Almost-at-a-distance and counterfactuality without tense

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Abstract

This paper makes a simple claim: The meaning of the adverbial *almost* contains a counterfactual that allows it to work 'at a distance' even in the absence of proximity. Essentially, *almost* can hold if the proposition follows from the normal outcomes of adding a small number of premises to a selection of relevant facts. The counterfactual behaves like an ordinary one in several ways, but differs from it in ways that are predictable from its lexical entry. The counterfactual's ability to save *almost*-at-a-distance is blocked when the temporal properties of the modal anchor and Davidsonian event prevent normal outcomes from coming true when they need to. Also, non-propositional complements of *almost* block *almost*-at-a-distance by restricting the same temporal properties and preventing normal outcomes from coming true when they need to.

This approach to *almost* differs sharply from the two general approaches that have emerged in the literature, by replacing the negative polar condition (not p) with a positive 'antecedent condition' that entails not p while avoiding the numerous well-documented complications of employing a polar condition. This approach also highlights the important role played by ordering sources based on normal outcomes in counterfactuality and in weak necessity modals, and suggests that the bridge between the two is the ordering source.

1 Introduction

The adverbial *almost* has a clear intuitive meaning, but has proven very difficult to reconcile with a formal semantics. Two basic approaches characterize our understanding of *almost* in the literature. Scalar alternative accounts hold that *almost p* is true if and only if p is false but some close alternative proposition q is true. Modal closeness accounts argue instead that *almost p* is true of a world w if and only if p is false in w, but true in some close alternative possible world w'. In (1) we provide a formalized version of each approach that smooths out the minor differences among the various accounts, and we will discuss each in detail.

(1)   a. **scalar alternative:**
         $[\![\textit{almost p}]\!] = \lambda w. \neg p(w) \,\&\, \exists q[\, q \approx_{\text{ALT}} p \,\&\, q(w) \,]$
      b. **modal closeness:**
         $[\![\textit{almost p}]\!] = \lambda w. \neg p(w) \,\&\, \exists w'[\, w' \approx w \,\&\, p(w') \,]$

1

Despite their differences, these approaches both accept that the basic components of *almost* are a **polar condition** (not p) and a **proximal condition** (close to p). However, this two-part meaning, intuitive as it is, has proven problematic, and most of the literature has sought to resolve these problems.

The polar condition causes trouble because the negation it contains behaves in ways negation should not. The negation does not license NPIs (2), it is immune to evaluation (3), and it seems to be an implicature some of the time (4,5).

(2) a.   *Becky almost saw someone/*anyone.*

  b.   ** Becky almost played with Tom at all.*

(3) *Amazingly, I almost met 10 heads of state at the party*
  $\nrightarrow$ It's amazing that I did not meet 10 heads of state at the party

(4) *He's almost there, but not quite* seems like "p, but p", which should be infelicitous.

(5) *To pass, you have to get almost all the answers right* does not rule out getting all the answers right.

The proximal condition also causes trouble, because *almost* does not always require closeness, or at least closeness as we typically understand it. *I almost lived in San Francisco* could be true even if you only considered it, but made no steps to actually do it. Since it is also true if you nearly came to live there, the sentence is ambiguous. Tense, aspect, and Aktionsart play important roles in this ambiguity. For instance, it has long been known that accomplishments can be diagnosed by the ambiguity between almost starting an event and almost completing it, although no one seems to have explored what that means for *almost*. Moreover, the proposition can hold of any point in the event before the accomplishment came to success, not just the start of the process: *I almost climbed Mount Everest, but I couldn't raise the money.*

We propose that these problems emerge because both approaches are fundamentally incorrect. The meaning of *almost* must contain a counterfactual, restricted by an antecedent condition that entails negation. The meaning of *almost* cannot be explained by scalar alternatives or modal closeness alone. Instead, we decompose the 'non-proximal' proximity into a scalar proximity measure and a separate modal, which lowers the success point of the complement sufficiently enough that a proximity measure can operate. We will demonstrate that the ability of this modal to lower the success point depends on the ability for normal outcomes to entail sucess. This ability is determined by the lexical meaning of *almost*, its arguments, and the way modals work.

Much of this paper will explore the nature of the counterfactual in *almost*. We will explore how it differs from ordinary counterfactuals in the types of premises it can employ. We will discuss the way its structural environment shapes the way it works, showing that its behavior differs from that of ordinary counterfactuals in predictable ways. Finally, we will discuss the significance of this counterfactual in our understanding of the relationship between counterfactual semantics and the grammar.

2 Away from scalar proximity

We will begin by discussing problems with previous approaches, starting with scalar proximity. In this section, we will demonstrate that despite *almost*'s obvious sense of proximity, it can apply 'at a distance.' Moreover, it can apply even when no imaginable scalar alternatives are true. These facts make a scalar approach untenable.

2.1 Scalar proximity unfeasible

The scalar proximity approach was first offered by Hitzeman (1992), and has been thoroughly refined since (Sevi 1998; Horn 2002; Penka 2006). Amaral & Del Prete (2010) offer the most well-worked scalar account, based on Italian *quasi*. In it, they argue for a *quasi* (7) that takes a focused complement P and some object (like an event), and asserts that P does not hold of the object, and that some close alternative Q does.[1]

(6)   *Leo è arrivato **quasi** [alle 15]$_F$.*
    Leo is arrived **almost** [at.the 15]

    'Leo arrived at almost 3 p.m.'

(7) $[\![\textit{quasi}]\!] = \lambda P_{\langle s,t\rangle}\lambda e_s.\ \neg P(e)\ \&\ \exists Q_{\langle s,t\rangle}[\ Q \leq_S P\ \&\ \text{close}_S(Q, P)\ \&\ Q(e)]$

(8) $[\![\textit{quasi alle 15}]\!] = \lambda e.\ \neg[\text{at 3pm}](e)\ \&\ \exists Q_{\langle s,t\rangle}[\ Q \leq_S [\text{at 3 pm}]\ \&\ \text{close}_S(Q, [\text{at 3pm}])\ \&\ Q(e)]$

Typically the set of ranked alternatives S in (6) would consist of other times in which the runtime of the event is located.

(9)   *Leo arrived almost [at 3 p.m.]$_F$*

    a. $[\![\text{at 3pm}]\!] = \lambda e.\ \tau(e) \subseteq 3\text{ p.m.}$
    b. $S = \langle\ \lambda e.\ \tau(e) \subseteq 2\text{ p.m.}, \lambda e.\ \tau(e) \subseteq 2{:}30\text{ p.m.}, \lambda e.\ \tau(e) \subseteq 3\text{ p.m.}, \ldots \rangle$

They define closeness as follows: Q is close to P if and only if Q is lower than P on a contextually provided scale S, and if Q is closer to P on that scale than a contextually provided limit point L. For instance, imagine that in (6), the limit point L is 2:30 pm. In that case, *almost* holds if and only if Leo's arrival event occurs between 2:30 and 3:00.

— Figure 1 is to be placed here —

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[1] Amaral & del Prete's *quasi* is cross-categorial. In (7), we provide only the denotation of *quasi* involving events and properties thereof, for simplicity.
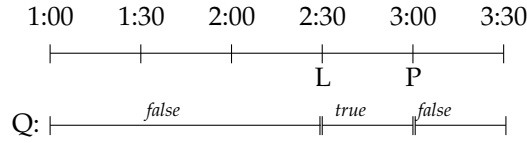
Figure 1: The limit point and proximity

The scalar approach has a number of benefits, especially when the scale relies on focus alternatives, but it encounters four crucial problems that it cannot overcome.

The first is that focus is not always the source of the scalar alternatives. *Almost* does not always have a focused constituent in its complement (10), in English or Italian.[2] In fact, *almost* itself can be the focused constituent (11).

(10)   a. *[Terese]$_F$ almost broke the record.* $\nrightarrow$ Someone close to Terese on a scale broke the record

       b. *[Teresa]$_F$ ha quasi battuto il record.*

(11)   a. *Terese [almost]$_F$ broke the record.* $\nrightarrow$ The extent to which Terese broke the record is not 'almost', but close to it.

       b. *Teresa ha [quasi]$_F$ battuto il record.*

Even if the focused constituent is in the complement of *almost*, it is not necessarily linked to *almost*. Such cases are easy to find. In *Terese almost married [Sam]$_F$/Teresa ha quasi sposato [Sam]$_F$*, the set of alternatives involves other people she almost married, not the degree to which she came close to marrying Sam.

A second problem is that *almost* can be felicitous even if no alternatives to the focused complement hold. The scalar account requires at least one to hold. In the following context, the alternatives are other kinds of records, none of which are reached, and yet *almost/quasi* is accepted.

> **Context:**
> *Valeria holds the world record in the 100m dash, 10.00 seconds, which she set at the 2012 Olympics. Since she is Italian, 10.00s is also the Italian national record, as well as her own personal record. At the 2016 Olympics, Valeria ran 10.01 seconds. She did not tie or break any records at all, but she was fast enough to win gold.*

(12)   a. *Valeria almost tied [the world record]$_F$.*

       b. *Valeria ho quasi raggiunto [il record del mondo]$_F$*

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[2]We thank several Italian speakers for their judgments.

4

Third, *almost* can be felicitous even when there is no clear idea of what the alternatives should be, or how they should be ordered. Penka (2006) suggests using Horn scales, but these only apply when scalar environments are triggered by particular lexical items like quantifiers or accomplishments. Nouwen (2006) finds examples that do not lead to the standard of proximity required for such a scale.

(13)   *Travis almost qualified for the long jump.*

No matter which constituent in the VP is focused in (13), it will not generate the right set on a Horn scale. Instead, we must construe a scale of distances based on the context. If we assume that one must jump (at least) 6 meters to qualify for the final, (13) is true if Travis jumped 5m90, but not if he jumped 2 m or 6m50. Amaral and del Prete propose that in contexts that do not generate Horn scales, *almost* coerces a scalar interpretation, basing it on the event structure when it can. The alternatives in the case of (13), are the list of things that need to be done to satisfy the predicate, ranked in a way leading to culmination.

Coercion based on event structure still is not enough. *Almost* can work even if the list of things needing to be done is not ranked. Imagine that you wrote a poem of a particular form, like a villanelle. The villanelle form imposes a lengthy list of strict criteria: 19 lines long, containing 5 tercets and 1 quatrain. Meter is regular but not fixed. The tercets have ABA rhyme scheme, the quatrain ABAA. There are two lines that serve as refrains. One refrain must be the first line of the poem, the other the third line. The second and fourth tercets must end with the first refrain; the others end with the second. The last two lines of the poem must be the first and second refrains, respectively.[3]

If you write a poem with all of these criteria, you have written a villanelle. If you write a poem with all save one, you have almost written a villanelle. It does not matter which criterion you failed, whether you changed a refrain[4], failed to keep a meter[5], missed a rhyme[6], or some combination of some of these; any of these can make an almost-villanelle. Since the criteria are not ranked, there is no way to coerce a scale ranking the propositions themselves. Instead, we must coerce a numerical scale counting the number of features required to make a villanelle. The limit point would represent a high proportion of that number. Essentially, we count up the villanelle features after the fact, with no regard to the writing event itself. If the total of features met exceeds the limit point and is not enough for a villanelle, *almost* works.

— Figure 2 is to be placed here —

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[3]Dylan Thomas's *Do not go gentle into that good night* is perhaps the best-known English poem exemplifying the form.

[4]https://thinkingsaying.wordpress.com/2015/05/06/fear-of-rejection-almost-a-villanelle-in-form/

[5]http://poetryforkidsjoy.blogspot.com/2013/02/quail-almost-villanelle.html

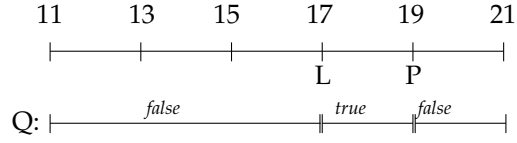[6]http://emilyseals.blogspot.com/2012/03/my-almost-villanelle.html

Figure 2: A numerical scale coerced from an unranked event structure

Looking back at the cases we've seen, we find that we can apply numerical scales to them as well. If the event structure has 10 steps, and you complete 8, you've almost completed the action, no matter what the steps are. In essence, the only scale we need for *almost* is a numerical one based off the proportion of met conditions to the proportion of total ones. If the conditions happen to be ordered in a scale, *almost* will appear to be based on that scale, but it is actually based on the numerical one of required conditions met.

The fourth problem with proximity on a scale is that *almost* can be felicitous even if proximity is not met. Imagine a baseball play where the batter hits the ball hard in such a way that he runs safely to second base. This play is known as a "double." Now, imagine the next batter hits the ball in such a way that under most circumstances, he would reach second base safely. However, in this instance, an infielder catches the ball, making the batter "out." About such a case, (14) expresses a true proposition.

(14) *The batter almost hit a double*.

No scalar approach can capture this truth. The Horn scale introduced by *double* would rank propositions expressing certain alternative baseball plays to a double (Table 1). That will not work here: Both cases involving a 'single' are false, 'got out' is true but too far away for the limit point of *almost*, and 'strikeout' is false.

proposition	hit the ball	reached 1st	went for 2nd	reached 2nd
The batter hit a double	+	+	+	+
The batter hit a single but got put out at 2nd	+	+	+	−
The batter hit a single	+	+	−	−
The batter got out	+	−	−	−
The batter struck out	−	−	−	−

Table 1: Ranked alternatives to a double

We cannot construe a scale based on event structure that would lead to a proximity reading, or even coerce a scale based on counting the proportion of met conditions, because out of all the things that needed to happen to make a double, only a few actually happened. The batter must hit the ball. The ball has to travel into the outfield, the outfielders have to be far enough to require

chasing the ball down, the batter has to stay on his feet running to second base, he has to touch first base, reach second base, and not be tagged by a fielder with the ball. Only one of these events occurred.

If we coerced a scale based on the things needed to be done to get a double if the event had run its course, we would still end up with an out, because the event did run its course. To even envisage an applicable scale of this sort, we would have to suppose a continuation of the event *without* the fielder catching the ball, along with no other impediments— we must suppose that the batter doesn't trip on the way to second base, that no other fielder catches the ball, and that any other thing that could go wrong doesn't. In essence, we only gain proximity if we project counterfacually into the future from some point during the actual event. We need counterfactual reasoning to judge the truth of *almost* at least some of the time.

Looking back, we can apply the same observation to our long jump case (13). Imagine that Travis is the defending world champion and absolute favorite to win, so his qualification for the final is a mere formality. However, he fouls on his jumps, and fails to score any distance. He finishes in last place, but (13) is still true. If we employ a position-based scale, *almost* should not be felicitous because Travis's position is below any limit point proximal to qualification. Instead, conditional supposition gets us the result: It's the fact that he fouled that matters. Essentially, (13) is true because if he hadn't fouled, he would have qualified, assuming nothing else went wrong.

In many cases, it is difficult or impossible to form a scale of alternatives based on any part of the complement of *almost*. The only scale we can always construe, and the only one we need, is a numerical scale measuring the proportion of propositions met to the propositions required for event completion. Usually, if the proportion is close to 1, *almost* holds. In many cases where this proximity does not occur, *almost* can be "saved" by making conditional suppositions concerning the facts of the matter and what needs to be done for culmination of the event. Clearly, the conditional supposition forms part of the semantic contribution of *almost*. We now must ask why this effect does not apply in (9). More broadly, under what conditions can a counterfactual save *almost* at a distance?

2.2   Revisiting an old observation

The starting point of this investigation is the observation that *almost* can be felicitous even if the event doesn't reach a limit point close to culmination. This observation was actually made long ago but had always been resolved by simply lowering the threshold of culmination. We will show that a modal is required for that lowering.

Morgan (1969) and McCawley (1972) found that *almost* could apply to events that weren't close to culmination, as in (15).[7]

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[7]We have added a context to this classic example.

Context:
John and Harry got into a fight. John had a gun in his pocket and considered shooting Harry, but then cooler heads prevailed.

(15)   *John almost killed Harry.*

Morgan and McCawley each preserved proximity to employ *almost* as evidence towards a decomposition of events and verbal predicates. Specifically, McCawley proposed decomposing *kill* into *act in a way to cause x to become dead*, where each decomposed predicate projects. *Almost* indicates a proximity to the culmination of one of the sub-events, depending on its location in the decomposed verb.

(16)   a.   John **almost** (acted to cause Harry to become dead) = (15)
       b.   John acted to **almost** (cause Harry to become dead) ≠ (15)
       c.   John acted to cause Harry to become **almost** (dead) ≠ (15)

However, (Dowty 1979: 242) demonstrates that the decomposition of predicates like *kill* in this fashion is independently unfounded. Not to mention, many predicates cannot be decomposed this way. Even with a more modern approach to verbal decomposition, Rapp & von Stechow (1999) find no interpretational effects of verb decomposition applying to German *fast*. Instead, its interpretation depends on its placement with respect to an aspectual projection. Translating their modal approach to a scalar one for this discussion, the placement of *fast* above aspect would put the event near the lower endpoint of the scale. The placement of *fast* below aspect gives the reading at the higher endpoint of the scale. This difference puts *fast* in line with scalar accounts (like Hitzeman (1992)) that propose *almost* to be compatible with either endpoint of a scale. This is why accomplishments are ambiguous with *almost*, and why *almost every* and *almost none* are acceptable, but not *almost some* or *almost many*.

It is clear that *almost* can apply at either end of a scale, but when we consider events that have numerous steps that need to be completed, we find that *almost* can apply felicitously at any step along the way. In (17), the subject had to stop because of some impediment. No matter which step the impediment occurs at, the sentence is felicitous, although less and less so as we go down the list.

(17)   *I almost climbed Mount Everest, but . . .*
       a.   *I fell ill when I was 200m from the summit.*
       b.   *I had to turn around from the last base camp.*
       c.   *the weather turned bad halfway up.*
       d.   *base camp was inaccessible.*
       e.   *I couldn't get into Nepal.*
       f.   *I couldn't raise the money.*
       g.   *I decided not to get off the couch.*

Like McCawley, our response to (17) is to lower the threshold for success. Once this threshold drops (T), the limit point L will drop with it.
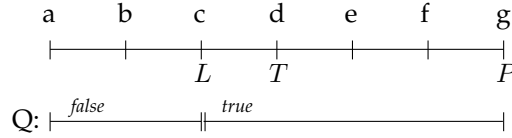
— Figure 3 is to be placed here —

Figure 3: Threshold drop

In (17d), the sentence is acceptable for cases where I almost made it to base camp, if we can lower the threshold to a point that would 'I almost made to base camp' guarantees that 'I almost climbed Mount Everest.' The question now turns to the determination of the factors permitting this threshold drop.

The only way to guarantee a successful threshold drop is if T entails P. The simplest way to incorporate this entailment is to redefine Closeness to include it.

(18)   **E(ntailment)-Closeness**
    Given properties $P, Q, L \in D_\alpha$, Q is E-close to P if and only if:

    1.   There is a property $T \in D_\alpha$ on a scale S with Q and P,
    2. $Q \leq_S T \leq_S P$,
    3. T entails P and
    4. Q is closer to T than some limit point L.

The conditions in (18) cover the ordinary cases where Q is actually close to P, since the threshold T would be P, which entails P.

Understanding E-closeness allows us to intuitively understand when *almost* can work at a distance, and we can try to use it in place of simple closeness in a scalar alternative *almost*.

(19) $[\![almost]\!] = \lambda P_{\langle s, wt\rangle} \lambda e_s \lambda w_w. \ \neg P(e)(w) \ \& \ \exists Q_{\langle s, wt\rangle}[\ Q \leq_S P \ \& \ \underline{\text{E-close}}_S(Q, P) \ \& \ Q(e)(w)]$

The entailment is only truly necessary when the simple scale fails and the event is not close to culmination, but E-Closeness does no harm otherwise. However, several reasons prevent us from a simple solution like this.

First, the entailment is not guaranteed. Arriving at the lower threshold T does not guarantee by itself that P will be reached, since there are worlds

9

where something blocks you at a later step. We need a modal whose domain limits the entailment worlds to certain accessible ones, where nothing blocks you.

As the threshold T drops away from the culmination point P, the less likely it is that T entails P, and the less likely it is that *almost* will be acceptable. This was already apparent in (17), but the following case is even clearer.

Context:
Your team lost a basketball game. You are describing the game to a friend.

(20)   *We almost won the game.*

If we had lost the game 82-81, after missing a last-second shot, (20) is true. It is obvious that in all accessible worlds where you make the shot you would have won. However, as we get further away from a last-second shot, the strength of *almost* weakens. For instance, it's likely in (20b) that you would have won if your star hadn't gotten hurt, but it is not certain.

(20)   a. We lost 82-81, when I missed a last-second shot.
       b. We lost 82-78, after our star player got hurt with 3 minutes left and our team leading 78-76.
       c. We lost 82-70, and led with 7 minutes remaining, but failed to score after that.
       d. We lost 82-48, and didn't even score in the first 10 minutes.

E-Closeness cannot achieve this weakening effect, since the entailment condition it requires that $(T \rightarrow P)$ either hold or not. Instead, a properly constructed modal will be able to achieve the effect, by shrinking the set of worlds where the implication holds.

Another reason that E-Closeness is not enough for *almost* to apply at a distance is that the facts of the world affect the strength of *almost*. If you say *I almost climbed Mount Everest, but I decided to stay home*, whether that's true will depend on independent facts that make the entailment come through. Some facts make *almost* stronger, while others make it weaker. It is much more believable if this sentence is uttered by a seasoned alpinist than by a bon-vivant semanticist, because the alpinist's condition and experience make it far more likely that taking the step of deciding to do it will lead to actually doing it. Likewise, it is far more believeable if the semanticist uttered *I almost wrote a squib about weak definites, but decided to watch TV* than it is for the alpinist, for similar reasons. These facts will affect the way that a modal is interpreted, by helping us determine which worlds are accessible.

A fourth reason we cannot simply redefine closeness and change nothing else is that doing so would preserve the problematic polar condition (not p). When we consider this with the need to guarantee entailment, the weakening effect, and the role of facts in determining the truth of *almost*, we see quite plainly that simply redefining closeness to account for entailment will not avert the need for a modal.

2.3 Against mere modal proximity

We have argued that a modal is required for the meaning of *almost*, but modal accounts are not new, either. The earliest one was offered by Sadock (1981) as an attempt to derive the polar condition pragmatically. *Almost p* is true of w if there is a close alternative world to w where p holds. The closeness relation that comes with the modal provides the proximal condition with no further assumption.

A more well developed version comes from Rapp & von Stechow (1999), who examine German *fast* (The relevant parts of their proposal apply in English). Their modal approach asserts the polar condition.

(21) ⟦ *fast* ⟧ = λpλw. p(w) = 0 & ∃w′[close(w)(w′) & p(w′) = 1]

Our account will differ from theirs by showing that the closeness that comes with this modal does not suffice for cases where *almost* applies at a distance. We need additional aspects of modal meaning.

The notion of closeness in these modal approaches is standard. Two worlds are identical if every proposition true of one is true of the other. Worlds differ increasingly as they differ one proposition at a time. Rapp & von Stechow do not work out this notion, but Nouwen (2006) does. *Almost* works by limiting the ways that worlds can differ to those affected by a contextually chosen set of properties and an individual. *Almost p* is true when there is a world w′ that is not too far removed from w and where p holds. We can select the set of propositions and the individual at will, and that obviates the need to coerce a scale.

(22) **Closeness (Nouwen 2006)**
      Given a set of properties P and an individual x,
      a world w′ is 1-removed from another world w iff
      w(P) = w′(P) ∪ { x } or w′(P) = w(P) ∪ { x },
      and w and w′ agree on all other properties.

In (23), we only need to change two properties based on the contextually provided scale. Thus, the world is 2-removed from the actual world. In this case, that is close enough for *almost*, which holds if there is a close enough world.

Context:
To qualify for the final, Travis needs to jump 6m00. Instead, he jumps 5m90, and fails to qualify.

(23) *Travis almost qualified for the long jump final.*

w_0	w_1	w_2	Property
F	F	T	[λxλw. x jumped 6m00 in w](Travis)
F	T	T	[λxλw. x jumped 5m95 in w](Travis)
T	T	T	[λxλw. x jumped 5m90 in w](Travis)
0	1	2	**: n-removal**

11

A world-closeness account easily accounts for the context-sensitivity of *almost*, and it allows for a sense of weakening, for as one gets further away from culmination, the n-removal increases.

In essence, Nouwen's n-removal is a scalar approach where all the scales rank possible worlds, and it works like a scale of numerical values based on propositions. However, since this approach involves a simple scale, it also runs aground faced with *almost* at a distance.

An advantage of Nouwen's approach is that the threshold drop comes for free with possible worlds. The threshold ϕ_t entails p if and only if ϕ_t-worlds are also-p worlds, and not *vice versa*. Given the set of propositions at hand, the worlds where p holds are not further n-removed from the actual world than the worlds where the threshold is true. So if the threshold is close enough for *almost*, so is culmination.

For example, in (24), the relevant worlds are all 4-removed, so at least some of them are. And 4-removal is close enough in this case, due to a lower threshold, so *almost* is felicitous.

(24) *I almost climbed Mount Everest, but I couldn't enter Nepal.*

w_0	w_1	w_2	w_3	w_4		Property
F	T	T	T	T		[λxλw. x reached the summit in w](I)
F	T	T	T	T		[λxλw. x reached the last base camp in w](I)
F	T	T	T	T		[λxλw. x reached halfway up in w](I)
F	T	T	T	T		[λxλw. x reached base camp in w](I)
F	T	T	T	T	ϕ_t	[λxλw. x entered Nepal in w](I)
T	T	T	T	T		[λxλw. x raised the money in w](I)
0	4	4	4	4		**: n-removal**

To save this account, we have to modify Nouwen's notion of closeness to a ranking of worlds based on n-removal. If there is a world such that only there are m number of worlds less n-removed than it, and m is lower than some limit point, *almost* works. In (24), despite being 4-removed, there is a high enough-ranking world where P holds.

The result is essentially a version of E-closeness that avoids the need to stipulate entailment. However, this stipulation was not the problem. E-closeness had a problem that only modality could solve, and this version encounters the same problem: Reaching the threshold does not entail success. In this case, entering Nepal does not entail reaching the summit of Mount Everest. The result is that unless every world on the scale between a success world and the actual world, successful worlds won't be ranked low enough. Consequently, we must independently limit the worlds at issue to ones where the entailment does hold. Even with a modal-closeness approach, an independent modality is required for the drop to occur.

3   A counterfactual *almost*

3.1   Summary of the account

In this section we will lay out a new denotation for *almost*, which contains two parts. The first is an 'antecedent condition,' which entails the polar condition, and asserts a missing set of necessary conditions. The second part is a 'counterfactual condition', which asserts that in all the most normal worlds where things happen as they did, except the set of missing conditions holds, the prejacent holds. In cases where *almost* is close, the counterfactual makes no real difference, but in cases of *almost*-at-a-distance, the counterfactual gives us the threshold drop we could not get with simple entailment, by limiting the assertion to worlds where the entailment holds.

Let us start with the background assumption of a possibilistic situation semantics (Kratzer 1989, 2015), under which a situation is defined as a part of a possible world. A possible world is simply a situation that is not a part of any other situation. The set of possible worlds is W, such that $W \in S$. A proposition denotes a set of situations. A proposition p is true of a situation s if and only if $s \in p$. The set of situations is S, and the set of propositions is its powerset $\mathbf{P}(S)$. A situation is only part of a single possible world, but may have counterparts in other worlds. For any situation s and world w, let $s^{\sim w}$ be s's counterpart in w.

Situations are of type s. Apart from situations, we employ well-understood type-theoretic concepts.

We will set the framework for discussing the meaning of *almost* by introducing the entire denotation of propositional *almost*, then justifying and discussing its parts.

(25)   Let NEC(p)(s) be a set of propositions necessary for p to hold of s

(26) $[\![almost]\!](p)(s) = 1$ iff : $\exists Z \left[\begin{array}{l} Z \subseteq_{SE} \text{NEC(p)(s)} \ \& \ s \notin \bigcup Z \ \& \quad s \\ \forall w [\ w \in \text{norm}_s(R(\text{fact}(s),Z)) \rightarrow p(s^{\sim w}) = 1\ ] \end{array} \right]$

   a.   There is a small enough subset Z of NEC(p)(s),
   b.   such that no member of Z holds of s, and
   c.   in all the worlds w with counterparts to s where Z holds,
   d.   whose outcomes are most normal with respect to the world of s,
   e.   p holds of the counterpart of s in w

The restrictor of the quantifier $\exists Z$ (steps a. and b. below) corresponds to the combined polar and proximal conditions discussed in section 2. We call this the **antecedent condition**, because it introduces Z, which will be an argument of the modal condition.

The modal condition is the nuclear scope of $\exists Z$ (steps c., d., and e.). It is a counterfactual adapted from the foundation laid by Kratzer (1981, 1989), and updated by Arregui (2009) and Abusch (2012). It asserts that in all the most normal worlds where certain facts of s hold along with the propositions in Z, p

13

holds in an extension of s's counterpart. Its modal base is circumstantial, combined with Z. Its ordering source is based on the normal unfolding of events of the evaluation world. The modal base is introduced by the function fact, while the ordering source is introduced by the function norm_s. We will discuss these more in detail in the next section.

(27)   a. **Circumstantial modal base**
fact(s) = { $w \in W$ | w has a counterpart of s }
The set of counterpart worlds

     b. **Modified circumstantial modal base**
R(fact(s),Z) = { $w \in$ fact(s) | $s^{\sim w} \in \bigcap Z$ }
The set of counterpart worlds where the premises hold

     c. **Ordering**
Given worlds w, w′, and an ordering source O,
$w \leq_O w'$ iff { $p \in O$ | $w \in p$ } $\subseteq$ { $p \in O$ | $w' \in p$ }

     d. **Normative ordering source**
g(s) = { $p \in \mathcal{P}(S)$ | p normally holds in w_s }
The set of propositions that normally hold of the world of s

     e. **Normative ordering source function**
Given a modal base M, and a normative ordering source g(s),
$\text{norm}_s(M)$ = { $w \in \bigcap M$ | $\neg \exists w'[\, w' \in \bigcap M$ & $w' \leq_{g(s)} w\,]$ }
The set of modal worlds that are the most normal with respect to g(s)

3.2   When *almost* is close anyways

Before showing how *almost*-at-a-distance works with this denotation, we will apply it to *almost* when the event is close to culmination. The counterfactual will not have any effect in such a case, so we can focus on the antecedent condition. The antecedent condition states that a small enough subset of the conditions required for p to hold of some situation s_T fail to hold. For instance, if I accomplished most of the steps required for climbing Mount Everest in s_T, it is true that I almost climbed Mount Everest in s_T. In this case, the propositional argument to *almost* is the AspP denoting the set of situations in which there is an event of me climbing Mount Everest. Let CME abbreviate this argument.

(28)

s_T
    almost   CME = AspP
λs. ∃e[e ≤ s & [I climbed M.E.](e)]
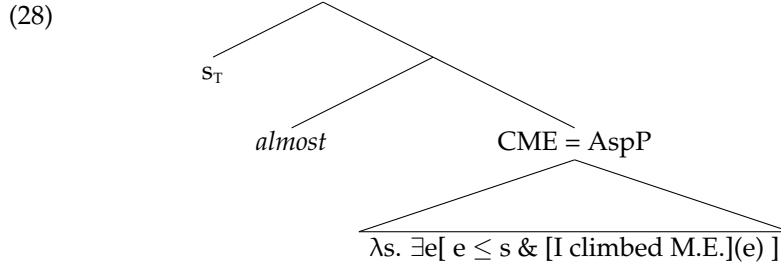
Given this, we can define the function NEC(CME)(s) as returning a set of conditions necessary for s ∈ CME. This set can vary for many reasons which we will discuss, but for now let us assume that it contains seven steps (**??**).

(29) *I almost climbed Mount Everest (but I had to turn back halfway up)*
   a. topic situation = $s_T \in S$
   b. Let $\{A, B, C \dots\}$ be the set of all propositions ($\mathbf{P}(S)$)
   c. Let CME = $[\![AspP \text{ in } (28)]\!] \in (\mathbf{P}(S))$
   d. NEC(CME)(s_T) = { A, B, C, D, E, F, G }

   > A = λs. I decide to climb Mount Everest in s
   > B = λs. I raise the funds in s
   > C = λs. I arrive in Nepal in s
   > D = λs. I make it to base camp in s
   > E = λs. I make it halfway up in s
   > F = λs. I reach the Hillary Step in s
   > G = λs. I reach the summit in s

There are seven propositions in NEC(CME)(s_T). Of these, only the members of { A, B, C, D, E } hold of s_T in (29). The other steps in the process do not hold, so they are the missing conditions. The sets of missing conditions are { F }, { G }, { F, G } . The antecedent condition of *almost* asserts that there is a small enough set of missing conditions.

If *almost* is felicitous, one of these sets must be "small enough," and can be assumed along with the met conditions to entail p of the counterpart of s_T in all the most normal outcomes. The only one of these subsets that meets the second condition is { F, G }, which contains all the missing conditions. Is it small enough?

Earlier we saw that proximity with *almost* relies on a simple numeric scale of propositions met. This scale can be derived from Jaccard dissimilarity, a measure that indicates how few members two sets share. Disjoint sets have a dissimilarity value of 1; identical sets 0.

(30) **Jaccard dissimilarity (d_J)**
   Given sets A, B: $d_J(A, B) = 1 - \frac{|A \cap B|}{|A \cup B|}$
   Whenever $A \subseteq B$: $d_J(A, B) = 1 - \frac{|A|}{|B|}$

The set of missing conditions Z is a subset of the set of necessary conditions NEC(p)(s), so their Jaccard dissimilarity(d_J(Z, NEC(p)(s))) will always be less than 1, and the dissimilarity value will correspond inversely to the relative size of the subset to the superset. As Z gets smaller, its dissimilarity to NEC(p)(s) rises toward one. The truth-conditions of *almost* require the dissimilarity of Z to NEC(p)(s) to be closer to 1 than some particular threshold value T. This value is not easy to determine, and may not be completely fixed. We will not

attempt a precise formulation of the exact number T should be, but it seems to typically fall between .7 and .8.[8]

(31) **Small enough subset**
A is a small enough subset of B ($A \subseteq_{SE} B$) if and only if:
   a. $A \subseteq B$ and
   b. $d_J(A, B) \geq$ T, where
   c. T is a contextually selected value such that $.7 \leq$ T $\leq .8$

Returning to (29) we see that the set with two members has a Jaccard dissimilarity of .714 with respect to the set of necessary conditions. This value exceeds T, so the two-member set is small enough.

$$(32) \quad d_J(\text{Z}, \text{NEC}(p)(s_{\text{T}})) \quad = \quad 1 - \frac{|\{\text{F, G}\}|}{|\{\text{A, B, C, D, E, F, G}\}|} \quad = \quad 1 - \frac{2}{7} \quad = \quad .714$$

Any world where { F, G } holds along with { A, B, C, D, E } will be a world where p holds of s, since all of NEC(p)(s) holds. The modal base worlds will all entail p, so *almost* is felicitous.

3.3 *Almost* at a distance

When the largest set of small enough missing conditions contains all the missing conditions, the counterfactual condition does not help or harm anything. However, when the largest small enough set still leaves missing conditions unmet, *almost* can only work at a distance. In such cases, the counterfactual becomes crucial.

We have seen that *almost*-at-a-distance requires counterfactual reasoning, so a modal must be incorporated into the meaning of *almost*. Counterfactuals, like other modals, have anchors from which their modality is projected. Recent advances find that modals are anchored within worlds by events (Hacquard 2006, 2010), times (Ippolito 2013), situations (Arregui 2009), or time-world pairs (Abusch 2012). The use of a situation semantics englobes these. Our account will employ situations, but is convertible to modals with other anchor types.

Moreover, the modal anchor is determined by the structural position of the modal. Modals below aspect have the Davidsonian event as their anchor, while modals above aspect take the Austinian topic situation (or Kleinian topic time). Modals above that, or in intensional clauses, take an attitude verb's Davidsonian event. The following trees present these structural distinctions in simplified format.

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[8]Our setting of T between .7 and .8 is crude and warrants its own investigation. For now it will suffice because the exact value is not a crucial component of our analysis. The inexactitude of T is reflected in judgments of *almost*. Also, the proportion will depend on the chosen set of necessary and sufficient conditions. T seems to increase along with the cardinality of NEC(p)(s); for instance, 8 out of 10 allows *almost* more easily than 800 out of 1000 does, and so on.

(33)

$\exists s_{Asp°}$ $\lambda p\lambda s.\ \text{modal}(p)(s)$ p s_T $\lambda p\lambda s.\ \text{modal}(p)(s)$ p

Dav. event   top. sit.

$\lambda q\lambda s'.\ q(s')\ \&\ \text{att}(s')$

att. pred.

complementizer

$\lambda p\lambda s.\ \text{modal}(p)(s)$ p

The location of *almost* in the structure will determine its modal anchor, so we need to determine its location. *Almost* is cross-categorial: It can appear in a propositional position in the extended verbal projection, or it can appear with particular constituents such as quantified determiner phrases (*almost every doctor*) or properties (*an almost happy ending*). In this paper we will focus on the propositional *almost*, with discussion about the other categories in section 6. In a situation semantics, any expression that propositional *almost* can take as its complement denotes a proposition.

Standard syntactic tests (34) find that propositional *almost* in English must be located at LF above an aspect head (Asp°), and below the insertion site of the topic situation/time. Often, the insertion site of the topic situation/time is argued to be T°, which introduces a pronoun bearing tense, a presuppositional time relation. We will instead assume free insertion of the topic situation/time pronoun above T°, which only introduces the presupposition that assigns a value to tense (35).

(34)   a.   above Asp°: *I will almost be running for two hours*

      b.   above or below Neg°: *I almost haven't been there*

                               I haven't almost been looking

      c.   above T°: *I almost didn't see you*

(35)   For any utterance context c,
      $[\![\ T°_{[\text{PAST}]}\ ]\!]^c = \lambda p\lambda s.\ p(s)$, only defined if $\text{time}(s) \prec \text{time}(c)$

Scope tests also place *almost* above aspect. Paired with a modal progressive (Portner 2009), we see that *almost* can only be interpreted outside the scope of the progressive's modal. In (36), interpreting $[\![\ \textit{almost}\ ]\!]$ above the progressive gets us a true proposition. The low scope reading (36b) does not provide the right truth-conditions.

(36)   *Imogen was almost crossing the street, when a bus hit her*

      a.   ✓ ALM > PROG : It is almost the case that in all worlds where the event continues without impediment, Imogen crossed the street

b. # PROG > ALM : In all worlds where e continues without impediment, Imogen almost crossed the street.

The crucial generalization to make is that propositional *almost* is situated between aspect and the topic situation/time. Since the location of a modal determines its anchor, the modal anchor of propositional *almost* will be the topic situation.[9]

(37) [s_{top} [... *almost* [... Asp° *vP*]]]
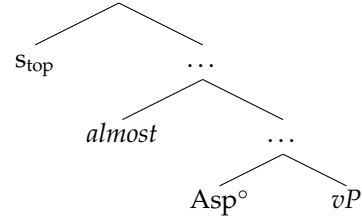
In the previous example (29), the subject made it halfway up the mountain. Out of the necessary conditions, 5 of 7 were met, so the addition of a small enough set of 2 unmet conditions to the 5 met conditions suffices to entail success in climbing the mountain. What happens when there is no small enough set that fits the bill? In (38), the proposition and necessary conditions are the same as in (29), but only one of the seven conditions are met, namely A.

(38) *I almost climbed Mount Everest* (in s_T) *(but I couldn't raise the money)*
    a. NEC(CME)(s_T) = { A, B, C, D, E, F, G }

        A = λs. I decide to climb Mount Everest in s

        B = λs. I raise the funds in s

        C = λs. I arrive in Nepal in s

        D = λs. I make it to base camp in s

        E = λs. I make it halfway up in s

        F = λs. I reach the Hillary Step in s

        G = λs. I reach the summit in s

The largest small enough sets Z that we can add will only have two members, so none will suffice to entail CME. Let us set Z as the set { B, C }.

The modal condition will work the rest out. It declares that in the most normal realistic worlds where Z holds with what actually happened in the modal anchor, the proposition holds. The modal anchor is determined by the structure as the topic situation s_T. The modal base is circumstantial, derived via a function that takes a modal anchor and returns worlds with counterparts to it (39a). It is also modified by the assumption of Z (39b), with the function R, which returns the set of counterpart worlds where the propositions of Z hold.

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[9]If *almost* is located under the perfect, then its anchor will be the 'perfect time span' that the perfect introduces.

In this case, those propositions are the set { B, C }. Inasmuch as ¬B and ¬C hold of the actual s_T, they will not hold of its counterparts when the propositions of Z contradict them. R(fact(s_T),Z) will be the worlds where A, B, and C hold, along with other compatible facts of the world.

(39) a. fact(s_T) = { w ∈ W | w has a counterpart of s_T }
      b. R(fact(s_T),Z) = { w ∈ fact(s_T) | $s_T^{\sim w}$ ∈ ∩Z }

The ordering source is introduced by the norm$_s$ function, which takes the modal base and returns the worlds among it that are most normal with respect to the world of the modal anchor. Let us assume that in the actual world, when someone raises the funds to climb Mount Everest and reaches Nepal for that purpose, they normally succeed in climbing the mountain. The ordering source $g(s_T)$ can be simple, containing only two propositions (40), so the best worlds will be the ones where they hold.

(40) $g(s_T)$ = { P, Q }

      P = λs. If someone raises the money to climb ME in s,
              they arrive in Nepal climb ME in s,
      Q = λs. If someone arrives in Nepal to climb ME in s,
              they reach the summit in s

In this limited set of best worlds, the prejacent is entailed. Z adds to the modal base the propositions that they raise the money and that they arrive in Nepal. The best ordered worlds where be the ones where both of these hold. Any world where P and Q hold and { A, B, C } hold, so will D, E, F, and even G, the proposition of reaching the summit. The truth-conditions of *almost* are met.

The reliance on normal worlds offers a very simple way for *almost* to fail. If it is not normal for the prejacent to be entailed by the modal base with a small enough set of assumptions, *almost* cannot work at a distance. We assumed for (29) and (38) that P and Q typically lead to success. That assumption is true of our world. In a different case where P normally holds but Q does not, the best worlds will contain some worlds where you succeed, but others where you do not. As a result, the truth-conditions for *almost*, which involve a universal quantifier, will not be met.

3.4   Avoiding shortcuts to proximity

So far, we have used examples where we reach a point of failure, then assume the next step in the process. For instance, if we fail to get into Nepal, we assume getting into Nepal. But there are many other small enough sets of missing conditions, including the last one, reaching the summit. We observe that speakers cannot simply assume this one and skip all the rest. That empirical observation seems obvious, but at first it seems like the denotation of *almost* should allow it. After all, in all normal worlds where you get to Nepal to climb Mount Everest,

and you've reached the top, you should have also done the other steps, because that's how the latter is normally accomplished. We need our semantics to rule out backtracking.

Unwanted skipping to the end is prevented by the way premises are added. It has long been observed that counterfactuals do not backtrack, without some epistemic commitment (Lewis 1979). With a situation-based circumstantial modal base, the counterparts are identical with the actual modal anchor, up to the point where the premise is added. In this case, the modal anchor is a situation, so that part of the world will be identical up until the point where you summit. Assume we got to Nepal in s_T, then got sick and quit (41). The modal adds the last step. However, we wind up with worlds with counterparts where we quit before even getting up the mountain, yet somehow wound up at the summit. This leaves us with missing necessary conditions, so the entailment fails.

(41) a. fact(s) $\quad= \{$ A, B, ¬C, ¬D, ¬E, ¬F, ¬G $\}$
     b. Z = $\{$ G $\}$
     c. R(fact(s),Z) $= \{$ w $\in$ fact(s) $\mid s^{\sim w} \in \bigcap Z \}$
              $= \{$ A, B, ¬C, ¬D, ¬E, ¬F, $\underline{G}$ $\}$

The temporal asymmetry results from the fact that the ordering source can only apply to the modal worlds. In this case, the modal worlds are those where we quit. On the other hand, if we assumed away the actual impediment, adding C to our premises, we end up with a set of worlds where the outcome can still be successful.

(42) a. fact(s′) = $\{$ A, B, ¬C $\}$
     b. Z = $\{$ C $\}$
     c. R(fact(s′),Z) = $\{$ w $\in$ fact(s) $\mid s^{\sim w} \in \bigcap Z \}$
               $= \{$ A, B, $\underline{C}$ $\}$

Another shortcut to proximity involves the necessary conditions themselves. Since *almost* relies on there being a small enough set of missing conditions, could we not simply change the necessary conditions to make sure we're close? If $\{$A, B, C$\}$ hold, then why not make the missing conditions the singleton set $\{$D $\cap$ E $\cap$ F $\cap$ G$\}$? That way, there is only one proposition missing, so the subset of missing conditions is small enough to satisfy *almost*.

We find no priniciple of logic preventing this, but it runs afoul of intuitions about *almost*. If we could rewrite NEC this way, we should be able to do it all the time. *Almost* would virtually never fail, because we could always ensure there is only one proposition left. For some reason, though, whenever we lay out a series of steps required to complete an action, we cannot package those steps together, even though each step brings with it any number of substeps.

The precise nature of the selection of necessary conditions spans well beyond the boundaries of this paper, and likely resides outside the boundaries of the semantics itself. It hardly seems proper to try to work all of these facts

into the semantics of *almost*, or any lexical item. For now, we can sketch out a handful of observed constraints on necessary conditions, while leaving their explanation to cognitive science.

(43) **Constraints on sets of necessary conditions**

    a. *Each step must be 'equivalent' in size.*
       This is more obvious on a numeric scale— if the scale is from 1 to 20, each integer in between is on the scale. We cannot say that 12 is almost 20 by lumping numbers 13 to 20. Likewise, you can't package together some of the largest steps of an accomplishment together. Obviously these steps needn't be perfectly equivalent the way integers are, but there is a constraint against convenient packaging.

    b. *Each step must be independently represented.*
       Even if you packaged propositions A and B together to make A ∩ B, at least A would still be in the set, leaving you with as many propositions as you would have had anyways.

    c. *The scale must be coarse*
       Penka (2006) observes that *almost* works with round numbers (*almost 100*) but not with exact ones (*?almost 102*). This observation follows if we assume that *almost* requires a coarse-grained scale. That said, exact numbers can easily be used if the scale is smaller than an integer; a thermometer can read 'almost 102 degrees' if the scale involves fractions of a degree.

3.5 Summary of this section

We have seen how a counterfactual works inside *almost* to save it at a distance, by limiting the worlds where entailment-closeness applies to the most normal ones given a set of premises. If there is an actual counterfactual, it should exhibit properties that counterfactuals are known to exhibit. Any differences should be derived from independently motivated sources. The next part of this paper will demonstrate that *almost* fulfills these requirements.

4 Comparison to ordinary counterfactuals

We claim that *almost* involves a modal reliant on a counterfactual supposition, and have just shown how it works. Counterfactuals have a number of properties besides their truth-conditions, and it is instructive to see how the counterfactual condition of *almost* compares to ordinary counterfactuals.

4.1 Predictable variability in the modal base

Abusch (2012) demonstrates that counterfactuals are built off a circumstantial or factual modal base by highlighting Kratzer (1981)'s key observation that

speakers can tailor a circumstantial modal base by selecting certain facts and omitting others from consideration. For instance, if we look at the standings of a sports team at a given point during the season, we can say they could have made the playoffs, even if all their players were injured at the time question and there was no metaphysically possible way for them to win anything from that point forward.

(44)   *Mathematically, Buffalo could still have made the playoffs.*

If *almost* has a counterfactual, it should allow tailoring as well, and it does. In (45), whether or not a team almost made the playoffs relies on which facts we want to take into account. If we just look at the standings, the team almost made the playoffs. If we consider how the season unfolded, however, they did not almost make the playoffs.

> **Context:**
> *New York failed to make the playoffs. The top 8 teams qualified,*
> *but New York finished 9th. However, they were actually out of*
> *playoff contention halfway through the season, and finished 7 games*
> *behind 8th place.*

(45)   *New York almost made the playoffs.*
    a. Based on standings at the end : True
    b. Based on how the season unfolded : False

We employ counterpart situation worlds for our modal base, rather than directly choosing sets of propositions. The tailoring of the facts of the modal base in fact is thus a choice in modal anchor (cp. Arregui (2009)). We saw that the modal anchor for propositional *almost* is the topic situation of the clause, so essentially, when we talk about different parts of the world, we change the modal base of *almost*. Thus, (45) expresses an ambiguity between a situation corresponding to the season itself, and a situation corresponding to the standings at the end of the season. In essence, we have a dynamic 'unfolding' reading in the former, and a static 'counting up after the fact' in the latter.

Situation selection can also distinguish between different-sized events, and that difference changes the set of necessary conditions in ways that affect truth-conditions of *almost*. This effect is clear in an anecdote recounted to us. A pair of colleagues were traveling to a conference in Vancouver. On the way to the airport to fly out, one remarked to the other "We're almost in Vancouver," which the other rejected, for they had just begun their journey. The first colleague remarked that, the day before, "We're almost in Vancouver" would have been true, even though they were further away. The difference in truth-value reflects a change in topic situation. On the way to the airport, the topic situation was the trip itself. On that trip, they had only made a few steps along the way, so not enough conditions were met for a small enough set to entail

completion[10]. The day before, the topic situation is the entire process of the talk, from submission, creation, preparation, and the travel itself. In that case, most of the conditions had been met, and *almost* would have been true about it.

A third effect of topic situation on the modal base involves embedding under attitudes. Intensional embedded clauses do not contain a topic situation pronoun that can serve as a modal anchor (Kratzer 1998b; Moulton 2009; McKenzie 2012). Instead, attitude predicates take as an argument a situation serving as *res* for the attitude. The attitude predicate subordinates the embedded modal, so that modal's anchor is not the *res*, but the counterparts to the *res* in the doxastically accessible worlds.

(46) *Jenny believes (of s_2) that Buffalo could have made the playoffs*
      = In every world w where what Jenny believes of s_2 is true, there is a world w' with a counterpart of $s_2{}^{\sim w}$, such that Buffalo made the playoffs in (an extension of) $s_2{}^{\sim w'}$

If the *res* s_2 corresponds to the season as it unfolded, its doxastic counterparts $s^{\sim w}$ will reflect how Jenny believes it unfolded, no matter how it actually did. Consequently, (46) could be true even if it was actually impossible for Buffalo to make the playoffs.

When propositional *almost* is embedded under an attitude, its modal anchor will be the doxastic counterparts to the attitude's *res*. In (47), the facts of the actual season are not at issue, but rather, what Jenny believes about the season. This proposition can hold even if Buffalo came nowhere near qualifying.

(47) *Jenny believes (of s_2) that Buffalo almost made the playoffs*
      = In every world w where what Jenny believes of s_2 is true, there is a small enough set of missing conditions Z such that in all worlds w' where $s_2{}^{\sim w'}$ holds along with Z, Buffalo made the playoffs in an extension of $s_2{}^{\sim w'}$.

The counterfactual in *almost* can be tailored in the same ways that ordinary counterfactuals can be. This is expected if

4.2 Predictable counterfactual logic with *almost*

Counterfactual antecedents famously fail to exhibit the downward monotonicity of conditionals expressing strict implication. The failure results from similarity between worlds that rule out certain counterfactual premises in another clause. If *almost* contains a counterfactual condition, that condition should also fail the tests for monotonicity, and it does.

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[10]*Almost*-at-a-distance is not allowed in this context, due to a present tense stative. This will be explained in section 5.2.

The first type of monotonicity failure is strengthening the antecedent, by which the set of worlds modified by one premise does not include the set modified by the conjunction of that premise with another. In a situation-based system, the counterpart worlds of a situation does not necessarily include other situations.

(48) If kangaroos didn't have tails, they'd topple over.
      $\nRightarrow$ If kangaroos didn't have tails and had crutches, they'd topple over

Almost-at-a-distance also fails this way. Imagine that I almost climbed Mount Everest, but I could not enter Nepal. The counterfactual premise is that I entered Nepal, which also does not entail other premises coming true.

(49) I almost climbed Mount Everest but I couldn't enter Nepal.
      $\nRightarrow$ I almost climbed Mount Everest but I couldn't enter Nepal and the weather turned bad

Conditionals can also fail to build transitive syllogisms, if their premises are not consistent due to entailed propositions. In (50), President Hoover would not be President Hoover if he had been born in Russia, since US presidents must be born in the US. Also, he would be Russian, so he could not be a traitor to the US.

(50) C → T: If President Hoover were a Communist, he'd be a traitor
      R → C: If President Hoover were born in Russia, he'd be a Communist
      R $\nrightarrow$ T: # If President Hoover were born in Russia, he'd be a traitor

The same occurs with the counterfactuality of *almost*. Imagine that Anna, an American since birth, is offered a chance to sell nuclear secrets to Soviet spies (in 1975), but refuses because she isn't a Communist. Again the syllogism fails, because if she had been born in Russia, selling secrets to Soviet spies would not be betraying her country.

(51) C → B: Anna almost betrayed her country, but she's not a Communist
      R → C: Anna was almost a Communist, but she wasn't born in Russia
      R $\nrightarrow$ B: #Anna almost betrayed her country, but she wasn't born in Russia

A third failure of monotonicity prevents contraposition, because the modal domains are simply distinct. These are very distinct sorts of situations (52a). The failure works for *almost*, as well (52b).

(52) a. If Penny had moved into the house, then Quentin would have moved out.
          $\nRightarrow$ If Quentin had not moved out of the house, Penny would not have moved in.

b. Quentin almost moved out of the house, but Penny didn't move in.
(*Q didn't move out, but if Penny had moved in, he would have*)
⇏ Penny almost moved in, but Quentin moved out of the house.
(*Penny didn't move in, but if Quentin had stayed she would have moved in*)

We see that the counterfactual condition in *almost* behaves just like an ordinary counterfactual with respect base tailoring and to monotonicity. On the other hand, *almost* differs from ordinary counterfactuals in several ways. The following dicsussion will explore these differences and explain how they are natural consequences of the restrictions on the counterfactual imposed by the lexical denotation of *almost*.

4.3 Apparent variability in modal force

The counterfactual in *almost* does differ from ordinary counterfactuals. First, it seems to have variable modal force, like modals attested in Salish languages of the Pacific Northwest region of North America. However, like those languages, the variability is not due to a change in quantifier, but rather in domain restriction.

The present account's use of a necessity modal differs from previous modal accounts of *almost*, which all involve possibility modals because the prejacent is not entailed. Sometimes, *almost* is true even if it seems to speakers that the prejacent merely could have come true. In a sentence like *I almost climbed Mount Everest, but the weather turned bad near the summit*, the intuition is clear that the speaker would have successfully climbed the mountain barring that impediment. Meanwhile, in *I almost climbed Mount Everest, but I couldn't raise the money*, the intuition is a strong 'could have'. We saw a similar progression in (20), discussing the basketball game. Almost winning because you missed a last-second shot is clearly a 'would have' scenario, while almost winning because your star player was injured with ten minutes to play in a close game is clearly a 'could have' situation. If *almost* contains a modal, that modal appears to vary between possibility or necessity. How do we square the possibility readings with a necessity modal?

We can square the readings with the modal by applying insights gained from the modals of languages indigenous to North America. In several languages of the Pacific Northwest, some modals seem to vary between possibility and necessity. For instance, the St'at'imcets modal *ka* specifies a circumstantial modal base but leaves modal force to context.

(53) **Stát'imcets** (ISO-639-3 code: lil; spoken in British Columbia)

*zúqwsas **ka**   ta sk'úkwmi7ta ti7 ku swúw'a,*
it kill   MODAL a child   that cougar,
lh-cw7áoz-as   kw   s-quscitítas
COMPLEMENTIZER-NEG-3 DET NOM-they shoot it

'That cougar would/could have killed a child if they hadn't shot it'[11] ([Rullmann et al. 2008](#))

    a. Context 1: The cougar had been on a rampage and had a child cornered. ($\rightarrow$ would)

    b. Context 2: Cougars sometimes kill children when they venture into built-up areas ($\rightarrow$ could)

Detailed study of this modal and others like it have found that none of them actually vary in force. Instead, they offer a unique modal force whose strength is affected by domain restriction. The stronger the modal, the more the reading is a 'would have' reading. The weaker the modal, the more likely the reading is 'could have'. In St'at'imcets, the modal expresses a necessity weakened by domain restriction. Rullmann *et al.* suggest a choice function as the means of this restriction, but [Portner](#) ([2009](#)) demonstrates that an ordering source does the job.[12] In the Salish language Gitksan (git, British Columbia), the epistemic modal =*ima* is a possibility modal strengthened by domain restriction via ordering source ([Peterson 2010](#)). In both cases, the ordering source reduces the number of possible worlds at issue.

Variable-force modals actually have a fixed force. Which force does the modal condition of *almost* express? It is easy to determine, because a smaller domain weakens a universal quantifier, but strengthens an existential quantifier. We can observe that the more we have to assume will go our way, the more the reading is 'could have' than 'would have'. The further we are from success in the actual world, the smaller the domain gets (through set intersection), because the ordering source will pick out fewer successful worlds. Since a weaker reading correlates to a smaller domain, we conclude that *almost* requires a necessity modal. This conclusion fits with the observations made earlier about entailment with the modal condition.

4.4 Restrictions on the counterfactual condition

The counterfactual condition of *almost* is also subject to constraints on premises. Ordinary counterfactuals place virtually no limits on the premises adopted. You could imagine the most outlandish premises— such as Abraham Lincoln brought back to life as a jar of pudding— and reason from there. But the counterfactual in *almost* is much more restricted.

One common constraint is that you can't change the rules of the situation. If we're describing a basketball game, for instance, ordinary counterfactuals allow supposing the rules of the game were different, but *almost* does not.

Context: I made a last-second shot in a basketball game. We were losing by 3 points, and after the shot, worth 2 points, we lost by 1 point.

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[11]The gloss has been simplified for presentation.

[12]See [Kratzer](#) ([2012](#)) for an alternate suggestion to the St'at'imcets facts.

(54)   a.   *We would have won the game, but last-second shots don't count double.*

     b.   # *We almost won the game, but last-second shots don't count double.*

The use of *almost* in (54) is barred because of the *but*-clause. Intuitively, it's because you can't change the rules. Why not? It is not controversial that certain facts resist being replaced by counterfactual premises better than others. However, just as *almost*'s premises are limited, so are possible sources of resistance.

Almost restricts the premises to a subset of the necessary conditions for p to hold of the actual (or evaluation) situation s. In the actual world, a last second shot doesn't count double, so the necessary conditions cannot involve such an idea. Since Z is a subset of these conditions, it cannot involve such an idea either, so such a premise cannot be employed with the counterfactual.

On a related note, Z cannot involve a failed presupposition of the prejacent. In (55), the presupposition that there exists a Mount Tomaloma is not true of any actual situation, and cannot be added to the facts of one. It can be added to an ordinary counterfactual.

(55)   a.   *I would have climbed Mount Tomaloma, but there is no such mountain.*

     b.   # *I almost climbed Mount Tomaloma, but there is no such mountain.*

The restriction of premises to actual necessary conditions also rules out idle speculation with *almost*. We can speculate that in a battle, the Aztecs would have beaten the Romans, under the premise that they faced each other in battle. With *almost*, however, that supposition is plainly impossible.

(56)   a.   *The Aztecs would have beaten the Romans in battle.*

     b.   # *The Aztecs almost beat the Romans in battle.*

With an ordinary counterfactual, we can assume a world where the Aztecs and Romans meet on the field of battle, and reason from there. We don't even have to care how they arrive at the battlefield, or when the battle takes place.

However, we cannot make those assumptions with *almost*, because the premises are limited to necessary conditions on actual situations. Any actual situation that the Aztecs are present for, the Romans are absent. For every actual situation the Aztecs are present for, there is no proposition involving the Romans' presence that can serve as a necessary condition to it. Thus, there is no counterpart to any actual Aztec situation such that the Romans are present. This lack eliminates from consideration all possible situations where the Aztecs beat the Romans in battle. The entailment of the counterfactual will always fail.

We cannot save *almost* here even with an overt if-clause. If anything, the result is worse: **If they (had) met in battle, the Aztecs almost beat the Romans.* Indeed, the premise set of *almost* never allows modification by truth-bearing *if*-clauses, even when a virtually identical counterfactual does.

(57)   a.   * *If I had made that last-second shot, we almost won the game.*

     b.   *If I had made that last-second shot, we would have won the game.*

Almost can appear in a clause with an *if*-clause that modifies something besides its own counterfactual premises, like a modal:

(58)   a.   *If I had made that last-second shot, we almost would have won the game.*

         b.   *If I pull this out of the oven, I will almost be done cooking dinner.*

This is also the case if the modal is covert. (60) is felicitous on the covert modal reading, where pulling it in the oven would make me almost done. The infelicitous reading says that I'm almost done now, and pulling it in the oven would make me done.

(59)   *If I pull this out, I'm almost done.*
       = [I pull this out]$_f$ MODAL(f) [I am almost done]

(60)   # *If I pull this out of the oven, I'm almost done cooking dinner.*

Almost-clauses can be followed up by a detached *if*-clause. However, this is a modifier for an unspoken ordinary counterfactual, not for the premises of *almost*.

(61)   *We almost won the game. If (only) I had made that shot....*
       = If I had made that shot, we would have won the game.

Almost-clauses can be modified by biscuit conditionals (62), but this is expected, since they are well known for modifying the relevance conditions for the information being provided, rather than the content itself (Iatridou 1991; Siegel 2006).

(62)   *If you're hungry, I'm almost done cooking dinner.*

We can conclude from these facts that the counterfactual condition of *almost* cannot be modified by an *if*-clause. Ordinary counterfactuals take the assumed premises as an argument, but *almost* lexically specifies it as the set Z of missing conditions introduced by the antecedent condition. Even if the content of the *if*-clause provides the same information that Z would (as it does in (57)), it is blocked.

It is not possible to use an *if*-clause to modify *almost*'s counterfactual premise set Z. But *if*-clauses can narrow down the set of facts or circumstances that Z is added to. We saw in section 4.1 that counterfactuals let speakers tailor the set of relevant facts, and that *almost* does as well. The next case is inspired by the sports-team example in that section.

Context:
Buffalo needed to win first place in their division to reach the playoffs this season. With 5 games left, they had 4 wins and 7 losses, eliminating them from contention, because New York, a team in their divison, already had 10 wins and 1 loss. However, Buffalo managed to win their next 5 games, finishing at 9 wins and 7 losses. New York lost its last five games, to finish with 10 wins and 6 losses, winning fthe division.

(63)   a.   True: *If you (only) look at the standings, Buffalo almost made the playoffs.*

    b.   False: *If you take into account the way the season unfolded, Buffalo almost made the playoffs.*

Crucially, the *if*-clause is not telling us what Buffalo must have done to succeed. Instead, it's narrowing down the possible facts by telling us what the topic situation is. It also serves as modal anchor, where it determines the content of the fact-based modal base. (63a) works because the topic situation is just the standings, and if you measure the distance from New York's 10 wins to Buffalo's 9, you see that a set of missing conditions entailing qualification (the 10th win) is small enough. (63b) fails because the topic situation is the entire season. If we go far enough back to a point where Buffalo could have made the playoffs, there will be too many missing conditions, even with the modal, for it is not normal for a 4-6 team that wins two more games to win the rest.

We have observed the inability of *almost* to take outlandish premises and its inability to be modified by *if*-clauses. It turns out that those facts are linked. If we are talking about a friend who was travelling in London, a permanent missing condition can block *almost*, while a temporary one allows it. This constraint does not apply to ordinary counterfactuals.

(64)   a.   *Marion almost saw Big Ben, but she was blinded by dust as she passed.*

    b.   # *Marion almost saw Big Ben, but she was blind.*

    c.   *Marion would have seen Big Ben, but she was blind.*

This restriction does not seem like it's tied tightly to actual necessary conditions, because one of these should be that Marion have sight. However, the restriction does follow from the lexical restriction on modifying *almost*'s premises. Ordinary counterfactuals allow all sorts of premises. However, if these premises are outlandish, they must either be introduced by an *if*-clause at previous some point in the discourse. Out of the blue, we cannot assume just anything.

(65)   a.   # *Chomsky would have been elected president in 1976.*

    b.   ***If he had run, and weird things happened***, *Chomsky would have been elected president in 1976.*

That is, outlandish premises cannot be accommodated, and must be made explicit. They don't have to be explicit in the same clause; if we had introduced the outlandish worlds in advance, (65) becomes felicitous. The same goes for Marion visiting London. Out of the blue, (66) is infelicitous, but if we've introduced worlds where she isn't blind, it is fine.

(66)   . . . in reply to "How was Marion's trip to London?"

    a.   # *Could've been better. She would have seen Big Ben.*

    b.   *Could've been better.* ***If she weren't blind***, *she would have seen Big Ben.*

The same also goes for the basketball game where points don't count double. If you are losing by 4 points, and miss a 3-point shot, it is false to say *We would have won if I'd made that*. The premise about points counting double has to be explicit: *We would have won if I had made that, and if points counted double*.

It is beyond the scope of this paper to determine precisely which factors render a premise outlandish enough to require this kind of modification. We can content ourselves, though, by understanding why *almost* cannot be used with such a premise. Their use with ordinary counterfactuals requires modifying the premises with an *if*-clause, but *almost* lexically blocks this modification. There is no way to modify *almost* to permit the outlandish premise, so it is blocked.

5 Systematic failure of *almost*-at-a-distance

We saw in section 3.3 that *almost* can apply at a distance when its complement follows from all the normal outcomes of the modified counterparts to the clause's topic situation. We can predict that AAD will fail in contexts where these outcomes cannot lead to entailment. These contexts will include those where the modal anchor lacks the 'room' for outcomes to come to fruition. It will also include those where the anchor is homogeneous, because the outcomes will not develop within the counterpart after the premises are added. Finally, AAD cannot occur when the complement of *almost* is not a proposition. We will show that this complement-based restriction is derived from the same mechanisms that rule out AAD elsewhere, because these complements force the modal anchor to prevent the normal outcomes from leading to success.

5.1 Running out of room

The counterfactual's modal anchor is the topic situation. The counterfactual in *almost* states that in counterparts to that situation where a small enough set of additional necessary conditions for success hold, the normal outcome of that counterpart is success. The success must take place in the temporal interval that begins at the point the premise set (Z) applies and ends at the endpoint of the normal extension of the counterpart situation. In this way, *almost* differs from ordinary counterfactuals, whose premises can apply at any time. The premises change the nature of the counterparts and shifts the success to an indefinite future. (Condoravdi 2002; Ippolito 2006, 2013; Abusch 2012). With *almost*, the premises must be propositions that need to be able to be true of the modal anchor, so the outcomes must ensue from a point "inside" its counterpart.

For example, assume that it is true of the situation s_T corresponding to 2016 that I almost climbed Mount Everest, but couldn't raise the funds. In that case, raising the funds (step C, below) would also take place in 2016, given the factual modal base, and the rest of the climb would have been completed in 2016 (inside the white box).

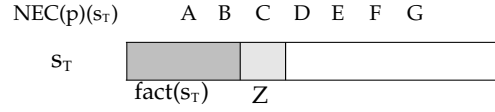NEC(p)(s_T)   A B C D E F G

s_T

fact(s_T)   Z

Figure 4: Unfolding of the topic situation after premises

Conversely, if the modal anchor does not provide room for completion, AAD will not apply. The predicate will not follow from any normal outcome of the premises, so it will not follow from all of them.

Context:
You came up with a good idea for a paper, and thought, "Maybe I can submit an abstract to SALT." You decide to send one in and check the call for papers, but it turns out the deadline is that day– in about an hour.

(67)   #*I almost sent an abstract to SALT.*

If proposition A is the decision to send an abstract, and B through G are the other steps, something like Figure 5 is the result; in normal worlds you will not have time to finish.

NEC(p)(s_T)   A B C D E F G

s_T

fact(s_T) Z
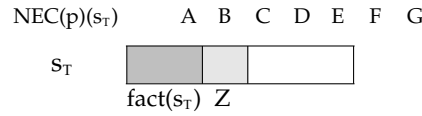
Figure 5: Unfolding of the topic situation without room

5.2 Situations that don't change

Almost takes a predicate with aspect and a topic situation as its arguments. Both its arguments contain a situation, and the temporal nature of that situation affects the availability of AAD. Specifically, when either is homogeneous, AAD is ruled out. Homogeneous predicates are those such that, when the property they denote applies to a situation (eventualities are situations), it applies to the temporal subintervals of that situation. Homogeneity affects *almost* because for the predicate to hold of all the subintervals, every necessary condition must hold of all the subintervals. The predicate cannot become true during the situation. The normal outcomes will not change after the premises are added. The change is precisely what AAD requires, so it will not occur.

The blocking of AAD also occurs in clauses with a dynamic predicate, if the topic situation involves counting up after the fact rather than the unfolding of events. For instance, if it is true that New York almost qualified for the playoffs in s_T, based on the standings alone at the end of the season, *almost*-at-a-distance is not allowed. They actually had to finish close to qualifying.

(68) $NEC(q)(s_T) = \{$
  G = New York finished 0 games away from qualifying (they qualified),
  F = New York finished 1 game away from qualifying,
  E = New York finished 2 games away from qualifying,
  D, C, B,
  A = New York finished 6 games away from qualifying $\}$

The topic situation s_T is simply the state of the standings at the end of the season. It is static, so it does not change internally. If we add premises, we are changing those propositions to every subinterval of the situation. The normal outcome of the state is the continuation of that state, so no other necessary condition will become true. If the premises do not suffice to entail qualification, nothing will, so AAD will not occur.
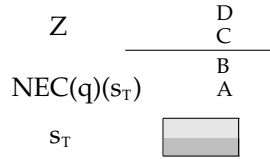
Figure 6: Counting up after the fact

AAD is also blocked when the topic situation is dynamic, but the Davidsonian event situation(Kratzer 1998a, 2015). Progressive aspect demonstrates this effect well. In (69), *almost* can indicate a state of moving at a near run, or the

near-beginning of a state of running to the store. It cannot mean that he was still, but if he had started moving he would have eventually been running.

(69) *Tom was almost running to the store*

    a. Tom was jogging/walking quickly to the store $\neq$ Tom was loping, but if he had sped up a little, he would have wound up running

    b. #Tom was running part of the way to the store (even with focus on *to the store*)

    c. Tom was about to run to the store

The presence of a stative predicates can also rule out AAD, as we see in (70). Kansas City is adjacent to Kansas, so the first proposition holds.[13]

(70)   a.   *Kansas City is almost in Kansas.*

        b.   # *Saint Louis is almost in Kansas.*

Meanwhile, Saint Louis is on the opposite end of Missouri, the same state Kansas City is in. This is not close enough for *almost* to be true.

In the past tense, an *almost*-clause with a stative is actually ambiguous between two basic readings. First is a 'map' reading, which is a kind of counting up after the fact. We see where the location is relative to the one in the predicate. If it's close, *almost* works, as in (71a). The second reading involves a 'path' through time, which involves counterfactuality, and does seem to allow AAD (71b).

(71) *I almost lived in San Francisco.*

    a. = I lived near San Francisco
        must have lived in a place near SF

    b. = I nearly came to live in San Francisco
        true if I considered it but decided not to

The 'map' reading is observed in Amaral & Del Prete (2010), who point out that in spite of their focus-alternative account, locative states with *almost* involve measurement along a scale of distance away from the location described. Under our account, which does not rely on focus, the necessary conditions are the propositions along that measured scale.

(72)   NEC($[\![$ (71) $]\!]$)(s) = { I lived in SF, I lived $\leq$1 km from SF, I lived $\leq$2 km from SF, . . . }

What about the second reading? The necessary conditions are not a measuring up after the fact, but actually involve an unfolding of events, whose eventual result would be the state in question. Imagine we have the following

---

[13]Kansas City (KC) is in Missouri and always has been. It even predates the territory/state of Kansas. However, there is a distinct city in Kansas also called Kansas City. There is no ambiguity, though: When anyone, even in that area, says "Kansas City," they invariably mean the one in Missouri.

set of necessary conditions for living in San Francisco, and that you applied for a job there. If we assume the set Z that you got the job, then in all normal outcomes from there, you move to San Francisco.

(73) NEC($[\![$(71)$]\!]$)(s) = { I drive the van to SF, I pack my things, I sell my house, I buy a new house, I look for a house, I get a job, I apply for a job, I think about it}

Likewise, the past tense phrase *Kansas City was almost in Kansas* can have an AAD reading: One where a series of events that failed to unfold would have led to Kansas City becoming a part of Kansas.

AAD works in a case like this because the eventuality is homogenous and the predicate does not hold of it. If the predicate can become true of the event within the topic situation, the necessary conditions can hold of the part of the topic situation leading up to that onset.

5.3 Shifting creates room

If statives allow this ambiguity with past tense, what about the present? The present tense applies when the topic situation closely overlaps with the utterance situation. It does not extend into the future. This fact is crucial, because the state cannot come true during the present topic situation unless you are really close. If you have applied for a job in San Francisco, you can't say *I almost live in San Francisco*, because there is not enough room for the missing necessary conditions to come true by the present.

We expect, then, that any operator that shifts temporal interpretation away from the present will allow AAD, and that is precisely what we find. The present perfect works well with AAD.

(74) *I have almost met the President.*
    a. (close) I have achieved most of the steps
    b. (AAD) I was going to meet her this one time, but I missed my bus to the event.

Under an extended now model of the perfect (Iatridou et al. 2001), the perfect is situated between tense and aspect, and introduces a 'perfect time span' leading up ($\mapsto$) to the topic situation, which overlaps ($\circ$) with the utterance situation c. This time span (itself a situation) is the modal anchor for *almost*'s counterfactual. Since this time span starts in the past and leads up to the present, its counterparts will, too, providing time for change.

(75) $[\![$(74)$]\!]^c$ = λs. time(s) $\circ$ time(c) & ∃t[t $\mapsto$ s & **almost**(λs'. ∃e[e ≤ s' & [I meet the President](e)])(s)]

The future, expressed by the English modal *will*, involves a temporal displacement into the future, whether we analyze it with a modal or not (see
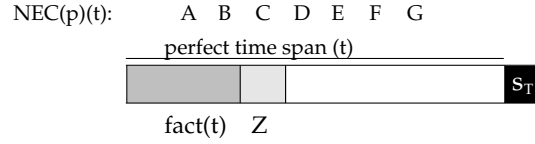
Figure 7: Unfolding of event under the perfect

Klecha (2013) for discussion). This displacement essentially buys us time, because the topic situation is still the present. The shifted time or situation can be large enough to provide room for *almost*-at-a-distance. Imagine that a baseball player asks a fortune teller about a possible heroic play he might make in the future. The soothsayer's reply can have the AAD meaning, where a fielder catches the ball in flight. The sentence's meaning in is provided in (76b). The use of *almost* is visually represented by Figure 8 below.

(76) *You will almost hit a double.*

a. *λs. In all the future worlds from s, there is a situation/time t that follows the counterparts of s in w, such that there is a set of small enough conditions Z for there to be an event in t of you hitting a double, which do not hold of t, and in all worlds with a counterpart to t where Z holds and normal outcomes ensue, there is an event in the extension of t's counterpart where you do hit a double.*

b. $\lambda s.\ s \circ s_U$ & $\forall w[\ \text{future}(s)(w) \rightarrow \exists t[\ t \succ s^{\sim w}$ & **almost**$(\lambda s'.\ \exists e[\ e \leq s'$ & $[\ \text{you hit a double}](e)\ ])(t)\ ]$
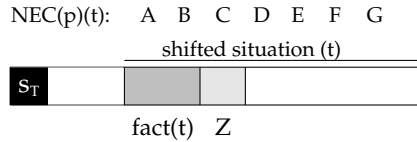
Figure 8: Unfolding of a future event

This section has shown that the availability of *almost*-at-a-distance depends in large part on the temporal nature of the situations above and below it. Notably, their homogeneity strips the ability of normal outcomes to make the predicate true, except in the case of statives that have not begun to be true. In the next section, we will show that the availability of *almost*-at-a-distance also depends on the complement it takes.

35

6 *Almost* across categories

We have focused on propositional *almost* so far, but *almost* can take complements of many different semantic types. The variation in complements affects the availability of *almost*-at-a-distance. In fact, outside of propositional *almost*, AAD is completely unavailable. We will first discuss quantified complements, then property and constituent complements, and we will show that the exclusion of AAD emerges from the effect the complement has on the situations that govern AAD.

6.1 *Almost* with non-verbal complements

Almost commonly occurs with a quantified complement. We call this use Q(uantifier)-almost, in contrast to P(ropositional)-almost, and observe that Q-almost does not allow *almost*-at-a-distance. The pair in (77–78) demonstrates the point well. The necessary conditions involve meeting ten heads of state. P-almost allows you to have met none, so long as you would have met ten given certain premises. Q-almost, however, requires you to have met nearly ten heads of state, likely eight or nine.[14]

(77) P-almost: *I almost [met [ten heads of state]]* ...
     a. *but I didn't get around to meeting Queen Elizabeth* (I met nine)
     b. *but my car broke down and I missed the event* (I met none)

(78) Q-almost: *I met [almost [ten heads of state]]*...
     a.   *but I didn't get around to meeting Queen Elizabeth* (I met nine)
     b. # *but my car broke down and I missed the event* (I met none)

The restriction on Q-almost also applies to subject quantifiers; *Almost ten heads of state met me* is infelicitous of a situation where none do.

     Almost also takes properties as a complement, in a manner resembling constituent negation. Let us call this C(onstituent)-almost. In each case, however, the property must actually be close to true, and there is no weakening effect. That is, there is no *almost*-at-a-distance.

(79) C-almost
     a. NP complement: *Johanna was an [almost [$_{NP}$ doctor]],*
                                  #but failed to get into medical school.
     b. AP complement: *We gave the story an [almost [$_{AP}$ happy]] ending,*
                                  #but decided not to give it a clear ending at all.

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[14]These facts also hold for Italian:

(1)   a.   P-almost: *Ho **quasi** [rencontrato [dieci capi di stati]]*
       b.   Q-almost: *Ho rencontrato [**quasi** [dieci capi di stati]]*

    c. PP complement: *Becky arrived in Rome [almost [PP at 3 pm]],*
                              #but her flight was cancelled and she never left London.

    d. AdvP complement: *The CEO prattled on [almost [AdvP non-stop]],*
                                #but in the end decided not to say anything.

6.2 Verbal *almost* below aspect

Each of these constituents is non-verbal, but even verbal predicates are incompatible with AAD if they do not contain aspect. Rapp & von Stechow (1999) show that AAD (which includes what they call the 'counterfactual' reading) occurs only when German *fast* 'almost' above aspect. It is ruled out when *fast* is below aspect. In English, it is difficult to put *almost* below aspect with a VP complement. A VP complement can be attained with small clauses, though, and with a small clause complement AAD is not available.

> **Context:**
> *Clubber is a boxer, and Giovanni is his manager. Alas, Giovanni is also a crook, and instructs Clubber to throw his upcoming fight. Clubber has to do well for the first few rounds, so the fix is not obvious. In fact, he has to near victory before losing on purpose. Clubber dutifully follows instructions.*

(80)   *Giovanni made Clubber* [VP ***almost** win the fight*]

Crucially, (80) cannot be true in an AAD context where Giovanni instructs Clubber to start the fight, but not come close to victory before throwing the fight. On the other hand, putting *almost* with the tensed verb *made* is compatible with such a context, for instance if *Giovanni* nearly decided to force Clubber to win instead of losing.

(81)   *Giovanni almost made Clubber* [*win the fight*]

The same facts apply to *let*:

(82)   a. AAD ruled out : *Giovanni let Clubber almost win*
        b. AAD available : *Giovanni almost let Clubber win*

    The fact that Q-*almost* and C-*almost* do not allow *almost*-at-a-distance offers interesting perspective on other investigations into *almost*. For instance, Amaral & Del Prete (2010) do not address AAD at all. However, they looked exclusively at Q- and C-*almost* in their discussion of Italian *quasi*.[15]

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[15]They do so based on their claim that *quasi* can only attach directly next to its focus target, but examples can be built that set them apart, and speakers easily accept their truth.

> **Context:**
> *Stefania competes in the pole vault. The world record is 7m51, but the Olympic*

Also, it is widespread to assume *almost* as a proposition-level operator at LF, no matter where it occurs in the sentence (Morzycki 2001; Penka 2006; Amaral & Del Prete 2010; Kilbourn-Ceron 2016, to name a few). The distinction between P and Q/C-almost shows that assumption to be untenable. Right away, we see that under that approach, the heads-of-state example with Q-almost (78) should be able to express AAD (the meaning in (78b)), but it cannot.

Instead, we must interpret *almost* adjacent to its syntactic complement. Supporting this interpretation is the interaction of *almost* with quantifiers; for instance, Rapp & von Stechow (1999) point out an important scope difference:

(83) a. *All the plants are almost dry* (can be true if none are dry)
      b. *Almost all the plants are dry* (cannot be true if none are dry)

Also, it has long been observed that *almost* is not allowed with certain quantifiers, notably existential ones (84a). However, this restriction only concerns Q-almost. P-almost is allowed when one of these quantifiers is in its scope. This difference would disappear if *almost* were a propositional operator.[16]

(84) a. # *The doctor healed [almost [some patients]].*
      b. *The doctor [almost [healed [some patients]]].* (He healed none)

Scope facts with quantifiers in the verbal projection also support interpreting *almost* with its complement. We've already seen that it can take scope above or below negation (34), and the meaning changes. In addition, it must take scope below certain modals, like epistemic *must*.

(85) *Based on the GPS signal, Johanna must almost be in New Jersey.*
      a. = (must ≫ almost) It is necessarily true that Johanna is almost in New Jersey.
      b. ≠ (almost ≫ must) It is almost necessarily true that Johanna is in New Jersey. (It is not true at all)

QR of *almost* can occur, but only if the quantifier complement comes along, allowing an ordinary *de re/de dicto* ambiguity in sentences like (86).

(86) *I forgot to water [almost all the plants].*
      a. de re : [almost all the plants] are such that I forgot to water them
      b. de dicto : I forgot to do something, which was to water [almost all the plants]

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record is only 7m33. Stefania was competing at the recent Olympics, and scored 7m31. Your friend tells you "Stefania ha quasi raggiunto il record mondiale," but you disagree. Now, you correct your friend:

(1) *No, ha quasi raggiunto il record [olimpico]$_F$.*

[16]It is also notable that *almost* is felicitous when placed directly above Aspect, which denotes an existential quantifier.

It may simply be the case that the quantifier is raising rather than *almost*, but *almost* is brought along because the quantifier cannot escape its scope.

6.3 A cross-category denotation

The complement of *almost* at LF corresponds directly to its complement in the derivation. We will maintain the assumption of a single *almost* morpheme, and offer a cross-categorial (CC) denotation that allows it to compose with these various semantic types. This denotation will take an argument of type $\langle \sigma, \langle s, t \rangle \rangle$, where σ can be any type, and will return an expression of the same type.

(87) $[\![almost_{CC}]\!] = \lambda \phi \in D_{\langle \sigma, \langle s, t \rangle \rangle}.\lambda \alpha \in D_\sigma.\lambda s \in D_s.$
$$\exists Z \left[\begin{array}{l} Z \subseteq_{SE} NEC(\phi(\alpha))(s) \ \& \ s \notin \bigcup Z \ \& \\ \forall w [\ w \in norm_s(R(fact(s),Z)) \rightarrow (\phi(\alpha))(s^{\sim w}) = 1 \ ] \end{array} \right]$$

(88)
$$[\![almost]\!]([\![XP]\!])$$
$$\langle \sigma, \langle s, t \rangle \rangle$$

$[\![almost]\!]$ $[\![XP]\!]$
$\langle \langle \sigma, \langle s, t \rangle \rangle, \langle \sigma, \langle s, t \rangle \rangle \rangle$ $\langle \sigma, \langle s, t \rangle \rangle$

In the case of P-*almost*, there is no expression of type σ, so $[\![almost]\!]$ is of type $\langle st, st \rangle$, as we've seen.[17]

In the case of properties of individuals like *happy*, of type $\langle e, st \rangle$, the type σ is type e. Properties of other types of objects will compose with *almost* the same way as $[\![happy]\!]$ does.

(89)   a. $[\![happy]\!] = \lambda x \lambda s.\ happy(x)(s) : \langle e, st \rangle$

     b. $[\![almost\ happy]\!]$
$$\langle e, st \rangle$$

$[\![almost]\!]$ $[\![happy]\!]$
$\langle \langle \sigma, st \rangle, \langle \sigma, st \rangle \rangle$ $\langle e, st \rangle$

---

[17] Alternately, its complement could be a null or identity function f of type $\langle st, st \rangle$. Type σ would be type $\langle s, t \rangle$, and $[\![almost]\!](f)$ would have the same denotation as *almost* in (26).

(1) $[\![almost]\!](f)(p)$
$$\langle s, t \rangle$$

$[\![almost]\!](f)$ $p : \langle s, t \rangle$
$\langle \langle s, t \rangle, \langle s, t \rangle \rangle$

$[\![almost]\!]$ $f = \lambda p \lambda s.\ p(s)$
$\langle \langle \sigma, \langle s, t \rangle \rangle, \langle \sigma, \langle s, t \rangle \rangle \rangle$ $\langle \langle s, t \rangle, \langle s, t \rangle \rangle$

c. $\llbracket$ *almost happy* $\rrbracket = \lambda x_e \lambda s_s.$

$\exists Z \begin{bmatrix} Z \subseteq_{SE} \text{NEC}(\llbracket \textbf{\textit{happy}} \rrbracket(\textbf{x}))(s) \ \& \ s \notin \bigcup Z \ \& \\ \forall w \begin{bmatrix} w \in \text{norm}_s(R(\text{fact}(s),Z)) \rightarrow \\ \exists s'[s^{\sim w} \leq s' \ \& \ (\llbracket \textbf{\textit{happy}} \rrbracket(\textbf{x}))(s')] \end{bmatrix} \end{bmatrix}$

READ: *There is a small enough set Z of necessary conditions for x to be happy in s, which does not hold of s, and in all the most normal worlds with a counterpart to s where Z holds, x is happy in an extension of that counterpart.*

Quantifier-*almost* seems to modify the determiner itself, but Morzycki (2001) shows that it must take a quantifying DP as its complement. We assume a situation-based meaning for quantifiers along the lines of Schwarz (2009), but simplified in insignificant ways in order to make this paper self-contained. The restrictor contains a resource situation r that limits the domain, and which can be anaphoric.

(90) a. *Every fugitive (in r) is in jail.*

b. $\llbracket$ *every fugitive* (r) $\rrbracket = \lambda Q_{e,st} \lambda s_s. \ \forall x[\text{fugitive}(x)(r) \rightarrow Q(x)(s)]$

The cross-categorical denotation for *almost* straightforwardly applies.

(91) a.

$$\llbracket \textit{almost} \rrbracket(\llbracket \textit{every fugitive (r)} \rrbracket)$$
$$\langle\langle e, st\rangle, \langle s, t\rangle\rangle$$

$$\llbracket \textit{almost} \rrbracket \qquad \llbracket \textit{every fugitive (r)} \rrbracket$$
$$\langle\langle \sigma, \langle s, t\rangle\rangle, \langle \sigma, \langle s, t\rangle\rangle\rangle \qquad \langle\langle e, st\rangle, \langle s, t\rangle\rangle$$

b. $\llbracket$ *almost every fugitive (r)* $\rrbracket =$

$\lambda Q_{e,st} \lambda s_s. \ \exists Z \begin{bmatrix} Z \subseteq_{SE} \text{NEC}((\llbracket \textit{every fugitive (r)} \rrbracket(\textbf{Q})))(s) \ \& \ s \notin \bigcup Z \ \& \\ \forall w \begin{bmatrix} w \in \text{norm}_s(R(\text{fact}(s),Z)) \rightarrow \\ \exists s'[s^{\sim w} \leq s' \ \& \ (\llbracket \textit{every fugitive (r)} \rrbracket(\textbf{Q}))(s')] \end{bmatrix} \end{bmatrix}$

READ: *There is a small enough set Z of necessary conditions for Q to hold in s of every fugitive in r, and which does not hold of s, and in all the most normal worlds with a counterpart to s where Z holds, Q holds in an extension of that counterpart of every fugitive in r.*

Given the type of generalized quantifiers, this cross-category denotation of *almost* will compose with any of them. It is observed that many quantifiers are incompatible with *almost*, like *each* or *many*, and this account does not seem to rule these out. We leave that determination for later work, though, and simply note that no other explanation of this distribution is completely successful, either.

6.4 AAD not possible in these contexts

Why can't AAD occur with C-almost or Q-almost? At first we could imagine that these versions of *almost* lack the counterfactual condition. However, this

denotation would simply hold when there is a small enough set of necessary conditions missing for the property to hold, and that is equivalent to negation. Instead, we can keep the counterfactual condition and rely on temporal restrictions imposed by these complements on the modal anchor to rule out AAD.

AAD is already ruled out in contexts that prevent the outcomes from coming true within the counterparts to the modal anchor. For instance, we can build off the classic example: *Almost every fugitive* (in r) *is in jail* (in s) expresses a true proposition if most of the fugitives who were on the run are now in jail. The modal anchor for *almost* will be the topic situation s, and the predicate is stative and present, ruling out AAD.

However, even in a context where the topic situation and dynamic predicate normally allow for *almost*-at-a-distance, AAD does not appear with Q-*almost*.

(92) *Almost every fugitive (in r) climbed Mount Everest (in s_T).*
 a. True if 8 or 9 out of 10 fugitives climbed Mount Everest.
 b. False if 3 of 10 fugitives did, but the rest would have if they hadn't gotten caught.

Since we cannot rely on the situation to rule out AAD, we must turn to the other elements in the modal. We have seen that when the necessary conditions involve counting up after the fact, AAD is ruled out. We can hypothesize that universal quantifiers always involve counting up after the fact. The reason seems to be related to the meaning of generalized quantifiers. As a generalized quantifier, *every* denotes a subset relation between its arguments such that the first is a subset of the second. As Barwise & Cooper (1981) point out, we judge the truth of such a relation by pairing the members of the witness set, offered by the first argument, to the members of the set offered by the second. Applied to *almost*, if the first argument φ of *almost* denotes a quantifier, each necessary condition must apply the second argument α to a distinct member of the witness set in φ in s.

For instance, if there are 5 fugitives on the run in (92), *almost* only works if 4 of them climbed Mount Everest in s_T. The necessary conditions for every fugitive to climb Mount Everest in s_T would be as follows:

(93) NEC($[\![92]\!]$)(s_T) = { A: λs. Amy climbed Mount Everest in s, B: λs. Beth climbed Mount Everest in s, C: λs. Catherine climbed Mount Everest in s, D: λs. Dana climbed Mount Everest in s, E: λs. Eliza climbed Mount Everest in s }

Assume that only Amy and Beth climbed Mount Everest; two of five fugitives succeeded. Every small enough set here contains one proposition, so we can only add one as a premise, leaving two conditions unmet. Without the counterfactual saving the day, this is not close enough for *almost*.

One can envisage a context that should obtain AAD via normal outcomes of adding the premises, but the normal outcomes do not have this effect, because

the subset relation expressed by *every* requires the necessary conditions to be counted up after the fact. Any premises we add we add after the fact as well, and there is no room for the situation to change. If the premises we add do not suffice to entail p, *almost* fails.

7 Refining the polar condition

So far we have focused on the role the counterfactual plays in *almost*, but no account is complete without a handle on the mysteries of the polar condition. While other accounts rely on pragmatic processes with unwelcome consequences, a solution to these mysteries follows from the present account, which relies on an existential quantifier rather than negation.

7.1 Mysteries of the polar condition

Negation is downward entailing and licenses NPIs, but *almost* is upward entailing and licenses PPIs instead. The lack of downard entailment poses a major obstacle for a polar condition.

(94) a.   I almost saw a dog $\not\Rightarrow$ I almost saw a green dog   (no DE)

     b.   * *I almost saw anyone. *We almost went at all.*   (no NPIs)

(95) a.   I almost saw a green dog. $\Rightarrow$ I almost saw a dog   (UE)

     b.   *I almost saw someone. I almost believed him somewhat.*   (PPIs)

    Penka (2006) suggests this results from an intervention effect triggered by a higher focus operator, but incompatibility with NPIs applies even without one. The denotation of P-*almost* in (26), repeated below, predicts the incompatibilty with NPIs. The polar condition is replaced with an antecedent condition that begins with an existential quantifier. The counterfactual condition is in the nuclear scope of the existential quantifier, which is an upward entailing environment. The prejacent is in the nuclear scope of the universally quantified modal, and that is also an upward entailing environment.

(26) $[\![\,almost\,]\!](p)(s) = 1$ if and only if : $\exists Z \begin{bmatrix} Z \subseteq_{SE} \text{NEC}(p)(s) \;\&\; s \notin \bigcup Z \;\& \\ \forall w \begin{bmatrix} w \in \text{norm}_s(R(\text{fact}(s),Z)) \rightarrow \\ \exists s'[\, s \sim^w \leq s' \;\&\; p(s') = 1 \,] \end{bmatrix} \end{bmatrix}$

    The failure of *almost* to exhibit classic properties of asserted negation have led several to claim that the polar condition is not asserted. Sadock (1981) claims it to be an implicature, Nouwen (2006) suggests it is a presupposition, and Horn (2002) lands between, arguing it to be a proposition lacking assertoric force. However, negating an *almost*-clause is perfectly acceptable, so it is clearly part of the assertion. The meaning of *almost* contains a conjunction, so we predict two possibilities for readings of negation with *almost*, and both are easily allowed, showing that negation poses no problems for the antecedent condition of *almost*.

(96) *We didn't almost win.*

    a. = We did win (There are no missing conditions)

    b. = We weren't even close (There are no small enough sets that lead to entailment)

Nouwen (2006) makes a novel observation about *almost*: Evaluative adverbs ignore the polar condition, despite taking scope over it.[18] For instance, *Amazingly, we almost won* can mean that it's amazing that we nearly won, but it cannot mean that it's amazing we didn't win. This asymmetry is not predicted by a simple polar condition in conjunction with a proximal condition. Nouwen suggests that the polar condition is not part of the assertion. However, our replacement of the simple polar condition with the antecedent condition explains this asymmetry straightforwardly. On our account, *almost* introduces an existential quantifier, whose domain restriction is provided by the antecedent condition. The domain restrictor of this existential quantifier is immune to evaluatives.

(97) $[\![$ *Amazingly, we almost won* in s_T $]\!]$ = It's amazing that [there's a small enough set of missing conditions for us winning such that in all the most normal counterpart worlds of s_T where that set holds, we win]

As it turns out, this immunity applies to all existential quantifier domains. The proposition in *Amazingly, a dog bit me* cannot mean that it's amazing that a dog existed. *Incredibly, I saw a doctor on the bus* cannot mean that it's incredible that a doctor existed. Likewise, (97) cannot mean it is amazing that there is a small enough set of missing conditions. What is amazing is the nuclear scope of the existential— that if that small enough set had held we would have won.

7.2 *Almost* is not quite *not quite*

One of Sadock's (1981) key arguments for the implicated status of the polar condition is the compatibility of *almost* with *not quite* in phrases like *almost but not quite*, for if both *almost* and *not quite* assert 'not p but close to p', *but* should not be able to link them. Horn (2011) disagrees, pointing out that the opposition introduced by *but* can be rhetorical, allowing truth-conditionally redundant conditions (98).

(98) *Bush barely won the election, but he did win*.

Our account of *almost* is compatible with Horn's observation, and it offers an avenue with which we can explain why *not quite* is similar enough to *almost* for Sadock to have raised the question of their identity. The antecedent condition of *almost* states that a small enough set of necessary conditions for p to hold of s do not hold of s. We propose that *quite*'s meaning also relies on necessary condtions; namely, it asserts that they all hold. *Not quite* simply signals that not all the necessary conditions hold.

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[18]Horn (2011) offers further examples.

(99) $[\![\textit{quite}]\!] = \lambda p \lambda s. \; \forall q[\; q \in \text{NEC(p)(s)} \rightarrow q(s) = 1 \;]$

(100)   *John didn't quite kill Harry* $= \lambda s.$ It is not the case that all the necessary conditions for John killing Harry in s hold.

The reason *not quite* seems similar to *almost* is pragmatic. As with other *not all* utterances, it is normal for listeners to draw the cancellable implicature that the nuclear scope applies to most of the domain.

Quite's expression of 'all necessary conditions' is supported by its etymology (*Oxford English Dictionary*). Its first attested uses in the 1300's denote thorough completion of an event, and to this day, it can often be replaced by *completely*. From the OED entry:

(101)   *His foule sore... She reduced, but himselfe destroyed **quight**.*

(Spenser, *Faerie Queene*, 1590)

(102)   *I **quite** understand why the girls fell for him.*   (*Vanity Fair* magazine, 1993)

The meaning of *not quite* in (99) leads us to predict that evaluatives will not ignore its contribution, like they do with the existential quantifier restriction in *almost*. This prediction holds. Horn (2002) offers the following example in his discussion of how connotations of *almost* and *not quite* differ. With *almost* in (103), the connotation is disappointment at the addressee's survival. With *not quite*, the connotation is relief.

(103)   a. *Good thing you almost died.*
           connotes: I'm disappointed you did not die.
        b. *Good thing you didn't quite die.*
           connotes: I'm glad you did not die.

Horn ties this observation to his claim that *almost*'s polar condition is not part of the assertion. Under our approach, the antecedent-condition is immune to evaluation, so the evaluative applies to the conditional condition: *If what little you needed to die had happened, you would have died... and that's good*. Meanwhile, with *not quite*, the evaluative states that it's good that not all the necessary conditions were met. That is, it's good there were some missing.

Despite a denotation for *quite* based on necessary conditions, *quite* is rarely used this way in positive sentences. Instead, it typically signals a moderate positive degree. Our denotation based on necessary conditions helps us sketch out a diachronic path explaining how a secondary use became primary. Without negation, *quite* adds redundant information to the assertion, since the assertion of success entails the completion of all necessary conditions. We suspect that the Maxim of Relevance pushed listeners to find non-redundant meanings, and these meanings eventually became normed, then lexicalized. In negative sentences, though, *quite* is not redundant, so its original meaning persists.

The polar condition of *almost* is a staple of previous accounts of the word, but it triggers important and confusing consequences. Our antecedent-counterfactual approach eliminates these consequences without requiring pragmatic involvement, by recasting the polar condition as a positive statement. This statement

entails the negative one, so the truth-conditions of *almost* are preserved, and it allows us to maintain a denotation that matches the observation that negation is asserted in *almost*.

7.3   *Almost* **in 'at least' contexts**

Another justification for considering the polar condition to be implied is that in 'at least' contexts, *almost p* can be true even when p can be (Kilbourn-Ceron 2016).

> **Context:**
> *You will be taking an exam that has ten questions, where 8 correct are required to pass.*

(104)   a.   *To pass the test, you have to get eight answers right.*

   b.   *To pass the test, you have to get almost every answer right.*

Almost's denotation should thus resemble those of numerals, which allow 'n or more' to hold. However, a debate rages on the meaning of numerals, and more recent approaches find that the lexical value is 'exactly n', while the 'more than n' reading is supplied by pragmatics (Geurts 2006; Breheny 2008).

   What we observe here is that the clearest 'at least' readings are virtually all in the scope of a modal, even a covert one like the English generic operator. The pragmatics that turn 'exactly' into 'more than' in these contexts occurs in the modal restrictor, not its nuclear scope. In, (104b) there is a necessity modal with a circumstantial modal base and a goal-oriented ordering source (passing the test). In all the worlds where things are as they are and you pass the 10-question test with 8 or more, you get 8, 9, or 10 questions right. In this case we have made the goal 'scoring at least 8', which is fine for numerical quantifiers, but not for *almost* with an asserted polar condition.

   However, the goal need not be to score 8, 9, or 10. In fact, if you specify that option with a verb meaning 'get all the questions right', the consequent no longer holds.

(105)   (same context: 10-question test)

   a.   *#To pass or ace the test, you have to get eight answers right.*

   b.   *#To pass or ace the test, you have to get almost every answer right.*

   In (104), the goal can simply be the minimum to pass: exactly 8. In that case, the best ordered worlds will be those where you score 8, and where you do not score 9 or 10. These worlds allow our version of *almost*, because in all those worlds, you score almost 10. The pragmatics can still work here, but on the domain, which only applies the prejacent to the worlds where you get exactly 8 right. The assertion only applies to these worlds, and says nothing about worlds where you score 9 or 10. A cancellable scalar implicature on numerals allows us to infer that scoring 9 or 10 will also pass the test, since 8 minimally

does. The same pragmatics works with *almost* in (104b). The nuclear scope is false in worlds where you score 10, but those are not at issue in the modal domain.

(106) a. *To pass, you have to get 8 questions right. But watch out: If you get more than 8 right, they'll actually fail you.*

b. *To pass, you have to get almost every question right. But watch out: If you get them all, they'll actually fail you.*

In this section we have explored the positive consequences of replacing the polar condition with an antecedent condition. We obviate the problem of missing effects of negation that arises with a polar condition. We also see that our approach to *almost* helps see why *not quite* differs slightly, and we show how *almost*'s entailment of 'not p' is compatible with 'at least' contexts.

8 Consequences for counterfactuality

In this paper we have determined that the meaning of *almost* contains an antecedent condition that entails the 'polar condition', and a counterfactual condition whose premises are limited by the antecedent condition. If the modal anchor and complement of *almost* allow the normal outcomes of those premises to continue to unfold within the modal anchor's counterparts, *almost* can hold 'at a distance.' In contexts or structures where that unfolding is not possible, *almost* can only hold when the proposition is actually close to being true. The use of the modal explains why *almost*'s interpretations can vary in the ways that ordinary modal expressions can, and the lexical restrictions on the modal's domain explain why *almost* differs in many ways from ordinary counterfactuals. We demonstrate that 'hidden' counterfactuals exist outside the verbal domain, and lend further support to notions of modality being sensitive to structure, and shed new light on the intricacies of *almost*.

8.1 Counterfactuality reliant on normal outcomes

We also can use *almost* to better understand crucial concepts about counterfactuals in general. For instance, *almost* demonstrates that the past tense itself is not a crucial ingredient for counterfactuality, even in tensed languages. Instead, what is crucial is the ability for things to change between the point the premises are accepted and the end of the modal anchor. We saw that a topic situation in the past gives us enough time between the point the premises are added and the end of the topic situation for the prejacent to result from a normal outcome. A present-tense situation does not give us this room, unless the perfect or the future shifts the modal anchor away from the present.

The need for counterfactuals to have room to come true is similar in outcome to Dahl (1997)'s observations about counterfactuals with a branching-worlds model, or claims that a prediction in the past implicates counterfactuality in the present (Ziegeler 2000; Hogeweg 2009).

Since past tense is not a crucial ingredient for counterfactuality, it remains a mystery why 'fake' past tense appears on counterfactual modal auxiliaries in many languages. Several accounts have been proposed, (Iatridou 2000; Ippolito 2006, 2013; Bjorkman 2011), but these tend to rely on the assumption that past tense is crucial for counterfactuality. We will not investigate this question, but we suspect that it is not coincidental that the modal in *almost* never lands at the same syntactic head as tense, but the modal auxiliaries often do. We also suspect (along with Bybee (1995)) that the 'fake' past tense reflects a historical process and is not always synchronically meaningful.

If past tense is not crucial for counterfactuality, what is? Abusch (2012) lays out the need for circumstantial modality in counterfactuals, based on the observation that speakers can select sets of relevant facts that matter. In our situation-based approach, that selection emerges from selecting distinct topic situations. Abusch also gives importance to the "normal course of events." A proposition of a sentence like *The tree could have fallen on our house* is true given certain facts and the normal course of events ensuing from those facts.

She mentions that speakers can leave normal scenarios for outlandish scenarios where "anything is possible," by adding to the modal base. For instance, maybe a freak gust of wind pushes the tree in a direction in which normal events would not lead it to fall. However, anything being possible still relies on normal outcomes *after those premises are assumed*. So we can surmise that what counterfactuals rely on is an ordering source that provides normal outcomes given the premises, and a modal anchor with enough room for the outcomes to come to fruition.

8.2 Normalcy and weak necessity

The normality-based ordering source in *almost* provides weakening of the counterfactual. The less normal it is to succeed given the premises, the weaker the necessity. Giving normalcy a major role in weak necessity clarifies some mysteries concerning other weak necessity modals. von Fintel & Iatridou (2008) show that *ought*'s weakness comes from the addition of a secondary ordering source. They also find that in many European languages, the equivalent of *ought* actually consists of a strong necessity modal combined with counterfactual morphology. French is one such language. For weak necessity it often uses the *conditionnel* form, a clear amalgam of past imperfective and future morphology.

(107) *Tu **devr**−**ais**   suivre   le MassPike, (mais tu   n=es*
       you have to−COND.2S follow.INF the MassPike (but you NEG=be.2S
       pas obligé).
       not obliged)
       'You ought to take the MassPike, but you don't have to.'

They don't know how this composition results in weak necessity, because a transparent structure with a counterfactual plus strong necessity should result

in "would have to" as it does in English. In languages like French, this meaning does emerge in clearly counterfactual contexts, in which it maintains strong necessity (108).

(108) *Si tu   voul-ais   y=arriver   en moins de trois heures, tu*
if you want−COND.2S there=arrive.INF in less   of three hours, you
devr−ais   *suivre   le   MassPike.*
have to−COND.2S follow.INF the MassPike

'If you wanted to get there in less than three hours, you would have to take the MassPike.'

Comparing the French conditionnel to English *ought* is possible because of what makes *ought* weaker than *have to*: A secondary ordering source that reduces the modal quantifier's domain. For instance, telling someone *You have to take Route 1* signals that the only way to get to the destination is Route 1. The ordering source is goal-oriented, and all the goal-meeting worlds involve taking Route 1. Meanwhile *You ought to take Route 1* signals that among the ways to get to the destination, the best one by some other criterion (like taking the scenic route) is Route 1. All the goal-meeting worlds where the scenery goals are met involve taking Route 1, leaving other goal-meeting worlds involving other routes.

The weakening effect corresponds to the amount of domain reduction (also see Katz et al. (2012)). As the Jaccard similarity shrinks between worlds that are best for the second ordering source and the best worlds for the first, the modal weakens.

(109) Given ordering sources g, g', a modal base $f(s)$, and an ordering function $Best$ (Portner 2009)

Necessity strength[19]= $\dfrac{|Best_{g'(s)}(Best_{g(s)}(f(s)))|}{|Best_{g(s)}(f(s)))|}$

The use of normality to gain weak necessity *almost* helps us understand what is going on, when we add a key observation: The second ordering source involves normal outcomes. In normal worlds where you take a more scenic route, you take Route 1. But sometimes things aren't normal; maybe a forest fire is currently marring the scenery. In that case, the normal outcomes *given that fire* make some other route the best way to meet the goal of a scenic trip.

The use of normal outcomes with *ought* is also well observed with an epistemic modal base. Because epistemic modality is a kind of 'counting up after the fact,' the 'outcomes' aren't different from what is adopted as the modal base.

(110) If you check to see where your car is now,

    a. *The car ought to be in the garage* $\mapsto$ normally it is there
    b. *The car has to be in the garage* $\mapsto$ I am certain it is there

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[19]This ratio is equivalent to the Jaccard similarity, $\dfrac{|Best_{g(s)}(f(s)))| \cap |Best_{g'(s)}(Best_{g(s)}(f(s)))|}{|Best_{g(s)}(f(s)))| \cup |Best_{g'(s)}(Best_{g(s)}(f(s)))|}$

Given the way normality matters for weakening necessity counterfactuals, it is not a stretch to conclude that *ought*'s lexical entry sets a secondary ordering source based on normal outcomes.

Coming back to French, we see that the normal outcome ordering source is present both with the weak necessity (ought) reading and the counterfactual (would have to) reading. This ordering source is perhaps the bridge between the two. It applies directly to the necessity modal in the 'ought' reading, and to the future morphology in the 'would have to' reading. For some reason, that application is expressed with past tense morphology. In German, the reliance on normal outcomes in AAD is linked to morphological realization on the verb. Specifically, Rapp & von Stechow (1999) find that when *fast* 'almost' scopes above aspect and triggers a reading where the event never took place, the verb must be marked with Subjunctive II morphology. Perhaps this morphology is triggered or licensed by the availability of normal outcomes, brought about by the location of *fast* above aspect.

8.3   Final remarks

Ultimately, we have seen that counterfactual semantics offers an immense contribution towards formulating a sense of proximity. Looking more broadly, it may be the case that all expressions of proximity behave the same way, at least when they concern eventualities. Also, we derive scalar effects without recourse to employing scales as semantic objects, and this allows us to easily handle cases that seem to ignore scales. We have also seen a counterfactual that is tightly restrained by elements surrounding it. These constraints demonstrate very clearly the role that the structure plays in the interpretation of individual lexical items, and they suggest the existence of a wide variety of counterfactuals meriting investigation.

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Contents