmatic reasons.

The three interpretations available to the example in (10) can then be summarized as follows.

(14)   a.   *Embedded Unremarkable Interpretation:* In all permitted worlds, the addressee picks an unremarkable book.
        b.   *Embedded Random Choice Interpretation:* In all permitted worlds, the addressee picks a book indiscriminately.
        c.   *Harmonic Interpretation:* In all permitted worlds, the addressee picks a book, and every book is a permitted option.

Not all modals allow for a harmonic interpretation of *uno cualquiera*. Consider, for instance, the sentence in (8) above. This sentence, with an epistemic necessity modal, has the two interpretations in (9). However, the sentence lacks the harmonic interpretation paraphrased in (15).

(15)   *Unattested Harmonic Interpretation.* In all the worlds compatible with our evidence, Juan went to watch a movie, and for every (relevant actual) movie *x*, there is a world compatible with our evidence where Juan watched *x*.

To see that, consider, as illustration, the scenario in (16):

(16)   *Scenario.* We know that Juan takes movies very seriously. Before picking a movie to watch, he reads countless reviews. He always makes an informed decision. This afternoon we found a movie ticket in his coat's pocket. The ticket had today's date on it. We concluded from this that he must have gone to the movies. We don't know which movie he watched, though, and we have no reasons to exclude any. As far as we know, Juan could have watched any movie.

The truth-conditions in (15) are satisfied in the scenario in (16), but the truth-conditions in (9-a) or (9-b) are not. The sentence in (8) is judged false in this scenario, which shows that it lacks the harmonic interpretation in (15).

Similarly, the ability sentence in (17) lacks a harmonic interpretation: (17) cannot mean that Juan is able to lift any stone, in contrast with its counterpart with the free choice determiner *cualquiera*, in (18), which does have that interpretation. ((17) sounds slightly degraded to us, which we attribute to the fact that the unremarkable

and random choice interpretations give rise to ability attributions that are somewhat odd.)

(17)   Dada su fuerza física,   Juan puede levantar una piedra cualquiera.
       given his strength physical, Juan can   lift   a   stone CUALQUIERA
       'Given his physical strength, Juan can lift a random stone.'

(18)   Dada su fuerza física,   Juan puede levantar cualquier piedra.
       given his strength physical, Juan can   lift   any   stone
       'Given his physical strenght, Juan can lift any stone.'

In view of the discussion above, one could conclude that the factor that determines whether a harmonic interpretation is possible is the flavor of modality expressed by the modal. So far, we have seen that *uno cualquiera* allows for harmonic interpretations with deontic modals but not with epistemic or ability modals. However, the empirical picture is complicated by the existence of pairs like (19) below, which suggest that modal force (necessity *vs.* possibility) might be a factor too.

(19)   a.   Según   nuestra evidencia, el asesino   puede ser un
            according to our   evidence   the murderer can   be UN
            prisionero cualquiera.
            prisoner   CUALQUIERA
            'According to our evidence, the murderer might be any prisoner.'
       b.   Según   nuestra evidencia, el asesino   tiene que ser un
            according to our   evidence   the murderer has   to   be UN
            preso   cualquiera.
            prisoner CUALQUIERA
            'According to our evidence, the murderer has to be an unremarkable / average prisoner.'

The example in (19-a), adapted from Rivero (2011a), features a possibility modal with an epistemic interpretation. The example in (19-b) is its counterpart with a necessity modal. Like (16), (19-b) lacks a harmonic interpretation: it can only convey that the murderer has to be an unremarkable or average prisoner. In contrast, to our ear, (19-a) can *marginally* convey that, as far as the evidence goes, *any* prisoner can be the murderer. That is, (19-a) seems to have a harmonic interpretation on which it is interpreted as (20), with the free choice determiner *cualquiera*.[9]

(20)   El asesino   puede ser cualquier   prisionero.
       the murderer can   be CUALQUIER prisoner

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9 Chierchia (2013) provides similar examples for Italian *uno qualsiasi* and argues that they can be given an epistemic free choice interpretation (i.e., a harmonic interpretation).

'The murderer can be any prisoner.'

On the analysis that we develop in Sections 3 and 4, modal flavor, rather than modal force, determines which modals allow for a harmonic interpretation of *uno cualquiera*. Our proposal will predict harmonic interpretations to be blocked with epistemic and ability modals. We will suggest (Section 4.3) that the harmonic interpretation we detect in cases like (19-a) might be due to a pragmatic inference triggered by the unremarkable interpretation of *uno cualquiera*.

1.3   Research Questions.

In the rest of the paper, we will ignore, for the most part, the unremarkable interpretation and focus on the random choice and harmonic interpretations. We will address the following three issues.

i. *Random choice interpretation.* What type of modality does the random choice interpretation convey? How does this modal interpretation arise in the absence of an external modal operator?

ii. *Long distance association.* How can *uno cualquiera* interact with a higher modal to give rise to a harmonic interpretation?

iii. *Modal selectivity.* Why are harmonic interpretations available only with some modals? What characterises the relevant class of modals?

These questions are not new. Building on Choi 2007, Choi & Romero (2008) present a detailed characterization of the random choice interpretation of *uno cualquiera*. The issue of how modal indefinites interact with external modals is central in the literature on these items (see, e.g., Kratzer & Shimoyama 2002, Alonso-Ovalle & Menéndez-Benito 2008, 2010, Chierchia 2013, Aloni & Port 2013, Fălăuş 2009, 2012, 2014, among others), and the modal selectivity pattern of other modal indefinites has been addressed in recent work (Fălăuş 2014, Chierchia 2013, Aloni & Franke 2013).[10]

However, our investigation of *uno cualquiera* will lead us to seek new answers to these questions. In Section 2, we will put forward a novel characterization of

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10 Other modal indefinites have been argued to display modal selectivity but the exact pattern differs depending on the indefinite. For instance, German *irgendein* triggers a free choice harmonic interpretation under deontic modals (Kratzer & Shimoyama 2002) but not under epistemic modals (Lauer 2010, Port 2010, Aloni & Port 2013). In other cases, the contrast is one of acceptability. Romanian *vreun* is acceptable under (obligatorily non-factive) epistemic modals, but not under deontics or other priority modals (See Fălăuş 2009, 2012, 2014, 2015. Farkas (2002) had already noted that *vreun* is ruled out under the scope of *want* and emotive factives.) Romanian *un oarecare* is fine under deontic modals, but only marginally so with epistemic ones (Fălăuş 2015).

the random choice interpretation. In Section 3, we will develop a compositional implementation of that characterization, building on some recent work on verbal modality (Hacquard 2006, 2009, Arregui 2009, Kratzer 2009, 2015, 2013). The core idea is that *uno cualquiera* projects its modal domain from an event made available by the semantic composition (its *modal anchor*). We expect different interpretations 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 3). When *uno cualquiera* shares its anchor with that of a higher modal, we will get a harmonic interpretation (Section 4). Section 4 shows how this hypothesis can help us address the modal selectivity problem: *uno cualquiera* requires anchors of a particular type, and harmonic interpretations are only possible when the anchor of the modal satisfies this requirement. This discussion is programmatic in nature: it shows that our proposal makes concrete predictions regarding modal selectivity and illustrates these predictions with some case studies. A full-fledged evaluation of the proposal is left to further research.

Our proposal will have nothing to say about the unremarkable interpretation of *uno cualquiera*. As a working hypothesis, we will assume that *uno cualquiera* is ambiguous between one form that can give rise to the random choice and harmonic interpretations (the form that we will focus on), and another that conveys the unremarkable interpretation. To determine whether this hypothesis is tenable it would be necessary to provide a detailed analysis of the unremarkable interpretation, a non-trivial task that we will not be able to undertake here.[11]

2 Characterizing the Random Choice Interpretation.

As noted above, intuitively, the random choice interpretation compares an actual action with a set of non-actual actions. But what is the exact nature of this comparison? Section 2.1 discusses a proposal, put forward by Choi (2007) for Korean, and applied to Spanish by Choi & Romero (2008), according to which *uno cualquiera* expresses counterfactuality. We will conclude that, despite its intuitive plausibility, the proposal does not correctly characterize the random choice interpretation. Section 2.2 assesses the possibility that random choice corresponds to goal-oriented modality. We will discuss several variations on the goal-oriented account, and conclude that the random choice interpretation introduces a modal domain consisting of worlds compatible with the goal associated with the agent's decision.

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11 But see Section 5 for some preliminary evidence for the ambiguity hypothesis.

2.1 A Counterfactual Approach: Choi & Romero (2008).

Choi (2007) shows that the Korean existential item *amwu-N-na* has a random choice component. The example in (21), for instance, conveys that John picked a card and that he did so randomly.[12]

(21) John-un   amwu-khadu-na cip-ess-e.
      John-TOP AMWU-card-OR take-PAST-DEC
      'John took just any old card.'   (Choi 2007: 204)

Choi puts forward a counterfactual analysis of these items that is modeled after von Fintel's account of English *-ever* free relatives, which also have an indifference / random choice component (von Fintel 2000, Tredinnick 2005, Rawlins 2008, Condoravdi 2015). The basic intuition underlying her proposal is that a sentence like (21) conveys that Juan took a card and that he would have taken a card regardless of what cards were available. To capture this intuition, she proposes that (21) asserts that Juan took a card in the actual world, w_0, and presupposes (roughly) that in all the closest worlds where the set of cards differs from the set of cards in w_0, Juan took a card if and only if he took a card in w_0.

The analysis has two components. The first is the claim that *-na* indeterminates convey a counterfactual presupposition. This is illustrated in (22) below, where the indefinite takes as arguments a world of evaluation, a set of worlds F (a modal base), and two properties P and Q. The function *min* in the metalanguage takes a world w and a proposition p and returns the worlds in which p is true that are maximally similar to w. Similarity here is determined with respect to the properties of w: for any worlds w' and w'', w'' is at least as close to w as w' if and only if the set of propositions that are true in both w and w'' is a subset of the set of propositions that are true in both w and w'.

(22) a. LF: wh-/amwu-(N)-na$(w_0)(F)(P)(Q)$
      b. *Presupposition*:

$$\forall w' \in min_{w_0} \left[F \cap \left(\lambda w''. \left[\begin{array}{c} \{x : P_{w''}(x)\} \\ \neq \\ \{x : P_{w_0}(x)\} \end{array} \right] \right) \right] : \begin{array}{c} \exists x [P_{w'}(x) \wedge Q_{w'}(x)] \\ \leftrightarrow \\ \exists x [P_{w_0}(x) \wedge Q_{w_0}(x)] \end{array}$$

      c. *Assertion*: $\exists x [P_{w_0}(x) \wedge Q_{w_0}(x)]$ (Choi 2007: 114)

In (21), P would correspond to the property of being a card, and Q to the property of

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12 Choi (2007) investigates two types of items that convey a random choice interpretation in episodic sentences and roughly correspond to English *wh-ever*: *amwu-N-na* and its *wh-* counterpart *wh-N-na*. She argues that the source of the random choice interpretation is the particle *-na*. *Amwu-N-na* items contrast with *wh-N-na* items in that the former range over widened domains.

being taken by John. This delivers the counterfactual presupposition in (23).

(23)   In all the worlds w where the set of cards differs from the actual set of cards and that are otherwise closest to w_0 John picked a card if and only if he picked a card in w_0.

Choi (2007) notes that (22) on its own does not capture the interpretation of (21). The sentence in (21) is only felicitous if John would have picked *any* card—it conveys a free choice effect. This is not predicted by (22). Suppose that the only cards in the world of evaluation are the queen of hearts, the jack of hearts, and the ace of spades. Assume that the domain of the universal quantifier in (23) is the union of the sets of worlds in (24). Now assume that John picked the ace in the actual world and that he picked the queen in worlds in $W1$ and $W2$ and the ace in worlds in $W3$. The condition in (23) is satisfied even though John would not have picked the jack.

(24) $W1 = \min_{w_0}(\{w \mid [\![\text{carta}]\!]^w = \{J\heartsuit, \mathbf{Q}\heartsuit\}\})$
         $W2 = \min_{w_0}(\{w \mid [\![\text{carta}]\!]^w = \{A\spadesuit, \mathbf{Q}\heartsuit\})$
         $W3 = \min_{w_0}(\{w \mid [\![\text{carta}]\!]^w = \{\mathbf{A}\spadesuit, J\heartsuit\}\})$

This motivates the second component of the analysis, a constraint on the worlds selected by min_{w_0}. For each individual d in the extension of the noun phrase, the set of worlds that is being quantified over must include worlds where the extension of the noun phrase is a singleton set containing only d (Choi 2007: 202 and ff.). In our example, the domain of quantification must contain the worlds in (25). Given this, assuming that John took a card, (23) will only be satisfied if John would have taken *any* card.

(25) $W1 = \min_{w_0}(\{w \mid [\![\text{carta}]\!]^w = \{J\heartsuit\})$
         $W2 = \min_{w_0}(\{w \mid [\![\text{carta}]\!]^w = \{Q\heartsuit\})$
         $W3 = \min_{w_0}(\{w \mid [\![\text{carta}]\!]^w = \{A\spadesuit\})$

Choi & Romero (2008) argue that this proposal can account for the distribution of (what we are calling) the random choice interpretation. On their view, random choice indefinites will be ruled out in cases where the presupposition they trigger cannot be satisfied (or is hard to accommodate). A case in point are non-agentive sentences. Choi and Romero note that the Korean sentence in (26) is out and argue that this is because the counterfactual presupposition triggered by this sentence is implausible.[13] They extend the claim to (27), which, as we have seen is bad (on its

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13 When discussing (26), Choi and Romero say: "The sentence asserts that the intersection of "people" and "individual run into by John" is not empty. The presupposition of variation conveys that there is something essential or law-like about this intersection being non-empty, regardless of who the actual set of people are" (Choi & Romero 2008: 94). They go on to claim that this presupposition is hard to

random choice interpretation).[14]

(26) * John-un amwu-hako-na macuchi-ess-ta.
         John-TOP AMWU-with-OR run.into-PAST-DEC
       '(Lit.) John ran into anynone.'   (Choi & Romero 2008: 93)

(27) # Ayer   Juan tropezó   con un objeto cualquiera.
         yesterday Juan stumbled with an object CUALQUIERA
       'Yesterday, Juan stumbled on a random object.'
                                 (Choi & Romero 2008: 78, our translation)

There are reasons to doubt that the counterfactual component is presuppositional. In his discussion of *whatever*, von Fintel notes that the indifference component does not project like a presupposition. In examples like (28), for instance, indifference does not project out of the *unless* clause. The sentence is interpreted as saying that Zach must have spent at least five minutes in the voting booth unless he voted indifferently for the person at the top of the ballot.

(28) Unless Zack simply voted for whoever was at the top of the ballot, he must
       have spent at least five minutes in the voting booth. (von Fintel 2000: 36)

This issue is left unsolved in von Fintel's work. Choi & Romero (2008) inherit this problem, since the random component of *uno cualquiera* does not seem to project like a presupposition, either. The sentence in (29) can be (roughly) paraphrased as saying that Juan's teacher will be angry at him if Juan took a book indiscriminately.

(29) Si Juan cogió un libro cualquiera,   su profesor estará enfadado.
       If Juan took UN book CUALQUIERA his teacher   will.be angry
       'If Juan took a random book, his teacher will be angry at him.'

Given this, in what follows, we will evaluate a version of the counterfactual account where the counterfactual component is part of the truth conditions. Our conclusion will be that this proposal cannot be successfully extended to *uno cualquiera*.

First of all, the counterfactual account predicts wrong truth conditions for the example in (30).

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satisfy (see their footnote 7 for possible reasons why this might be so).

14 Choi and Romero do not discuss cases like (iv) which, as we have seen, also lack the random choice interpretation (but see footnote 6).

(iv) Habló un estudiante cualquiera.
       spoke UN student   CUALQUIERA
       'An unremarkable student spoke.'

(30)   Juan cogió una carta cualquiera   de esta baraja.
        Juan took a   card CUALQUIERA of this deck
        'Juan took a random card in this deck.'

(31)   *Scenario.* Juan is a gambler. As a rule, he will only pick a card if the deck
        has exactly fifty-two cards. This time, this condition was met. The deck
        was complete, and there were no extra cards. Juan picked a card at random.

Intuitively, (30) is true in the scenario in (31). But the counterfactual account predicts
it to be false. For (30) to be true, the condition in (32) would have to be satisfied.
Recall that Choi needs to assume that the domain of quantification in (32) includes
worlds where there is only one card. But Juan would not have picked a card if there
was only one available card.

(32)   In all the worlds where the set of cards in this deck differs from the actual
        set of cards and that are otherwise closest to w_0, Juan picked a card iff he
        picked a card in w_0.

Second, the counterfactual account does not correctly predict the distribution of the
random choice interpretation. As we have seen, the example in (33), where *uno
cualquiera* is in the subject position of an agentive verb, only has the unremarkable
interpretation.

(33)   Habló un estudiante cualquiera   de la clase.
        spoke a   student   CUALQUIERA of the class
        'An unremarkable student in the class spoke.'

The counterfactual account predicts that this example should have the interpretation
in (34): the example should convey that a student in the class spoke and that, if the
set of actual students had been different, a student in the class would have spoken as
well.

(34)   a.   A student in the class spoke in w_0, and
        b.   in all the worlds where the set of students in the class differs from the
              actual set of students in the class and that are otherwise closest to w_0,
              a student spoke if and only if a student spoke in w_0.

But consider the scenario in (35).

(35)   *Scenario.* Professor Smith has the following policy: at the beginning of
        each class, she asks one of her students to summarize the main points of
        the previous lecture. She has a method for selecting the student: whoever
        got the highest grade in the last homework gets to present (when grading,

Professor Smith always makes sure that only one student gets a grade that is higher than any other.) This time, Perfecto, who got a 98/100 in the last homework, was the one who talked.

If the interpretation in (34) were available, (33) would be true in the scenario in (35). But (33) is intuitively false in this scenario. As noted in Section 1, this sentence can only be interpreted as saying that a student spoke and, that, according to the speaker, this student is unremarkable.

We conclude that the counterfactual proposal cannot account for the interpretation and distribution of the random choice interpretation of *uno cualquiera*.

2.2 Goals and Decisions.

Chierchia (2013) suggests in passing that the modal domain associated with Italian *uno qualsiasi* is the set of worlds compatible with the agent's goals. In Section 2.2.1 we will start discussing the possibility that *uno cualquiera* expresses this type of modality. The outcome of this discussion is that a goal-oriented account needs to be suitably constrained so as to take into consideration what the agent knows and what she can do. In Section 2.2.2 we present, and ultimately reject, a way of capturing these restrictions in a system that employs quantification over conceptual covers (Aloni 2001). Section 2.2.3 puts forward a characterization of random choice modality where the modal domain associated with *uno cualquiera* is determined by the goal associated with the decision that triggered the event described by the sentence.

2.2.1 A Goal Oriented Account, First Pass.

On a simple version of the goal-oriented account, the sentence in (36) would be true if and only if Juan took a card and taking any card was compatible with his goals. That is, (36) would be true only if the two conditions in (37) were satisfied. Note that, intuitively, only Juan's goals at a particular time, close to the actual taking event should be relevant. In (37) we locate this time at the preparatory stage of the event described by the sentence.[15]

(36)   Juan cogió una carta cualquiera.
        Juan took a   card CUALQUIERA
        'Juan took a random card.'

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[15] Following much literature on events (Parsons 1990, Smith 1990, Kamp & Reyle 1993, among many others), we are assuming that eventualities are linguistically decomposable into stages (e.g., preparatory stage, inner stage, end point, and result state).

(37)   a.   *Existential Component.* There is an actual event e of Juan taking a card.

        b.   *Modal Component.* For every (relevant) card y in w_0, there is a world w where Juan's goals at the preparatory stage of e are satisfied and Juan takes y in w.

This hypothesis makes the right predictions in many cases. Consider, for instance, the scenarios below. The sentence in (36) can felicitously describe the scenario in (38), where taking any card would be fine with Juan, but not the one in (39) (where Juan has some preferences), or (40) (where Juan's goal is to take a particular card).

(38)   *Scenario.* There were several face-up cards in front of Juan. Juan wanted to take a card. He took the ace of spades, but any other card would have been fine with him.

(39)   *Scenario.* There were several face-up cards in front of Juan. Juan wanted to take a card, but he did not want to take the queen or the jack of hearts. Any other card was fine with him. He took the ace of spades.

(40)   *Scenario.* There were several face-up cards in front of Juan. Juan wanted to take the ace of spades and he did so.

However, there are cases where (36) is acceptable, even though not all the cards would be compatible with Juan's goals. A case in point is the scenario in (41). Intuitively, (36) is true in this scenario. However, the proposal in (37) predicts it to be false, because the condition in (37-b) is not satisfied: in all the worlds where Juan's goals are satisfied, he takes the ace of spades.

(41)   *Scenario.* There are two face-down cards in front of Juan. Juan knows that one 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.

                                                    (Based on a scenario in Aloni 2001)

In what follows, we will explore two ways of modifying (37) so that it makes the right predictions in (41).

2.2.2   Ways of Identifying Cards.

In the scenario in (41) there is a way of identifying cards on which all cards are compatible with Juan's goals. Given what Juan knows, he does not have a preference between the card on the left and the card on the right. A goal-oriented account that employs quantification over conceptual covers (Aloni 2001) might give us a way

of capturing this fact. In this section, we spell out such an account and ultimately conclude that adopting this proposal would require us to make assumptions that are not empirically motivated.

One of the observations that motivate the system in Aloni 2001 is the fact that knowledge is sensitive to identification methods. Is the example (42) true in the cards scenario above? It depends on what method of identification is relevant. The example would be judged as true if cards are identified by their suit; false if they are identified by their position.

(42)   John knows which card is the winning card.   (After Aloni 2001: 16)

Aloni (2001) models methods of identification as conceptual covers. A conceptual cover CC is a set of individual concepts (functions from possible worlds to individuals) that jointly 'cover' the domain of quantification: in any world, each individual concept in CC is true of one individual, and each individual is picked out by one concept in CC. In the cards scenario, the following covers are salient: identification by position (43-a), by suit (43-b), and by description (43-c).

(43)   a. $\{\lambda w.\iota x.\text{CARD-ON-THE-LEFT}_w(x), \lambda w.\iota x.\text{CARD-ON-THE-RIGHT}_w(x)\}$
         b. $\{\lambda w.A\spadesuit, \lambda w.Q\heartsuit\}$
         c. $\{\lambda w.\iota x.\text{WINNING-CARD}_w(x), \lambda w.\iota x.\text{LOSING-CARD}_w(x)\}$

Let us now modify the goal-oriented account so that it takes into account (i) methods of identification (via quantification over covers), and (ii) the agent's knowledge. To do so, we will assume that our target sentence in (44) has the truth conditions in (45), where CC stands for a salient cover.

(44)   Juan cogió una carta cualquiera.
         Juan took a   card CUALQUIERA
         'Juan took a random card.'

(45)   a.   *Existential Component:* Juan took a card in w_0.
         b.   *Modal Component:* For every individual concept c in CC, there is a world w compatible with what Juan knows in w_0 and that is best with respect to Juan's goals in w_0 where Juan takes $c(w)$.

In the cards scenario, there are two types of worlds compatible with what Juan knows, those in (46) below:

(46)   a.   Type 1 worlds: the queen is on the left and the ace on the right.
         b.   Type 2 worlds: the queen is on the right, and the ace on the left.

If CC is the cover in (43-a) (corresponding to identification by position), the sentence

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will come out true in the scenario, as desired. The Type 1 worlds that are best with respect to Juan's goals are those where he takes the card on the right; the Type 2 worlds that are best with respect to Juan's goals are those where he takes the card on the left. The goal condition is thus satisfied. But if *CC* is the cover in (43-b), the sentence will come out false. There is no world in (46) where Juan takes the ace and that is best with respect to his goals.

Given this, the conceptual cover account would predict a flip-flop effect for (44) in the cards scenario (parallel to the effect that Aloni describes for (42)). However, (44) is unambiguously true in that scenario. To get the right result, we would need a way to force (44) to be interpreted with respect to a particular cover. Since it is not clear to us how this could be done, we will not pursue this approach further.

2.2.3   Decision-Based Modality.

In Section 2.2.2 we explored the possibility of modifying the basic goal account in (47) by letting the universal quantifier in (47-b) range over conceptual covers. In this section, we will put forward a modification of (47) where the modal domain in (47-b) is determined by a particular type of goals.

(47)   a.   *Existential Component.* There is an actual event e of Juan taking a card.
   b.   *Modal Component.* For every (relevant) card y in w_0, there is a world w where Juan's goals at the preparatory stage of e are satisfied and Juan takes y in w.

The challenge that the cards face-down scenario presents for (47) is reminiscent of the Miners' Puzzle discussed by Kolodny & MacFarlane (2010), which has been argued to be problematic for the classic (Kratzerian) semantics of deontic modals (see Kolodny & MacFarlane 2010, Charlow 2013, 2014, Cariani et al. 2013, and references therein).[16] The relevant scenario is as follows:

(48)   Ten miners are trapped either in shaft A or in shaft B, but we do not know which. Flood waters threaten to flood the shafts. We have enough sandbags to block one shaft, but not both. If we block one shaft, all the water will go into the other shaft, killing any miners inside it. If we block neither shaft, both shafts will fill halfway with water, and just one miner, the lowest in the shaft, will be killed.

(Kolodny & MacFarlane 2010: 115)

The sentence in (49) is intuitively true in the scenario in (48): in principle, blocking

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16 We are indebted to an anonymous reviewer for making us aware of this connection.

the shaft that the miners are in would be the best action to take, but, since we don't know where the miners are (and we cannot find out), the best that we can do is to block no shaft.

(49)   We ought to block neither shaft.

The Miners' Puzzle shows that in order to determine the obligations that are relevant for the interpretation of sentences like (49) we have to take into account what the agent can do, given the information she has. Our intuitions about (41) suggest that something similar is true for *uno cualquiera*. In (41), the agent wants to take a particular card—the ace of spades. However, if he is rational, he cannot *decide* to take the ace of spades: given that the cards are face-down, he does not know how to proceed in order to do so. In his account of the Miners' Puzzle, Charlow (2013) proposes that *ought* is evaluated with respect to a particular type of goals—*actionable ends*.Our account of *uno cualquiera* takes the same line: we will claim that only a particular type of goals, the ones that we contend are linked to the agent's decision to act, are used to determine the modal domain of *uno cualquiera*.[17] We will start by putting forth some assumptions about decisions and goals.

2.2.3.1   Decisions and Goals.

We will assume that every volitional event is caused by a decision to act on the part of its agent, and will take decisions to act to be events. We will take the decision to act associated with an event e to be a part of the preparatory stage of e (see Grano 2011 on *try*). Intuitively, a decision to act amounts to a commitment to satisfy a goal. Just to have a convenient term, we will use 'action goal' to refer to the type of goal associated with decisions to act. An action goal corresponds to the (type of) action that the agent of the decision intends to undertake. We will model the action goal associated with a decision d as a property of possible events that share their agent with the agent of d. For instance, if Sarah decides to smoke, her action goal will be (50) below: the property of possible events of Sarah smoking.[18]

(50) $\lambda e.\exists w[\text{SMOKE}_w(e) \ \& \ \text{AGENT}(e) = s]$

Assuming that the agent is rational, her action goal will contain events that satisfy her

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desires.[19] But there are cases where the agent cannot decide to act upon a particular goal, as much as she might desire it, because she does not know how to bring about this goal. For instance, I cannot decide to solve a quadratic equation if I do not know how to solve a quadratic equation. We will assume that action goals are goals that the agent *can* act upon. We list in (51) two conditions that a property of possible events G has to meet in order to be an action goal associated with a decision to act d by an agent a in a world w.[20]

(51)   a.   *Desire:* In every world where a's desires (in w, at the time of d) are satisfied, there is an event of type G.
         b.   *Know-How:* In w, at the time of d, a knows how to bring about an event of type G.[21]

In Section 2.2.3.2 we will formulate the truth conditions corresponding to the random choice interpretation of *uno cualquiera* with the help of the assumptions laid out in this section. We will show how these truth conditions come about in Section 3.

2.2.3.2   The Random Choice interpretation: Indiscriminate Decisions.

We contend that the modal domain for the random choice interpretation of *uno cualquiera* consists of worlds where there is an event that fulfills the agent's decision (for short, 'worlds compatible with the decision'). What do we mean by this?

    Suppose that, in the actual world, Juan decided to buy *War and Peace*. We will say that an event e fulfills Juan's decision in a world w only if, in w, (i) Juan took the same decision as in the actual world, (ii) that decision is located at the preparatory stage of e, and (iii) e is an event of Juan's buying *War and Peace* (i.e., e instantiates Juan's action goal). Thus, the worlds compatible with Juan's decision are those where Juan took exactly the same decision, which 'developed into' an event of him buying *War and Peace*. More generally, we will adopt the definitions in (52).[22]

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19 Here, and in what follows, we are switching freely from function-talk to set-talk.

20 Our *action goals* are similar, but not identical to, Charlows's *actionable ends*:

(v)   An end p is *actionable* with respect to an information state I iff for some available action α, I entails that α realizes p. (Charlow 2013).

Like action goals, Charlow's actionable ends are goals that the agent knows how to implement. But unlike action goals, actionable ends may involve a change of agent. As we will see in section 3.3.2, the same-agent condition of action goals plays an important role in capturing the distribution of the random choice interpretation of *uno cualquiera*.

21 Spelling out what it means for an agent a to know how to bring about an event of a certain type is not an easy task (see Roberts 2009 for a recent account of *know-how*). In what follows, an intuitive understanding of the *know-how* condition above will suffice for our purposes.

22 These definitions are inspired by the analysis of transfer of possession verbs presented in Kratzer

(52)   a.   *Fulfillment.* An event e fulfills a decision d in a world w whenever w contains a decision dup_d that is a duplicate of d, dup_d is part of e, and e is in d's action goal.

2015. We postpone the presentation of the analysis until Section 3.

b. *Worlds compatible with a decision d.* The set of worlds compatible with a decision d are the worlds where there is an event that fulfills d.[23]

Note that instead of saying that the agent took *the same decision* across the worlds in the modal domain, we are saying that these worlds contain *a duplicate of the decision*. We are adopting David Lewis' ontology (Lewis 1968, 1986) in which individuals are world-bound and cross-world identification amounts to relations between counterparts. Counterparts resemble each other closely, but they can do so in different ways: the similarity relation is vague. In the limit case, similarity can correspond to duplication.[24]

We propose that our sentence in (53) is true in a world w if the conditions in (54) obtain.[25]

(53)   Juan cogió una carta cualquiera.
         Juan took a   card CUALQUIERA
         'Juan took a random card.'

(54)   a. *Existential Component:*
            In w, there is an event e of Juan taking a card x.
         b. *Modal Component:* For every (relevant) card y in w, there is a world w' compatible with d_e where there is an event e' of Juan taking y that fulfills d_e.

The modal claim requires that Juan's decision can be fulfilled by taking *any* card in the domain. Let us now revisit the cards face-down scenario, repeated in (55) below.

(55)   *Scenario.* There are two face-down cards in front of Juan. Juan knows that one 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.

In this scenario, the existential condition in (54-a) is met: Juan took a card.[26] What

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24 We are assuming that duplicates share temporal location and surrounding circumstances. Furthermore, we assume that d can be a duplicate of itself and that duplication preserves action goals.
25 Notation: For any volitional event e, d_e refers to the decision part of e.
26 We take the existential component to be asserted. We therefore predict the negation of (53), (vi), to be true in a situation where Juan didn't buy any book. The prediction is not borne out. (vi) is not an appropriate description of that kind of situation—it conveys that Juan bought a random book. (Choi (2007) reports the same effect for *wh-N-na* and *amnu-N-na* indeterminates.) This would be

about the modal condition in (54-b)? To answer this question, we need to determine what Juan's action goal is. We know that the property of events in (56-a) below is *not* Juan's action goal because Juan didn't want to take the queen (*Desire* is not satisfied). And, even though Juan wanted to take the ace, the property of events in (56-b) cannot be his action goal either: Juan didn't know what to do in order to take the ace (*Know-How* is not satisfied). However, given Juan's desires, what he knew, and what he could do, we can assume that the property in (56-c) *is* his action goal. Intuitively, Juan wanted to take the ace, but all he could *decide* was to take a card (and hope for the best).

(56)   a. $\lambda e.\exists w[\text{TAKE}_w(Q\heartsuit)(e) \ \& \ \text{AGENT}(e) = j]$
       b. $\lambda e.\exists w[\text{TAKE}_w(A\spadesuit)(e) \ \& \ \text{AGENT}(e) = j]$
       c. $\lambda e.\exists w\exists x[\text{CARD}_w(x) \ \& \ \text{TAKE}_w(x)(e) \ \& \ \text{AG}(e) = j]$

Given this, the modal component in (54-b) is satisfied in the scenario in (55). Juan's action goal, (56-c), contains events of Juan taking the ace, and events of Juan taking the queen. Therefore, the modal domain will contain two types of worlds:

(57)   a.   Type 1: worlds where Juan's decision is fulfilled by an event of him taking the ace.
       b.   Type 2: worlds where Juan's decision is fulfilled by an event of him

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expected if the existential component were a presupposition, but this component does not project as a presupposition in other cases: B's replies in (vii) do not presuppose that Juan bought a book.

(vi)   Juan no compró un libro cualquiera.
       Juan not bought a   book CUALQUIERA
       'Juan did not buy a random book.'

(vii)   A: What did Juan buy María for her birthday?
       B: No sé. ¿Le   compró un libro cualquiera?
            not know to-her bought UN libro CUALQUIERA?
            'I don't know. Did he buy her a random book?'
       B′:   Si le   compró un libro cualquiera,   se pondrá   como una furia.
           if to-her bought UN libro CUALQUIERA SE will-become like   a   fury
           'If she bought her a random book, she will get mad at him.'

We believe that (vi) cannot describe a situation where Juan bought no books for the same reason (viii) cannot easily do so either: the speaker could unambiguously convey that information by saying *Juan didn't buy any book*.

(viii)   Juan no compró un libro de física.
        Juan not bought a   book of physics
        'Juan didn't buy a Physics book.'

taking the queen.

Since the only cards in the domain are the ace and the queen, the modal condition in (54-b) amounts to (58).

(58)   a.   There are worlds in the modal domain where Juan's decision is fulfilled by an event of him taking the ace, and
        b.   there are worlds in the modal domain where Juan's decision is fulfilled by an event of him taking the queen.

As the condition in (58) is met, the sentence in (53) comes out true in the scenario in (55), as desired.

The proposal replicates the good predictions of the basic goal-oriented account (See Section 2.2.1) for the scenarios in (59) and (60) below.

(59)   *Scenario.* There are two face-up cards in front of Juan: the ace of spades and the queen of hearts. Juan wanted to take the ace of spades and he did so.

(60)   *Scenario.* There are two face-up cards in front of Juan: the ace of spades and the queen of hearts. Juan wanted to take a card, but didn't care which one. He took the ace of spades.

The sentence in (53) is correctly predicted to be false in (59). We can safely assume that Juan's action goal in this situation was the set in (56-b) above (since Juan wanted to take the ace, and knew how to do it). Thus, an event of Juan taking the queen cannot fulfill Juan's decision in this case and, therefore, the modal condition in (54-b) is not satisfied. What about (60)? Since Juan took the ace knowingly, wasn't his goal to take the ace? Not in the sense we are conceptualizing action goals here. For the set of events in (56-c) to be Juan's action goal, all of Juan's desire worlds would have to be worlds where he takes the ace. As Juan was indifferent as to the choice of card, his action goal will be a more inclusive set—the one in (56-c). Accordingly, the sentence in (53) is predicted to be true in (60), in accordance with our intuitions.

Our proposal squares well with the fact that *uno cualquiera* is odd (on the random choice interpretation) in cases where the agent performs an action that does not have the intended result. Suppose that Juan is a rock star that is greeted by a group of fans at the airport. For publicity purposes Juan decides to hug one of the girls, and picks one at random. Unfortunately, Juan trips and ends up pushing the girl accidentally. Unless we want to say that the girl in question is unremarkable, we cannot use the sentence in (61) to describe that scenario (even though Juan picked the girl randomly). This is predicted by our account: for the sentence to be true, Juan's

action goal should be the set in (62), a condition that is not met in the scenario.

(61) Juan empujó a una chica cualquiera.
      Juan pushed a UNA girl   CUALQUIERA
      'Juan pushed a random girl.'

(62) $\lambda e.\exists w \exists x[\text{GIRL}_w(x) \,\&\, \text{PUSH}_w(x)(e) \,\&\, \text{AG}(e) = j]$

3 Possibilities and Modal Anchors.

In Section 2.2.3, we argued that the modal domain of *uno cualquiera* is determined by looking at the agent's decision. This raises the question of how *uno cualquiera* can have access to that decision. Our answer will build on recent work on verbal modality where modal domains are anchored to parts of the evaluation world (situations, events or individuals) rather than to whole worlds (Hacquard 2006, 2009, Arregui 2009, Kratzer 2009, 2013). We claim that *uno cualquiera* is anchored to an event. When the anchor of *uno cualquiera* is the event argument of the verb, *uno cualquiera* will be able to retrieve the decision that triggered that event.

This section is structured as follows: Section 3.1 introduces the work on verbal modality that our proposal builds on. Section 3.2 presents the core components of our proposal. In Section 3.3, we show how the account derives the content and distribution of the random choice interpretation.

3.1 Background: Modal Anchors.

Recently, a number of authors have proposed that the modal anchors from which modal domains are projected are parts of worlds (individuals, events, situations) (Hacquard 2006, 2009, Arregui 2009, Kratzer 2009, 2013).[27] For Kratzer, modal auxiliaries are propositional operators that take a situation argument from which they project their domain, via a *domain fixing function f* that maps a situation into a set of worlds, as in (63) (Kratzer 2009, 2013)[28]

(63) $[\![\text{must}]\!] = \lambda p.\lambda s.\forall s'[s' \in f(s) \rightarrow p(s')]$

The anchor of the epistemic modal in the sentence in (64) below would be a situation that provides the evidence that the claim that (64) makes is based on. This could be,

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27 There is a long tradition of projecting the domain of quantification of natural language quantifiers from situations. See, for instance, Barwise & Perry 1983, Récanati 1986/87, Heim 1990, Cooper 1996, Elbourne 2002, 2005, Schwarz 2009, Schwarzschild 2009, Kratzer 2004, Percus 2006, Elbourne 2013, Schwarz 2012.

28 On the types of domain fixing functions introduced by modals see Kratzer 2013. The term 'domain fixing function' is used in Schwarzschild 2009.

for instance, a situation in which Jockl comes in from the street with wet clothes.

(64)   It must be raining.

Modals can be selective when it comes to choosing their modal anchors. The sentence in (64) is odd, for instance, when the speaker has direct evidence for the proposition that it is raining (von Fintel & Gillies 2010, Matthewson (2015)). Kratzer (2009) hypothesizes that these evidential constraints might correspond to restrictions that the modal imposes on its possible anchors. Since modal anchors are arguments of modals, constraints on anchors can be captured as definedness conditions on the denotation of the modal.

Kratzer (2015) argues that transfer of possession verbs (*throw, give for free, bequeath, grant, offer, buy, owe* ...) project a modal domain from their event argument.[29] Some of these verbs, like *promise* or *owe*, clearly have an intensional component, since they fail to license existential import inferences. I can owe you a croissant without there being a particular croissant that I owe you.[30]

(65)   Lord Peter offered Harriet a cup of tea.   (Kratzer 2015)

The example in (65) makes an existential claim: that there was an offer made by Lord Peter. On top of that, (65) also makes a modal claim. The sentence conveys information about a certain domain of possibilities. Kratzer argues that this domain consists of worlds that have duplicates of the actual offer and where the 'normative conditions' associated with the offer are satisfied—the offer is accepted by Harriet and honoured by Lord Peter. The modal claim that (65) makes is that in all the worlds in the domain, the offer causes Harriet to have a cup of tea. In Kratzer's proposal, the VP of (65) denotes the property of events in (66).[31] This property holds of any event e iff e is an offer that causes Harriet to have a cup of tea in all accessible worlds.

$$(66) \quad \lambda e. \left[\text{OFFER}(e) \ \& \ \forall w \left(w \in f(e) \rightarrow \exists x \left(\exists s \left(\begin{array}{c} \text{CUP-OF-TEA}_w(x) \ \& \\ \text{CAUSE}_w(e)(s) \ \& \\ \text{HAVE}_w(x)(\text{HARRIET})(s) \end{array} \right) \right) \right) \right]$$

The sub-lexical modal component of *offer* projects the domain of accessible worlds from the event argument of the verb (the modal anchor) via a domain fixing function f. The domain fixing function f outputs a set of worlds that have a duplicate of

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29 This discussion follows the presentation in Kratzer 2015 very closely.

30 For these and other verbs that convey sub-lexical modality, see Koenig & Davis 2001 and Martin & Schäffer 2012, Martin & Schäfer 2017. On Kratzer's account, *all* transfer of possession verbs express sub-lexical modality, even those that fail to license existential import inferences (e.g., *throw*)

31 To make the expression easier to read, we represent world arguments as subscripts.

the anchor (via what Kratzer calls *factual projection*) and where the normative conditions established by the anchor are satisfied (e.g., obligations are met, goals are satisfied, rights are exercized ...). For any offer e to have the property in (66), e must cause Harriet to have a cup of tea whenever the offer is honoured and accepted.

Like transfer of possession verbs, *uno cualquiera* conveys sub-lexical modality, and, as the reader will have noted, the modal domain projected by f in (66) is very similar to the one that we proposed for the random choice interpretation of *uno cualquiera* (see Section 2.2.3.2): a set of worlds where the actual decision is copied, and 'comes to term' (evolves into an event belonging to the agent's action goal). Accordingly, in the following sections, we put forth a formal implementation of the proposal in Section 2.2.3.2 that is modelled after Kratzer's analysis.

3.2 Proposal: the Basic Components.

We contend that *uno cualquiera* projects its modal domain by means of the domain fixing function f in (67) below.[32]

(67)   a.   *Definedness conditions:* $f(e)$ is defined only if e has a (possibly improper) part d that establishes normative conditions.

      b.   If defined, $f(e) = \left\{ w \,\middle|\, \begin{array}{l} \text{there is a duplicate } \text{dup}_d \text{ of } d \text{ in } w \text{ and} \\ \text{there is an event that fulfills } \text{dup}_d \text{ in } w \end{array} \right\}$

Like in Kratzer's analysis, possibilities are projected from a particular d that establishes normative conditions. The domain fixing function f delivers worlds that contain duplicates of d (that is, it performs factual projection), and where the normative conditions established by d are satisfied. (To keep with the terminology introduced in Section 2.2.3.2, we say that in that case there is an event that *fulfills d*.) But note that (67) departs from Kratzer's formulation in that the particular that ultimately determines the modal domain can be either the anchor itself or a proper part of the anchor. The reasons for this move are two-fold: First, to derive the random choice interpretation we need *uno cualquiera* to see the agent's decision. Letting the domain project from a part of the anchor will make this possible (see Section 3.3). Second, this modification will allow us to account for the harmonic interpretations of *uno cualquiera* (see Section 4).
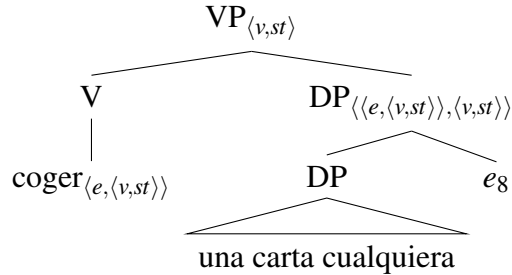
We take the modal anchor of *uno cualquiera* to be one of its arguments, like Hacquard 2006 and Kratzer 2013 assume for modal auxiliaries.[33] We take this argument to be syntactically represented, as in the tree in (68) below, which corresponds

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32 As mentioned in 2.2.3.2, we need to consider only worlds that are not too far from the world of evaluation. We will leave this condition implicit.

33 Kratzer (2013) puts forward *The Modal Anchor Hypothesis*: A modal expression's anchor is one of its arguments.

to the VP of the sentence in (36).[34]

(68)

$$VP_{\langle v,st \rangle}$$

```
                VP⟨v,st⟩
          ╱            ╲
         V              DP⟨⟨e,⟨v,st⟩⟩,⟨v,st⟩⟩
         │            ╱        ╲
  coger⟨e,⟨v,st⟩⟩    DP         e₈
                   ╱    ╲
              una carta cualquiera
```

The second argument of *uno cualquiera* in the structure in (68) is the denotation of the transitive verb. We assume that transitive verbs denote functions of type $\langle e, \langle v, st \rangle \rangle$. For instance, the verb *coger* ('to take') in (68) has the denotation in (69): (the Schönfinkelized version of) a relation that holds between an individual x, an event e, and a world w iff e is an event of taking x in w.

(69) $[\![coger]\!] = \lambda x. \lambda e. \lambda w. \text{TAKE}_w(x)(e)$

After combining with its modal anchor, then, *uno cualquiera* combines with a function R of type $\langle e, \langle v, st \rangle \rangle$. The result is (the Schönfinkelized version of) a relation R' between events and worlds (a semantic object of type $\langle v, st \rangle$). In the example above, R' is a relation that holds between an event e' and a world w if the two conditions in (70) below obtain:[35] that e' is an event of taking a card in w (existential component) and that for every card y there is a world in the modal domain projected from the anchor where an event of taking y fulfills the normative conditions of the anchor (modal component).

(70) $\underbrace{\exists x [\text{CARD}_w(x) \ \& \ \text{TAKE}_w(x)(e')]}_{\text{existential component}} \ \& $

$\underbrace{\forall y [\text{CARD}_w(y) \rightarrow \exists w' \in f(\mathbf{e_8}) \ \exists e'' [\text{TAKE}_{w'}(y)(e'') \ \& \ \text{FULFILLS}_{w'}(e'', \mathbf{e_8})]]}_{\text{modal component}}$

Abstracting over the anchor and the denotation of the transitive verb, we get to the denotation for *uno cualquiera* below (where 'NORM(e)' stands for 'e has a (possibly improper) part with normative conditions.')

(71) $[\![un \ NP \ cualquiera]\!] = \lambda e : \text{NORM}(e). \lambda R. \lambda e'. \lambda w.$

---

34 The basic semantic types are: e for individuals, v for events, s for worlds, and t for truth values. To make functional types easier to read, we will write "$\langle \tau, st \rangle$" instead of "$\langle \tau, \langle s, t \rangle \rangle$" (for any type τ).

35 We use $\mathbf{e_8}$ (bold type) for the value of the object language expression e_8.

28

$$\exists x \begin{bmatrix} [\![NP]\!](w)(x) \; \& \\ R_w(x)(e') \end{bmatrix} \& \forall y \begin{bmatrix} [\![NP]\!](w)(y) \rightarrow \\ \exists w' \in f(e) \exists e'' \begin{bmatrix} R_{w'}(y)(e'') \; \& \\ \text{FULFILLS}_{w'}(e'', e) \end{bmatrix} \end{bmatrix}$$

Note that the denotation in (71) allows for the anchor, e, to get different values. It could get the same value as e' (the argument of the verb) but it needs not to. As a result, we get different interpretational possibilities depending on what larger structure VPs like (68) are embedded in. We will assume that the modal anchor of *uno cualquiera* must be co-indexed with another event variable in the structure. When *uno cualquiera* is in the scope of a modal auxiliary, its anchor can in principle be co-indexed with the anchor of the modal (which can yield a harmonic interpretation, given the right conditions) or with the argument of the verb (which will generate the random choice interpretation). In non-modal sentences, only the latter possibility is available. We will start by discussing non-modal sentences in the next subsection.

3.3 Proposal: the Random Choice Interpretation.

3.3.1 Deriving the Interpretation.

We take the sentence in (36) to have the LF in (72) below, where world and event pronouns and their binders are syntactically represented (Hacquard 2006), and agents are introduced by a separate functional head (Kratzer 1996). We are leaving Tense and Aspect nodes out, for simplicity and assuming that an existential closure operator closes off the event argument.

(72)

29
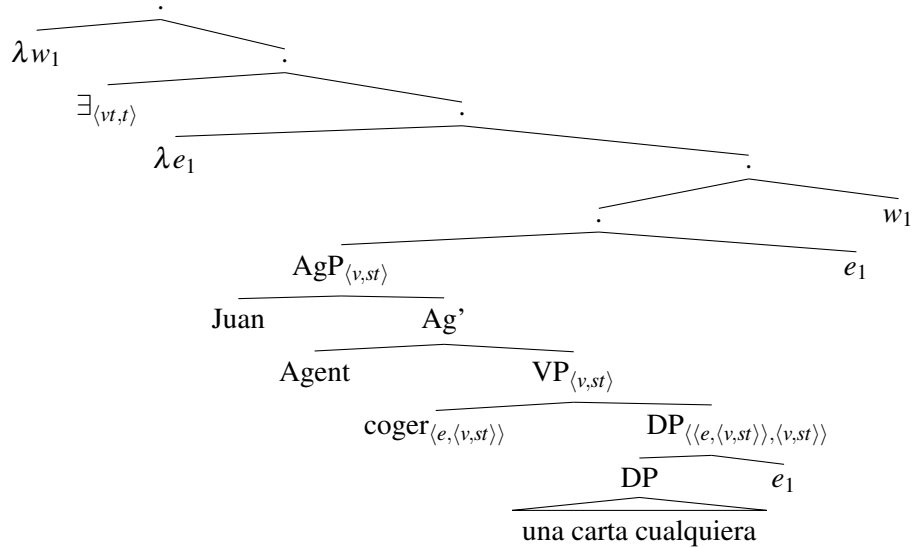
As noted above, we will assume that the modal anchor of *uno cualquiera* must be co-indexed with another event variable in the structure. In this structure, it can only be co-indexed with e_1 (the event of the Agent Phrase, which ultimately saturates the event argument slot of the verb). Leaving aside the contribution of aspect, we predict (36) to be true in a world w only if the two conditions in (73) are satisfied.[36]

(73)   a.   There is a past event e of Juan taking a card in w, and
       b.   for every (relevant) card in w, there is a world in $f(e)$ where there is an event e' of Juan taking y that fulfills d_e.

Given our assumptions, this corresponds to the truth conditions we want to derive (i.e. the ones in Section 2.2.3.2). Let us spell this out.

Recall that we have characterized f, the domain fixing function, as in (74).

(74)   a.   *Definedness conditions:* $f(e)$ is only defined if e has a (possibly improper) part d that establishes normative conditions.
       b.   If defined, $f(e) = \left\{ w \mid \begin{array}{l} \text{there is a duplicate } \text{dup}_d \text{ of } d \text{ in } w \text{ and} \\ \text{there is an event that fulfills } \text{dup}_d \text{ in } w \end{array} \right\}$

First, let us note that the definedness condition in (74-a) is met in (73). We have assumed that all volitional events have a decision part. Decisions establish goals (in our terminology, 'action goals'), and therefore come with normative conditions. Thus, the event of taking described by the existential condition in (73-a) has a normative part: the decision.

Given this, the output of f in (73-b) will be the set of worlds that contain a copy of the decision that triggered e, and where there is an event that fulfills the decision. Following our discussion in Section 2.2.3.2, we say that an event fulfills a decision if the condition in (75) is met.

(75)   An event e fulfills a decision d in a world w if a duplicate of d, dup_d is part of e, and e is in d's action goal.

Putting all this together, we get exactly the truth conditions we set out to derive.

3.3.2   Deriving the Distribution.

Recall that the random choice interpretation is blocked in sentences like (76), (77), which describe non-volitional events, and in sentences like (78), where the verb is volitional but *uno cualquiera* fulfills the agent role.

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36 A reminder about the notation: the expression 'd_e' picks up the decision subpart of any volitional event e.

(76)   Ayer   Juan tropezó   con   un objeto cualquiera.
yesterday Juan stumbled with an object CUALQUIERA
'Yesterday, Juan stumbled on an unremarkable object.'

(77)   La levadura rompió un molde   cualquiera.
the yeast   broke   a   baking pan CUALQUIERA
'The yeast broke an unremarkable baking pan.'

(78)   Habló un estudiante cualquiera.
spoke a   student   CUALQUIERA
'An unremarkable student spoke.'

The unavailability of the random choice interpretation in (76) and (77) is expected un-
der the proposal in Section 3.3.1. In these cases the modal anchor of *uno cualquiera*
will have to be co-indexed with the event argument of the Agent Phrase (which
saturates the event argument slot of the verb). But the event arguments of the Agent
Phrases in (76) and (77) do not have a part with normative conditions: they are
involuntary events, and therefore, not triggered by a decision. They are not valid
anchors for *uno cualquiera* and, thus, the random choice interpretation is blocked in
these cases.

What about (78)? We contend that the random choice interpretation is disallowed
here because it clashes with the conditions on action goals that we discussed in
Section 2.2.3.1. Let us see why.

Given our assumptions, (78) will have the LF in (79):

(79)
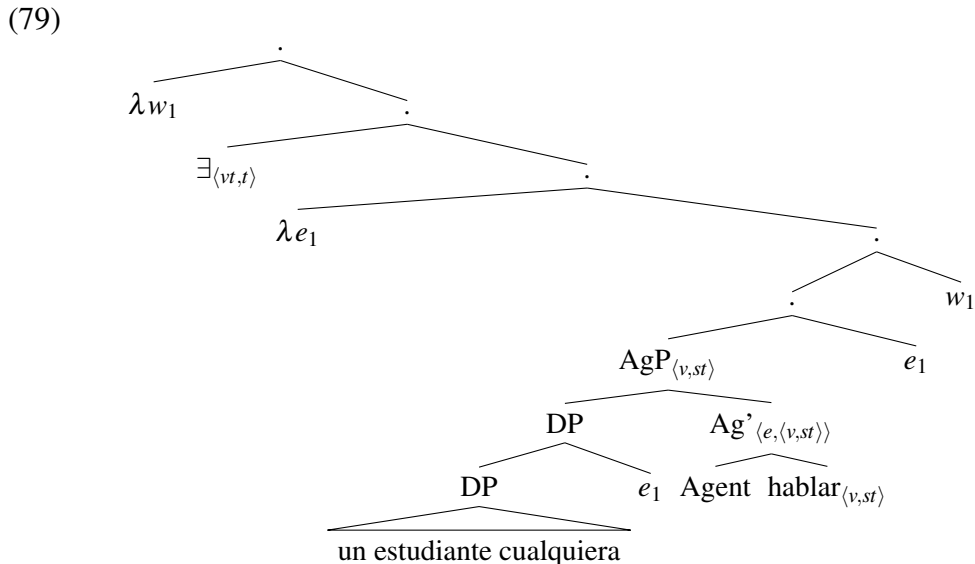
Following Kratzer 1996, we will assume that the functional head *Agent* has the

denotation in (80-a). Combining (80-a) with the denotation of *hablar* (in (80-b)) by (an intensional version of) Kratzer's Event Identification rule yields (80-c).[37]

(80) a. $[\![Agent]\!] = \lambda x. \lambda e. \text{AGENT}(e) = x$
      b. $[\![hablar]\!] = \lambda e. \lambda w. \text{TALK}_w(e)$
      c. $[\![[Agent\ [\ hablar]]]\!] = \lambda x. \lambda e. \lambda w. \text{TALK}_w(e)\ \&\ \text{AGENT}(e) = x$

The sentence in (78) will thus be predicted to be true in a world w only if the two conditions in (81) are satisfied.

(81) a. There is a (past) event e of a student x speaking in w, and
      b. For every relevant student y in w, there is a world in $f(e)$ where there is a (past) event e' of y speaking that fulfills d_e.

Now, suppose that there are two students, Juan and Sara, and that Juan spoke. The modal component requires that there be worlds where an event of Sara's speaking fulfills Juan's decision. This, however, is an impossible condition: for an event e to fulfill a decision d, e must belong to the action goal associated with d. But, given what we assumed in Section 2.2.3.1, the action goal associated with d contains only events whose agent is the agent of d. Therefore, an event of Sara speaking cannot fulfill Juan's decision. The modal component in (81-b) is, thus, false.

More generally, the modal component of sentences like (78) yields a contradiction as long as the domain of individuals of *uno cualquiera* contains two or more individuals. This condition is independently required: sentences like (36) are distinctly odd if there is only one relevant card in the domain, suggesting that *uno cualquiera* imposes an anti-singleton constraint on its domain.

This is captured in the revised denotation of *uno cualquiera* in (82), where the domain of quantification can be contextually restricted by means of a variable ranging over properties. In the discussion that follows, we will ignore this anti-singleton constraint.[38]

(82) $[\![un\ NP_{C_6}\ cualquiera]\!]^g =$
      $\lambda e : \text{NORM}(e). \lambda R. \lambda e'. \lambda w : |\{x : [\![NP]\!](w)(x)\ \&\ \mathbf{C_6}(w)(x)\}| \geq 2.$
      $\exists x \begin{bmatrix} [\![NP]\!](w)(x)\ \& \\ R_w(x)(e') \end{bmatrix}\ \&\ \forall y \begin{bmatrix} [\![NP]\!](w)(y) \rightarrow \\ \exists w' \in f(e) \exists e'' \begin{bmatrix} R_{w'}(y)(e'')\ \& \\ \text{FULFILLS}_{w'}(e'',e) \end{bmatrix} \end{bmatrix}$

Sentences with the structure in (79) would either not be assigned an interpretation

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37 When $[\![\alpha]\!]$ is a function of type $\langle e, vt \rangle$ and $[\![\beta]\!]$ is a function of type $\langle v, st \rangle$, $[\![[\alpha[\beta]]]\!]$ is that function f of type $\langle e, \langle v, st \rangle \rangle$ such that for any individual d, event e and world w, $f(d)(e)(w)$ is true iff $[\![\alpha]\!](d)(e)$ is true and $[\![\beta]\!](e)(w)$ is also true.

38 As before, we take variables in bold-face to stand for the objects that they denote.

(if the domain of individuals is a singleton), or have contradictory truth-conditions. We contend that this blocks the random choice interpretation of these sentences.

The claim that sentences can be ruled out as ungrammatical because they denote contradictions (or tautologies) has been proposed in connection with a number of constructions.[39] However, this line of analysis has to deal with an obvious objection: that there are grammatical contradictions and tautologies, as illustrated in (83).

(83)   a.   Most students are students.
        b.   Every circle is a square.

Gajewski (2002) has claimed that there is a fundamental distinction between different types of contradictions and tautologies.[40] He argues that there is a formal principle of grammar that rules out contradictory and tautological sentences and that applies at a level of representation ('the logical skeleton') that is underspecified with respect to the content of non-logical words. The logical skeleton of a sentence is derived from the sentence's LF by (i) identifying the maximal constituents containing no logical words, and (ii) replacing each such constituent with a distinct variable of the appropriate type. On Gajewski's account, a sentence is ungrammatical whenever its logical skeleton contains a constituent that is false (or true) under every variable assignment.[41]

Assume that *uno cualquiera* and functional heads like Agent belong to the set of logical words. The logical skeleton corresponding to (78) would then be (84) below.

(84) $\lambda w_1 \, [\, \exists \, [\, \lambda e_1 \, [\, [\, [\, \text{un } N \text{ cualquiera } e_1 \,] \, [\, \text{Agent } V \,] \,] \, e_1 \,] \, w_1 \,] \,]$

To apply Gajewski's proposal to this case, we would have to factor in presuppositions. That is, we would need to say that a sentence is ungrammatical if its logical skeleton comes out false (or true) whenever its interpretation is defined. For (84), we would have to consider cases where e_1 is an event with normative conditions, and the extension of N in the world of evaluation contains at least two individuals. Given our assumptions about action goals, (84) does come false whenever these two conditions are met. Once we make these assumptions, we predict (78) to be ungrammatical on the random choice interpretation of *uno cualquiera*.

Our explanation of the asymmetry between object and subject position can be

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39 For instance: durational phrases (Dowty 1979), existential sentences (Barwise & Cooper 1981), exceptive constructions (von Fintel 1993), degree constructions (Fox & Hackl 2006), negative islands in comparatives (Gajewski 2008), weak islands (Abrusán 2007, 2008), free choice items (Menéndez-Benito 2005, 2010, Chierchia 2013), and negative polarity items (Chierchia 2013).

40 For an earlier proposal in the same spirit, see Chierchia 1984.

41 Gajewski assumes that logical words are those that are permutation-invariant, in the sense of van Benthem (1989). See Chierchia 2013 for a recent discussion. Gajewski (2009) discusses and further elaborates the ideas explored in Gajewski 2002.

summarized as follows: *uno cualquiera* introduces possible events that have the same agent as the actual event, and it requires these events to vary with respect to one of the event participants. In object position, it is the theme that must vary. This amounts to the requirement that the agent's decision be compatible with the agent acting upon any of the individuals in the extension of the NP. In contrast, in subject position, the agent must vary across the possible events introduced by *uno cualquiera*. This clashes with the requirement that the agent of these events be the same as the agent of the actual event.

4 Interaction with Modals.

This section focuses on the interaction of *uno cualquiera* with modal operators. As noted in Section 1.2, *uno cualquiera* can trigger a harmonic interpretation with some modals. The sentence in (85), for instance, can be interpreted as a request that would be satisfied by taking *any* book. This interpretation can be paraphrased as in (86), where the modal component of *uno cualquiera* ranges over the worlds introduced by the higher modal.

(85)   ¡Coge un libro cualquiera!
          take   UN book CUALQUIERA
         'Take a book cualquiera!'

(86)   a. In all permitted worlds, the addressee takes a book, and
         b. for every book *y* in the domain, there is a permitted world where the addressee takes *y*.

In contrast, as we have seen, the harmonic interpretation is not available in other modal sentences, such as (87) below, which cannot have the interpretation in (88).

(87)   Según lo que sabemos, Juan tiene que haber ido   a ver una película
         given what   we-know, Juan must   have gone to see UNA film
         cualquiera.
         CUALQUIERA
         'Given what we know, Juan must have gone to see a random movie.'

(88)   a. In all the worlds compatible with what we know, Juan went to see a movie, and
         b. for every movie *y* in the domain, there is a world compatible with what we know where Juan went to see *y*.

The account that we have proposed makes concrete predictions regarding the interaction of *uno cualquiera* with modal auxiliaries. On the harmonic interpretation,

uno cualquiera has the same modal domain as the modal that it is embedded under (e.g., in (85), the set of permitted worlds). In the framework that we are adopting, all modals project their domain from a part of the world of evaluation (the anchor). Thus, we expect the harmonic interpretation to obtain whenever *uno cualquiera* and the higher modal project their modal domain from the same anchor, using the same domain fixing function. But if the anchor of the modal does not meet the selectional constraints imposed by *uno cualquiera* (i.e., it is not an event with normative conditions), the harmonic interpretation should be blocked. Section 4.1 shows how harmonic interpretations are derived in cases like (85), and Section 4.2 discusses why they might be blocked in cases like (87). Section 4.3 examines a type of examples that do not match our predictions, and suggests a possible explanation.

The reader should be aware that the literature on verbal modality is not always in agreement about the type of anchors that different modals require. In the absence of a full-fledged theory of the connection between verbal modals and their anchors, our discussion will have to remain at a somewhat tentative level and should be regarded, not as a complete evaluation of our proposal, but rather as the first step of a research program.

4.1 Deriving Harmonic Interpretations.

Consider again the imperative in (85). For illustration purposes, we will focus on the case where (85) is interpreted as a command.[42] We assume that (85) has the structure in (89) below.[43]

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42 Cases where the imperative has a different force should be parallel, as suggestions, permissions, or wishes establish goals. Harmonic readings are available for imperatives with other forces: (85) can be interpreted as an invitation to take whichever book the addressee wants. To our ears, harmonic readings are somewhat harder for permissions than for orders. This might be due to a competition with the determiner *cualquiera*, which is compatible with permissions but not with orders.

43 As Kaufmann (2012), we take the imperative to introduce a necessity modal. Unlike her, we assume that the modal projects its domain from an event. For other modal accounts of imperatives see Aloni 2007, Grosz 2011, a.o.. For non-modal accounts see, e.g., Han 2011 and Charlow 2014 for an overview. Charlow 2014, von Fintel & Iatridou to appear and Starr 2013 critize the modal approach.

(89)

IP
λw₂ ·
· TP
· w₂ λw₁ ·
have-to e₂ ∃ ·
λe₁ ·
· w₁
AgP e₁
you Ag'
Ag VP
coger DP
DP e₂/e₁
un libro cualquiera
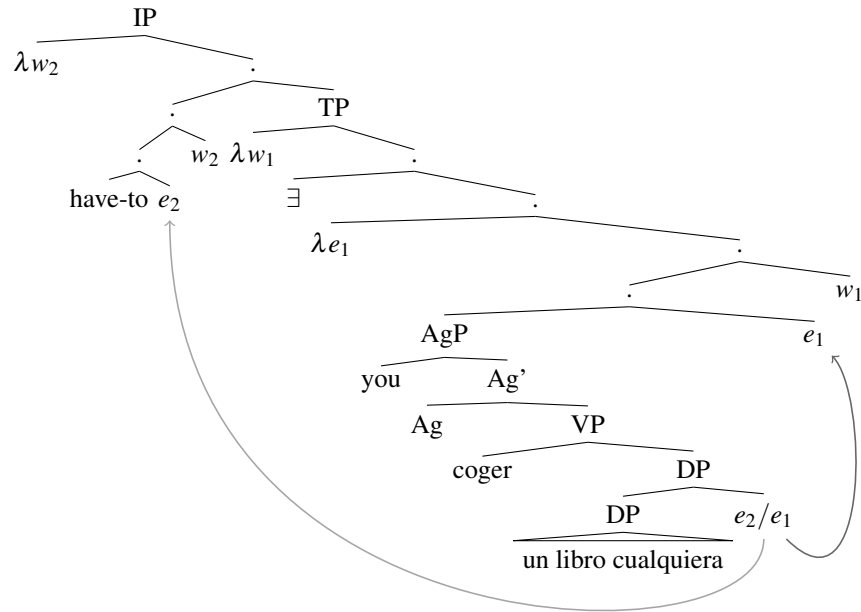
The structure of the lower clause is as in Section 3.3 (again, omitting tense and aspect nodes). We assume that the modal has both an event argument (its anchor) and a world argument, and that the event argument is free.[44] Remember that we have assumed that the anchor of *uno cualquiera* must be co-indexed with another event (Section 3.3). The anchor of *uno cualquiera* can be either co-indexed with the event argument of the Agent Phrase (e_1) or with the anchor of the modal (e_2).The two indexing configurations represented in (89) correspond to two interpretational possibilities. The local co-indexing configuration yields an embedded random choice interpretation, derived as in non-modal sentences (Section 3.3). The long-distance co-indexing can only be interpreted when the anchor of the modal is of the type of that *uno cualquiera* requires (i.e., an event with normative conditions). This is the configuration underlying the harmonic interpretation.[45]

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44 Of these three assumptions, the only one that is crucial for us is that the modal has an event argument that serves as its anchor (Hacquard 2006). What we have to say here is compatible with the event argument being bound (following Hacquard 2006 on modal auxiliaries) or with the modal lacking a world argument. We will remain agnostic about these issues and make some working assumptions.

45 The availability of long-distance co-indexing for the modal anchor of *uno cualquiera* is not completely unexpected. Percus (2000) shows that world pronouns inside the nuclear scope of a quantifier have to be bound by the closest binder, but those inside the restriction of the quantifier are accessible to long-distance binding. Hacquard (2006, 2010) argues that the event argument of modals must be bound locally. She suggests that the binding conditions observed by Percus might be reformulated by means of a more general condition stating that any world and event arguments *on the spine of the tree*

What is the anchor of the modal in (85)? Hacquard (2006) makes a distinction between true deontics (which put an obligation on the addressee), and subject-oriented deontics, which pattern with circumstantials. For Hacquard, true deontics project their domain from the order uttered by the speaker. Although she does not discuss imperatives in detail, Hacquard assimilates true deontics to imperatives. Building on this, we will assume that imperatives also project their domain from the order. Simplifying quite a bit, we will work with the denotation for the imperative operator in (90) (where '$e \sqsubseteq w$' 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 fulfilled.[46])

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

The selectional conditions imposed by *uno cualquiera* are satisfied by the anchor of the modal, the order event, since an order has normative conditions (it establishes obligations). Thus, the long-distance co-indexing in (89) is possible in this case. This configuration will yield the interpretation in (91), where $\mathbf{e_2}$ corresponds to the order. The domain fixing function of the modal, f^*, takes the order $\mathbf{e_2}$ and yields the set of worlds where this order is fulfilled. The truth-conditions in (91) require that in all of these worlds the addressee take a book. The domain fixing function contributed by *uno cualquiera*, f, also takes $\mathbf{e_2}$ as an argument. Given the way in which we defined f in Section 3.2, $f(\mathbf{e_2})$ is the set of worlds that contain duplicates of the order $\mathbf{e_2}$ and where there is an event that fulfills $\mathbf{e_2}$. *Uno cualquiera* requires that for every book y, there be a world in that set of worlds where the order is fulfilled by the addressee taking y. This is what we have labelled the harmonic interpretation.

(91) $\lambda w.\left[\exists e' \exists x \left[\forall y \begin{bmatrix} \mathbf{e_2} \sqsubseteq w\ \&\ \forall w' \in f^*(\mathbf{e_2}) \\ \text{BOOK}_{w'}(x)\ \&\ \text{TAKE}_{w'}(x)(e')\ \&\ \text{AGENT}(e') = \text{AD}\ \& \\ \text{BOOK}_{w'}(y) \rightarrow \exists w'' \in f(\mathbf{e_2})\ \& \\ \exists e''[\text{TAKE}_{w''}(y)(e'')\ \&\ \text{AG}(e'') = \text{AD}\ \&\ \text{FULFILLS}(e'', \mathbf{e_2})] \end{bmatrix}\right]\right]$

As mentioned before, our proposal also predicts an embedded random choice interpretation for cases like (85), corresponding to the local co-indexing configuration in (89). When the anchor of *uno cualquiera* is co-indexed with the argument of the

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(e.,g., Tense, Aspect, V) need to be bound by the closest binder. (She thanks Kai von Fintel for this generalization). Our assumptions about the indexing possibilities available to the modal anchor of *uno cualquiera* square well with this suggestion, although our constraint is formulated in terms of co-indexing, rather than binding.

46 Following Portner 2005 (see also Portner 2007), Hacquard (2006) argues that the modal domain of true deontics consists of the worlds compatible with the addressee's TO DO list. In what follows, we will just rely on an intuitive understanding of what it means to fulfill (obey) an order, and will not discuss the fulfilment conditions of orders in any detail.

Agent Phrase, we will get the interpretation in (92), where, as before, $\mathbf{e_2}$ corresponds to the order event. Like (91), (92) conveys that in all the worlds where the order is obeyed, there is an event of the addressee taking a book. An extra condition is imposed on the decisions triggering each of those possible events: for any book x, the decision of the agent should be compatible with the addressee taking x. In short: the addressee is required to pick a book and make an indiscriminate decision as to which book to pick.

$$(92) \quad \lambda w. \left[\exists e' \exists x \left[\forall y \left[\begin{array}{c} \mathbf{e_2} \sqsubseteq w \ \& \ \forall w' \in f^*(\mathbf{e_2}) \\ \text{BOOK}_{w'}(x) \ \& \ \text{TAKE}_{w'}(x)(e') \ \& \ \text{AGENT}(e') = \text{AD} \ \& \\ \text{BOOK}_{w'}(y) \rightarrow \exists w'' \in f(e') \ \& \\ \exists e''[\text{TAKE}_{w''}(y)(e'') \ \& \ \text{AG}(e'') = \text{AD} \ \& \ \text{FULFILLS}(e'', e')] \end{array} \right] \right] \right]$$

As we noted in the introduction, it is hard to find reasonable scenarios where (92) (the embedded random choice interpretation) obtains but (91) (the harmonic interpretation) does not. Those would be cases where the addressee would be told to make an indiscriminate decision regarding the choice of book but at the same time required not to bring just any book. The King Cruel scenario in the introduction provides just such a situation. These scenarios, albeit possible, are extremely uncooperative. Thus, we expect that the random choice interpretation of (85) will typically (in the absence of clues to the contrary) license the inference that the addressee is allowed to pick any book. (Note that the reverse inference does not hold: as discussed in Section 1.2, scenarios where the harmonic interpretation obtains but the random choice interpretation does not are completely natural.)[47]

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[47] An anonymous reviewer asks whether a parallel pattern obtains with an attitude verb like *want*, and whether the assumed co-indexing configurations capture them. According to our intuitions, there are indeed two readings for (ix) corresponding to what we have called the embedded random choice interpretation (x-a) and the harmonic reading (x-b).

(ix) María quiere que Juan lea   un libro cualquiera.
      María wants that Juan reads a   book CUALQUIERA
      'María wants Juan to read a random book.'

(x)   a.   Maria wants Juan to read a book and pick it indiscriminately.
      b.   Maria wants Juan to read a book and any book would satisfy her desires.

This would be derived by our account if (i) *want* takes an eventuality argument that is syntactically represented, and (ii) that event imposed normative conditions. As far as we can see, these assumptions are compatible with the account in Hacquard 2006 (see her ex. (272)).

4.2 Blocking Harmonic Interpretations.

The account that we have proposed predicts harmonic interpretations to be blocked when the anchor of the modal does not satisfy the selectional restrictions imposed by *uno cualquiera*. Assessing this prediction fully is difficult, as a complete characterization of the anchors that verbal modals can take is not yet available. But, given discussions of epistemic and ability modal anchors in the literature, the prediction is borne out by examples like (93) and (94).

(93) Juan tiene que haber ido   a ver una película cualquiera.
      Juan must   have gone to see UNA film   CUALQUIERA
      'Juan must have gone to see a random movie.'

(94) (Dada su fuerza   física), Juan puede levantar una piedra
      given his strength physical Juan can   lift   UNA stone
      cualquiera.
      CUALQUIERA
      'Given his physical strength, Juan can lift a random stone.'

As we have seen, (93) does not have a harmonic interpretation. What is the anchor of the modal in cases like (93)? Two possibilities have been discussed in the literature. In Hacquard's work (Hacquard 2006, 2009), the anchor of epistemic modals is the speech event, an event with content corresponding to the speaker's beliefs. Kratzer (2009) proposes instead that epistemic modals project their domain from situations that provide the evidence that the claim is based on.

Evidence situations don't come with normative conditions—they do not confer rights, set goals or establish obligations. Thus, if we adopt Kratzer's view on epistemic modals, the anchor of the modal in (93) will not be a possible anchor for *uno cualquiera* and the harmonic interpretation will correctly be predicted to be blocked. Speech events (as characterized by Hacquard) don't come with normative conditions either. Yet, as pointed out by an anonymous reviewer, one could conceive of speech events as having normative content: the agent is acting upon a decision to convey her thoughts, perhaps to persuade her listeners. If we adopt this view, our account would only be compatible with Kratzer's take on epistemic anchors.

Ability sentences like (94) also lack a harmonic interpretation. A natural assumption to make is that the anchor involved in ability attributions is a situation containing the individual whose properties are being described at a relevant a time. On this view, the anchor of the modal in (94) would be Juan considered at the time of utterance. As this anchor is not an event with normative conditions, we predict the harmonic interpretation to be impossible in (94).[48]

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48 In principle, harmonic interpretations should also be blocked when the anchor of the modal does meet

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4.3 Possible Interferences.

Sections 4.1 and 4.2 examine a number of cases studies that bear our predictions out. In this section we discuss some examples that pose a challenge for our proposal and suggest a possible way of meeting this challenge.

Consider the example in (95) (adapted from Rivero 2011a), which contains *uno cualquiera* and a possibility modal interpreted epistemically.

(95) Según   nuestra evidencia, el asesino   puede ser un prisionero
      according to our   evidence   the murderer can   be UN prisoner
      cualquiera.
      CUALQUIERA

Given what we have said so far, (95) should only have the unremarkable interpretation, conveying, roughly, that, according to our evidence, the murderer can be an unremarkable prisoner. The embedded random choice interpretation should be out, as the verb *ser* is not agentive. The harmonic interpretation should not be possible either, since the anchor of the epistemic modal is not an event with normative conditions.

However, as noted in Section 1.2, (95) *can* marginally convey that, as far as the evidence goes, *any* prisoner can be the murderer. In contrast, according to our intuitions, the sentence in (96), the counterpart of (95) with a necessity modal, clearly lacks a harmonic interpretation. This sentence can only convey that the murderer has to be an unremarkable / average prisoner.

(96) El asesino   tiene que ser un preso   cualquiera.
      the murderer has   to   be UN prisoner CUALQUIERA
      'The murderer has to be an unremarkable / average prisoner.'

What can we make of the contrast between the sentences in (95) and (96)? We would like to suggest that the epistemic free choice interpretation that we detect in (95) might be due to an inference drawn on the basis of the unremarkable interpretation of *uno cualquiera*. The idea is as follows: On the unremarkable interpretation, (95) would say that the murderer can be a prisoner that is not special, does not stand out. Since we are talking about potential murderers, this could mean that the murderer can be a prisoner that does not stand out as a potential murderer more than other prisoners do. If this prisoner can be the murderer, other prisoners will also be

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those selectional restrictions (i.e., it is an event with normative conditions), but the modal and *uno cualquiera* introduce different domain fixing functions, hence projecting different modal domains from the same anchor. Further research will have to determine if there are any combinations that instantiate this configuration (and if not, why not).

possible murderers. If even an unremarkable prisoner can be the murderer, the more remarkable ones will be, too. This may lead us to infer that any prisoner can be the murderer.

On this view, the contrast between the possibility sentence in (95) and the necessity sentence in (96) is expected. The unremarkable interpretation of the sentence in (96) would convey that the murderer *has to be* an unremarkable / average prisoner. If that is the case, the remarkable prisoners, those that stand out more as potential murderers, will no longer be epistemic possibilities, and, thus, we cannot draw the inference that any prisoner could be the murderer.

Although it seems to us that this hypothesis is on the right track, developing an explanation along these lines requires analyzing the content of the unremarkable interpretation in depth. This is a task that we cannot undertake here. For now, we will limit ourselves to sketch the idea at the intuitive level above, hoping to explore its consequences in future research.[49]

5 Concluding Remarks and Issues for Further Research.

By proposing that *uno cualquiera* projects its modal domain from an event argument, we have been able to derive the interpretation and distribution of the random choice interpretation, and to understand how harmonic interpretations are derived (and why they may be blocked in some configurations). However, a number of questions remain.

One question has to do with the internal composition of *uno cualquiera*. We have not investigated the individual contributions of *un* and *cualquiera* in the structure in (97), and we have not attempted to relate the semantics of *uno cualquiera* to that of the determiner *cualquier*. Whether the interpretation of *uno cualquiera* is predictable from the semantics of *un* and *cualquiera* is, of course, an issue worth exploring. However, we are currently not in a position to tackle this question, and we will have to leave it for further research.[50]

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49 This hypothesis would predict that a similar interference might be available for ability sentences like (xi). To our ear, however, there is a strong contrast between (xi) and its counterpart with the free choice determiner *cualquiera*, which unambiguously conveys the harmonic reading. Further research is needed to test if other speakers can get a harmonic reading for (xi).

(xi)   Dada su fuerza física,   Juan puede levantar una piedra cualquiera.
        given his strength physical, Juan can   lift   a   stone CUALQUIERA
        'Given his physical strength, Juan can lift a random stone.'

50 In Chierchia 2013 the behavior of *un qualsiasi / qualunque* arises from the compositional interaction of *un* and *qualsiasi / qualunque*. However, Chierchia's characterization of the semantics of *un qualsiasi / qualunque* differs from ours in several respects, so his claims about the internal composition of this item cannot be straightforwardly imported into our account.

(97) $[_{DP}$ un $[_{NP}$ libro(s) [cualquiera]]]

Yet another issue concerns the unremarkable interpretation of *uno cualquiera*. We have assumed, as a working hypothesis, that *uno cualquiera* is ambiguous between one form that yields the random choice and harmonic interpretations (the one that we have investigated) and another one that conveys the unremarkable interpretation. However, whether the two forms can eventually be traced back to a common source is still an open question.

The alternative to assuming an ambiguity would be to say that *uno cualquiera* has a meaning that is general enough so as to cover the different interpretations that we detect (Zwicky & Sadock 1975). Negation can help distinguish between the two possibilities. If *uno cualquiera* were unambiguous, placing it in the scope of negation would deny both interpretations. If, on the other hand, *uno cualquiera* were ambiguous, it should be possible for negation to target only one interpretation. As an illustration, consider the case of *book* (whose single meaning applies to, e.g., novels, textbooks and poetry books) and *bank* (ambiguous between 'financial institution' and 'river bank'). While the sentence in (98-a) tells us that Juan didn't buy a novel, or a textbook, or a poetry book, the one in (98-b) can be true in a context where Juan didn't go to the financial institution but did go to the bank (or vice versa).

(98)   a.   Juan did not buy a book.
         b.   Juan did not go to the bank.

In this respect, *uno cualquiera* seems to pattern with *bank* rather than with *book*. For instance, the sentence in (99) can describe a context where Juan bought an unremarkable book that he didn't chose indiscriminately (as in (100)). And it can also describe a context where Juan bought a remarkable book that he chose indiscriminately (as in (101)).

(99)   Juan no compró un libro cualquiera
         Juan not bought UN book CUALQUIERA
         'Juan did not buy a random book.'

(100)   Juan no compró un libro cualquiera—   lo escogió con todo
         Juan not bought UN book CUALQUIERA— it chose   with all
         cuidado (aunque al   final resultó   ser aburrido).
         care,   although at-the end turned-out be boring
         'Juan didn't buy a random book—he chose it very carefully (although in
         the end it it turned out to be boring).'

(101)   Juan no compró un libro cualquiera—   aunque   eligió al azar,
         Juan not bought UN book CUALQUIERA— although chose at random,

compró el libro más interesante de la librería.
bought the book more interesting of the bookstore
'Juan didn't buy a random book—although he chose at random, he bought the most interesting book in the bookstore.'

Consider also elliptical constructions, which provide us with one of the classic tests for ambiguity (Zwicky & Sadock 1975).[51] As is well known, ellipsis is subject to an identity condition: a constituent can be elided only if it is a copy of another constituent at LF (see Heim & Kratzer 1998 for references and discussion). Thus, when an elided constituent copies a constituent containing an ambiguous element, only 'matching understandings' (Zwicky & Sadock 1975) are possible. For instance, (102) can only mean (i) that both John and Peter went to the financial institution, and (ii) that both John and Peter went to the river bank. But it cannot be interpreted as saying that John went to the river bank and Peter, to the financial institution.

(102)   John went to the bank and Peter too.

Now let us look at the elliptical example in (103). To our ear, if we interpret the first sentence as saying that the baker broke a baking pan that he chose indiscriminately, the second sentence in the discourse feels deviant. This would be expected under the ambiguity hypothesis: the condition on ellipsis would force us to copy the random choice form, which cannot be interpreted under volitional predicates. However, we should also mention that this judgment is rather elusive. More research is needed to determine to what extent this intuition generalises across speakers (and sentences) before a more solid case can be made for the ambiguity hypothesis.

(103)   El panadero rompió un molde   cualquiera   y   la levadura
          the baker   broke   UN baking pan CUALQUIERA and the yeast
          también.
          too
          'The baker broke a random baking pan and the yeast too.'

In connection with the distinction between the random choice and unremarkable interpretations, an anonymous reviewer notes the existence of examples like (104).[52]

     In this example, the lexical entry that we have given for *uno cualquiera* (which generates the random choice and harmonic interpretations) is uninterpretable. How-

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51 We are grateful to Angelika Kratzer for pointing out the relevance of these tests to us.
52 The reviewer links the interpretation of (104) to what Tredinnick 2005 calls the 'external indifference' interpretation of English *whatever*, which "are simply cases where there is no entity in the sentence to whom we can attribute an indifferent attitude." (Tredinnick 2005: 29). See also Choi 2007. Rivero (2011a) also discusses a number of examples that are not related to volitionality, and that might also fall under what we are calling the unremarkable interpretation.

ever, the perceived interpretation of this sentence does not seem to correspond to what we have called the unremarkable interpretation. As the translation below indicates, (104) does not seem to be making a claim about a pair of unremarkable points, but rather to quantify universally over pairs of points.

(104)   La línea más corta entre   dos puntos cualesquiera   es una línea
             the line   more short between two points CUALESQUIERA is a   line
             recta.
             straight.
             'The shortest line between any two dots in a straight line.'

Do examples like this force us to admit the existence of yet another reading? In the absence of a better understanding of the unremarkable interpretation, we cannot provide an answer to this question. However, we would like to offer a preliminary suggestion.

We have been using the label 'unremarkable' for lack of a better term, but we do not want to claim that what we have been calling the unremarkable interpretation conveys the same meaning as the adjective *unremarkable*. One could hypothesize instead that on its 'unremarkable' interpretation *uno cualquiera* ranges over individuals in the extension of the NP that count as 'average' with respect to a certain set of properties. What this set of properties is may vary depending on the NP (and on contextual factors). When talking about students, it seems natural to consider, at least in some cases, properties prototypically associated with students. If Juan is *a student cualquiera*, he is a student that does not stand out with respect to, e.g., his grades, his studying habits etc . . . Students differ significantly with respect to these stereotypical properties.[53] In cases like (104), the situation might be different. In this case, the properties that count under the relevant interpretation (for instance, the points' shape, or their position with respect to one another) may be such that individual points do not differ significantly with respect to them. If there are no significant differences between the points, any pair of points will be an average one. On this view, the sentence in (104) would say something like 'the shortest line between two points that are like any other points is a straight line'. This reading may invite the inference that the reviewer reports, that the shortest line between *any* two points will also be a straight line.

At this point, this is only a speculation, of course. In order to develop an explanation along the lines above, we would have to say more about which properties may be relevant for the interpretation of *uno cualquiera*. In the case of (105) (also

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53 As a consequence, a student that is average with respect to these properties might be one that falls below what we consider an appropriate threshold for the properties at issue. This would give rise to a pejorative connotation (see Rivero 2011a).

provided by the reviewer), *uno cualquiera* can range over pairs of mediocre students (i.e. average with respect to their prototypical properties as students), but this is not necessary. We could also get a stronger interpretation (reflected in the translation below), on which *uno cualquiera* ranges over any pairs of students that stand in some sort of relationship. If our speculation is on the right track, in order to deliver this interpretation, we would need *uno cualquiera* to be evaluated with respect to the property of being a student that has a relationship with another student in the school. To see how feasible this is, we would need to develop an account of how the relevant set of properties is established, something that we will have to leave for further research.

(105)   En esta escuela, la relación más frecuente entre   dos estudiantes
         in this school   the relation most frequent between two students
         cualesquiera   es la desconfianza.
         CUALESQUIERA is the distrust.
         'In this school, the most frequent relation between any two students is distrust.'

To conclude, we would like to sketch the consequences that our proposal might have for a general typology of modal indefinites. The account of *uno cualquiera* that we have developed invites the working hypothesis in (106).

(106)   All modal indefinites project their modal domain from a situation or event, and impose selectional constraints on their anchor.

This hypothesis may shed light on our understanding of epistemic indefinites, which as noted in Section 1 signal ignorance on the part of the speaker (For instance, by uttering the sentence in (107), with *algún*, the speaker conveys that she does not know what student María is dating.)

(107)   María está saliendo con algún   estudiante.
         María is   dating   with ALGÚN student
         'María is dating some student or other.'

Epistemic modals have been claimed to trigger evidential constraints. For instance, *must* is odd when the speaker is looking at the rain pouring down (von Fintel & Gillies 2010), but improves if the speaker is looking at what seems to be rain in a far away TV set (see Kratzer 2009 for similar examples).

(108)   It must be raining.

Elsewhere (Alonso-Ovalle & Menéndez-Benito 2013a), we have noted that *algún*

triggers evidential constraints that resemble those encoded by *must*.[54] Suppose that P looks out of the window and sees María kissing a boy. If the circumstances are as in (109), P cannot felicitously utter (111). However, if they are as in (110), P can felicitously utter (111) while pointing at the boy.

(109)   *Clear vision:* P hasn't seen the boy before, but she can see him very clearly now.

(110)   *Blurry vision:* María and the boy are far away. P can see that María is kissing a boy, but she cannot make out the boy's features.

(111)   ¡Mira! ¡María está besando a algún   chico!
        Look! María is   kissing a ALGÚN boy!
        'Look! María is kissing some boy!'

Kratzer (2009) proposes that the evidential restrictions of epistemic modals arise because the modal imposes constraints on the evidence situation that it takes as anchor. The hypothesis in (106) raises the possibility that epistemic indefinites might be amenable to such an account.

     The hypothesis in (106) also has the potential of shedding light on a striking contrast between modal indefinites and verbal modals. As is well known, modal auxiliaries can convey a wide variety of modal flavors. Available modal flavors include, e.g., epistemic, deontic, circumstantial, bouletic or teleological. Remarkably, modal determiners do not seem not instantiate all these flavors. Across the languages examined in Haspelmath 1997, modal indefinites express either epistemic modality or random choice modality. We don't seem to find, for instance, examples with the form in (112) that can convey that Juan took a book and that he was allowed to take any other book (i.e., we don't seem to find deontic indefinites).

(112)   Juan took INDEFINITE book.

This gap is unlikely to be accidental, as it recurs in language after language. The hypothesis in (106) opens up the possibility that the explanation for this gap might lie on the types of anchors that non-modal sentences make available to modal indefinites. This is a possibility that we would like to explore in future research.

Acknowledgements.

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54 Slade 2015 has independently noted that the same pattern obtains for the Sinhala epistemic indefinite *wh-hari*.

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