

A little bit more on the English Perfect

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1. Introduction

This paper has two goals. First, to investigate the syntax and meaning of sentences like (1), which I will be referring to as exemplifying the “*since*-construction”:

(1) *It has been five years since I saw him.*

Second, to investigate the hypothesis that at a certain level, the following equivalence holds:

- (2) a. *There are three cups of water in the pot.*
 = *It has been three years since I saw him.*
 b. *There are three horses in the barn.*
 = *I have visited the Cape three times since 1990.*

2. *Since*-clause + tense = the time span

I will start with the hypothesis that the *since*-construction of (3a) is structured roughly as in (3b):

- (3) a. *It has been two years since I saw him.*
 b. *light verb* [five years]_α [in the period since I saw him]_β

In other words, the *since*-construction contains the morphosyntactic means to express a time span (the β-constituent) and make a claim about the measure of its size (the α-constituent). From (3b) we also infer that the assertion of the sentence is a statement about the size of the β-constituent. The existence of the time span and the points that bound it are presuppositions of the *since*-construction. I will be using “LB” for the Left Boundary of the time span described in the β-constituent, and “RB” for its Right Boundary. Please consult footnote 1 for background on this terminology. In the main text I will take it as self-evident that LB in (3) is the time of the event of my seeing him and RB is the Time of Utterance.¹

3. The time span is empty of events of the relevant type

The *since*-construction measures how much time fits in the span bounded at LB by a certain eventuality and at RB by Tense. Part of the meaning of the *since*-construction is that between the time of the eventuality that sets LB and RB there is no other eventuality of the relevant kind (We will return in detail to how this is derived):

- (4) *I saw him a week ago and again yesterday.*
 *# *It has been a week since I saw him.*

By this point, the reader may suspect that the *since*-construction has a close paraphrase containing negation. After all, if (3a) is true, (3b) appears to be too:

- (5) a. *It has been two years since I saw him.*
 b. *I haven't seen him in two years.*

However, the potential for paraphrasability is actually an illusion. The possibility of using a negated Perfect to paraphrase a *since*-construction is very restricted. A *since*-construction can only be uttered if the event of the *since*-clause has occurred. With the negated Perfect it is possible to avoid this requirement. All that a negated perfect like 'I haven't seen him in five years' does, is assert that a period of five years is devoid of any events of my seeing him. It only implicates that there was an event of seeing him earlier:

- (6) A: *Has the patient ever had a seizure?*
 B: *He hasn't had one in five years/in the five years that I have been working here/in the last five years. I don't know about earlier.*

On the other hand, in a *since*-construction, the occurrence of the event at some point in the past is not cancelable. The occurrence/ truth of the event is built in as a presupposition of the sentence. The assertion of the *since*-construction is about the time of that event, or, the distance of that time from the time interval specified by Tense (RB).

The discourse in (6) shows the agnosticism on the part of the speaker with respect to the question of whether there is a seizure at all in the past. This means that the existence of the seizure is not presupposed (or entailed) in the negated Perfect.

We can also have the speaker explicitly deny that there was a seizure. As predicted, this is possible with the negated Perfect but not with the

since-construction, which presupposes the existence of the relevant event.

- (7) A: *Has he had a seizure in the last five years?*
 B: *No. [He hasn't had a seizure in the last five years.] In fact, he has never had one.*
- (8) *It has been five years since he had a seizure. #In fact, he has never had one.*

We can also take the opposite course of action, namely have the speaker assert that there was an event at the relevant time (LB). In the case of the negated Perfect this goes through without problem. In the case of the *since*-construction, it feels like the funny repetition that is brought about when what is being asserted was already presupposed.

- (9) a. *He hasn't had a seizure in five years. (But) he had/did have one five years ago.*
 b. *It has been five years since he had a seizure. ?? (But/so) he had/ did have one five years ago.*

In this context, consider also a medical insurance form that has to be filled in at a doctor's visit. You would be surprised to find questions like the following:

- (10) a. *How long has it been since you have taken illegal drugs?*
 b. *Has it been five years since you have taken illegal drugs?*

The above sentences are funny in the context because they presuppose that you have taken drugs. However, you would not be surprised to find (9a) in a drug rehabilitation clinic, where it is presupposed that the visitor is a drug-user.

On the other hand, you would not be surprised to see one of these in a general practitioner's office:

- (11) a. *Have you (ever) taken illegal drugs?*
 b. *Have you taken illegal drugs in the last five years?*

All the above clearly follow from the proposal that the *since*-construction has as presupposition the occurrence of the event (at its LB) but not so the negated Perfect.

With the negated Perfect, it is only an implicature that an event of the relevant type occurred. Here is how the implicature comes about, step by step.

The negated Perfect has what we will call its weak implicature, namely the implicature for the possibility of a seizure (before/at LB of the Perfect Time span). And it also has what we will call its strong implicature, namely the implicature that there actually was a seizure (before / at LB of the Perfect Time span). We can derive these implicatures by interpreting the fact that the speaker has not made a stronger statement than the one that s/he did make. If speaker did not make a particular assertion it is either because s/he does not know whether that assertion is true, or, because s/he knows that that assertion is false.

- (12) a. Speaker asserts A (= *Bill hasn't had a seizure in five years*).
 b. Speaker did not assert B (= *Bill hasn't had a seizure in six/seven/etc years; Bill has never had a seizure*), B is stronger than A.
 c. If Speaker had been convinced that B is true s/he would have asserted B.
 d. Therefore, Speaker is not convinced that B is true = speaker permits the possibility that Bill has had a seizure (= our weak implicature).

We can generate the strong implicature by adding an additional premise:

- e. The Speaker has an opinion about whether B is true or not.
 f. Therefore, Speaker is convinced that B is false = speaker is convinced that *Bill has never had a seizure* is false = speaker is convinced that Bill has had a seizure (= our strong implicature).

With the previous tests we cancelled these implicatures as follows. The sentences in (6b) cancel the strong implicature (12f) by directly contradicting (11e), that is, by having the speaker explicitly deny knowledge regarding B. Hence the strong implicature goes away and we are left with the weak one (the possibility of an earlier seizure), generated by (12a-d). The sentence in (127), by having the speaker directly assert B, cancel (12b), hence cancel both the weak and strong implicatures.

Finally, we can cancel (12c) by slightly modifying the discourse as in (13):

- (13) A: *Has he had a seizure in the last five years?*
 B: *No.*

In (13B), since the speaker is not asked for more information and s/he does not give it, we can cancel (12c).

To summarize, the negated Perfect at most implicates that there was a prior event, whereas the *since*-construction presupposes that the event occurred. Of course they both have in common that the indicated time-span is free of events of the relevant sort.

In short, in the *since*-construction there is an existential presupposition on the LB-event. In the next section we will see that there is a uniqueness presupposition as well.

4. The last occurrence of the event

In order to derive the correct meaning of the *since*-construction, it may seem that we need LB of the time span to refer to the last occurrence of an event of the relevant type. Imagine that the world is as described in (14). Then the sentence in (15) appears false.

- (14) *He was injured in 1997 and again in 2000 and in 2001. It is now the year 2003.*

- (15) *It has been six years since he was injured.*

How is this meaning derived? Is there a covert “last”? That does not seem a very attractive option. Moreover, always postulating a covert *last* gives the wrong results in a variety of cases. For one, (16a) should be as bad as (16b):

- (16) a. *It has been seven years since his cat died.*
 b. *#It has been seven years since the last time his cat died.*

In addition, if we always posit a covert *last* then the following should be odd:

- (17) *It has been 5 years since I saw you for the first time / for the seventh time / etc.*

Sentence (17) should be odd because of the contradiction between *for the first time* and covert *last*. Or it should be odd because it would talk about the last time I saw you for the first time (or vice versa).

In fact, we do not want a covert *last* at all. In the context of (14), I had said that (15) “appeared false” because a first impression might have been that the utterance with a *since*-construction that is true in that context is (18) instead of (15):

(18) *It has been two years since he was injured.*

But for that matter, in the context of (14), (18) is not felicitous either. What we need is an expansion like the following:

(19) *It has been two years since he was injured for the last time.*

This gives us another argument for not positing a covert *last* in the *since*-construction: If there was a covert *last*, then (18) without overt *last* but with covert *last* should have been just as felicitous. So a covert *last* is not an answer to our problem.

In fact, the *since*-construction is best when there is a single event that fits the event description of the *since*-clause. There are several ways to create a uniquely referring event-description. One option is, of course, to have an LB-event that by its nature is unique:

(20) *It has been five years since his cat died.*

(21) *It has been five years since this house was built.*

With events that are in principle repeatable, we need to modify the event description so that only a single event fits it. One way to do that is to add an overt *for the last time*, as we did in (19). But we could have added *for the first time*, or, *for the second time*, or for that matter *for the fifty-sixth time*. As long as we create a uniquely referring event-description. So there is no covert *last* in the *since*-construction, nor does *last* have any special status; any ordinal will do, as any ordinal will create a unique event description. In short, in the context of (14), (18) suffers from uniqueness presupposition failure. Consider also the following.

(22) a. *John got married in St. Patrick’s Cathedral.*
b. *It has been five years since he did/since then/ since he got married.*

(23) a. *John got married three times in St. Patrick’s Cathedral.*
b. *#It has been five years since he did/since then/ since he got married.*

In the context of (22a), sentence (22b) is fine. However, in the context of (23a), (23b) is infelicitous. If we add *for the last time* or *for the first time* etc in (23b) we can make the sentence felicitous and true but then we have found a description that only one event satisfies. But the exact meaning of *last* is not what saves the sentence. Anything that would yield a description satisfiable by a unique event would do. When there is more than one event fitting the description, the *since*-construction is infelicitous the way (24) is:

(24) (when there are five books on the table:) *#I will give you the book that is on the table.*

To summarize, then, what we have seen in this and the previous section is that the *since*-construction contains a description of the LB-eventuality that has an existential presupposition and a uniqueness presupposition. In short, we are dealing with a (singular) definite description of the eventuality. In the next sections we will look at similar constructions in a different language and we will see that the fact that we have a definite description is a correlate of the sentence in the *since*-clause being finite.²

The careful reader may have noticed an apparent contradiction at this point. In this section I argued that there is a uniqueness presupposition on the LB-event of the *since*-construction. Yet, we started out the paper with sentence (1), which certainly does not imply that I have seen him only one time. So what is the difference between (14,18), (23a,b), where failure of uniqueness causes a problem for the *since*-construction and sentence (1) where it does not? In effect what happens is that in (1) the context makes one event salient and so the *since*-clause has no problem picking that event up. Why does the context do that for (1) but it cannot do it for (14,18), (23a,b)? The difference lies in that with certain events, it lies in the pragmatics of their nature that only the most recent one is relevant. Consider for example, going to the hairdresser. You are only as good as your last visit. For this reason, when you ask your friend (25), you will expect (26a) as an answer and not (26b):

(25) *When did you get a haircut?*

(26) a. *Last Tuesday.*
b. *In 1964 I went in February, May, July and October. In 1965 I went in January, March... etc.*

And when you get (26a) as answer, you will correctly assume that Tuesday was the last time your friend had a haircut. If it turns out that your

friend had a haircut last Tuesday but also had one yesterday, you will feel that you have been seriously misled.

So it is not surprising that one can say (28) without implicating that last week was my only ever visit to the hairdresser:

(27) *It has been one week since I went to the hairdresser.*

With respect to (18), in most contexts, getting injured is not such a commonplace affair that only the most recent counts as relevant. However, if one sets up the context where only the most recent injury is relevant, (18) becomes fine again. The problem with (18) uttered after (14) is that no one salient event of injury stands out. So the Uniqueness presupposition of the *since*-construction is not satisfied. If one plays with the context so that there is one salient event, then (18) can be uttered without implicating that it is the only such event in existence. For example, (29) can be uttered by a pitcher just back from injury leave without implicating that the most recent injury was the only one in his life:

(28) *It has been almost one month since I got injured and I still can't throw the ball right.*

This behavior fits exactly what we would expect of a definite description. It picks out the unique entity in the model that fits the description or the unique salient one.

5. A quick look at other languages

We can look for the equivalent to the *since*-construction in other languages too and of course, we learn a lot from doing so. Below are some examples from French and Greek:

(29) *Il y a cinq ans que je l'ai vu.*
 he CL has five years that I him-have seen
 'It has been five years since I saw him.'

(30) *Echi pende chronia pu ton idha.*
 has five years that him saw
 'It has been five years since I saw him.'

Even this first look at French and Greek reveals that the equivalent of the *since*-construction is grammaticalized with the morphosyntactic means used in existential sentences³:

(31) *Il y a cinq livres sur la table.*
 he CL has five books on the table
 'There are five book on the table.'

(32) *Echi pende vivlia sto rafi.*
 has five books on-the shelf
 'There are five books on the shelf.'

Once one gains this perspective, one can explore such a possibility also for the English *since*-construction. In fact, also in English the morphosyntax of the *since*-construction is compatible with that of existential constructions (the copula and an expletive), though maybe less explicitly so than in French or Greek. In short, adapting (3b) to the current discussion, we have (for Greek, French and English):

(33) *existential light verb* [five years] α
 [in the period since I saw him] β

In (33), "existential light verb" is short for whichever light verb appears in existential constructions. It should not be taken to represent the position that the source of existential quantification is located in the verb. Tense and the *since*-adverbial together compose the time span represented as the β -constituent in (33). The α -constituent constitutes the amount of time that is asserted to exist in the β -constituent.

Consistent with what we would expect on the basis of (33), we find that there is a definiteness effect on the α -constituent:

(34) **It has been (the month of) January since I saw him.*

(35) **It has been most days of last week since I saw him.*

In Iatridou (2003) I discuss linguistic variation issues.

5. Enter the Perfect: another temporal existential?

I have argued that the *since*-construction has the following meaning:

(36) There are [3 years] α [in a certain time span] β

I will call (36) a "temporal amount existential" in that it is similar to a "nominal amount existential" of the type in (37):

(37) There are [three cups of water] α [in a certain space] β

But we have another type of nominal existential, which we can call an “individual existential” since the existence of individuals is asserted:

(38) There are [three horses] α [in a certain space] β

Is there a parallel to (38) in the temporal domain? What would it look like? If the parallel is close, we would expect to find something like (39):

(39) There are [3 individuals of a certain sort] α [in a certain time span] β

In this section I will argue that the Existential Perfect instantiates the schema in (39). I will argue that this angle may provide us with some further insights into the Perfect.

Recall the IAI treatment of the Existential Perfect

- (40) a. *I have visited Cape Cod three times since 1990.*
 b. In the time span whose LB is 1990 and whose RB is the utterance time there are 3 events of me visiting the Cape.
 c. there are [3 events of me visiting the Cape] [in the time span whose LB is 1990 and whose RB is the utterance time]

In other words, the “garden variety” Perfect is a temporal existential of sorts as well, where instead of asserting that a certain amount of time exists in a time interval (as in the *since*-construction), the Perfect asserts that certain events exist in the relevant time interval. These events themselves are not set with respect to time coordinates. As a result, the participial (non-tensed) forms of the verb are not unexpected⁴.

So here is what we have:

- (41) a. *There are three cups of water in the pot.*
 = *It has been three years since I saw him.*
 b. *There are three horses in the barn.*
 = *I have visited the Cape three times since 1990.*

Are there any benefits to seeing the Perfect as a temporal existential? That depends on whether it helps us raise interesting questions. Let’s see if it does.

Repeatable eventualities have no problem appearing in the Perfect. This can easily be seen with verbs of use:

(42) *I have painted this house (many times) since 1990.*⁵

However, eventualities that by their very nature are unique create quite degraded sentences. This can be seen with verbs of creation and verbs of destruction with definite objects:

(43) ?? *The dictator has assassinated his opponent since 1990.*

(44) ?? *She has written this paper since 1990.*

What is the contrast between (42) and (43,44) due to? Recall that we are evaluating the hypothesis according to which the Perfect contains an indefinite description of the eventuality. At the same time we know from the nominal domain that we cannot use an indefinite for an item that is definite or unique in context. In other words, when a definite description is warranted, a definite description must be used (Hawkins 1978, Heim 1991 and others). The possibility of plurality is required for the felicitous use of indefinites:

- (45) a. *I watched a game last night. The /*an /*one umpire was very unfair.*
 b. *I watched a married couple play chess. The /*a/ *one man had no endgame.*

When the context does not entail uniqueness, an indefinite must be used.

- (46) a. *I watched several games over the weekend.*
 *One/ an^o / *the umpire was very unfair.*
 b. *I watched many married couples play chess yesterday.*
 *A/ one / *the man had no endgame whatsoever.*

I propose then that what is wrong with (43,44) is that definite objects of “one-time-only” verbs like verbs of destruction and creation create unique eventualities, which in turn prohibits the indefinite description of the eventuality that is inherent in the Perfect. On the other hand, such verbs with indefinite objects are fine in the Perfect:

(47) *She has written many papers since 1990.*

(48) *The dictator has assassinated many of his opponents since 1990.*

Even though events of creation and destruction are unique per individual, the plural indefinite objects reintroduce the potential multiplicity (non-uniqueness) required of the α -constituent of the existential.

In case the reader finds it hard to see the contrast under discussion, here are some ways to bring it out:

- (49) a. *Have you painted this house since 1990?*
 b. *Has she read this paper since 1990?*
 c. *Has the dictator debated his opponent since 1990?*
- (50) *??Has she written this paper / "Girl with a pearl earring" / etc since 1990?*
- (51) *??Has the dictator assassinated his opponent / Bella Smith since 1990?*
- (52) *Has she written many papers since 1990?*
- (53) *Has the dictator assassinated many of his opponents since 1990?*

What other questions should we ask if we want to see how far we can get with seeing the Perfect as containing an indefinite/existential? In nominal existentials, we can have (apparent) violations of the Definiteness Effect with what has been called the "list-reading":

- (54) A: *Who do we have to cast in our play?*
 B: *Well, there is John, Bill and Susan.*

Whatever the mysterious list-reading is due to, we also find it with temporal existentials and with descriptions of events whose definiteness/specificity does not normally permit them in the perfect:

- (55) A: *What has she done since 1990?*
 B: *Well, she has written this paper, she has assassinated her opponent and she has had the fields destroyed.*

So far then, we have seen arguments to the effect that there is an indefinite description of the eventuality in the Perfect, which is exactly what we would predict if that description is the α -constituent of an existential. In some examples that we saw, the degraded status of a Perfect sentence was the result of unique eventualities associated with definite objects, such as the creation and destruction of definite objects. But uniqueness/definiteness can be contributed by other parameters of the eventuality.

For example, even if an eventuality is in principle non-unique, if we make any particular occurrence specific enough, it becomes again unique and therefore close to a definite. One way to do this is to add uniqueness inducing modifiers:

- (56) *I have seen him for the third time since 1990.*

Sentence (56) is on the reading where all three times that I saw him happened in the period between 1990 and now. But the reading that is missing and the one that is relevant to the current discussion is the one where the first two times I saw him happened before 1990 and the third time I saw him happened in the period between 1990. It's this reading that we are correctly predicting the sentence not to have.

The question arises whether it is possible to make a description of an eventuality unique by making its temporal coordinates precise and thereby unique. This may be so:

- (57) **He has worked on Sunday.*

- (58) *Even though his religious beliefs prohibit it, he has worked on a Sunday.⁷*

McCoard (1978) gives us some arguments in favor of the current proposal. McCoard argues against what he called the "Indefinite Past Theories" of the Perfect ("ID theories). According to the ID approach, the difference between a Perfect and a Simple Past is that the Perfect provides an indefinite Past. For example, on pp 79-80, he discusses the ID theories' position that the Preterite is definite and the Perfect indefinite as concluded from the contrasts between the (a,b) sentences (judgments as reported by McCoard):

- (59) a. *I went back to visit two months ago.*
 b. **I have gone back to visit two months ago.*
- (60) a. *I went back to visit last weekend.*
 b. **I have gone back to visit last visit.*
- (61) a. *I went back to visit just yesterday.*
 b. **I have gone back to visit just yesterday.*

McCoard does not take issue with the position that some of the relevant adverbials can be described as definite. Instead, he argues against the ID theories on the basis that these definite adverbials do occur sometimes in

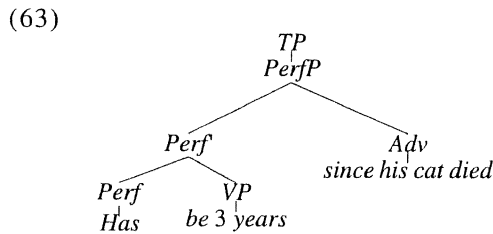
the Perfect, and so the definiteness of the adverb cannot be the deciding factor. The following is such a sentence, according to McCoard:

(62) *I have gone back to visit two months ago, last weekend, and just yesterday (so far).*

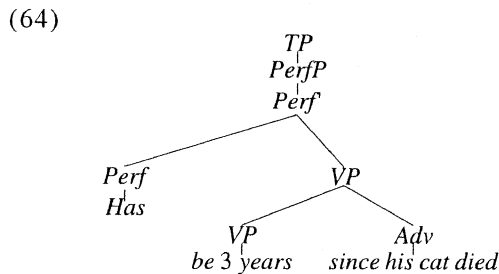
However, sentence (64) is an instance of a list-reading and we already saw that violations of the definiteness restriction accompanied by an ensuing list-reading is a prediction of (and indirect evidence for) the view of the Perfect as temporal existential⁸.

6. Putting it in a tree

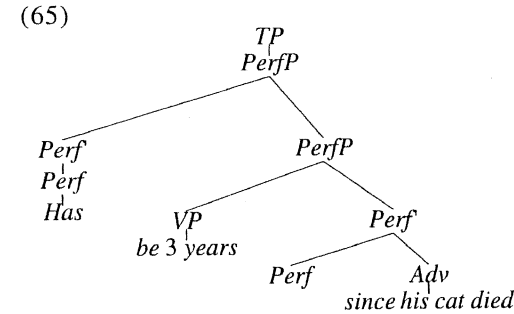
The syntax that IAI assume with respect to the placement of *since*-adverbials (following Thompson and others cited there), would dictate the following (partial) tree for the *since*-construction:



However, following von Stechow (2002) and von Fintel and Iatridou (2002), I will assume that this unnecessarily complicates the semantics (see these references for details). Following these works I will choose a tree that represents that the VP and the adverbial intersect and the composed node is an argument of *Perf*. :



Even if it composes better than (63), one may wonder about the syntax of (64) (for example, given the findings of Thompson and others). One might also worry that (64) might be incompatible with the “right-ascending” theories of adverbial syntax (Andrews). However, Larson (2003) presents arguments to the effect that these theories are wrong and that adverbial syntax is “right-descending”. In fact, Larson (p.c.) suggests that the syntax of Perfect-level adverbials like *since*-clauses may be as follows (though not particularly for the *since*-construction):



I will leave these issues unresolved for now, as any of the above will do for the properties of the *since*-construction that we discussed. And interesting, though irrelevant to the main text, a property of the *since*-construction is that it licenses NPIs:

- (66) a. *It has been 5 years since he budged an inch.*
- b. *It has been 5 years since I met anybody decent.*
- c. *It has been 5 years since I've been anywhere.*

Within the theory according to which NPIs are licensed in Downward Entailing Environments (e.g. Fauconnier 1974, Ladusaw 1977), we would have to start by showing that the *since*-construction provides a Downward Entailing Environment.

In order for it to be Downward Entailing, the truth of (67a) would have to entail the truth of (67b):

- (67) a. *It has been 2 months since I had (any) dessert.*
- b. *It has been 2 months since I had baklava.*

This does not appear to be the case. Certainly (67a) can be true without (67b) being true, as for example in the case where two months ago I did not have baklava but had tiramisu. This means that the relevant environments are not Downward Entailing and yet they license NPIs. Can we

Footnote

resolve this? von Fintel (1999) noticed problems of this sort and argues for the following amendment to the Downward Entailing theory of licensing.

“We can define a notion of entailment that will only check whether an inference is truth-preserving under the assumption that all the conventional implicatures and presuppositions of premises and conclusions are satisfied” (von Fintel, p. 6)

von Fintel calls this type of entailment “Strawson Entailment”. So here is what we have. Sentence (67a) does not entail (67b) as I mentioned earlier, because it could be that two months ago I had tiramisu, not baklava. However, recall that the *since* construction has as presupposition that the eventuality in the embedded clause has, in fact, occurred, as it is built in as its LB. To check whether there is Strawson-Entailment, we need to satisfy the presuppositions of the relevant sentences. That is what is done in (68). (68a) provides the environment whose Downward Entailing /Strawson Entailment properties we are checking. In our calculations we should assume the truth of (68b) along with that of (68a). Now we can ask the question whether (68c) is entailed and the answer is that it is.

- (68) a. *It's been five years since I had dessert.*
 b. *Five years ago I had baklava.*
 c. ----> *It's been five years since I had baklava.*

So von Fintel provides us with a way to apply the Downward Entailing theory to capture the licensing of NPIs in the *since*-construction.

The truth meaning that we can compose off these trees is as follows (where “PTS” stands for “Perfect Time Span” the interval between LB and RB):

- (69) $\exists t$ [PTS (t, now) & LB(t) = the t [his cat died at t] & $\exists t'$ [3 years (t') & $t' \subseteq t$]]

Notes

- * This article is part of a larger paper entitled “More Perfect Constructions”, which raises crosslinguistic issues. I am very grateful to Noam Chomsky, Kai von Fintel and Irene Heim for their help in putting this paper together. I have also benefited from discussions with Elena Anagnostopoulou, Rajesh Bhatt,

Howard Lasnik, Lance Nathan, David Pesetsky, Barry Schein, Arnim von Stechow.

1. I will follow the description of the Perfect in Iatridou, Anagnostopoulou and Izvorski (2001) (henceforth IAI). IAI's proposal is a version of an Extended Now theory of the Perfect such as McCoard 1978, Dowty 1979, and others. For a formal implementation of the assumptions I make here, please consult von Fintel and Iatridou (2002). - IAI argue that the Perfect sets up a time span, the Left Boundary (LB) of which is set by an adverbial, the Right Boundary (RB) of which is set up by Tense. In the Present Perfect RB is (at) the time of utterance, in the Past Perfect, RB precedes the time of utterance and in the Future Perfect RB follows the time of utterance. Consider the examples (i) (Existential Perfect) and (ii) (Universal Perfect):

- (i) a. *Since 1990 I have been to Cape Cod three times.*
 b. There is a time span whose LB is 1990 and whose RB is the utterance time and in that time span there are 3 events of me going to the Cape
- (ii) a. *He has been sick since last Tuesday.*
 b. There is a time span whose LB is last Tuesday and whose RB is the utterance time throughout that time span there is an event of him being sick.

The examples in (i,ii) are with *since* but there are examples of more adverbials in IAI. - There are several ways to express the coming together of Tense and the *since*-clause to form a time span as its RB and LB respectively. For the sake of concreteness, I will assume the following. Many languages, including English, have temporal adverbials that make both RB and LB overt, e.g. *from... to...* In fact, I have found adverbials like *since*, which cannot take an overt RB, to be rare. I will assume that basically *since* is like *from... to...* in that it comes with a second argument which is the RB of the time span it defines. The only difference is that this second argument is a variable and this variable is bound by and gets its content from Tense. In this way, if Tense is Present, RB (the second argument of *since*) overlaps the time of utterance; if it is Past, RB precedes the Time of Utterance. - The IAI description of a time span will be adopted in the rest of the paper with one change. Instead of existential assertion of the time span (“There is a time span whose LB is... and whose RB is...”), I will be treating it as a definite (“In the Time span whose LB is... and whose RB is ...”). This does not have any effect on the cases that IAI actually discuss, since existential assertion on something that is uniquely defined (given that we know what LB and RB are) is from many perspectives equivalent to a definite. However, treating it as a definite might avoid potential difficulties in the presence of elements like negation (thanks to Arnim von Stechow for bringing this up.) - Similarly, the time span in the *since*-construction is the combined outcome of Tense (RB) and the time of the event described in the *since*-clause (LB).

Footnote



- (iii) since-construction + Past:
 a. *I saw him last week. It had been 2 years since I saw him.*
 since-construction + Future
 b. *In one week it will be 2 years since I saw him.*

We should not forget that numerals always come with some vagueness, “two” could be “at least two” not “exactly two”:

- (iv) a. *If it has been two years since your last check-up, you are entitled to a free exam.*
 b. *If there are five horses in your meadow, you should spray for parasites.*
2. The possibility of a null operator that yields a definite event-description cannot be discarded at this point but finiteness is a clear prerequisite. But if there is an operator, it is unclear whether it is of the usual XP kind, as one would expect lower readings in sentences like (i). However, I have found one a few speakers who can do this:
 (i) *%It has been five years since Mary thinks that John arrived.*
3. For our purposes, it is crucial that we are dealing with main sentences and not adjunct, as is clearly the case in the following French sentence
 (i) *Je l'ai vu il y a cinq ans.*
 See Rigau (2001) for differences between such adjuncts and the matrix temporal existentials. Her paper provides data from several Romance languages.
4. But what also maybe a correlate, is the fact that in so many languages, there are auxiliaries and that they are frequently drawn from the same pool as the verbs in existentials (nominal and temporal). See Kayne (1994) for an assimilation of the roles of the auxiliaries in the Perfect and in existentials.
5. Without the expansion with *many times*, the sentence seems to require stress on *have* for some speakers. This is a property of the Existential/Experiential Perfect in general. Its source is unknown to me.
6. There is a preference for “one” over “an” because of the D-linked status of “umpire” due to the previous mention of “games”.
7. It is possible that even though adverbs like *on Sunday* do not determine an absolutely unique position for the eventuality on the time-line (the duration of Sunday will permit multiple placements of the eventuality), they may determine a position sufficiently unique to yield a definite description of the eventuality and thereby violate the Definiteness restriction of the Perfect. Although we will see later more evidence for this, the issues are far from clear.
8. The reader may now think that the current proposal has come close to an ID approach, as well as to some of the ideas in Klein (1992). But this is not so. As I said earlier, according to the ID theories, the difference between a Perfect and a Simple Past is that the Perfect provides an indefinite Past. In the current proposal what is indefinite in the Perfect is the description of the eventuality (the α -constituent of the existential) and not the temporal content of the Perfect. My proposal falls squarely under what McCoard would classify as an “Ex-

tended Now” theory. However, I hope it is clear how I am predicting that some of the uniqueness/definiteness inducing temporal adverbs will be predicted to not be possible.

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