Perfect Parameters

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Abstract: This article proposes, in the framework of generative grammar, an analysis of the present perfect in English and other European languages in which the morpho-syntactic structure of a form determines its interpretation at the interface between syntax and construal. We associate an invariable syntactic structure with the perfect and attempt to account for variation in its interpretation both within and among languages in terms of the presence and value of two formal features of verbal heads: +/–Number determines the aspectual value of a verb, and +/–locative triggers an existential construal when merged with Tense. We claim that the present perfect is an existential structure similar to sentences like "There is a man at the door" based on the same verbs *have* and *be*. Moreover, like the simpler structures, while asserting the existence of a Figure/Ground configuration located in the discourse space and time, the perfect implies access to a source of information supporting the assertion. Both simple existential sentences and perfect tenses thus belong to a "scattered" evidential paradigm found in European languages.

Keywords: generative grammar, present perfect, tense, T-chains, existential construal, evidentials

1. Introduction

In this article, I will propose an analysis of the syntax and interpretation of the present perfect structure in European languages in the framework of generative grammar. I assume that syntactic structures are generated by an autonomous syntactic component whose output is submitted to two interpretive components, Phonological Form and

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Conceptual-Intentional Form. The present perfect is syntactically complex: it contains a matrix present tense (overt or covert) auxiliary verb embedding a past participle. The participial head selects a VP which describes a situation and the tensed auxiliary predicates this situation of a point or interval of the discourse time line. Although we associate an invariable structure to this form, its interpretation does vary both within and between languages. For example, McCawley (1971) defined four "flavors" of the perfect in English, identified by aktionsart, adverbials, or even intonation:

(1) a. Experiential: John has visited Boston (three times).

     b. Universal: John has known Mary since the year 2000.

     c. Resultative: Jean-François Copé has resigned (as expected).

     d. Hot News: Hollande has resigned! (*as expected)

The construal of the perfect varies among languages as well. In English the universal perfect accepts only stative predicates. Modern Greek has no universal perfects, while Bulgarian allows eventive universal perfects (Iatridou, Anagnostopoulou and Izvorski 2001). Nishiyama and Koenig (2010) account for the Greek vs. Bulgarian contrast via pragmatic-semantic constraints on discourse representations: in languages like Greek the perfect requires that the base eventuality precede the Reference Time (RT), while in languages like Bulgarian, it requires only that a subpart of the eventuality precede the RT.

English, unlike French or German, does not allow a present perfect with a definite past time adverbial.

(2) a. Jean est parti (hier).

     b. Hans ist (gestern) weggegangen.

     c. John has left (*yesterday).

Pancheva and von Stechow (2004) propose a semantic account of the contrast between (2b) and (2c). Roughly, in English, the Perfect Time Span (PTS) must overlap with the Speech Time (ST), while in German this is not necessary.

Such analyses describe rather than explain the linguistic data, however. While semantic analyses of the perfect have been valuable for discovering problems of interpretation, for the most part they do not even attempt to link variation in construal to variation in the morphosyntax. In the framework of the Minimalist Program (Chomsky 1995), we will take the opposite approach: we will attempt to simplify the grammar by reducing interpretation to morphosyntax as far as possible. The burden of

the interpretation of the present perfect will be placed on syntactic structure interacting with specific formal features (FF) borne by syntactic heads. One is a verbal number F [+/−pl(ural)] which we claim underlies aspectual construal. The other is a formal locative F [+loc] which, when merged with a tensed copula is construed as an existential operator taking scope over VP and introducing a Figure-Ground configuration into the discourse world.

2. Formal Features Underlying the Perfect Construal

2.1. Grammatical Aspect as a Formal Number Feature

Iatridou et al. (2001) took a step in the direction of the simplification of the analysis of the perfect by reducing the Greek-Bulgarian contrast cited above to variation in grammatical aspect. The Modern Greek perfect, whose participle is overtly marked for perfective aspect, cannot support a universal construal, while the Bulgarian perfect can, provided the participle is marked with Imperfective or Neutral aspectual morphology.

We proposed in earlier work that the contrast in (2) between English vs. French or German also reduces to variation in aspect (Guéron 2004). Grammatical aspect does not necessarily project as a syntactic morpheme, however. We claim, rather, that Aspect reduces to a FF for verbal number (Nb.), which, like the FF for nominal Nb., varies in its value and even its presence within and among languages. Nominal Nb. is a [+/−pl] FF checked on a NbP located between NP and DP. When N merges with Nb. and N+Nb. merge with D, Nb. has a referential function: +pl Nb. multiplies the object which N denotes, while −pl Nb. denotes a single object, as shown in (3).

(3) the book(s); le/les livre(s)

    structure: [$_{DP}$ [D   [$_{Nb.P}$ [Nb. [$_{NP}$ N]]]]]

              +/−def   +/−pl.

    a. English: the/some   0/s   book

    b. French: le(s)/un(e)/des 0/s   livre

We claim that verbs also contain a [+/−pl.] Nb. F which may project in syntax, as in Ancient Greek, merge with V in the lexicon, as in French, or do both, as in Russian. V+Nb. merges with T in a +finite (in French) or a +/−finite (in Russian) Tense node. In a finite TP, Nb. has a referential function: +pl Nb., construed as imperfective aspect, multiplies the points of time which T denotes. If Nb. is −pl or is lacking, the ST or RT in T is construed as default punctual: it denotes a single point of time.

For example, in Russian, the base verbal form is, construed, with few exceptions, as bearing a +pl Nb. F. When V+Nb. raises from the vP domain to merge with T in the TP domain, +pl Nb. multiplies the point of time T denotes, creating a plurality of points of time – a temporal interval – on the discourse time line. The event VP denotes is then distributed onto this interval. +pl Nb. is thus responsible for what we call Imperfective (IMP) Aspect, as illustrated for Russian in (4a).

Alternatively, a prepositional/particle prefixed to the base verb assigns –pl Nb., as in (4b). Then, when V+Nb. raises to the Tense node, the event vP denotes is predicated of a single point of time. (4b) is associated with the construal of Perfective (PF) Aspect.[1]

(4)   [$_{TP}$ T [$_{Nb.P}$ [Nb. [... [$_{vP}$ V   NP]]]]]

   a. IMP: +Past   +pl.   chital+past knigu

                                read+past   book

   b. PF: +Past   –pl.   pere-chital+past   knigu

                                through-read+past book

The contrast in (2) may now be reduced to the presence and value of the verbal Nb. F. We claim that in French, verbal Nb. may be either +pl or –pl. If Nb. is +pl as in (5a), under temporal construal the implied subevents of the "lire un livre" event are distributed over a plurality of points of time one of which coincides with ST. If Nb. is –pl as in (5b), it is construed as perfective/punctual and the event is predicated of a single point of time. When the [+/–pl] value for Nb. is not overt, it is disambiguated by temporal adverbs.

(5) a. Je lis un livre *maintenant/depuis ce matin*. (+pl)

   b. Je lis un livre *en deux heures*. (–pl) (habitual construal multiplies a single event)

I claim that English lexical verbs lack the Nb. F (= Aspect) altogether and are –pl by default. In the absence of a temporal interval in T on which to distribute subevents of a "read a book" event, an adverb cannot induce a +pl construal, as in (6a).[2]

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[1] A +pl suffix may subsequently be added to a –pl perfective verb creating a secondary imperfective which again projects the embedded event on a time interval. The precise construal of the secondary imperfective varies with the lexical content of the complex verb.

[2] An event predicated of the point of present time may not be construed as episodic in English. However, the point of time may be construed as a variable in the scope of an operator such as Habitual, Generic, Conditional, or Futurate, licensing sentences like (5b) and (6b) (cf. Enç 1990).

(6) a. *I read a book now/ since the morning. (−pl)

    b. I read a book in two hours. (−pl habitual)

    Fortunately, English grammar does provide a mechanism which derives a time interval in TP. As the paradigm in (7) illustrates, English auxiliary *have* bears the +pl value for Nb. available to all verbs in French but to no other verb in English.

(7) a. Je connais Jean (depuis dix ans).

    b. I know John (*for two years).

    c. I have known John (for two years).

    d. J'ai connu Jean (*depuis deux ans).

    The contrast in (7a–b) shows that a lexical verb in English cannot project a time interval on T, while a lexical verb in French can. The introduction of auxiliary *have* creates a time span in (7c), deriving a universal perfect in English with the same construal as (7a) in French. (7d) is rejected in French, either by economy, since (7a) is simpler, or because the participial suffix in French has a lexical −pl. Nb. F independent of the aktionsart of VP. In English, where the participle lacks a Nb. F, the universal construal is based on aktionsart: events have boundaries while states do not.

    The contrasts in (2) and (7) thus both follow from the simple hypothesis that English HAVE has an invariant +pl Nb. value while French and German HAVE are +/− plural.

    We propose (8a) as the canonical present perfect structure in English and other European languages. C, the head of the Complementizer Phrase (CP), contains a null tense morpheme with a −pl Nb. value denoting the single point of ST. (cf. Mittwoch 1988).[3] Matrix T1 denotes the single point of Present time. When auxiliary *have* with +pl Nb. merges with T1, it multiplies the point of time T denotes, defining the Extended Now interval of McCoard (1978) or the Perfect Time Span (PTS) of Iatridou et al. (2001).
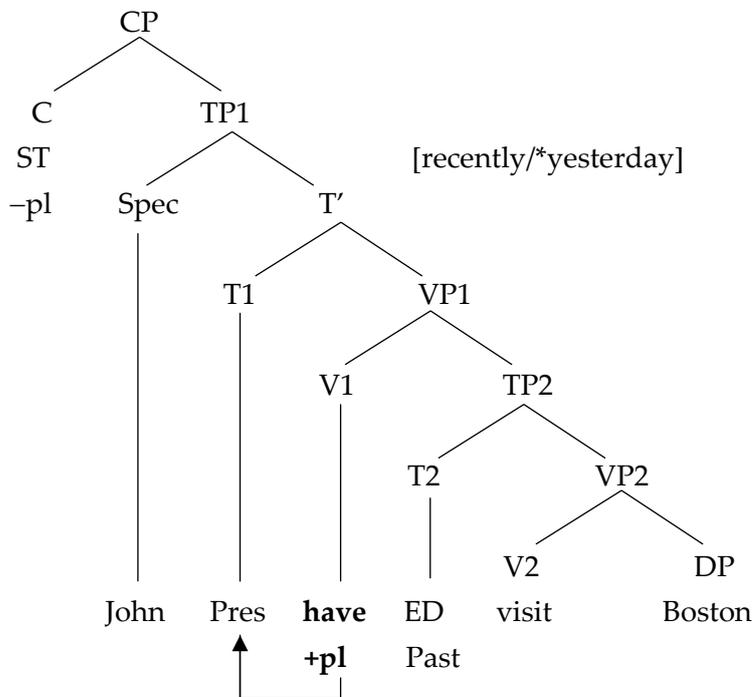
    Tense construal superimposes a linear time line on the hierarchical syntactic structure by predicating eventuality descriptions of distinct points of discourse time. In (8a), the final boundary of the event that the participle describes is predicated of a single point of the PTS calculated with respect to the pragmatic ST point. The +pl Nb. F of the auxiliary derives a retrospective temporal configuration bounded by the Event

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[3] The present tense morpheme seems to be null in all languages. Its existence is revealed indirectly by its inclusion in a paradigm with visible morphemes for past and future tense. In English the paradigm is *0/ED/will-shall* merging with a verbal root. Tenses are also rendered visible by agreement with time adverbs (e.g., *now/previously/afterwards)*.

Time (ET) on the left and the ST on the right, as shown in (8b). (2c) above is ruled out because a verb denoting the present time may not be modified by an adverb denoting past time.

(8) a. John has visited Boston.

(English)

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                CP
              /    \
            C        TP1
           ST              [recently/*yesterday]
           –pl   Spec        T'
                           /    \
                         T1      VP1
                                /    \
                              V1      TP2
                                     /    \
                                   T2      VP2
                                          /    \
                                        V2      DP

           John   Pres   have    ED     visit    Boston
                          +pl    Past
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b. [ET .... ST]

Although we have not indexed C, T1, and T2 in (8a), we assume, following Partee (1973), that Tenses are pronominals and bear referential indices. These syntactic heads each bear a valued Tense F which functions as a link in a T(ense)-chain associated with the syntactic structure (cf. Guéron and Hoekstra 1988). While the hierarchical syntactic structure in (8a) is derived bottom-up starting with VP, the temporal structure is constructed top down, starting with CP.

The T-chain is subject to binding theory and observes locality constraints: each point of time is calculated with respect to the link of the T-chain which governs it in syntax. As sketched in (9c), C_i is construed as a deictic present tense pronoun. T1 anaphoric to the ST is also indexed T_i. T2, identified by the ED morpheme as a non-anaphoric pronominal, is counterindexed with $T1_i$. T2 is thus interpreted as distinct from the present time, and, being referential, necessarily denotes a time before rather than after T1. The two binary pronominal relations in (9a) and (9b) are collapsed in (9c) to form a linear temporal chain with three links.

(9) i. C_i.................$T1_i$ C-T1

 ii. ....$T2_j$....$T1_i$ T1-T2

 iii. C_i....$T2_j$....$T1_i$ Tense construal: linear T-chain

The T-chain in (9c) is comparable to a pronominal string like (10) where an anaphoric relation between *he*$_i$ and *his*$_i$ is established prior to the counterindexing of the pronominal dative *him*$_j$ with the anaphoric chain *he*$_i$ - *his*$_i$.

(10) He$_i$ gave him$_j$ his$_i$ hand.

We claim that unlike English *have*, French *avoir* may be construed as bearing either +pl Nb., as in (11a), or −pl Nb., as in (11b). In (11a), it functions like English (8a): *avoir* merges with finite T and defines an extended time interval into which the final boundary of the past perfective "visit Boston" event is inserted, as shown in (12a). In (11b), *avoir* merges with T to define a single point of present time. In the absence of +pl Nb., there is no temporal interval: the two referential points of time, present and past are separated by a gap. This configuration defines the punctual Aorist/simple Past sketched in (12b).

(11) Jean a visité Boston.

(French)

			a	é	visite	Boston
	Jean	Prés.	**a**	é	visite	Boston
a.			**+pl**	past		[récemment]
			−pl			
b.			**−pl**	past		[hier]
				−pl		

(12) a. [ET ....ST]

    b. [ET]   [ST]

The hypothesis that French and German HAVE and BE have +/–pl value for Nb. while Modern English HAVE is only +pl and BE is only –pl, accounts not only for the contrasts in (2) and (7) but also for the fact that Modern English does not manifest auxiliary alternation in the perfect, contrary to other European languages and to Shakespearean English.[4]

2.2. Existential Quantification and the Locative FF

The paradigm in (13) supports the proposed difference between French and English HAVE in the value of the Nb. F. In simple existential sentences, HAVE and BE can function over languages as a copula bearing only T, Agreement, –pl. Nb. FF. In (13a), French *avoir* with –pl. Nb. merges with an overt locative morpheme to existentially quantify over, that is, to introduce into the discourse world at ST, a three-dimensional FIGURE-GROUND spatial configuration defined in VP. The existential operator situates the spatial configuration within the discourse space at the single point of present time. In English, a locative morpheme may only merge with the –pl copula BE as in (13c), not with +pl HAVE in (13b).

(13) a. Il **y**   **a**   un livre sur la table.

      loc cop [–pl]

  b. *****There   has**   a book on the table.   .

      loc   loc [+pl]

  c. **There is**   a book on the table.

    loc   cop [–pl]

On the basis of syntactic structure, FF in TP, and the lexical content of VP, (13a) and (13c) are interpreted as in (13d).

(13) d. Assertion: There exists in the discourse space at Speech Time a new Figure (*a book*) located on a Ground (*the table*) which is a proper part of the discourse space.

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[4] Cf. in *Hamlet*, the ghost's "My hour *is* almost come..."or Polonius's "Th'ambassadors from Norway.../*Are* joyfully returned". The BE auxiliary seems to have been reserved for perfects with unaccusative participles, while those with transitive participles, like Hamlet's "I *have* heard..." or "The spirit that I *have* seen" take HAVE, as in Modern French or German present perfects.

French *avoir* may be construed as bearing either a +pl or a −pl Nb. F. When French avoir is −pl, then it functions like copula BE in English and can combine with a locative morpheme to derive an existential operator as in (13a). When *avoir* is +pl., then, like English *have*, it may define a "possessive" sentence like (14b), where the subject functions as a discourse space which contains a Figure (a book) in a Ground defined as a proper part of this space (his hand) in VP.

(14) a. John has a book (in his hand).

b. Jean a un livre (à la main).

In TP, again as in English, +pl *avoir* can define a canonical perfect sentence like (1a).

As for participles, their +/−pl. values are marked by morphosyntactic paradigms such as perfective vs. imperfective marking in Bulgarian, perfective marking in Greek, past tense vs. particle+past tense vs. particle+past tense+secondary Nb. morpheme in Russian, or vocalic patterns infixed on a consonantal root in Arabic. In English, aktionsart alone can distinguish a perfective from an imperfective construal.

In addition to its +pl Nb. F responsible for deriving the PTS, we propose that auxiliary HAVE also contains an inherent locative F which, when merged with tense, is construed as an existential operator.[5] French +pl +loc BE is clearly existential in narrative texts beginning with phrases like "*Il était une fois* une petite fille...". Such phrases are not possible in English where BE is −pl −loc (cf. **It once was* a little girl).

3. Further Questions Concerning the Perfect

The hypothesis that auxiliary HAVE and BE are provided with both a +/−pl Nb. F and a +/−loc F whose value may vary within and between languages suggests answers to several questions concerning the grammar of the present perfect:

i. What has allowed the present perfect, which, like the simple past, places an event in the past time, to survive competition with the latter tense (Squartini and Bertinetto 2000)?

ii. What accounts for the use of perfect structures as evidential forms?

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[5] I use the term "operator" to refer to a syntactic element bearing a FF such as +loc, +wh, or Neg., which modifies or determines the referential value of its syntactic target, and merges with a tense node defining its syntactic scope.

3.1. The Present Perfect as a Sign of "Discours"

Benveniste (1966) proposed that deictic elements like *I* and *NOW* define a "discours" which implies a speaker, while the French passé simple defines "histoire" which lacks any linguistic sign of a speaker.

While the episodic present tense always implies a speaker, it does not always imply a deictic discourse ground containing the speaker, however, as shown in (15a–b).

(15) a. Mary is studying economics in London now.

   b. Volcanoes are erupting in several continents.

A present tense verb with inherent locative content, as in (16a–c), does imply a deictic discourse ground containing the speaker, however.

(16) a. Jean *arrive*. (= John is arriving.) (French)

   b. John is *staying* for a few days.

   c. After that storm, nothing *remains.*

In simple existential sentences, main verb HAVE or BE with –pl. Nb. lexically contains or merges in syntax with a loc. F and a finite tense F, as in English *there is,* French *il y a,* Spanish *hay,* Italian *c'è,* Russian *ect',* etc. These verbal forms assert the existence of a new spatial Figure Ground configuration in the discourse space at one instant of discourse time.

In a perfect structure, the very same verbs HAVE and BE, with +pl rather than –pl value for Nb., merge with finite tense to define a discourse-linked temporal interval in TP1. The past event is placed within this interval at a time previous to the present time. The perfect thus introduces a spatio-temporal event FIGURE within a temporal GROUND included in the discourse time interval.

There remains a problem, however. What allows the speaker to assert at ST the existence of an event which occurred previously to ST and which the speaker did not herself witness? Once again, this is not a problem for narrative whose sequence of sentences is assumed to be true within a *narrative* rather than a *deictic* discourse space.

This is where the role of evidence comes in. Simple existential sentences are already evidential. The sentences in (5a) and (5c), not only assert that a spatial configuration exists at the present time, they also imply direct perceptual evidence supporting the assertion, via the inclusion of an overt PP (or an implied equivalent spatial referent) which restricts the existential operator formed by the merger of a copula with locative and Tense FF.

There can be no direct perceptual evidence at ST for the past event asserted by the perfect sentences in (1a–d), but there can be indirect evidence. Unlike the simple past, which leaves a gap between ST and ET, the present perfect provides a retrospective time span leading from present to past. The locative content of the auxiliary places the entire path including its end points within the discourse world, implying, as in simple existentials, that there is evidence for the existential assertion. The perfect implies what Faller (2002) calls "the best possible grounds" (bpg) for asserting the existence of a situation. While the best possible grounds for a spatial Figure-Ground configuration is visible perception, the best possible evidential grounds for a past event is either reportative, via a chain of communication, or else inferential, consisting of a physical trace at the present of the past event.

Both the simple existential sentence and the present perfect may be construed as forming part of a "scattered" evidential paradigm in European languages.

The present perfect persists alongside the simple past because it is not a narrative time of "histoire" in which the narrator is in a space and time (world) distinct from that of the narrated event but a time of "discours" in which the speaker is in the same world as the past event and is linked to it by a continuous temporal path. The different construals of the perfect in (1) depend on "how close" the speaker at ST is to the past ET. Bhatt and Pancheva's (2005) observation that "the different types of perfect make different claims about the temporal location of the underlying event with respect to the reference time" supports our analysis of the PTS as describing a temporal path linking the present to the past.

Reportative evidence depends on the existence of a chain of communication between a participant in the event and the speaker. Contrary to what (16a) suggests, it is not necessary that the referent of the subject of the sentence be alive at ST. Rather, it is necessary and sufficient that the report of the event be transmitted along an uninterrupted path of communication connecting an event participant to a source of information and the source of information to the speaker, as non-defeasibly implied in (17b), (17d) and (17f).

(17) a. *Einstein has visited Princeton.

b. Princeton has been visited by Einstein.

c. *Einstein has influenced Feynman.

d. Einstein has influenced my physics teacher.

e. *Einstein has spoken to Niels Bohr.

f. Einstein has said that imagination is more important than knowledge. (Nishiyama and Koenig 2010)
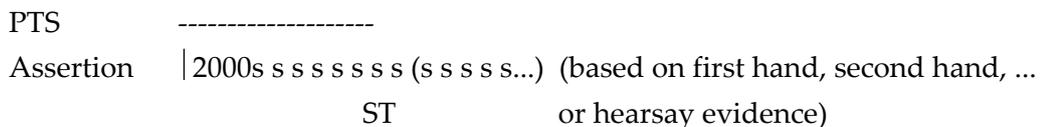
The experiential perfect in (1a) is represented by the construal schema in (18), where a vertical line marks the end of each event, while another vertical line marks the ST point. The gap between the last event boundary and the ST is filled by an implicit path of communication, marked by an uninterrupted line, which transmits first hand, second hand, etc., or hearsay information. The path begins with the source of the information, which may or may not be the subject himself and is unbroken, no matter how many communicative links may have intervened between the subject and the speaker, and it ends at ST. There is no "result state" (RS) in this construal. John is simply assigned the event property of having visited London three times.

(18) John has visited Boston three times.   (= (1a))

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PTS            ------------------------
Assertion  |__|___|_____|      (based on first hand, second hand, etc., or
           ET (x3)            ST    hearsay evidence)
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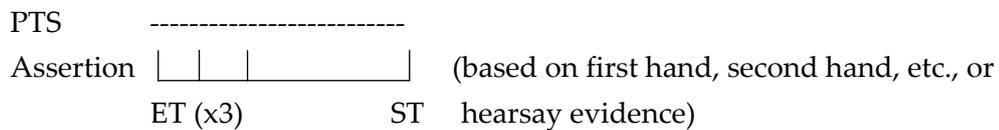
Under the universal construal of the perfect in (1b), sketched in (19), a state is claimed to exist which persisted between a moment defining the left boundary of the PTS identified by the temporal adverb up to the pragmatic right boundary at ST. The assertion also depends on an implicit chain of communication: the speaker may have acquired this knowledge directly from Mary or from another source in direct or indirect contact with Mary. Since the asserted property of Mary can persist beyond the ST, one cannot point to any RS here either. The state of knowing John now is identical to the state which held in the year 2000 and will continue to hold after the present time provided the speaker is still alive to testify to it.

(19) John has known Mary since the year 2000. (= (1b))

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PTS            --------------------
Assertion    |2000s s s s s s s (s s s s s...) (based on first hand, second hand, ...
                          ST                or hearsay evidence)
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It is only under the resultative construal of the perfect that a state exists at ST which resulted from a past event. Here too, the assertion depends on the existence of a path of communication which links the RS of a past event to the speaker at ST.

(20) John has broken his leg.

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PTS          --------------------
    ET - |RS s s s s s s ST
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We have identified the present perfect as an existential structure. While a simple existential sentence like (13a) or (13c) introduces a spatial configuration into the discourse space at the instant of ST, the perfect introduces a situation into the discourse time which, if an event, terminated at a past time, or, if a state, held at a past time, but is nevertheless asserted to have existed, or, if a state, possibly to still exist at the present time. The assertion is supported by implicit indirect evidence borne along a temporal path linking past to present.

The perfect is a complex structure, however, which embeds an event description in TP2 within the existential assertion in TP1. Like any event description, that which TP2 denotes may be categorial (predicational) or thetic (all-focus) in the sense of Kuroda (1972). In particular, an event description with an agentive subject is often construed as a predication asserting a property of that subject.

The different nature of the embedded event description is revealed by Negation. Predicational assertions like (21a–b) are compatible with negation of the situation vP denotes.

(21) a. John didn't leave.

b. Mary is not happy.

In an existential sentence, however, negation of the lexical vP creates a semantic contradiction (unless "contradictory" negation takes scope over the entire propositional TP rather than the situation described in VP).

(22) a. There is a man at the door.

b. #There isn't a man at the door.

(23) a. John has TWO CHILDREN, a girl and a boy.

b. *John doesn't have TWO CHILDREN, a girl and a boy.

(24) a. On the wall hangs a picture of Abe Lincoln.

b. *On the wall doesn't hang a picture of Abe Lincoln.

(25) Qu'est-ce qu'il y a? (What is there? What's happening?)

a. Il y a Marie qui pleure. (There is Mary who is crying.)

b. *Il n'y a pas Marie qui pleure.

The present perfect thus contains two layers of syntactic structure which define distinct eventualities on distinct levels of reality. TP2 defines a past spatio-temporal trajectory which may be in the scope of a subject Agent. The speaker is not witness to this trajectory. TP1 defines a mental trajectory "à la recherche du temps perdu" (in pursuit of lost time) in the scope of a speaker Agent. These two trajectories – or accomplishments – cannot overlap in discourse time unless the spatio-temporal eventuality is a state as defined by, for example, aktionsart, the progressive perfect in English, or imperfective or neutral participial aspect in Bulgarian as described in Iatridou et al. (2001).

Under tense construal in TP1, a linear temporal structure is superimposed upon a hierarchical syntactic structure. ST (or, in a past perfect, RT) and ET are construed as two points of time separated by a succession of points of time on a one-dimensional discourse time line. This linear temporal path supports an implied chain of communication between the speaker at ST and a source of information located at ET. The source of information is ultimately traced back to the subject if there is one. When there is a +human subject at one end of the PTS in addition to the implied speaker at the other end, the construal of the perfect oscillates between defining a predication from the subject's point of view and an existential sentence from the speaker's point of view. As we saw in (21)–(25) above, the lexical predicate of a predicational sentence may be negated while that of an existential sentence may not be. It turns out that the closer the perfect gets to the speaker's existential point of view, the harder it is to negate the sentence.

(26) a. John has visited Paris. (Predicational)

    b. John hasn't visited Paris.

(27) a. John has visited Paris three times. (Existential)

    b. *John hasn't visited Paris three times.

(28) a. John has just broken his leg. (Result)

    b. ?*John has not just broken his leg.

(29) a. John has known Mary since the year 2000. (Universal)

    b. *John has not known Mary since the year 2000.

A negative existential sentence is acceptable only if the NEG operator takes scope over an element larger than the lexical predicate, namely TP, as in (30b) or smaller than the predicate, such as the adverbials *yet* and *since* in (31b).

(30) a. You are wrong; there is NOT someone in the house.

   b. You are wrong; John has NOT known Mary since the year 2000.
      (= It is not the case that John has known Mary since the year 2000.)

(31) a. There is *not yet* someone in the house.

   b. John has *not* visited London *since the year 2000.*
      (= John has visited London but not since the year 2000.)

   Evidence in favor of the claim that the construal of the present perfect oscillates between subject and speaker point of view comes from Sequence of Tense (SOT) data. Vogeleer (2015) points out that in an embedded sentence, a past tense construed as anaphoric, responsible for a SOT reading, is in the scope of the subject while the same tense construed as deictic and triggering a shifted past reading is in the scope of the speaker.

   Brugger (1997) cited by Pancheva (2003) observes that in a sentence like (32), the embedded past tense may be either in the scope of the subject or in that of the speaker. In a perfect, however, while both the result perfect in (33a) and the universal perfect in (33b) are in the scope of the speaker, only the existential perfect in (33c) may be construed in the scope of the subject.

(32) John convinced his coach that he was too weak to play. (Simultaneous SOT or shifted past)

(33) a. John has convinced his coach that he was too weak to play. (Result perfect: shifted)

   b. Since Friday, John has been convincing his coach that he was too weak to play (Universal perfect: shifted)

   c. John has convinced his coach once before that he was too weak to play. (Experiential perfect: simultaneous SOT or shifted)

   Barring a relevant syntactic difference between the sentences of (33), for which there seems to be no evidence, such data show that when the subject and the speaker are at different ends of the chain of communication, interpretation may shift from one perspective to another. An experiential perfect is in the scope of either the subject or speaker. (33c), like (32), has the same subject-centered or speaker-centered tense construal as, for example, "John said that Mary was pregnant". The anaphoric simultaneous tense construal is in the scope of the subject while the deictic shifted

tense construal is in the scope of the speaker. A result perfect like (33a) and a universal perfect like (33b) are necessarily in the scope of the speaker since they depend on the existence of a perceived state at ST.

When the overt subject of an active perfect (or the implied subject of a passive perfect) is referential, the chain of reportative evidence borne by the PTS includes both the subject, as ultimate source of information, and the speaker-observer at ST, as in (34a–b). In the absence of a chain of communication, the bpg is inferential evidence in the form of a perceptible trace in the present moment of the past occurrence, as in (34c–e).

(34) a. John has visited London. (bpg = hearsay)

   b. It has been claimed that the earth is flat. (bpg = hearsay)

   c. It has rained. (bpg = wet ground)

   d. il a été dansé dans cette salle. (bpg = overturned chairs, audio equipment, etc.)
      (It has been danced in this room.)

   e. Somebody has been sleeping in my bed, said Big Bear. (bpg = messy bed)

The hot news perfect, like a mirative evidential, is a speech act form implying the presence of both speaker and hearer at ST. Like other speech act forms, and unlike the other varieties of perfect, it cannot be embedded. Note, however, that while the hot news perfect is resultative, the tense of a mirative evidential is usually simultaneous with that of the prejacent event (cf. de Haan 1999).

3.2. The Evidential Perfect

The second question raised above was how to account for the fact that in many languages a perfect structure may be construed as either a tense form included in the assertion of the sentence, or an evidential form, which does not assert the truth of the sentence but simply supplies a source of evidence for the embedded assertion. Alternate construals of the perfect as tense or evidential forms exist in languages in South East Europe and Western Asia described by Izvorski (1997), Lazard (2001), Tatevosov (2001), and others.

We claimed above that the +pl Nb. F of the finite auxiliary is responsible for the PTS which provides the speaker at ST with access to a temporal path bearing indirect evidence of a past event. If the Nb. F of the auxiliary is –pl, then there is no PTS and a gap in the time line separates the past event from the present time. Such gaps are acceptable in narrative, where the mode of discourse imposes chronological links between sentences, but we assume they are not tolerable in "discours".

In languages described in Aikhenvald (2004), the lexicon provides a class of evidential morphemes adjoined to the matrix TP or CP which defines a proposition. These morphemes signal that a source of evidence for the truth of the proposition is available which ranges over direct perceptual evidence, reportative evidence, or inferential evidence. As sketched in (35), an evidential morpheme embeds CP/TP rather than being embedded in it like perfects and modals.

(35) [EvidentialP Evidential morpheme [CP/TP Proposition (including Tense, Negation and Modal morphemes) [vP Event description]]]

We assume a form of Minimality which rules out any sentence in which a scopal element is separated from its target by an intervening distinct scopal element (cf. Rizzi 1997). An evidential morpheme takes immediate syntactic and semantic scope not over the event in the lexical vP but rather over the entire proposition that TP denotes. A grammatical evidential morpheme is in the same position and has the same semantic function as verbs like *see* or *say* when they take scope over propositions and from which evidential morphemes are often derived. Even when merged with a tense F in phonology, as an adjunct to the CP/TP domain, an evidential morpheme does not assert the truth of the proposition it embeds. Although direct sense evidence implicates truth, a sentence containing a grammatical evidential may in general be followed by a disclaimer.

On the contrary, tenses and modal elements are located within TP and do take scope directly over vP. Consequently perfect structures and modal morphemes assert either the occurrence of the eventuality described by the lexical vP or the possibility or necessity of such an occurrence.

In languages with "scattered evidentiality" (Aikhenvald 2004), in the absence of a lexical class of devoted morphemes, evidential construals are associated with lexical items and syntactic structures which exist independently in the grammar with non-evidential functions, such as verbs of seeing or saying, conditional mood, modals, or tenses.

However if evidentiality is construed on a syntactic level higher than the propositional level, how can a language without evidential morphemes adjoined to CP/TP assign a TP-external evidential function to a structure with a devoted TP-internal function like a perfect tense form?
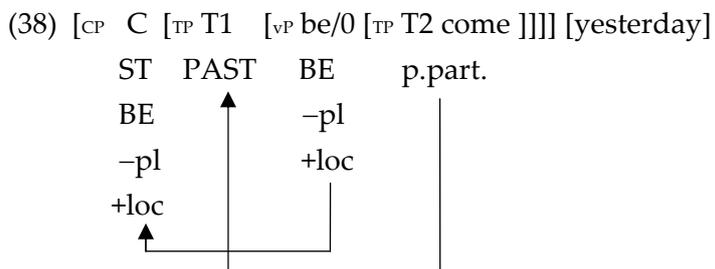
In Bulgarian and Swedish, the alternation between evidential perfect and perfect evidential is apparently marked by the loss of the +pl Nb. value of the auxiliary in the latter, for the tense of the perfect changes from present to past. Definite past time adverbs like *yesterday* which are excluded in the canonical perfect become fine, as

shown in (36) in Bulgarian from Izvorski (1997) (loss of auxiliary in the third person marks the evidential form) and (37) in Swedish from Björn Rothstein (2005).

(36) a. ??Te   sa došli *včera*.   (Perf)   (Bulgarian)
       they are come yesterday
    '*They have come yesterday.'

   b. Te   došli *včera*.   (Evid)
     they came yesterday
    'They (apparently) came yesterday.'

(37) a. *Bjornen har gått   här *igar*.   (Perf)   (Swedish)
     bear-the has walked here yesterday
    '*The bear has walked here yesterday.'

   b. Bjornen har tydligen gått   här *igar*. (Evid)
    bear-the has probably walked here yesterday
    'The bear has probably walked here yesterday.'

We propose that the change of tense in the transition from canonical to evidential perfect has the same cause as the change of tense in the transition from present perfect to aorist in French: the construal of the Nb. F of the overt or covert auxiliary is −pl rather than +pl.

In an aorist perfect, the participle raises to T1 and predicates the event TP2 denotes of a point of time anterior to the ST in C. We propose that the evidential perfect construal is triggered by raising the auxiliary even higher, adjoining it to C in syntax or LF, as shown in (38).

(38) [$_{CP}$ C [$_{TP}$ T1   [$_{vP}$ be/0 [$_{TP}$ T2 come]]]] [yesterday]
        ST   PAST   BE   p.part.
        BE   −pl
        −pl   +loc
        +loc

The participle T2 raised to T1 in (38) is construed as an aorist past in Bulgarian (36b) as in French (2a). At the CP level, the locative F and the −pl Nb. F of the raised auxiliary merge with the ST tense morpheme in C to derive an existential element. This −pl element cannot create a *temporal* path of communication between the speaker and the event. However, the +loc morpheme merged with a punctual tense suffices to

create a *cognitive path* between the speaker and the proposition which TP denotes. While the PTS of a canonical perfect is extended in time, allowing evidence to be passed along from the event source to the speaker, a purely cognitive path is grammatically punctual even when it implies mental activity. This is shown in (39a–b) in English, a language in which a spatio-temporal event may not be predicated of the punctual present tense (39a), but a mental event (39b) may be (and where *see* in (39b) functions as an evidential morpheme).

(39) a. *I take/break what you are holding.

      b. I understand/realise/see what you are saying.

Rothstein (2005) notes that the Swedish inferential perfect in (40a) and the modal sentence in (40b) are semantically equivalent to the English epistemic modal sentence (40c).

(40) a. Bjornen har tydligen   gått igar.   (Swedish inferential perfect)
         bear-the has probably left yesterday

      b. Bjornen lar   ha   gått igar.   (Swedish modal S)
         bear-the must have left   yesterday

      c. The bear must have left yesterday.   (English modal S)

Does this mean that an evidential perfect is an epistemic modal, as claimed by Izvorski (1997) and Matthewson, Davis and Rullmann (2007) (but denied by de Haan 1999)?

Let us consider the similarities and differences between an epistemic modal and an evidential perfect.

So far, we have referred to four syntactic structures, each of which implies a direct or indirect link between the speaker at ST and an eventuality absent at ST.

i. A *canonical perfect*, merged and construed in TP, contains a +pl auxiliary verb which defines a temporal path linking the speaker at ST to a past eventuality. The verb also contains a locative F which, when merged with tense, is construed as asserting that the entire path including the past event exists in the discourse world. The assertion is supported by the implication that the PTS bears indirect evidence of the past event.

ii. An *epistemic modal* is also merged and construed in TP. But like all stative predicates, the modal is −pl. It cannot define a temporal path between a speaker in the present and a past situation. Moreover, lacking existential content, the modal does not assert

the existence of the absent eventuality in the discourse world. It defines, rather, a mental state associated with a purely cognitive process relating what the speaker knows at ST about the actual discourse world and the laws of cause and effect to the possibility or necessity of the existence of the situation the VP denotes in the present or some other accessible world.

iii. *Grammatical evidential morphemes* are adjoined to CP/TP. Unlike perfects and modals, they take scope above Tense and Negation, and are construed at the periphery of the CP domain, justifying Faller's claim that they identify speech acts. The lexical content of an evidential morpheme defines a range of available sources of evidence for the proposition TP denotes. But they lack the +pl Nb. F which is checked by verb raising to T. Consequently, in the absence of a path bridging the temporal gap between present and past, an evidential cannot assert the existence of the event embedded in TP.

iv. We claim that *evidential perfects,* headed by a –pl +loc overt or covert copula, are construed at the CP level. While they do not lexically denote an accessible source of evidence, their locative content merges with tense to provide a cognitive path implying indirect evidence for the truth, not of the embedded event, but of the proposition as a whole. Their position above TP prevents them from asserting the existence of the event the lexical vP denotes.

Izvorski's translation of the sense of the evidential perfect in Bulgarian by the adverb *apparently* implies a similarity with SEEM, which is a propositional rather than an existential operator. The modal adverb *probably* in the Swedish example suggests that the evidential perfect, like grammatical evidentials in a number of languages, is compatible with a modal implying that the link to the truth of the proposition has various strengths in terms of possibility.

In English, unlike Swedish, the addition to a perfect of a modal adverb does not suffice to create a past time construal.

(41) The bear has (probably) left yesterday.

Rothstein (2005) proposes that Swedish, unlike English, allows mismatches between the morpho-syntax and the semantics of some temporal forms. Like the semantic accounts of variation in the perfect discussed earlier, this proposal describes rather than explains the facts. Nor is it compatible with a generative grammar in which an autonomous syntax derives structures which LF, semantics, and pragmatics interpret, but which lacks global rules ranging simultaneously over syntax and semantics.

Our proposal that the evidential perfect construal depends on the raising and reinterpretation in CP of an overt or covert auxiliary generated in TP, predicts that only epistemic evidential perfects which target propositions may exist. There can be no deontic evidentials which would target actions or "outcomes" (cf. Laca 2015). Nor can there be universal, resultative, or hot news evidential perfects, since these all claim the existence of a perceived state in the discourse world at ST.

4. Conclusion

I have proposed that the Perfect is both an existential structure which asserts the existence of a situation and an evidential structure which implies evidence in the present for a past event. The perfect belongs to a "scattered" evidential paradigm which also includes simple existential sentences based on the same verbs *have* and *be*. A simple existential sentence denotes the existence in the discourse setting of a spatial Figure/Ground configuration on the basis of direct perceptual evidence. The present perfect asserts the existence of a past event in the discourse world to which access is available via a restrospective temporal path. Indirect evidence of the past event is carried along this path in the form of a reportative chain of communication in transitive sentences and of inference based on the existence of perceptible traces of the past event at the present time in unaccusative and other thetic sentences. The +pl Nb. F of a finite auxiliary provides the retrospective time span. The locative content of the auxiliary is the source of its existential assertion. The different construals of the perfect oscillate between the experiential orientation or point of view of the subject of an embedded predication located at the beginning of the PTS and the existential perception of the speaker located at its final pragmatic boundary.

Perfect structures persist because they belong to the mode of "discours". They are not a rival to but the complement of the simple past which is a narrative form belonging to "histoire".

The transition from an evidential perfect to a perfect evidential requires eliminating the PTS which supports a path of communication between subject and speaker. This can be done by a simple change in the value of the Nb. F of the auxiliary from +pl to −pl, as I proposed for Bulgarian and Swedish. The overt or covert copula raises to C and merges with the ST morpheme in C. The locative content of the −pl auxiliary merges with tense to create a cognitive link between the speaker and the proposition. Unlike a temporal path, a cognitive path can exist at a single point of time. In many languages, a modal adverb may be added to an evidential statement, implying that the speaker may consider the embedded proposition as probable or necessary. But

neither modals in TP, grammatical evidentials adjoined to TP or evidential perfects construed in CP, can make a past event accessible at ST. Only the canonical perfect combines the grammatical +pl and +loc FFs and a syntactic position within TP which makes this extraordinary feat possible.

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