Towards a competition account of the Present Perfect: The case of the indefinite Simple Past

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1   Introduction

For many years, the English *present perfect* has been studied extensively, and yet, no fully satisfactory account of its meaning has been provided. Cross-linguistically, many European languages exhibit a tense that is similar to the English *present perfect* in both form and meaning – like the French *passé composé*, German *Perfekt* or Dutch *voltooid tegenwoordige tijd*(*vtt*) – but the exact differences and commonalities between these PERFECT forms remain difficult to pin down (Binnick, 1991).[1] A substantial part of the research on the PERFECT has either focused on trying to account for differences between the *present perfect* and other tenses within the English language (cf. Nishiyama & Koenig, 2010), or on differences between the PERFECT in different languages, like German, Spanish or French (cf. Klein, 1992).

Even though this cross-linguistic variation and variation within the English language give rise to many intriguing puzzles on their own, a different approach to the meaning of the PERFECT will be taken up in this paper. That is, while the English *present perfect* and the English *simple past* do not seem to have much in common, the differences between the two pale in comparison to differences between their Dutch counterparts. Moreover, while the Dutch *vtt* seems to differ from the *present perfect* in many ways, a closer look at the *simple past* and Dutch *onvoltooid verleden tijd* (*ovt*) reveals that the use of these tenses might differ even more.

Following Schaden (2009), I will therefore argue in this paper that the PERFECT is not the only tense to vary cross-linguistically. In fact, the main claims in this paper will be in line with Schaden's proposal that variation in the use of the PERFECT is closely related to the cross-linguistic variation of the SIMPLE PAST (see also Ritz, 2012).

In Schaden's (2009) proposal, the difference between the use of SIMPLE PASTS and PERFECTS in Dutch or English is pragmatic in nature: in English the *simple past* is the default form to refer to an event in the past, whereas the *present perfect* is considered a marked form which will therefore trigger a pragmatic reasoning process. In a language like Dutch this pattern is reversed, which explains why *ovt's* in Dutch are a lot more widely used than *vtt's*[2] – while the exact opposite pattern is found in English. However, what Schaden's account clearly lacks are

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[1] In the remainder of this paper, I will refer to specific tense forms in a particular language using italics; I will refer to the abstract category among languages with small caps.

[2] Schaden actually does not explicitly discuss the Dutch *vtt*, but he does discuss two categories of languages. It is clear that Dutch would fit into this latter category for which the PAST is marked, and the PERFECT is the default form.

specific reasons for these markedness patterns to emerge among different languages. Why is Dutch *ovt* marked? Or what causes the *simple past* to be the default form in English?

In this paper I will instead argue that differences between PASTS and PERFECTS in Dutch and English may in fact arise because of differences in semantic content of the SIMPLE PAST in each language. The goal of this paper will therefore be to explain at least a part of the differences in use between English and Dutch PERFECT forms in terms of differences in the semantic content of the SIMPLE PAST. I will therefore focus on describing the differences between the English *simple past* and Dutch *ovt*, and I will explicitly leave a detailed description of the semantic contribution of the PERFECT for future work. More specifically, the exact difference between the semantics of the Dutch and English SIMPLE PAST will be that the *simple past* has both a definite and an indefinite reading, while the *ovt* is always definite. What I mean with this is the following.

It has often been pointed out that the *simple past* is anaphoric and deictic in character: just like an anaphoric pronoun, a *simple past* needs an antecedent introduced in previous discourse (Partee, 1973, 1984; Webber, 1987; Kamp & Reyle, 2013). When a *simple past* is embedded within a narrative structure, it indeed seems to have such a definite use, in which a sequence of events is described by picking up on a previously given time interval. Dutch *ovt's* are assumed to have to same function as they seem to work in a very similar way in a narrative context. On the other hand, PERFECTS in both languages are generally taken to be indefinite in the sense that they introduce a new time interval and therefore do not necessarily need a pre-defined time point to be given in advance. This presumed difference between PAST and PERFECT forms in terms of definiteness makes certain predictions about what contexts these tenses can occur in. That is, assuming that SIMPLE PASTS are definite, while PERFECTS are indefinite makes the correct prediction that PASTS generally do not occur in the very beginning of a narrative structure, while PERFECTS do (Nishiyama & Koenig, 2010).

In studying tense, scholars have mostly focused on such narrative structures, but there is more to language than just narration. When we look at data from dialogue, on the other hand, it becomes clear that the English *simple past* and Dutch *ovt* differ much more than we would expect if we take them to have the exact same semantic content. A secondary, and more indirect goal of this paper will therefore be to show that data from dialogue can shed new light on questions related to the meaning of the PAST or PERFECT – and perhaps even on tense in general.

The crucial observation when it comes to dialogue is that, in English, *simple pasts* can generally also be used when an input interval is not specified in advance: they can be used in questions, in the beginning of a discourse or after a topic shift. This is impossible for Dutch *ovt's*. Dutch *ovt's* are in this sense genuinely definite: they cannot be interpreted in another way than having a definite reading. English *simple pasts* seem much more flexible, and I will therefore argue that they are in fact ambiguous between a definite and indefinite reading. That is, I will argue that *simple pasts* can also introduce a new time interval, and, going back to Prior (1967), I will propose that they may contain an existential quantifier over times (cf. Kratzer, 1998).

Under this analysis, *simple pasts* thus have in common with *present perfects* that they can both introduce a time interval themselves and do not need such an interval to be specified in advance. Therefore, the proposed analysis predicts that English *simple pasts* behave much more like *present perfects* than Dutch *ovt's* behave like *vtt's*. I will argue that this is indeed what we find when we look at a wider range of data than has previously be taken into account.

In the next section, I will provide a first indication that there are clear differences in use between the English *simple past* and Dutch *ovt*, and moreover, that these differences solely

arise if we take data from dialogue seriously. Whereas English *simple past* occurs frequently in dialogue, the use of an *ovt* seems to be much more restricted in a dialogue setting in Dutch. Instead, a *vtt* is much more common in such a setting. I will argue that this shows that the English *simple past* must have a broader meaning than the Dutch *ovt*. In Section 3, I will then discuss some more specific observations that may indicate that the difference between English and Dutch SIMPLE PAST is exactly the fact that the *simple past* can be indefinite, while the Dutch *ovt* cannot.

In Section 4 I will spell out the semantic contribution of the PAST and in Dutch and English in a very simple way, and I will show that such an analysis can indeed account for many observations discussed in Section 3. In Section 5 I will sketch an extension of this proposal in which an inquisitive framework is used to capture the meaning of questions and to account for observations concerning sluicing. I will use a temporal version of the inquisitive semantics framework to spell out the differences in semantic content of the English and Dutch SIMPLE PAST.

2 Why the PAST must be different in Dutch and English

Initial support for the hypothesis that the meaning of the English *simple past* is a lot less restricted than its Dutch counterpart comes from corpus data. I will briefly discuss some data obtained from J.K. Rowling's *Harry Potter and the Philosopher's Stone* in English and its Dutch translation to show that – even in a small data set like this – there exist clear differences between the way the *simple past* is used in English and the *ovt* is used in Dutch. After discussing these general differences in use, I will go into more specific observations in the next section which suggest that these differences in use arise because of differences in definiteness.

2.1 Some corpus data

The data that I will present here comes from two fully annotated chapters (the first and the last chapter) from the first Harry Potter book (Rowlings, 1997). This book was chosen as it is written in contemporary English, contains narrative sections as well as relatively natural dialogue, but also because its translations are easily available in many different languages – including Dutch. The choice for the specific two chapters was made in order to get roughly the same amount of narrative and dialogue data within the corpus. For the chosen chapters, all verb phrases are selected in the original English text and then aligned with the verb phrases in their Dutch translations. All verb phrases are manually annotated for tense in both languages and the whole text is automatically annotated for structure (narration vs. dialogue).

Only looking at the use of the *simple past* and *present perfect* in the original text, we obtain the following results as shown in Table 1. We first of all observe that the distribution of *simple pasts* versus *present perfects* is not that much different from the distribution of *ovt's* and *vtt's* in Dutch. However, even though the vast majority of English *simple pasts* are simply translated with *ovt's*, in a fair amount of cases the *simple past* is translated as a *vtt* in Dutch. The opposite, i.e. a *present perfect* translated as an *ovt*, occurs only once.

2.2 Narration vs. dialogue

Interestingly, when we take a closer look at the cases in which a *simple past* is translated with a *vtt*, we observe that all of them occur in a dialogue setting. In fact, in narration, only *simple*

	Simple Past	Present Perfect	
Onvoltooid verleden tijd	691	1	692
Voltooid tegenwoordige tijd	49	27	76
Other	22	13	34
Total	762	41	

Table 1: Tense distribution in *Harry Potter and the Philosopher's Stone* and its Dutch translation

	Dialogue		Narration		
	Simple Past	Present Perfect	Simple Past	Present Perfect	
ovt	101	1	590	0	692
vtt	49	27	0	0	76
Total	150	28	590	0	768

Table 2: Tense distribution narration vs. dialogue

pasts are used in English and these *simple pasts* are always translated with an *ovt* in Dutch, as shown in Table 2.

If we therefore only take narrative structures into account, we do not observe a difference between the use of *simple pasts* and *ovt's*, but in dialogue this difference does become clear. At the same time, PERFECTS are used in a dialogue setting, but not in narration. If we take PERFECTS to be indefinite and PASTS to be definite, we can perhaps conclude that narration does not generally require the use of an indefinite tense, while dialogue sometimes does. Intuitively, this makes sense – not because this indefinite reading is intrinsically related to dialogue or the definite reading to narration, but because, unlike a narrative setting, a more conversational setting often involves a less neat sequential description of events. When we tell a story, on the other hand, it makes more sense to use a definite tense, because we describe events in a more sequential order, in which a time point is often specified by previous discourse.

The answer to the question why many *simple pasts* are translated as *vtt's* in dialogue, but not in narration, may be related to this difference in definiteness. Looking only at the data from dialogue, we can possibly explain the fact that *simple pasts* are translated as *vtt's* in two ways. That is, we can either suggest that on top of the meaning that a *present perfect* expresses, the Dutch *vtt* also has a component that expresses a meaning similar to that of the *simple past*, or else we can suggest that the *simple past* can contribute something similar to the Dutch *ovt* while also being to express something similar to the Dutch *vtt*. In terms of definiteness, this means that it is either the case that the Dutch *vtt* is both definite as indefinite, or that the English *simple past* is both definite as indefinite.

I will argue that it is the latter hypothesis that would make most sense given the data above, because only on this hypothesis can we explain why such a shift would only occur in dialogue. That is, if we stick to the traditionally assumed meaning of the *simple past*, while also assuming the *vtt* to be ambiguous between a definite and indefinite reading, it would be difficult to explain why the translation of a *simple past* as a *vtt* would only occur in dialogue, but never in narration. Therefore, I will suggest that the *simple past* has both a definite and an indefinite reading. Because it often receives this latter reading in dialogue, but not in narration, it is only translated as a *vtt* in Dutch in dialogue.

If we further zoom in on our data, we indeed observe that the English *simple past* is used in cases in which we would expect an indefinite tense. For instance, the Dutch *ovt* is almost

never used in questions that raise a new issue, while the English *simple past* can be used in such contexts: 13 out of 49 cases in which the *simple past* is translated as a *vtt* involve questions.

In the next section I will go into such examples in more detail. The crucial point of all the observations that I will discuss in the next section is that the English *simple past* is in fact used very often in contexts in which we would expect an indefinite tense, while the Dutch *ovt* is not. The specific examples to be discussed will therefore all be instances of the same pattern, in which the PERFECT in both English and Dutch, as well as the English *simple past* can be used in a specific context, but the Dutch *ovt* cannot. I will argue that this split arises because the first tense forms can be indefinite, while the latter cannot.

3 Why English simple past can be indefinite

In this section I will discuss more specific observations that suggest that English simple past is not just a definite tense, but can also have an indefinite reading.

3.1 Interaction with negation

The claim that simple past tenses share certain features with pronouns dates back to Partee (1973), who showed with the example below that the simple past cannot have an existential component: both the $\exists > \neg$ and the $\neg > \exists$ reading do not capture the intended reading. That is, while the reading in which it is not the case that there is a time in the past at which the speaker turned off the stove seems too strong, the reading in which there is a time in the past at which the speaker did not turn off the stove, seems almost trivially true. Instead, the reading as paraphrased in (1d) seems a more likely interpretation of this sentence.

(1) a. I didn't turn off the stove.
    b. It is not the case that there is a time at which I turned off the stove.   ×
    c. There is a time in the past at which I did not turn off the stove.   trivial
    d. For some given interval/time in the past I did not turned off the stove.   ✓

Of course, the reading in (1d) entails the reading in (1c), but, crucially, not the other way around. It therefore becomes clear that the semantic contribution of the *simple past* is anaphoric, as paraphrased in (1d).

Whereas Partee's famous example therefore indeed seems to show that the English *simple past* has a definite reading, this cannot be the only interpretation that the simple past has. To see this, consider the example in (2).

(2) a. I didn't read the book.
    b. It is not the case that there is a time at which I read the book.   ✓
    c. There is a time at which I did not read the book   trivial
    d. For some given interval/time I did not read the book.   ×

Again, it is not very likely that a speaker would want to convey that there is a time at which she was not reading the book. Instead, a stronger reading is more likely to be the intended meaning of (2). In contrast to (1d), the most salient reading is not the anaphoric reading. That is, the most natural interpretation is *not* a reading in which the speaker tries to convey that for a given time point she wasn't reading a book – though this reading is available. A

more natural interpretation would be to read such a sentence as conveying that there is no time point at all at which the speaker read the book, i.e. that the speaker *never* read the book.

For such a reading to arise, the contribution of the *simple past* has to be indefinite, because this interpretation only comes about when we analyze such a sentence as containing a negation taking scope over an existential quantifier over times.

A comparison between English and Dutch SIMPLE PAST makes the difference between the default definite reading of (1d) and the default indefinite reading of (2) even clearer. This is because in Dutch, the $\neg > \exists$ reading of (2) is simply not available at all (and again, neither is the $\exists > \neg$ reading). That is, the Dutch version of (2a) cannot get an interpretation in which the speaker has never read the book. When a Dutch speaker wants to convey that she hasn't read the book at all, she has to use the *vtt* instead.

(3)   a.   Ik las het boek niet.
            *I read.*PAST *the book not*
        b.   It is not the case that there is a time at which I read the book.   ×
        c.   There is a time at which I did not read the book   trivial
        d.   For some given interval/time I did not read the book.   ✓

Uttering a sentence like (3a) on its own will thus be very unnatural in Dutch, while it does make sense to utter such a sentence in isolation in English. This becomes clear in a dialogue setting like the following, in which in English it is perfectly fine to answer with a *simple past*, but in Dutch answering with a *ovt* will clearly be very odd.

(4)   a.   A: What did you think of the new Star Wars movie?
        b.   B: I didn't see it.

(5)   a.   A: Wat vond je van de nieuwe Star Wars film?
        b.   B: #Ik zag het niet.

To the extend that the Dutch answer in simple past can be interpreted at all, a possible interpretation will be that the speaker, during the entire time she was watching the movie in the movie theater, could not see the screen. In other words, if the Dutch answer can be interpreted at all, it will still be interpreted as definite in the sense that the past tense picks up on a specific time or interval that could be given contextually.

An answer similar to (6b) can be made more natural by embedding it in a context in which a specific time interval is more explicitly given in previous discourse, for example because this interval is made explicit in the question itself. Therefore, in the question-answer pair in (6), the answer is felicitous because it is clear to what time point the question is referring to.

(6)   a.   A: Waarom gaf je gas terwijl het stoplicht op rood stond?
            Why did you hit the gas while the traffic light was red?
        b.   B: Ik zag het rode licht niet.
            I didn't see the red light.

For instance, we could in fact imagine the above scenario to be very natural if we think of a situation in which a police officer asks a driver why he didn't stop at a red light. In such a situation, it is very clear that the time point the officer is referring to is the interval at which the light was red. In a very specific case like this, a Dutch speaker could actually use an *ovt* to express that she didn't see the red light during that interval, but again, it is clear that the intended interpretation is a definite one.

3.2 Interaction with quantified noun phrases

The way SIMPLE PASTS interact with quantified noun phrases might also indicate that the English *simple past* itself can contain a quantifier over times, while its Dutch counterpart does not. To see this, let us imagine a class room situation in which the following sentence is uttered.

(7)   a.   All of the students in the class did the homework.
$$\rightsquigarrow \forall x(S(x) \rightarrow \exists t(H(x)(t)))$$
$$\rightsquigarrow \forall x(S(x) \rightarrow H(x)(t_p))$$
      b.   Alle studenten in de klas maakten het huiswerk.
$$\rightsquigarrow \forall x(S(x) \rightarrow H(x)(t_p))$$

In the English version, a reading is possible in which it is stated that each student has already done his or her homework before coming to the class – possibly even at different points in time. That is, one could very well imagine that a teacher would say the sentence in (7a) to one of his colleagues in a conversation on how the class went or on how motivated the students in that specific class are. In other words, the sentence in (7a) can have a reading in which for each student, there is a specific time at which he or she was doing the homework, and can thus have the reading as shown in (7a).

For the Dutch version, on the other hand, a different reading seems most intuitive: a reading in which all students were simultaneously doing their homework at some given point in the past. Such a reading would for example fit better into a narrative structure in which someone is describing what was going on at a specific point in time t_p during the class, as indicated in (7b). This reading is therefore clearly a definite reading in the sense of Partee (1983). [3]

The English example can have this latter reading too, however. The difference between English and Dutch is that for the *ovt* this is the only reading available, whereas the English example seems ambiguous. And even though the definite reading is available for the English sentence as well, it is certainly not the most salient interpretation of that sentence.

Hence, the reading that is most natural for Dutch is a definite reading, while the English version may be interpreted as introducing a new time variable. This again, indicates that English *simple past* can also be indefinite, as opposed to Dutch *ovt* which is only definite.

3.3 Combinations with *ever* and *never*

Another important observation has to do with the combination of different tense forms with adverbs like *ever* and *never*. When taking English *simple past* as definite and only the *present perfect* as indefinite, it is difficult to explain why temporal adverbs like *ever* or *never* can occur in sentence in the *present perfect* but also in sentence in the *simple past*. For example, in the Harry Potter corpus, we observe that examples such as in (8a) are translated as (8b).

(8)   a.   But he never wanted you dead.
      b.   Maar hij heeft je nooit dood gewild.

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[3]This latter reading could actually be captured in two ways. A first option would be to analyze it as the inverse scope reading of the reading just laid out above, in which the existential quantifier over times takes scope over the universal quantifier over individuals. Since this would mean that the Dutch *ovt* would have an existential component too, a more straightforward way of capturing this intuitive reading is by analyzing it as a definite tense, in which the time point is the same for each student because it has been specified by previous context.

This seems to be, because the *nooit* can generally not be combined with an *ovt*: the examples in (9) are – in contrast to the Dutch examples in (10) – both felicitous.

(9) a. I have never read Tolstoy.
   b. I never read Tolstoy.

(10) a. Ik heb nooit Tolstoy gelezen.
    b. # Ik las nooit Tolstoy.

The same pattern can be found for *ever* in questions, as shown below.[4]
 Again, the Dutch *ovt* seems to be a lot more restrictive than the English *simple past*, and while the English *simple past* patterns with the *present perfect*, there is a clear split between the Dutch *ovt* and *vtt*.

(11) a. Have you ever read Tolstoy?
    b. Did you ever read Tolstoy?

(12) a. Heb je ooit Tolstoy gelezen?
    b. # Las je ooit Tolstoy?

An explanation for this pattern can again easily be found, if we take English *simple past* to be similar to the *present perfect* in the sense that it has an existential component. That is, NPI's like *ever* or *any* are often taken as domain-widening items, which cancel out restrictions on the quantificational domain previously introduced in the common ground (Kadmon & Landman, 1993). For example, the sentences in (13a) and (13b) both have a basic indefinite reading, but they differ in that *any* in (13b) additionally invokes widening of the domain restrictor of the existential quantifier that is part of the indefinite meaning.

(13) a. John doesn't have potatoes.
     $\neg \exists x \in D_c \subseteq D_e(\textit{potato}(x) \wedge \textit{have}(j)(x))$
    b. John doesn't have any potatoes.
     $\neg \exists x \in D_e(\textit{potato}(x) \wedge \textit{have}(j)(x))$

The meaning of both sentences can be modeled using the logical representation below. The difference between the sentence with and without *any* is that the domain D is interpreted differently in each sentence: without *any*, this domain is the regular, contextually supplied domain of individuals $D_c \subseteq D_e$, which contains all and only individuals standardly under consideration in the current utterance situation for the particular quantifier. In this case the domain might contain edible potatoes for example. With *any*, on the other hand, this domain is be extended in some way to include potatoes not usually under consideration.
 The NPI *ever* seems to work in an analogous way, but instead of widening a domain of individuals, *ever* extends a domain of intervals or time points. The difference between (14a) and (14b) is therefore that in the first sentence the domain of quantification is a contextually salient set of time points in the past $D_c \subseteq D_{past}$, whereas the domain in the second sentence seems to be the full set of time points in the past (i.e. $D_{past} \subseteq D_i$).

(14) a. John has not read Tolstoy
     $\neg \exists t \in D_c \subseteq D_{past} \subseteq D_i(\textit{read-Tolstoy}(j)(t))$
    b. John has never read Tolstoy

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[4]Both examples in (10b) and (12b) could be seen as felicitous, if read on a habitual reading. I will leave issues concerning the coercion of such a reading aside for now.

$$\neg\exists t \in D_{past} \subseteq D_i(\textit{read-Tolstoy}(j)(t))^5$$

Thus, for such an item to be licensed, there needs to be a quantifier available that the NPI is to be combined with. The fact that these adverbs can combine with the *simple past* in English but not with the *ovt* in Dutch, may therefore indicate that such a quantifier is introduced by the tense morpheme in English, but not in Dutch.

3.4 Questions

Another reason to suspect that there is more to the English *simple past* than just the expression of a definite tense is the fact that English *simple pasts* seem to convey a different meaning from the Dutch *ovt's* when they are used in questions. As can be observed in the Harry Potter corpus, polar questions like *You let the troll in?* or *You got Hermione's owl?* are all translated with a *vtt* in the Dutch translation.

If we, very informally, take a polar question to inquire whether p or not p is the case, the meaning of such sentences should be closely related to the meaning of a sentence p and its negation. As argued for in the previous section, if English simple past can indeed be interpreted existentially, its negation should possibly be interpreted as denying an existential claim; a polar question should then in turn somehow ask whether or not there exists an interval at which the proposition holds.

This indeed seems to be the case for English questions in the *simple past*, but not for Dutch ones in *ovt*. That is, a question as in (15a) intuitively asks whether there was a time at which John did his homework, whereas its Dutch version – if at all felicitous in isolation – asks for a given, specific time point whether John was doing his homework at that point in time or not.

(15)   a.   Did John do his homework?
          b.   #Maakte Jan zijn huiswerk?
              *make.*PAST *John his homework?*

In a discourse initial context, (15a) seems fine, but (15b) seems a bit odd. Again, a context that could make (15b) more natural, would be one in which a speaker wants to know whether John was doing his homework at a specific point in time that is already predefined. For example, in a context like the following, a polar question in the simple past does seem felicitous.

(16)   Wat deed Jan toen je binnenkwam? Las hij de krant?
       What was John doing when you came in? Did he read the newspaper?

Something very similar holds for simple pasts in wh-questions. As already noted by Leech (1987:43), an English speaker who has mislaid his/her spectacles could utter both (17a) and (17b), while a Dutch speaker could only use the present perfect in that case, as illustrated in (18).

(17)   a.   Now where did I put my glasses?
          b.   Now where have I put my glasses?

(18)   a. #Waar legde ik mijn bril neer?
          b.   Waar heb ik mijn bril neergelegd?

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[5]Of course, I assume here that *never* is a contraction of *not* and *ever*.

A similar observation was already made by Kratzer (1998), who argued that this out-of-the-blue use of simple pasts in is evidence against Partee's claim that simple pasts are obligatorily definite. Even though Partee does admit that this is problematic on her account, she argues that the simple past in cases like this is still anaphoric to a "large, vague, and possibly even irrelevant" time point in the past and could potentially even refer back to "the whole of the past" (p.314). Looking at English on its own, this could very well be the case, but in Dutch such a vague referent for the simple past is somehow not allowed. If we stick to a definite reading of the English simple past, this restriction in Dutch seems difficult to explain, since it is hard to build such a restriction into the semantics of the simple past itself. When we instead take this restriction as a result of a pragmatic constraint in Dutch, it seems rather difficult to explain where this difference between Dutch and English really stems from.

In short, these observations concerning the meaning of questions seem in line with the claims about negation made above. Both observations can be straightforwardly accounted for when we think of English simple past as possibly containing an existential component.

3.5 Sluicing

Finally, a related observation that could be taken as evidence for the claim that the English *simple past* can have an indefinite interpretation is that it allows for sluicing, while the Dutch *ovt* does not. This could be an indication that English *simple past* is indefinite and Dutch *ovt* is not, because, generally, sluices are allowed for indefinites, but not for definites. For example, in (19a), sluicing is allowed, but not in (19b). Analogously, (20a) is felicitous, but not (20b).

(19)   a.   Someone broke the window, but I don't know who ~~broke the window~~.
       b.   # He broke the window, but I don't know who ~~broke the window~~.

(20)   a.   I read the book, but I don't remember when.
       b.   # Ik las het boek, maar ik weet niet meer wanneer.

On the other hand, in both Dutch and English, a temporal sluice is available for PERFECTS as shown below. Again, English *simple past* seems to align with the *present perfect*, while a clear distinction between Dutch *vtt* and *ovt* arises.

(21)   a.   I have read the book, but I don't remember when.
       b.   Ik heb het boek gelezen, maar ik weet niet meer wanneer.

3.6 Summary

All the observations discussed in this section can be summarized in Table 3.6 below. The overall pattern seems rather clear: a distinction between Dutch *ovt* and *vtt* often becomes apparent, while no such distinction arises between English *simple past* and *present perfect*.

To account for this general pattern, the semantic content of the English and Dutch SIMPLE PAST needs to be spelled out in a more concrete way. In the next section, I will therefore show that a very simple analysis of the SIMPLE PAST in Dutch and English will already go a long way in accounting for the observations discussed above.

However, to account for the observations concerning the availability of sluicing and the interpretation of questions, a slightly more elaborate analysis is needed. In section 5 I will therefore show that the given account can easily be extended by embedding it in an inquisitive framework, and that doing so will allow us to account for observations concerning sluicing and questions as well.

	Dutch		English	
	SP	PP	SP	PP
Availability of $\neg > \exists$ reading	×	✓	✓	✓
Interaction with quantified NPs	×	✓	✓	✓
Combination with ever & never	×	✓	✓	✓
Questions	×	✓	✓	✓
Availability of temporal sluice	×	✓	✓	✓

4 The main proposal

The main proposal will be very simple: while the Dutch *ovt* will always be taken as definite, the English *simple past* will be analyzed as ambiguous between definite and indefinite, and therefore possibly also containing an existential quantifier over times.[6]

4.1 The definite SIMPLE PAST

Following Partee (1984), the definite simple past in Dutch and English needs a pre-defined time point in the past for which some proposition is true. The simple past is then only felicitous when such a time point is already determined by previous discourse. Ideally, this would be modelled in a dynamic system, in which the value of this time point has to be defined as a discourse referent. To keep the system simple, however, I will treat this t_p as a variable that can receive values by the context. A presupposition of the definite simple past then states that the value of this variable has to be defined.

My semantics uses three basic types, e, t, and i, which are the semantic types of entities, truth values, and time intervals, respectively. That is, apart from a domain of individuals D_e, we define D_i as a set of convex subsets (intervals) of I. And I, in turn, is a totally-ordered, dense set of 'time points'. A precedence relation over this set of time points will be denoted by $\prec$.

I take predicates of any syntactic category to have a time argument.[7] A tenseless sentence, like *John walk* will be of type $\langle it \rangle$ and will be of the following form:

(22) $[\![$ John walk $]\!]_{\langle it \rangle} = \lambda t_i.walk'(j)(t)$

A sentence like *John walks* will in this way simply be analyzed as being of type t, where we take n to be indexical to the moment of utterance. A sentence in the simple past, like *John walked* will be analyzed in the following way, where it is presupposed that the interval t_p is already defined by previous discourse.

(23) $[\![$ John walks $]\!]_{\langle t \rangle} = walk'(j)(n)$

(24) $[\![$ John walked $]\!] = [\![$ PAST$_D$ [John walk] $]\!]$
$\qquad = walk'(j)(t_p) \wedge t_p \prec n$ (Presupposes: t_p is defined)

---

[6]In these definitions, I will assume that definiteness and indefiniteness is part of the semantic content of the SIMPLE PAST, but of course, one could also introduce definiteness or indefiniteness by defining a separate (in)definite operator, as has been done by Grønn and von Stechow (2017) for example. For present purposes, I do not see the need to add such operators separately to the system, but of course, the current proposal can be adjusted in such a way that it does introduce (in)definiteness separately.

[7]One may also analyze predicates as having a Davidsonian event variable. For ease of presentation, and because adding them will not make a difference in the current proposal, I will omit these here, even though these could in principle be added as well. This should, however, definitely not be understood as a statement against such arguments.

The entry for the definite PAST will be as follows, where $\prec$ indicates strict precedence of the pre-defined moment t_p and the moment of utterance n. This all means that the definite SIMPLE PAST will be of type $\langle\langle it\rangle t\rangle$, and will thus take a tenseless expression of type $\langle it\rangle$, and will give a proposition.

(25) $\quad [\![\text{PAST}_D]\!] = \lambda P_{\langle it\rangle}.P(t_p) \wedge t_p \prec n$ $\qquad\qquad$ (Presupposes: t_p is defined)

4.2 The indefinite SIMPLE PAST

The indefinite past will be captured in a similar way, but instead of taking a pre-defined variable t_p, the indefinite PAST will contain an existential quantifier over times. That is, a sentence in the indefinite PAST, like *John walked* will be analyzed as shown below. Hence, the entry for the indefinite simple past will be as shown in (27) and will thus also be an expression of type $\langle\langle it\rangle t\rangle$.

(26) $\quad [\![\text{ John walked }]\!] = [\![\text{ PAST}_I[\text{John walk}]]\!]$
$\qquad\qquad\qquad = \exists t(walk'(j)(t) \ \wedge \ t \prec n)$

(27) $\quad [\![\text{PAST}_I]\!] = \lambda P_{\langle it\rangle}.\exists t \prec n(P(t))$

4.3 Back to the data

Given these entries for Dutch *ovt* and English *simple past*, many of the observations made in Section 3 can easily be accounted for. For example, the observations concerning negation follow straightforwardly from the current analysis: since the English *simple past* contains an existential quantifier, combining a *simple past* with negation will give us either a $\neg > \exists$ reading or a $\exists > \neg$ reading. As the latter one would be trivially true in any context, it is clear that the first will be a default reading of a negated *simple past* in English in a context in which a definite reading is not available. Similarly, the way *simple pasts* and *ovt's* interact with quantified noun phrases also follows directly from the provided analysis, as a $\forall > \exists$ reading will be available in English, but not for Dutch.

Moreover, as Dutch will only have the definite reading of the SIMPLE PAST, adverbs like *ever* and *never* will not be licensed in combination with Dutch *ovt's* as there will be no quantifier over times in such expressions. For English, a *simple past* can be combined with *ever* or *never*, because the *simple past* may be interpreted as introducing an existential quantifier.

To account for the data concerning questions, a semantic framework is needed in which the meaning of questions can be modelled. I will adopt the inquisitive semantics framework extended with a suitable semantics for tense to do so. The main reason for using this framework is that it allows us to capture the meaning of interrogatives and declaratives within one system, thereby giving us a unified analysis of both types of sentences. In particular, this means that a close link can be established between the meaning of negated *simple pasts* and *simple pasts* in questions.

Another reason for using the inquisitive semantics framework is that it can also be used to account for observations concerning sluicing. That is, as argued for in Anderbois (2011), sluicing is considered a diagnostic for inquisitiveness. At the same time, in inquisitive semantics, existential quantifiers are generally taken as a source of inquisitiveness. Therefore, analyzing the English *simple past* as possibly containing an existential quantifier over times also means that such tense forms in some sense introduce inquisitiveness, while Dutch *ovt's* clearly do not. I will therefore also show that, when using an inquisitive semantics frame-

work, the observations concerning sluicing will fall out of an inquisitive version of the analysis laid out above almost immediately.

5 Adding Inquisitiveness

Before extending the definitions for the definite and indefinite SIMPLE PAST to an inquisitive setting, I will quickly go over some of the basics of the inquisitive semantic framework as it is known in the literature (Ciardelli, Groenendijk, & Roelofsen, 2013). Then, I will add a temporal component to the basic inquisitive semantics framework in order to capture tense.

5.1 The basic framework: InqB

In classical frameworks, the semantic content of a sentence, or the proposition that it expresses, is generally taken to be a set of possible worlds. In inquisitive semantics, a sentence instead denotes a set of information states, i.e. a set containing sets of possible worlds. By using this richer notion of an *inquisitive proposition*, defined as a non-empty, downward closed set of information states, both the informative and the inquisitive content of a sentence can be captured. For the basic inquisitive semantics framework this means that an atomic, declarative, sentence denotes the set of all information states consisting exclusively of worlds where the sentence is true (Ciardelli et al., 2013). For atomic sentences that consist of a 0-place predicate p without any arguments this amounts to:

(28) $[\, p \,] := \{s \mid \forall w \in s : w(p) = 1\}$

In a very simple setting in which we have a language containing only two atomic sentences p and q, we can also visually represent the proposition expressed by the sentence p as the rightmost diagram in Figure 1(a) below, where we interpret the topmost worlds w_1 and w_2 as the worlds in which p is true and the leftmost worlds w_1 and w_3 as the worlds in which q is true. Even though propositions are always downward-closed, to keep these figures readable, only the maximal elements of the proposition are depicted, which is in this case only a single set of worlds. Intuitively, Figure 1(a) captures the fact that in uttering the declarative p, a speaker provides the information that the actual world must be either w_1 or w_2.
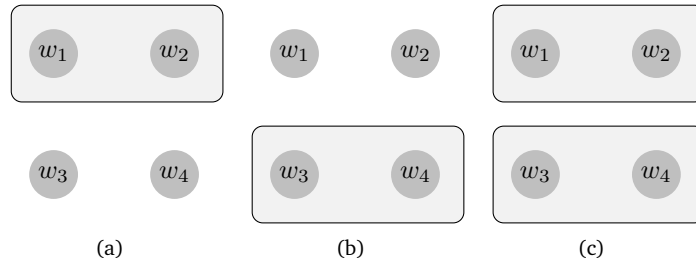

Figure 1: Propositions expressed by the sentences p, p^*, and $p \cup p^*$ respectively

In this framework, the negation of sentence p, $\neg p$, will express the downward-closed set consisting of all states in which p is false at any world in that state, as shown in 1(b). More formally, negation will correspond to the notion of an absolute pseudo-complement: the

absolute pseudo-complement of a proposition $[p]$, which will be denoted as $[p^*]$, is the weakest proposition $[q]$ such that $[p] \cap [q]$ entails any other proposition. Since the only proposition that entails any other proposition is the empty proposition, denoted as $\bot$, $[p^*]$ can be characterized as the weakest proposition $[q]$ such that $[p] \cup [q] = \bot$. In classical logic, it consists simply of all worlds that are not in $[p]$ itself, i.e. the complement of $[p]$. In InqB it can be defined as follows (Ciardelli et al., 2013):

(29)   InqB: $[p^*] := \{s \mid \forall s' \subseteq s : \text{ if } s' \neq \emptyset, \text{ then } s' \notin [p]\}$

All other connectives can be expressed in terms of the algebraic notions of *meet* and *join*, where a conjunction of two sentences is the meet of each of its conjuncts and a disjunction the join of each of its disjuncts. The operations of meet and join intuitively correspond to intersection and union in a classical setting. That is, the meet of a set of propositions Σ will be defined as the intersection of all the propositions in that set. The join of a set of propositions will be the union of all the propositions in that set (Ciardelli et al., 2013).

(30)   InqB: $\bigcap \Sigma := \{s \mid s \in P \text{ for all } P \in \Sigma\}$

(31)   InqB: $\bigcup \Sigma := \{s \mid s \in P \text{ for some } P \in \Sigma\}$

The universal and existential quantifier can also be defined in terms of the meet and join operations, as they correspond to infinitary meet and join respectively. This is also shown in (32).

(32)   First-order inquisitive semantics
        1. $[R(t_1, ..., t_n)] := \wp(|R(t_1, ..., t_n)|)$
        2. $[\neg \varphi] := [\varphi]^*$
        3. $[\varphi \wedge \psi] := [\varphi] \cap [\psi]$
        4. $[\varphi \vee \psi] := [\varphi] \cup [\psi]$
        5. $[\forall x.\varphi(x)] := \bigcap_{d \in D}[\varphi(d)]$
        6. $[\exists x.\varphi(x)] := \bigcup_{d \in D}[\varphi(d)]$

Crucially, the meaning of questions can be captured within the same system. That is, the meaning of a question is defined in terms of its resolution conditions: a question in this framework will denote a set of information states that will resolve the issue raised by the question. Since questions can be resolved in multiple ways, their denotations will have multiple maximal elements, each corresponding to a possible answer. A proposition will therefore be called *inquisitive* iff it consists of multiple alternatives, i.e. iff it has multiple maximal elements.

    The main source of inquisitiveness within this system is the join operation, and an inquisitive proposition is therefore always formed out of a disjunction or an existential expression. For example, a polar question $?p$ is formed out of a proposition $[p]$ by taking the join of $[p]$ and its absolute pseudo-complement. In other words, the question operator that is responsible for this, the $?$ operator, thus takes the set of alternatives introduced by the proposition $[p]$ and adds in its negation (Groenendijk, Roelofsen, et al., 2009).

(33)   InqB: $[?p] := [p] \cup [p^*]$

A polar question can in this sense be understood as expressing an inquisitive proposition which raises the issue whether p or not p is the case. This is illustrated in figure 2(a) below, where w_1 and w_2 are worlds in which p holds and w_3 and w_4 worlds in which p doesn't hold.

A wh-question also denotes a set of alternatives, and like a polar question, these alternatives can be understood as possible answers to the question. For example, a question like the one in (34) will then denote a set of alternatives which are of the form 'x left', where x is an individual in the domain. In other words, a question like (34) will be represented as containing an existential quantifier, quantifying over individuals in the domain (AnderBois, 2014). In a tiny universe with only two individuals, this can also be represented as in 2(b) below, in which w_1 and w_2 are worlds in which some individual a left, w_1 and w_3 are worlds in which some individual b left and w_4 a world in which no one left.

(34)   Who left?
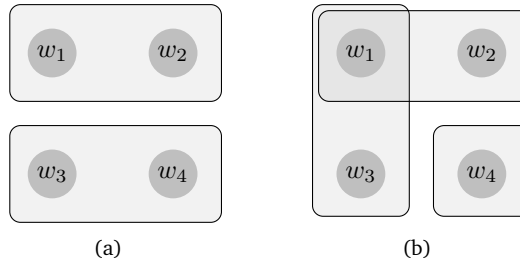 $\rightsquigarrow ?\exists x(leave'(x))$

Figure 2: Propositions expressed by the sentences $?p$ and $?\exists x(\varphi(x))$ respectively

5.2   Extension to the temporal domain: InqT

Since a classical proposition is usually taken to be a set of worlds it will be of type $\langle st \rangle$, where s is a basic type for worlds and t the basic type for truth values. An inquisitive proposition is therefore of type $\langle \langle st \rangle t \rangle$, abbreviated as T: a set of information states (or sets of worlds). To extend the basic inquisitive semantic framework to also capture tense, a basic type for times, denoted as i, will be added to the system. That is, apart from a domain of individuals D_e, we again add a domain of intervals D_i just as in the non-inquisitive system. Again, I will assume predicates to have time arguments, and – since we are dealing with possible worlds as well – world arguments. In other words, any sentence will be evaluated at a world and a time.

Since we now have a domain of individuals and of intervals, the definition of the quantifiers need to be relativized to the specific domain, as is shown for the existential quantifier below. The rest of the definitions from InqB will carry over to InqT .

(35)   InqT : $[\exists x_\alpha.\varphi(x)] := \bigcup_{d \in D_\alpha}[\varphi(d)]$

A sentence in the present tense, like *John walks* will in the extended framework InqT simply denote a proposition which is the downward-closed set of states containing only those worlds in which John is walking at the moment of utterance. This is shown in (36) below. For ease of presentation, I will identify the time of utterance with the present time, i.e. "now".

(36) $[\![$John walks$]\!] = [\![$PRES[John-walk]$]\!] = \lambda p_{\langle st \rangle}.p \subseteq \lambda w_s.walk(j)(n)(w)$

As a sentence like the one in (36) basically denotes the powerset of worlds at which John is walking at the moment of utterance, I will abbreviate the above formula as in (37), where $|walk(j)(n)|$ will denote the set of worlds in which John walks "now".

(37) $[\![\text{John walks}]\!] = \wp(|walk(j)(n)|)$

A tenseless sentence will in this way be translated as an expression of a higher type: it will be a function from intervals to inquisitive propositions. For instance, *John walk* will be a function from time points to the powerset of worlds at which John is walking at that time point (type $\langle iT \rangle$):

(38) $[\![\text{John walk}]\!] = \lambda t_i \lambda p_{\langle st \rangle}.p \subseteq \lambda w_s.walk(j)(t)(w) = \lambda t.\wp(|walk(j)(t)|)$

In the following sections, I will show what this will look like for the definite and indefinite SIMPLE PAST.

5.3 The definite SIMPLE PAST

The *simple past* in Dutch is definite: when applied to some tenseless proposition $\varphi_{\langle iT \rangle}$, it gives a downward-closed set of states for which at all the worlds in those states φ holds at time point t_p. The definite SIMPLE PAST is only felicitous when this time point is already determined by previous discourse. Again, I will treat this t_p as a variable that can receive values by the context, and I will propose that a presupposition then states that the value has to be defined.

(39) $[\![\text{ Jan walked }]\!] = [\![\text{ PAST}_D[\text{Jan walk}]]\!]_{\langle\langle st \rangle t\rangle}$
$= \lambda p_{\langle st \rangle}.p \subseteq \lambda w.\, walk'(j)(t_p)(w) \,\wedge\, t_p \prec n$
$= \lambda p.p \subseteq \{w \mid walk'(j)(t_p)(w) \wedge t_p \prec n\}$ (Presupposes: t_p is defined)

Thus, the entry for the definite SIMPLE PAST will be as follows:

(40) $[\![\text{PAST}_D]\!]_{\langle\langle iT \rangle T\rangle} = \lambda P_{\langle iT \rangle}.P(t_p) \wedge t_p \prec n$

As in the non-inquisitive setting, the SIMPLE PAST will take a tenseless proposition to yield a tensed proposition. Instead of classical propositions, however, we deal with inquisitive propositions in this case, meaning that the SIMPLE PAST will not be of type $\langle\langle it \rangle t\rangle$, but of type $\langle\langle iT \rangle T\rangle$. Note that, except for this difference in typing, the entry for the definite SIMPLE PAST will remain exactly the same as in the non-inquisitive setting.

In InqB, we can provide a visual representation of the proposition that a sentence expresses. If we want to do something similar for InqT, we would need to add a feature that represents time. In the picture below, I represent time by adding an extra dimension, and time points are represented as time slices along that dimension.

Now let's consider the following example, in which it is true that John read the book at time t_1 in world w_1, he read the book at t_2 in world w_2 and he read the book at t_3 in w_3 (indicated with blue in Figure 3(a)). When a speaker utters a sentence like *John read the book*, where *read* gets a definite reading, this means that at some given time point it is the case that John is walking. Let's assume that the time point t_1 is the time that is given by previous discourse. Then, we can represent the proposition that such a sentence expresses as in Figure 3(b): the set containing only world w_1. That is, in uttering a sentence in the definite SIMPLE PAST, we only look at one time slice and check for which worlds the statement holds.

In the next section, I will discuss the entry for the indefinite SIMPLE PAST and we will see that the picture for this reading of the SIMPLE PAST looks slightly different. That is, instead of singling out one specific time slice, the indefinite simple past takes multiple time slices into account. This then, will be the crucial difference between the definite and indefinite SIMPLE PAST.
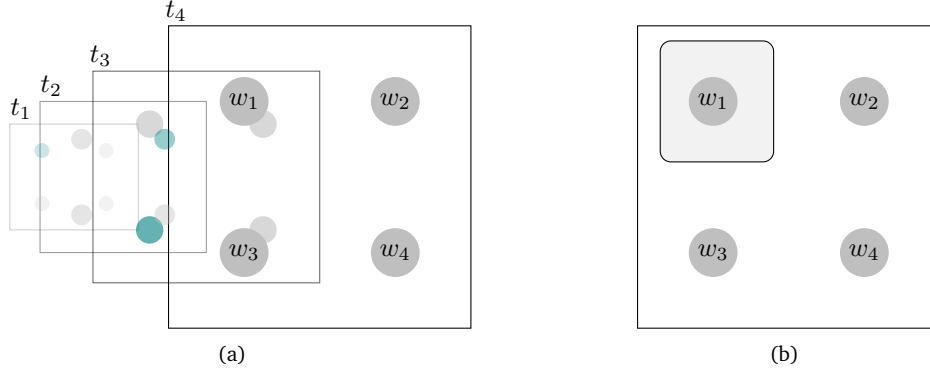
Figure 3: The definite SIMPLE PAST

5.4 The indefinite SIMPLE PAST

The inquisitive version of the indefinite SIMPLE PAST will also introduce an existential quantifier over time points in the past, but in the inquisitive setting this existential quantifier will, not surprisingly, be an inquisitive one. Thus, the indefinite reading could be defined as follows, where the entry for the indefinite SIMPLE PAST by itself will be as in (42). Again, note that the only difference between the inquisitive and non-inquisitive entry is the typing.

(41) $[\![\text{ John walked }]\!] = [\![\text{ PAST}_I[\text{John walk}]]\!]_{\langle\langle st\rangle t\rangle}$
        $= \exists t \prec n(\lambda p_{\langle st\rangle}.p \subseteq \lambda w.\ walk'(j)(t)(w))$
        $= \exists t \prec n(\wp\{w \mid walk'(j)(t)(w)\})$

(42) $[\![\text{PAST}_I]\!]_{\langle\langle iT\rangle T\rangle} = \lambda P_{\langle iT\rangle}.\exists t \prec n(P(t))$

Alternatively, we can simply define the indefinite inquisitive reading in the following way, where we take $[walk'(j)(t)]$ to be an inquisitive proposition (i.e. to denote $\wp(|walk'(j)(t)|)$).

(43) $[\![\text{ John walked }]\!] = \exists t \prec n[walk'(j)(t)]$

The existential quantifier in this formula is an inquisitive one, which means that it corresponds to the join operation over all time intervals in the past. Hence, we can write:

(44) $[\![\text{ Jan walked }]\!] = \bigcup_{t \prec n \in D_i}[walk'(j)(t)]$ by def. of $\exists$ in InqT

Because of this, the above means that an utterance in the indefinite SIMPLE PAST itself is inquisitive: the proposition that it expresses contains multiple maximal elements or alternatives. The definite SIMPLE PAST on the other hand, only introduces one alternative, as a proposition in the simple past only contains one maximal element.

Let's look at an example again. What the indefinite SIMPLE PAST does in a sentence like *John read the book* is taking the join of all worlds such that John read the book in that world at some t. For example, if John read the book at t_1 in world w_1, at t_2 in w_2 and at t_3 in w_3, this sentence will express the proposition containing the alternatives w_1, w_2 and w_3.

Thus, a sentence like *John read the book* with an indefinite reading of the *simple past*, will be inquisitive in the sense that it introduces several alternatives. Just as an indefinite noun phrase expresses something similar to who-questions in InqB, we can now see a parallelism between the indefinite *simple past* and when-questions. If we take a when-question to inquire
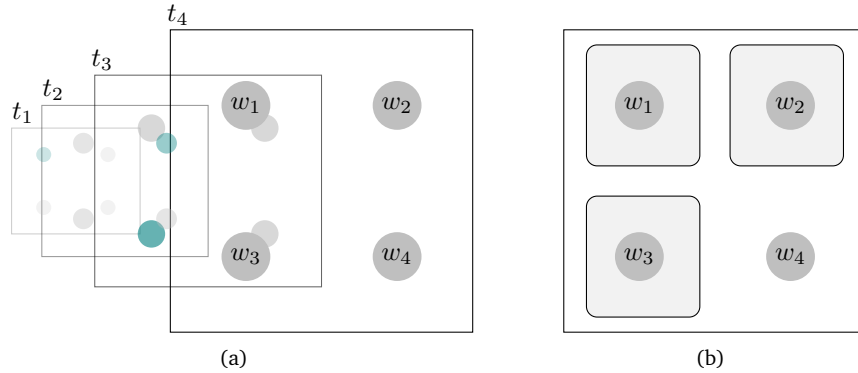
Figure 4: The indefinite SIMPLE PAST

at which point in time a statement holds, this means that it raises the issue which of the alternatives the actual world belongs to.

5.5 Back to the data

Within this temporal inquisitive framework, we can now show how to Dutch questions in the *ovt* differ from English questions in the *simple past*. Moreover, we can straightforwardly account for the observations concerning sluicing since the *simple past* in English will can be inquisitive, while the Dutch *ovt* cannot be.

5.5.1 Questions

The fact that the Dutch *ovt* does not occur very frequently in questions, while the English simple past seems to be fine in a question can now be explained given the definitions as given above. That is, a question like (45a) will denote a proposition like (45b).

(45) a. Did John read the book?
      b. $[\![\text{PAST}_I(\text{John read the book})]\!] =?[\text{PAST}_I(\text{read-the-book(j)})]$
          $= [\text{PAST}(\text{read-the-book(j)})] \cup [\text{PAST}(\text{read-the-book(j)})]^*$
          $= \bigcup_{t \prec n \in D_i}[\text{read-the-book(j)(t)}] \cup [\bigcup_{t \prec n \in D_i}[\text{read-the-book(j)(t)}]]^*$

This will thus give us the join of the downward-closed set of worlds w such that for some t (before the moment of utterance) John read the book in w at t, and the downward-closed set of worlds w' at which there is no t' at which John was reading the book. Let's consider the following example as illustrated in Figure 5(a), in which we take our domain of intervals to only contain two time points t_1 and t_2, and we say that w_2 and w_3 are the worlds in which John reads the book only at t_2 and t_1 respectively, w_1 is the world in which John reads the book at both t_1 and t_2, and w_4 is the world in which John never reads the book. A polar question like the one above then inquires whether the actual world is w_4, or whether the actual world is among w_1 and w_2 or w_1 and w_3. This is illustrated in Figure 5(b)

The picture for Dutch looks rather different, because the Dutch simple past can only be interpreted as definite. That is, the same question in *ovt* in Dutch would express the following proposition:
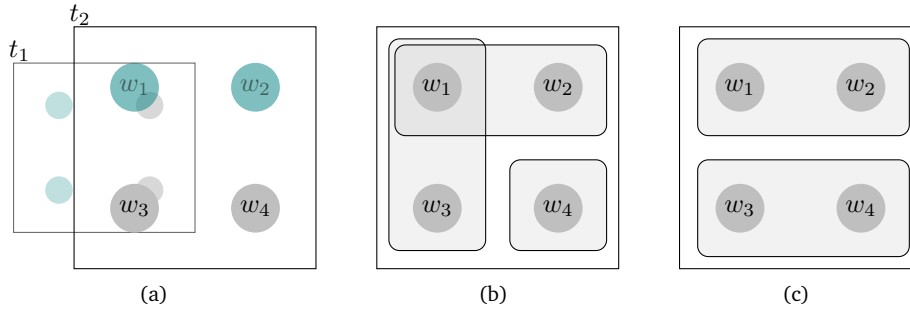
Figure 5: Questions in the SIMPLE PAST

(46)   a.   Las Jan het boek?

        b. $\llbracket \text{PAST}_I(\text{John read the book})\rrbracket =? [\text{PAST}_I(\text{read-the-book(j)})]$
             $= [\text{read-the-book}(j)(t_p) \wedge t_p \prec n] \cup [\text{read-the-book}(j)(t_p) \wedge t_p \prec n]^*$

Thus, the polar question in Dutch only consists of the join of the downward-closed set of worlds at which John reads the book at t_p and the worlds at which John doesn't read the book at t_p (where t_p is a by context determined time point in the past). If we assume t_p to be defined as t_2 by the previous context, we will get something as in Figure 5(c). Such a question would therefore express a different proposition as a similar question in English in the indefinite *simple past*.

5.5.2 Sluicing

In general, sluices are licensed when the antecedent of the ellided clause is an indefinite, but not when the antecedent is definite, as shown in (51). However, sluicing is not restricted to indefinites only: as shown in (48), a sluice can also have a disjunctive antecedent.

(47)   a.   Someone stole my wallet, but I don't know who ~~stole my wallet~~.

        b. #He stole my wallet, but I don't know who ~~stole my wallet~~.

(48)   Mary or Ann stole my wallet, but I can't remember who ~~stole my wallet~~.

In inquisitive semantics, disjunctions and indefinites have in common that they both introduce a set of alternatives, that is, that they both are inquisitive. To account for the availability of sluices, AnderBois (2014) relies on this notion of inquisitiveness, as he argues that, for an interrogative E clause to be elided, it must have the same informational and inquisitive content as its antecedent clause. Sluicing is then only allowed in cases in which the antecedent of the ellided clause is entailed by the ellided clause and vice versa. In other words, Anderbois takes the general condition on sluicing to be the following:

(49)   Symmetric Entailment Condition on sluicing:
        Given a structure like:

$$\begin{array}{c} \text{CP}_E \\ \diagup \diagdown \\ \text{C}_{+Q} \quad \text{IP}_E \end{array}$$
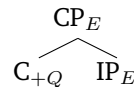
        IP_E can be elided only if there is some salient antecedent CP_A such that:

    a. $\text{CP}_E \models \text{CP}_A$, and

    b. $\text{CP}_A \models \text{CP}_E$

Where entailment is defined in the following way:

(50) Anderbois's (2012) notion of entailment:
$\varphi \models \psi$ iff for all $\alpha \in [\varphi]$ there is a $\beta \in [\psi]$ such that $\alpha \subseteq \beta$

As also argued by AnderBois, 2014 the denotation of a question like "Who left?" and a corresponding assertion "Someone left" both propose to update the common ground with a proposition consisting of a set of alternative states in which 'x left' and with the worlds where no one left no longer candidates for the real world. This is shown in (51) below. Obviously, since these propositions really are the same, both the informative and the inquisitive content of those propositions are the same.

(51) [Someone left]$_A$, but I don't know [who ~~left~~]$_E$
    a. (28)$_A$ $\rightsquigarrow$ $\exists x \exists t \prec n(leave'(x)(t))$
    b. (28)$_E$ $\rightsquigarrow$ $\exists x \exists t \prec n(leave'(x)(t))$ (Presupposes: $![\exists x \exists t \prec n(leave'(x)(t))]$)

Crucially, for sentences with a PERFECT as the antecedent of a *temporal* sluice, we can obtain a similar result. That is, it has often been argued that an indefinite like *someone* contributes the same set of individual alternatives as the corresponding wh-word *who*. We can easily extend this to the temporal domain, by taking *when* to introduce the same set of alternatives as an indefinite tense. In this way, we establish a similar relation between a PERFECT antecedent and the elided when-clause as Anderbois derived for "Who left?" and "Someone left". This will hold for both Dutch and English, as the PRESENT PERFECT in both languages is analyzed as having an existential component.[8]

(52) [John has left]$_A$, but I don't know [when ~~John left~~]$_E$
    a. (28)$_A$ $\rightsquigarrow$ $\exists t \prec n(leave'(j)(t))$
    b. (28)$_E$ $\rightsquigarrow$ $\exists t \prec n(leave'(j)(t))$ (Presupposes: $![\exists t \prec n(leave'(j)(t))]$)

Given the account of sluicing as laid out in Anderbois (2011), the current analysis of Dutch can explain why a temporal sluice is odd when the antecedent of the ellided clause is an *ovt*. Moreover, the analysis of the English *simple past* as having an existential component can also account for the fact that sluicing is available for English *simple pasts*. That is, in a very similar way as we would account for the availability of a temporal sluice with PERFECTS, we can account for the fact that English *simple past* allows for a temporal sluice, if we take the indefinite SIMPLE PAST to express a proposition like in (54a) and a when-clause again to express a proposition as in (54b).

(53) [John left]$_A$, but I don't know [when ~~John left~~]$_E$
    a. (28)$_A$ $\rightsquigarrow$ $\exists t \prec n.leave'(j)(t)$
    b. (28)$_E$ $\rightsquigarrow$ $\exists t \prec n.leave'(j)(t)$ (Presupposes: $!\exists t \prec n.leave'(j)(t)$)

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[8]Since we only use time points or intervals in this semantics, it is hard to make a clear distinction between the meaning of the PERFECT and that of the SIMPLE PAST. To do more justice to the actual contribution of the PERFECT, we could, for example, add events and states to our semantics. If we do so, we can spell out the semantic contribution of the PERFECT in the style of Nishiyama and Koenig (2010), which would look something like the following, where s is the perfect state introduced by the PERFECT, e and e' are eventualities and n the moment of utterance.

(i) $[\![PERFECT]\!] = \lambda P.\exists s, e, e'(P(e) \wedge P(e') \wedge e' \leq e \wedge \tau(e') \prec n \wedge X(s) \wedge \tau(s) \circ n)$

In this definition, the event e' is a subevent of e, which is taken to precede the moment of utterance, and a proposition P holds for both e and e'. The state s introduced by the PERFECT is taken to overlap with this moment of utterance (p. 619).

For Dutch, however, a simple past antecedent clause does not have the same informational content, nor does it have the same inquisitive content as the ellided clause in a temporal sluice. To see this, consider the following example in Dutch. If we assume that we have three time points in our domain, t_1, t_2 and t_3, and four worlds in which John left at t_1 in w_1, at t_2 in w_2, at t_3 in w_3, and w_4 is the world in which John never left. Then, no matter what the presupposed time is, the proposition expressed by the antecedent of the sluice will only contain one singleton, which contains the one world in which John left for that given time point. The E clause, on the other hand, will contain multiple alternatives, all of which are possible answers to the question "When did John leave?". In this case, the proposition expressed by the A clause is a subset of the proposition expressed by the E clause. It is therefore clear that there is an $\alpha \in [CP_E]$ for which there is no $\beta \in [CP_A]$ such that $\alpha \subseteq \beta$, and hence, the symmetric entailment condition is not met.

(54)   #[Jan ging weg]$_A$, maar ik weet niet [wanneer ~~Jan wegging~~]$_E$
John left, but I don't know when
   a.   (28)$_A \leadsto leave'(j)(t_p) \wedge t_p \prec n$
   b.   (28)$_E \leadsto \exists t(leave'(j)(t) \wedge t \prec n)$ (Presupposes: $!\exists t \prec n.leave'(j)(t)$)

In short, the current account therefore predicts such a sluice to be infelicitous for Dutch, but not for English – which is exactly what we wanted given the data discussed in Section 3.

6   Conclusion & Discussion

To conclude, the main claim of this paper was that Dutch *ovt* is definite (i.e. anaphorically referring to a given interval), whereas English *simple past* is ambiguous between a definite and an indefinite reading. If we indeed assume that the English *simple past* has an indefinite reading which contains a quantifier over times, we can account for many observations, like the way English *simple pasts* interact with negation, with quantified NP's or NPI's like *ever* or *never*. Moreover, if we embed this indefinite version of the *simple past* in an inquisitive framework, we can also account for the fact that English *simple pasts* freely occur in questions and allow for a temporal sluice.

Going back to the distribution of PASTS and PERFECTS as found in the Harry Potter corpus, we can thus conclude that the English *simple past* is a lot more versatile than its Dutch counterpart in the sense that it can express similar meanings as the *present perfect*, while it can also have a similar meaning to that of the Dutch *ovt*. For this reason, English *simple pasts* may be translated as *ovt's* in some cases, and as *vtt's* in others. In fact, we can say that an English *simple past* is always translated as an *ovt* when the *simple past* gets a definite reading, as is usually the case in a narrative context. In dialogue on the other hand, the English *simple past* may in some cases also express an indefinite reading, which then has to be translated as a *vtt* in Dutch.

Given this analysis of the English *simple past* and Dutch *ovt*, competition between the PERFECT and SIMPLE PAST in the sense of Schaden (2009) will be very different in both languages, since the English *simple past* can be used in a much wider range of contexts and covers a larger part of the 'semantic space' than its Dutch counterpart. Since the Dutch *ovt* has a much more restricted meaning, it becomes clear why the Dutch *vtt* is much more widely used than the English *perfect*: in many contexts, the Dutch *vtt* is simply the only form that *can* be used. This may therefore explain the markedness patterns that Schaden (2009) claims to be underlying in the cross-linguistic differences in the use of the PERFECT among these

languages. In this sense, the English *perfect* may be considered marked as it expresses a very specific meaning, while the *simple past* can be considered the default form as its use is a much more generic way of referring to an event in the past.

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