

Klein, W., & Vater, H. (1998). The Perfect in English and German. In L. Kulikov & H. Vater (Eds.) *Typology of Verbal Categories. Papers presented to Vladimir Nedjalkov on the occasion of his 70th birthday* (pp. 215-235). Tübingen: Niemeyer.

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The Perfect in English and German

1. "Perfect" – a universal or a language-specific category?

1.0 Preliminary remarks

What beyond mere tradition entitles the grammarian to assign a particular form to a grammatical category? What is the rationale behind the fact that we infallibly call *hominis* a genitive, *perepisovat'* an imperfective, and *vidi*, (*ich*) *habe gesehen*, (*I*) *have seen* and (*j'*) *ai vu* a perfect? This immediately raises the more fundamental question of what constitutes the unity of a category within a particular language and across languages. What, for example, defines "perfect" in German, "perfect" in Latin, and "perfect" in general?

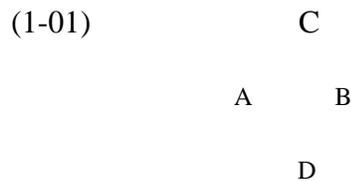
A grammatical category is always a mapping between particular formal means and particular meanings (or functions). In the ideal case, unity of formal marking and of specific meaning component should go together in the definition of a category. Apparently, this case is rarely found in human language. In fact, the situation is even worse. Even within a particular language, a grammatical category is often neither uniform with respect to form nor with respect to meaning. Latin genitive, for example, has no fixed meaning, and its morphological marking is highly variable. We cannot say that it is always marked by a *-i* or by *-is* or *-ae*, nor can we say that it is defined by the fact that it expresses "possession" (or whatever other semantic feature). Still, we all assume that there is a grammatical category "genitive" in Latin, and we also assume that other (though perhaps not all other) languages have 'this' category, as well. Does this solid faith, so basic to linguistic theory and even more to linguistic practice, have a fundamentum in re, if so, what is it?

In this paper, we shall address a small instance of this general problem - what is "perfect" in German, what is "perfect" in English, and how are these two instantiations of the cross-linguistic category "perfect" - if there is such a category at all - related to each other. This is not the first attempt in this regard. ANDERSON (1982:227) begins his study with the following question:

"A grammatical category, such as the "Perfect", will not have exactly the same range of uses in one language as it does in another. Given that this is true, why are linguists willing to use the same name for the category in two different languages? How can we sensitively compare languages?"¹

"Use" is apparently understood as synonymous with "meaning" by ANDERSON 1982.

He solves the problem in looking for common traits of meaning among the corresponding forms in different languages and drawing "maps" that show the meaning areas of each form. If, for example, a form in language L_1 (e.g. the perfect) has the variants A, B and C, whereas a corresponding form in L_2 has the variants A, B und D, then a map is drawn on which the two languages overlap in A und B.



Sameness (or rather: similarity) of meaning is defined as follows: "We can determine 'similarity' of meaning typologically. If two particular meanings are often expressed by the same surface form (across languages), then we can assume that the two meanings are 'similar' to the human mind" (ANDERSON 1982:227).

On the whole, this inductive procedure² is has considerable plausibility. Most linguists probably proceed like this unconsciously in comparing categories across languages. However, Anderson's procedure has to be supplemented in two respects: First, the so-called "surface forms" have to be submitted to a comparative analysis. Usually, different languages do not use the same morphosyntactic means for representing a category. And secondly, one of a number of different meaning variants (or uses) of a category may be more central as the other ones, as COMRIE (1976:11) notices:

"Where a form is said to have more than one meaning, it is often the case that one of these meanings seems more central, more typical than the others. In such cases, it is usual to speak of this central meaning as the basic meaning."

"Central meaning" should not be equated with "basic meaning"; basic meaning can be obtained by abstraction from individual meanings. Thus, REIS 1980 argues that every lexical or grammatical expression has a literal meaning being the sum of all meaning components that have turned out to be invariable throughout all possible contexts: There is reason to assume that the "basic meaning" of an expression is, on the whole, equivalent to its literal meaning. The central meaning is a component of the basic (literal) meaning of an expression.

1.1 Formal and functional divergence

What is called "perfect" in different languages, is neither uniform in meaning nor in form; but there is a number of similarities in both regards. Typical meaning components will be discussed in the next section. As for form, it is common to distinguish two different modes of construction: the synthetic (morphological) and the analytic (syntactic) perfect. The **synthetic** construction allows for several different procedures:

² "We can develop grammar/meaning spaces inductively, finding a 'map' which works consistently for many languages ..." (ANDERSON 1928:27).

- (1-02) a Suffixation: lat. *amavit* "he has loved";³
 b root modification: lat. *fecit* "he has made" (vs. pres. *facit*);
 c Reduplication: gr. *pepaideuke* "he has educated" (vs. pres. *paideuei*);
 d Prefixation: suaheli *amefika* "he has come" (COMRIE 1976:57).⁴

Analytically the perfect is formed by means of auxiliary verbs in many languages ; thus, in all Germanic and Romance languages, a finite form of the auxiliary is combined with the participle of the main verb; this is not the only possibility; in Bulgarian, for example, the finite form of the auxiliary is combined with the finite Präteritum tense form of the main verb.⁵ In forming the progressive perfect in English, the finite auxiliary is combined with the participle of the auxiliary and the *-ing*-form of the main verb:

- (1-03) a Aux. + participle: engl. *he has arrived*; Gm.. *er ist gekommen*, Fr. *il est venu*;
 b Aux + Präteritum.: Bulg. *Ivan e doswl* (COMRIE 1976:107);
 c Aux. + part. +Ving: Engl. *he has been waiting*.

It is not at all clear, however, whether the two types of construction indeed reflect the same notional category. Latin perfect, for example, - that is, in the language which gave its name to the category - is typically used to describe singular, completed actions in the past, that is, essentially it serves the function of French *passé simple* (in written language) and English simple past, rather than French *passé composé* and English present perfect; next to this "perfectum historicum" usage, it can also serve as a "perfectum praesens" in some cases; but this function is clearly marginal.[xxxreference] French, English or German translations of say *De bello gallico* normally render Caesar's perfect forms by *passé simple*, simple past and Präteritum, respectively, hardly ever by *passé composé*, present perfect or Perfekt.

This divergence in form as well as in function is somewhat less salient if we only consider the Romance and Germanic languages in which the "perfect forms" forms are composed of a present tense auxiliary and past participle. This construction naturally invites a compositional interpretation of the perfect meaning. COMRIE (1976:107) surely gives expression to a wide-spread view when he writes:

"the present auxiliary conveys the present meaning, while the past participle conveys that of past action."

This is in agreement with the fact that quite often, the perfect while describing an event that took place in the past relates it in a special way to the present. But quite correctly, Comrie also points out that sometimes "...there is a discrepancy between form (which includes both present and past) and meaning (which is often just past)" (COMRIE 1976:107). In fact, the apparent parallelity in construction may be quite deceptive. A brief comparison between English *Peter has left*

³It seems that *-v-* has to be analyzed as perfect suffix, to which the personal suffixes (e.g.. *-it* in the 3.pers.) are added; the 1.Ps.Sg. remains unmarked. The suffixes *-u-* (vgl. *tenuit*) und *-s* (cf. *rexit*) can be assumed to be phonological or morphological variants of the suffix *-v-*.

⁴According to COMRIE (1976:57), the Perfect prefix *me-* is preceded by the subject prefix a-.

⁵Originally this Präteritum form used to be a participle.

London, German *Peter hat London verlassen* and French *Pierre a quitté Londres* will illustrate the point. They all describe an event in the past; they do not say when exactly this event took place; all that is said is that the time of the event, here Peter's leaving London, precedes the time of utterance. It could have been yesterday, for example. In German and French, the precise event time can easily be made explicit by an adverbial, whereas this is impossible in English:

- (1-04) a *Yesterday, Peter has left London.
b Gestern hat Peter London verlassen.
c Hier, Pierre a quitté Londres.

The only way to be more specific with the precise time in English would be to replace the present perfect with the simple past: *Yesterday, John left London*. This and similar observations have given rise to the assumption that despite their formal composition German Perfekt and French *passé composé* are semantically not compound in the same way as the English present perfect (i.e., consisting of a "present component" and a "past component") but rather function like a simple past tense. But it is easy to see that there are other contexts in which English and French go hand in hand, whereas German is different. Suppose someone wants to state a simple fact in the past, for example the fact that the colossos of Rhodos weighed 100 tons. In this case, neither English nor French can use their "perfect", whereas German can:

- (1-05) a *The colossos of Rhodos has weighed 100 tons.
b *Le colosse de Rhode a pesé 100 tonnes.
c Der Koloss von Rhodos hat 100 Tonnen gewogen.

Here, English requires the simple past, and French requires the *imparfait*; in German, the *Präteritum* is also possible but surely less common.

Hence, the mere idea that the "perfect" functions sometimes like a composition of present and past meaning components and sometimes simply like a past tense as well as the connected idea that this difference reflects a typical historical development is perhaps not false but surely a gross oversimplification. In order to understand what "perfect" in a particular language really means, we must have a much more careful look at its various uses in this language. This is an extremely difficult task. The following discussion will essentially be confined to English and German. From now on, we shall use the term "present perfect" for the English present perfect, as in *John has left London*, the term "Perfekt" for its German counterpart *Peter hat London verlassen*, and the term "perfect" for the category in general.

1.2 Range of uses of the perfect

There are two salient differences in the way in which Perfekt, on the one hand, and present perfect, on the other, can be used. One of those has been mentioned above: German Perfekt often functions like the English simple past. In this function, it competes with the *Präteritum* (the form which in structure and history corresponds to the English simple past). In fact, it has often been argued that these two forms share the same temporal meaning, the difference being more a question of style, register or perhaps dialect. This is not correct, though; we shall return to this point below.

Second, the German perfect can easily relate to the future. It cannot only be combined with past time adverbials, as in *Gestern um zehn hat er London verlassen* 'Yesterday at ten, he left

London' but also with future time adverbials, as in *Morgen um zehn hat er London verlassen* 'Tomorrow at ten, he will have left London'. Here, the temporal adverbial does not give the time of event itself, his leaving, but a time at which this event is over.

Any comparative account of Perfekt and present perfect has to explain these two facts. Other differences in the range of use, partly connected to those, partly different, are less obvious and hence much harder to grasp. There are numerous descriptive accounts on how the perfect can be used in English (see for example McCoard 1978, Fenn 1987). Consider, for example, the list of "major uses" that ANDERSON (1982:228) offers:

- (1-04)a "experiential": *Have you (ever) been to Japan?*
b "current relevance of anterior": *He has studied the whole book. (so he can help)*
c "new situation" ("hot news"): *The Etna has just erupted*
d "result-state": *He has gone. (or) He is gone. (is not here)*
e "continuous": *I have been standing here for three hours.*

A sixth use, "anterior", is illustrated by the example *John thought Mary had left*. But this is a pluperfect, which will should remain out of consideration here.

Concerning e, it can be assumed that the "continuous" meaning has to be ascribed to the progressive aspect (expressed by *be + -ing*) rather than to the perfect. In the interlingual comparison, it is interesting to note that the meaning of the continuous perfect is expressed by the present tense German (and, incidentally, in French).

The uses a – d can be compared in a direct way with the corresponding uses in German; d can be expressed in German – as in English – only by the perfect, whereas a, b, and c also allow for the Präteritum – which often is preferred – (cf. (1-06)).⁶

- (1-05)a ?Sind Sie schon (einmal) in Japan gewesen?
a Waren Sie schon (einmal) in Japan?
b Paul hat sich mit Biologie befaßt. (P. kennt sich in Biologie aus.)
c Eben hat es geblitzt.
d Fritz ist weggegangen. (Fritz ist weg.)

- (1-06)a ?Gerade ist der Briefträger dagewesen.
a' Gerade war der Briefträger da.
b *Soeben haben Sie die vierte Symphonie von Anton Bruckner gehört.
b' Soeben hörten Sie die vierte Symphonie von Anton Bruckner.

In the northern and central areas of German, the perfect of *sein* (as well as the perfect of *haben*, the modal verbs and some frequent strong verbs like *kommen* and *gehen*) is extremely infrequent;

⁶ The situation in German is complicated: In those areas, where Präteritum and Perfekt overlap, it is often said that a complementary distribution has been obtained: with certain groups of verbs (e.g. auxiliary and modal verbs), the Präteritum is predominant, with other groups the perfect. Besides, some uses of the Präteritum seem to be idiomatic and, thus, obligatory, as e.g. (1-06)b' shows.

(1-05)a' and (1-06)a' with Präteritum sound more natural than the corresponding sentences (1-05)a and (1-06)a with perfect. (1-06)b' is a normal broadcast announcement, whereas (1-06)b - which one would expect - is never used.

The emerging picture is not a very homogeneous one. In the sense of Anderson's diagram (1-01), we get some overlap but also some clear divergences. Rather than following these up in detail, we shall now turn to the question whether there is a uniform meaning behind the different range of uses in the two languages. We will then discuss whether this uniform meaning can explain the two salient differences as well as some of the subtler ones.

1.3 Perfect and temporal relations

Most recent attempts to assign a uniform meaning to the present perfect as well as to the Perfekt use the framework which REICHENBACH 1947 originally proposed for English. He noted, as others did before him (see EHRICH 1992: xxx), that the meaning of tense forms in general cannot just be described in terms of temporal relations between the "point of speech (S) and the "point of the event (E)"⁷, as the traditional notion of tense suggests but that at least in many cases, a third point in time - which he calls "point of reference (R)" is needed.

This idea was taken up by many authors. There is some disagreement as to whether R is necessary for all tenses. COMRIE, for example, argues that present or past tense in English are adequately represented if just the relationship between E and S is taken into account (cf. COMRIE: 1985:36ff):⁸

(1-07) I see John. (E,S;i.e.: E simultaneous with S).

(1-08) I saw John. (E<S;i.e.: E before S).

For the pluperfect (past perfect), however, R as a third parameter is necessary. The pluperfect in (1-09) locates the event of raining before an implied reference point R that, on its turn, is prior to the time of speech. In grammars of German, this case is called "Vorvergangenheit" ("prepast"). Here, Comries agrees with Reichenbach. But REICHENBACH (1947:289f) also argues that we need R as third parameter for the temporal analysis of present and past tense, as well. According to him, the difference between past and perfect can only be explained by the relations of E and S to R: With the past tense, R is simultaneous with E, with the perfect, R it is simultaneous with S. (1-10) expresses the fact that Peter's coming is temporally simultaneous with R (which can only be determined by the context or our knowledge of the world). (1-11) expresses – according to REICHENBACH 1947 – the fact that R coincides with S (suggesting that Peter is still present at the time of speech).

(1-09) I had seen John. (E<R<S; E before R before S).

(1-10) Peter arrived. (E,R < S; E simult. with R before S)

⁷ Reichenbach's term "event" comprises states, processes and actions, i.e. everything that can be expressed by a verb. In more recent works (e.g. EHRICH 1992), the term "situation" is used as a cover term. This is also done here.

⁸For COMRIE (1985:56ff) the point of reference seems only to be relevant for the interpretation of "relative tenses" such as perfect and pluperfect.

(1-11) Peter has arrived. (E<R,S; E before R simult. with S)

It is tempting to transfer this simple and elegant account to the analysis of the German tense system, and to the German Perfekt, in particular. This has indeed been done by a number of authors. Given the divergences briefly discussed in the preceding section, this is not possible without some revisions. In what follows, we shall first present the proposal made in EHRICH/VATER 1989 and then discuss some more substantial revisions which both concern the analysis of English and of German.

A crucial difference between English and German does not concern the perfect in particular but the role of present tense. In English, the present tense is relatively stable with respect to the moment of speech; metaphorical uses aside, R must coincide with, or include, S. German present tense, by contrast, is relatively free in this regard; depending on context, R may also be after S and even precede it (though the latter possibility is somewhat less controversial than the former.) Since the Perfekt includes a present tense component (the tense marking on the auxiliary), this fact has consequences for the Perfekt, as well. In order to comply with this “shiftability” of the present tense component, EHRICH/VATER postulate a subdivision of the relations between E, S and R into an intrinsic relation between E and R and a contextual relation between R and S. Whereas the intrinsic relation is invariable for each tense form, i.e. applicable in all of its uses, the contextual relation can be shifted, at least in those cases, where R and S are simultaneous (or where R is included by S or the other way round). For the four main tenses of German, the following relationships are valid:

(1-12) **Intrinsic and contextual meaning of the German tenses**

		contextual relation	
		S,R	R<S
intrinsic relation	E,R E<R	Present Perfect	Präteritum Pluperfect

There is no direct deictical relation between E and S. But this relation - the traditional “tense relation” - can be derived from the two other relations: Perfect and Präteritum, being different in their intrinsic and contextual relations, have the same deictic interpretation: "E<S", that is, the event is marked as being in the past.

(1-13) **Deictic interpretation of perfect and Präteritum**

Perfect:		Präteritum:
E<R	INTRINSIC MEANING	E,R
S,R	CONTEXTUAL MEANING	R<S
E<S	DEICTIC INTERPRETATION	E<S

So far, the only difference between the meaning of the English present perfect and the German Perfekt concerns the first component - the role of the auxiliary, which encodes the contextual

meaning. In English, R is more or less simultaneous to the moment of speech, in German, it can be also follow and precede it. Essentially, this line of thought is also followed by other authors (Ballweg 1988, Thieroff 1992, Zeller 1994), though there is some disagreement as to whether R is completely free with respect to S or whether it is only excluded that R precedes S.

But there are two fundamental problem with this analysis. The first of these concerns all accounts in terms of Reichenbach's three temporal parameters E, S and R. How are these to be interpreted? Reichenbach himself considered them to be points in time, an assumption that does not make much sense in view of the fact that the times of two events can overlap or partly include each other. Hence, most authors after Reichenbach consider E, R and S to be more or less extended temporal intervals or time spans. Under this assumption, S as well as E make at least some initial sense: S is the (more or less extended) time span during which the utterance is expressed by the speaker, and E is the (again more or less extended) time span during which the event, state, process, in short, the situation described by the sentence takes place or obtains. On closer objection, both interpretations raise a number of questions. What, for example, is S in the case of written language, say the composition of a journal article or a book, or what is E in the "habitual" or "generic" events? Hence, many refinements may be needed, but in principle, it is clear what is meant. But what is R? No definition whatsoever is given; it is simply "another time span" (or point in time). Very often, this time span is taken from context, for example the time of some preceding event; but this is surely not the definition of R. But if R is simply "some other time span", then the entire distinction between simple past and present perfect, as discussed above, collapses. In the case of the simple past, there is always "another time" X which (more or less) coincides with S, just as there is "some other time span" R which coincides with E, and the other way around for the present perfect. The entire analysis makes only sense when R is given a specific interpretation: R must be a time span which is characterised in some way.

The second problem has to do with the deictical relation between situation time and utterance time, i.e., that relation which is traditionally labelled "tense". It is best illustrated with the analysis of the English simple past, as exemplified in (1-08) above. According to this analysis, the situation time E should precede the utterance time S. This is surely true in some cases, but it is nor less surely false in others. The following example (taken from KLEIN 1992:22) illustrate this plainly:

(1-14) They found John in the bathtub. He was dead.

By stating *He was dead*, the speaker is not likely to imply that John rose from the dead some time later, i.e. that the time of John's being dead precedes the time of utterance. He rather wants to make an assertion about some time in the past (the time at which John was found) implying that this time is included in the time at which John is dead. This does not exclude the possibility that the time of John's being dead also includes the time of utterance. In fact, we know (or at least, some of us believe) that once dead, a person is forever dead.

Another example is (1-15), where speaker B, or at least a cooperative speaker, wants to report a present rather than a past state of affairs:

(1-15) A: Do you know where John is?
B: Well, he was in the garden.

An utterance like (1-15)B leaves open whether John still is in the garden at the time of utterance; John may have left the garden meanwhile.

Again, the speaker makes an assertion about some time in the past, but wants to indicate at the same time that John is likely to be in the garden at the time of utterance and can be found there.

What matters for the past tense, therefore, is not whether the time of the situation, such as John's being dead or his being in the garden, precedes the moment of speech but whether the time about which the speaker makes an assertion by this utterance is in the past. This **topic time** (or **assertion time** in the specific case of declarative utterances) is only a subinterval of the entire situation time. Hence, three time spans play a role in the temporal analysis of finite verb forms:

- (a) the time at which the utterance is made, here abbreviated TU; TU is the same as Reichenbach's S.
- (b) the time of at which the situation obtain, here abbreviated TSit. In principle, this notion corresponds to the Reichenbach's E, except, of course, that it is not a point but a more or less extended interval. Depending on the particular lexical content of the verb and other components of the sentence's meaning, TSit time span may be long or short, heterogeneous or homogeneous, and these differences play an important role in the analysis of finite verbs forms, a point to which we return below.
- (c) the time about which an assertion is made, abbreviated TT (for "topic time"); again, TT may be long or short, and this gives rise to different usages of temporal forms of the verb. We may take TT to be a particular way to interpret Reichenbach's R.

The notions of "tense" and "aspect" can now easily be reconstructed as purely temporal relations between these three temporal parameters (cf. Klein 1992: 99). Tense is a temporal relation between TU and TT, that is, the topic time may follow, include, or precede the time of utterance. In the past tense examples (1-14) and (1-15) above, TT (but not TSit!) precedes TU, in the English present tense, TT includes TU (and nothing is said about the boundaries of TT), and in the English future tense, TT follows TU. Aspect, by contrast, is a temporal relation between TT and TSit. In examples (1-14) and (1-15), TT is a subinterval of TSit, i.e., TT is properly included in TSit (and hence the latter can easily contain TU itself). Other temporal relations are possible. In particular, TSit may be fully included in TT, which gives the impression that the is "presented in its totality", as "viewed as completed", in brief, as "perfective", whereas it is viewed in its process, as incompleting, not in its entirety, if an assertion is made about a subinterval of TSit only. It is also possible that TT is after TSit or that it precedes TSit, etc. The exact way in which the relationship between TT and TSit is encoded varies from language to language. This gives rise to the various grammatical aspects in this language (including the borderline case that all relations between TT and TSit are expressed by the same form, i.e., that the language has no grammaticalised aspect distinctions). English, for example, grammaticalises the difference between (roughly speaking) "TT included TSit" and "TSit included in TT". The former is expressed by the progressive form, the latter by the simple form. German, by contrast, does not: both relations are collapsed in one form.

In actual fact, the situation is somewhat more complicated; this has largely to do with a fourth problem of Reichenbach type approaches. This problem was already briefly alluded to above. It concerns the notion of "event time" E. Depending on the particular lexical content of the sentence which describes the situation, the event time - or TSit in the present approach - can be

very different. There are situations which last forever, for example the situation described by *Two plus two makes four*. Other situations have temporal boundaries, such as the situation described by *John slept*; these boundaries are not explicitly stated, but clearly, the situation described is not meant to last forever. Still other situations involve two distinct subintervals; thus, for *John woke up* to be true, there must be a first subinterval in the past, where John is asleep, and, and a second subinterval in the past, in which John is awake.

As a consequence, we must distinguish between different types of “event times” or, in the present approach, of TSit. If, for example, the lexical content describes a situations without boundaries, as in *Two plus two makes four*, that is, if TSit extends over the entire time, then no differentiation with respect to TT, and hence no aspectual differentiation, is possible. Therefore, it is odd to say *Two plus two is making four* or *Two plus two has been making four*. Similarly, it is normally impossible in English to say *The book has been in Russian*. This gives the somewhat strange impression that the book had this property at some earlier time, and no it has changed language. But since being in Russian is an atemporal property of books, this sound odd. Whilst these constraints on the relationship between TT and TSit are relatively straightforward, the situation is much more complicated for the difference between contents which describe one - not necessarily fully homogeneous - situation, as in *John slept* and those in which the situation includes two opposing subintervals, as in *John woke up*; to which of those two subintervals is TT related, to the “source state”, i.e., the state in which John is asleep, or to the “target state”, i.e., the one in which John is awake? Languages differ in this regard. English, just like German, regularly treats the “source state” of these “two-state contents” on a par with the single state of “one-state contents”. Since there is no apparent difference in this regard between English and German, we shall ignore this otherwise important distinction here and just speak about the relation between TT and TSit. It should be kept in mind, however, that this simplifies the actual facts.⁹

With this notional repertoire in mind, we can now return to the temporal meanings of English present perfect and German Perfekt. The analysis will proceed in three steps. We first “translate” Reichenbach type analyses from section 1.3 into the new framework. This solves the various theoretical problems mentioned in this section, but it does not necessarily imply a gain in empirical adequacy. It will then be shown (section 3) that this analysis can cover most of the empirical observations from section 1.2, but leaves others unexplained; in particular, it cannot account for the “simple past”-usage of the German Perfekt. We will then suggest an amendment of this analysis which naturally explains why this reading is possible in German but not in English.

2. The temporal meaning of Perfekt and present perfect I

Let us briefly recapitulate the underlying rationale. German Perfekt, as in *Peter hat angerufen* as well as English present perfect, as in *Peter has called* is composed of two components - auxiliary and past participle. Each of these component has its own meaning contribution to the entire construction. In COMRIE’s words (cf. section 1.1): “The present auxiliary conveys the present

⁹An analysis of the English perfect which includes these differentiations is found in Klein 1995.

meaning, while the past participle conveys that of past action.” In the present framework, this basic idea naturally translates into an analysis according to which the perfect consists of a tense component and an aspect component. The former is a temporal relation between TU and TT, the latter is a temporal relation between TT and TSit. Possible temporal relations are AFTER, BEFORE, INCLUDED IN, OVERLAPPING WITH (i.e., the two intervals have a common subinterval etc.), and similar ones. How are they defined for Perfekt and present perfect? Let us discuss the two relations in turn.

(a) The aspectual component simply says that TT, the time about which an assertion is made, is after an interval of the type described by the lexical content of the sentence, that is, after some TSit, in brief: TT AFTER TSit. We shall also say that TT falls into the posttime of TSit, where posttime is simply the temporal interval after TSit. This corresponds to the familiar notion “E>R” in Reichenbach type frameworks, with the only exception that now “R” has a clear interpretation: it is the time about which an assertion is made.

Four further points should be noted here. First, this part of the perfect meaning does not say anything about how the time of the situation itself is related to the time of utterance, it only says that the time about which something is said falls into the posttime of the situation. It is a temporal relation, but not a deictical relation. Second, nothing is said about the distance between TT and TSit: they can be very close to each other, in fact, they could be adjacent; but it is also possible that there is a long time in-between TT and TSit: all that is said is that TT falls into the posttime of TSit. Third - and this is a less transparent point - it is not required that TSit is specific or definite: TSit is an interval which satisfies the description provided by the lexical content of the verb (and possibly other parts of the sentence). Therefore, it is actually somewhat misleading, as we have done here, to talk about **the** time of the situation, in a way, it would be more appropriate to say “TT is after the time of a situation of this type”. Fourth, nothing is said about the frequency of TSit. Normally, a sentence such as *Peter has called/Peter hat angerufen* is interpreted in the sense that there was one “calling action”, i.e., one situation of this type. But it is surely not false when he has called seven times. But minimally, there must be one TSit of this type which precedes TT. In a word, TSit is **indefinite** in many ways - with respect to its position on the time line (in relation to TU), with respect to its distance to TT, with respect to its frequency. All of this information, however, can be made explicit by adverbials; but their meaning contribution, of course, is not part of the meaning of the perfect itself.

So far, and in agreement with the established analyses discussed in section 1.3, there is no reason to assume that there is any difference between Perfekt and present perfect. For both of them, the aspectual part is “TT AFTER TSit”. This is different for the tense component associated with the present tense auxiliary *has/hat*. It is generally assumed that the English present tense is closely linked to the time of utterance. In Reichenbach type approaches, R is even often said to coincide with S. This is not very plausible, given the short duration of S. We shall only require here that TT properly contains TU. Note that nothing is said about the boundaries of TT. It may be a long interval - in which case the time about which something is claimed is very long and hence the claim itself is, as it were, a more fundamental one; but it may also be very short, in which case the claim confined to the “right now”. The first case is found in present tense sentences such as *Beer contains alcohol* or *John smokes*, whereas the second case is found in “actual present”-sentences such as *John is smoking* or *This beer is by far too warm*. The present tense marking

only says that TU is contained in TT, no matter how long or short TT itself is. German present tense is different in this regard. It is generally assumed that often, and perhaps in the default case, it is linked to TU; but it can also have a “future meaning” and perhaps also “past meaning”. The first possibility is uncontroversial, whereas there is some disagreement on the second (Thieroff 1992, for example, argues for the former position, whereas Fabricius-Hansen 1986 or Grewendorf 1995 plea for the latter). In the present framework, this would mean that in the German present tense, (a) TT must not precede TU (i.e., it can contain it or follow it), or (b) it is not fixed with respect to TU at all: it can precede it, contain it, or follow it.

In a way, however, both positions are somewhat unsatisfactory since they do not do justice to the fact that the particular “readings” depend on specific conditions (cf. the discussion in section 1.3). These conditions are quite complicated; in general, three factors play a role here: the inherent temporal features of the verb, presence and absence of adverbials, and general context. For instance, without a context that would suggest a different reading, a “durative” verb in the present tense can only have the reading “TT AFTER TU, if this is indicated by a temporal adverbial which refers to the future; otherwise, it is interpreted as “TT INCLUDES TU”. Whatever the precise details of these conditions are¹⁰, it seems clear that the temporal relation between TT and TU in the German present is neither completely free nor completely fixed. We shall therefore describe this relation as “TT SHIFTABLE WRT TU”. The label “shiftable with respect to” does not directly describe a temporal relationship; it is a variable for possible relations such as AFTER, CONTAINS, BEFORE, and the value which it takes depends on a number of factors.

This now yields the following analysis of Perfekt and present perfect, respectively:

(2-01)	aspect component	tense component
Perfekt	TT AFTER TSit	TT CONTAINS TU
present perfect	TT AFTER TSit	TT SHIFTABLE WRT TU

The temporal meaning of Perfekt and present perfect only differs in the tense component. This naturally accounts for two of the differences noted in section 1. First, it easily explains the fact that the German Perfekt can have a “future reading”, as in *Morgen um zehn hat Peter London verlassen*. TT is not fixed to TU, it can be shifted into the future, and this is the case here. Second, since TT is not fixed to a particular position on the time line, we do not get the “position-definite effects” (Klein 1992) which make it usually odd to combine the present perfect with a temporal adverbial with pasttime reference, or to have two independent temporal adverbials with the past perfect. Thus, it is easily possible to say (in the same situation) *Yesterday at eleven, Peter had left London* and *Peter had left London yesterday at ten*, whereas it is distinctly odd to say in this situation *Yesterday at eleven, Peter had left London yesterday at ten*. The reason is simply that, if John’s leaving is claimed to have happened at ten, then any time afterwards is a posttime of his leaving London at ten; therefore, it is odd to confine TT to a

¹⁰For a detailed discussion of these conditions, see Ehrich 1992.

particular interval within this posttime. In this case, this specific TT is sorted out by the temporal adverbial *yesterday at eleven*. The (English) present tense has a similar function: it links TT to TU (though with vague boundaries), and confines the claim to a specific interval within the posttime; whence the oddity of *Yesterday at ten, Peter has left London* or *Peter has left London yesterday at ten*. In German, TT is shiftable with respect to TU, and therefore, we do not observe this effect.

But, as was noted in section 1.3, there are other differences, as well, and more generally, one would want to know whether the meanings assigned to Perfekt and present perfect, respectively, can account for the range of uses noted for these forms. This will be discussed in the next section.

3. Temporal meaning and range of uses

3.1 English

The five different usages of the present perfect noted by Anderson are (cf. section 1.2):

- (1-04) a "experiential": *Have you (ever) been to Japan?*
b "current relevance of anterior": *He has studied the whole book. (so he can help)*
c "new situation" ("hot news"): *The Etna has just erupted*
d "result-state": *He has gone. (or) He is gone. (is not here)*
e "continuous": *I have been standing here for three hours.*

How does the present analysis comply with these usages? Clearly, in all cases, the "event" itself, that is, TSit, precedes the time of utterance. Moreover, it is also intuitively clear that something is said about what is presently the case, that is, TT includes TSit (in contrast to, for example, *The Etna erupted in 1946*). Hence, all uses are compatible with the two-component analysis suggested in (2-01).

But what is responsible for the more or less salient differences between these five usages? They reflect various pragmatical constellations within the range of possibilities offered by the two temporal relations. In the "hot news" perfect, TSit immediately precedes TT, whereas in the "experiential perfect", it suffices that there is any TSit of the type indicated which precedes TT at some unspecified (and possibly remote) distance. The result-state perfect is typically observed for "two-state expressions" in the sense of section 1.4: the relevant subpart of the posttime - that part in which TT is understood to be located - is within the "target state"; in the example *he has gone*, this is the state at which he is away. The "current relevance of anterior"-reading is in a way comparable, except that here, the result state is not lexically specified: it is just the property which, according to world knowledge, the reader probably has after having studied the book. The "continuous"-use is somewhat special in that it here, the perfect marking operates on a compound participle itself (*been standing*). In this case, the relevant posttime is the time after a TSit of the type "be standing here for three hours"; note that this is not the posttime of "be standing here", i.e. after having been standing here for three hours, he may still be standing here

(in the fourth or even fifth hour).

This brief discussion should have shown two things. First, all readings are easily compatible with the uniform meaning which we assigned here to the present perfect: they simply reflect particular constellations within the possibilities defined by this meaning. And second, there is no clear borderline between these uses; we would not say, for example, that in the “hot news” use, there is no present relevance. Again, this should not come as a surprise; it simply reflects the fact that many pragmatical constellations are possible within the frame set by the uniform temporal meaning of the present perfect.

3.2 German

In principle, all five uses of the English are possible with the German Perfekt as well. But on closer inspection, there are some smaller caveats, and, more importantly, there are two clearly different additional uses - the “future use”, as in *Morgen um zehn hat Peter London verlassen* and the “simple past”-use, as in *Peter hat London gestern um zehn verlassen*. The “future use” was discussed in section 2.xxx and will not be resumed here. Instead, we shall go through the five uses and see, in each case, how it relates to the “simple past”-use.

(a) Experiential

The most natural translation of *Have you (ever) been to Japan* would be *Warst du (je) in Japan*. The Perfekt version *Bist du (je) in Japan gewesen* is possible, too, but less common (though there is probably some geographical variation here). This, however, is an idiosyncrasy of the copula that is hardly ever used in the Perfekt (cf. footnote xxx above). With a lexical verb, only the Perfekt is possible in this reading: *Hast du (je) Froschschenkel gegessen?* “Have you (ever) eaten frog legs?” is the only reasonable way to ask this question in German.

(b) Current relevance of anterior

Again, the normal way to express this would be the Perfekt:

(3-01) Jetzt habe ich das ganze Buch durchgearbeitet (und sollte in der Lage sein, die Prüfung zu bestehen).

In this context, the Präteritum would be odd. What the speaker wants to characterise is his or her present state, as the result of the preceding activity. This state is not made lexically explicit; it could well be that that working through the entire book has even lead to greater confusion.¹¹ If

¹¹ A nice example, which illustrates this point and the use of the Perfekt in general, is the beginning of Goethe’s “Faust”:

Habe nun, ach, Philosophie,
Juristerei und Medizin
Und leider auch Theologie
Durchaus studiert, mit heissem Bemühn.
Hier steh ich nun, ich armer Tor
Und bin so klug als wie zuvor.

“ I’ve studied now Philosophy/And Jurisprudence, Medicine,/ And even, alas! Theology/

the resulting state is made explicit, we have the “result perfect”, found in German as well as in English:

(3-02) Das Kind ist eingeschlafen (und schläft noch).

Here, too, the Präteritum would be odd in this function, that is, with the intended reading that the resulting state (child being asleep) obtains at TT. Note, however, that German also allows (3-02 a and b):

(3-03) a (Gestern abend war es unruhig) Das Kind ist eingeschlafen (, aber bald wieder aufgewacht).

b (Gestern abend war es unruhig.) Das Kind schlief ein (, wachte aber bald wieder auf).

In the case of (3-03), the Perfect of the verb *einschlafen* refers to a previous process and can be replaced by the Präteritum without any change of meaning. This use of the Perfect is responsible for the vast area of meaning where Präteritum and Perfect can be exchanged.

(d) Hot news

Again, the Perfekt is normal here. The normal way to express that the Pope has just died would be to say *Der Papst ist gestorben*. It would be distinctly odd to say *Der Papst starb* in this particular context.

(e) Continuous

This case is somewhat different. In contexts of this kind, German typically uses the Perfekt, but the pure present tense is often possible, too:

(3-03) a Ich habe hier (jetzt) drei Stunden lang gewartet.

b Ich warte hier (schon) drei Stunden lang.

It is hard to tell what precisely the difference is. Without the adverbial *schon* in b, the sentence can also mean that TSit, that is, waiting for three hours, is not over but extends into the future; it can even be entirely in the future. Sentence b, by contrast, does not have this reading; it indeed means that the speaker is in the time after such an interval; it can, however, have a future reading with a future adverbial, such as *In fünf Minuten habe ich hier drei Stunden gewartet, und dann gebe ich es auf* ‘in Five minutes from now, I will have been waiting here for three hours, and then, I will give up’. It may well be that German compensates the lack of a continuous form by the choice of specific adverbials, if particular nuances are to be conveyed. There is no doubt, however, that the Perfekt is possible here.

Summing up, it appears that the German Perfekt can have the same uses as the English present perfect, that there are occasionally alternatives that are not so easily available in English, as illustrated with the last example, and that all of these uses match the uniform meaning assigned to them by “TT SHIFTABLE WRT TU and TT AFTIER TSit”. This uniform meaning also accounts for the “future use”, it does not explain, though, the fact that Perfekt can often replace the

All through and through with ardour keen!/
Here now I stand, poor fool, and see/
I'm just as wise as formerly.” (translated by George Madison Priest)

Präteritum.

Before turning to this problem, it will be interesting to have a look at the use of the Perfekt but hardly possible in English. It concerns sentences of the following type:

(3-08) Wählbar ist, wer das fünfundzwanzigste Lebensjahr *vollendet hat*. (GRUNDGESETZ, article 38)

Eligible is everybody on attaining the age of twentyfive years.

In this case, the aspectual part of the entire meaning "TT AFTER TSit" is preserved: The eligibility is a state following a person's 25th birthday. But in this case, the statement is "timeless"; it is valid for past, present and future. This means, that TU does not necessarily follow TSit, although TT itself is after TT. But TT is not fixed to TU; it can be shifted in particular context, as for example this case. Alternatively, one might assume that TU itself can be "shifted". This is not implausible, either, in this particular case; after all, when is the "utterance time" of a legal text? Is it the time at which this text passed the legislation, or rather the time at which it is read or quoted by someone? We shall not follow up this difficult issue; in any case, sentences of this type are fully within the range of uses predicted by our Perfekt analysis.

4. The temporal meaning of Perfekt and of present perfect II

The only reading which our analysis seems unable to grasp is the "simple past"-use of the Perfekt. This is no marginal problem, though. In everyday language, this is apparently its dominant function of the Perfekt, and quite a few authors argue that the Präteritum, which competes with it in this role, has now become more or less a tense form of narrative texts, especially in literary fiction. This may be an exaggeration, but there is little doubt that in German, the Perfekt has assumed most of role which the simple past (and, incidentally, the past progressive, too, since there is no differentiation) plays in English.

A first idea would be to link this reading to the fact that TT is shiftable wrt TU. Hence, TT can also precede TU, and this might account for the "past-reading". This explanation would be on a par with the "future reading", as in *Morgen um zehn hat Peter London verlassen*. Unfortunately, this suggestive idea does not work, because the other temporal component, TT AFTER TSit, remains stable. This is fine in the case of the "future reading", where the shifted TT "tomorrow at ten" does not give the time of the leaving but a time at which this event is over. But when TT is shifted into the past, the resulting entire meaning would be "TU (shifted) AFTER TT AFTER TSit". This, however, is not what is intended with the "simple past"-reading of the Perfekt: A sentence such as *Gestern um zehn hat Peter London verlassen* or (*Peter hat London gestern um zehn verlassen*) means that the event itself is located at this time. Just like in English, the compound meaning "TU AFTER TT AFTER TSit" must be expressed by the pluperfect: *Gestern um zehn hatte er London verlassen* 'Yesterday at ten, he had left London'. So, we are in need of a different solution.

To this end, it will be helpful to have another look at the formal composition of the perfect: it consists of a present auxiliary and a past participle. The leading assumption was that the former contributes the tense component, and the latter the aspectual component, respectively. In a way, this is not very satisfactory, since there is also a nonfinite form of the perfect, the bare infinitive *geschlafen haben/to have slept*. It is this entire construction which contributes the "posttime" element to the entire meaning. This becomes immediately clear as soon as we embed it into a

larger construction:

(4-01) Peter seemed to sleep

(4-02) Peter seemed to have slept.

The time talked about is some interval which precedes TU (the time at which Peter gave that impression). In (4-01), this TT overlaps with TSit, i.e., Peter gives the impression of sleeping at that time. In (4-02), however, Peter gives (at TT!) the impression of being in the posttime of sleeping, whatever this impression may be based upon.

Hence, it is more perspicuous to look at the composition of the perfect in a slightly different way: it consists of a finite component (which we will abbreviate FIN) and a non-finite component (abbreviated INF). FIN is an abstract operator that can have different values; in particular, it can carry the value “present tense”; in this case, the only one considered here, we will write FIN_0 . INF consists of the (non-finite) auxiliary and the past participle. INF can occur in isolation, as in (401) above. But it can also be morphologically “fused” with FIN_0 , a process that results in the inflected present-tense form of the auxiliary. It turns, for example, FIN_0 and *geschlafen haben* into *hat geschlafen* (or *hast geschlafen*, *habe geschlafen*, depending on other factors not to be considered here).

FIN expresses the relation of TT to TU; in the particular case of FIN_0 , this is TT INCLUDES TU in English and TT SHIFTABLE WRT TU in German. This is as before, except that we now talk about an abstract operator rather than about the auxiliary itself. INF, by contrast, gives us the posttime of the situation itself, that is, all intervals which are after a TSit interval. If FIN and INF are morphologically fused, then this means that TT is such a posttime interval. Again, there is no fundamental difference to what has been assumed so far, except that we now assume that the nonfinite part of the auxiliary contributes to the definition of the posttime. The two temporal relationships as such are as before: “TT INCLUDES TU and TT AFTIER TSit” in the case of the present perfect, and “TT SHIFTABLE WRT TU and TT AFTIER TSit” in the case of the Perfekt. The former component is expressed by FIN_0 , and the latter component by INF, respectively. The posttime meaning of the latter is the joint contribution of the auxiliary and the past participle morphology. It is a difficult problem to determine the precise role which these two elements play in this process - is it the auxiliary or is it rather the participle marking which define the posttime, or do they interact in some way? This is a question which we will not follow up here. We will simply label their joint contribution by an operator POST. Thus, POST is the meaning of (nonfinite) auxiliary and participle marking (not the participle itself, which also contains the verb stem!), taken together.

Consider now again a full finite sentence such as *Peter hat London verlassen*. It consists of a finite component, FIN_0 , and a nonfinite component, $INF = [\text{Peter London verlassen haben}]$. The latter can in turn be decomposed in the posttime marking POST and the remaining part, i.e. $[\text{Peter London verlassen}]$. What does POST operate on? As for the formal side, this is quite clear: the verb stem *verlass* is turned into the past participle *verlassen* (which, in this particular case, happens to be identical to the present infinitive), and the auxiliary *haben* is connected to this participle; the result is the nonfinite Perfekt *verlassen haben*. But this does not necessarily mean that the semantic domain of application of POST - its semantic scope - is exactly the same. It is not necessarily the case, in fact, it is unlikely that POST only gives the posttime of whatever is expressed by the bare verb stem and not, for example, of what is expressed by other components of the VP and perhaps the entire INF. This is particularly clear in cases such as *Peter has lived in*

London for three years, where the posttime is really the time after “living in London for three years”, rather than the time after “living”. There are two likely candidates for what is semantically affected by POST - either the VP = [London verlassen] or even the entire nonfinite sentence S = [Peter London verlassen]. Hence, the two possible analyses of a simple perfect sentence are (4-03) and (4-04), respectively:

- (403) FIN₀ [NP POST-VP] FIN₀ [Peter POST-London verlassen]
 (404) FIN₀ POST-[NP VP] FIN₀ POST-[Peter London verlassen]

Intuitively, the first analysis means that for the TT, as defined by FIN₀, and for Peter, that he is in the posttime of leaving London; Peter has the ‘posttime properties’ of leaving London, whatever these are. The second analysis means that TT, as defined by FIN₀, is a posttime of Peter’s leaving London. In some cases, this simply amounts to the same, but there are others in which it makes a considerable difference.

Which analysis is correct? This may vary from language to language, depending on the way in which the semantic scope of scope-bearing elements functions in these languages. We assume that in English, POST always has VP-scope, whereas in German, both possibilities are available, i.e. POST-VP as well as or POST-[NP VP] (or POST-S, as we may alternatively say in the latter case).

If this is correct, then it naturally explains the ambiguity between the various “present perfect”-uses of the German Perfekt and its “simple past”-reading. Under the latter reading, the Perfekt only states that TT (in the default case some interval around TU) is a time span after some situation as described by the full sentence. Under the former reading, it says that the subject has a particular property at TT - a posttime property of whatever is described by the VP.

The second reading - the only one available in English - makes only sense, of course, if the subject exists at TT. Therefore, a sentence such as *The colossos has weighed 100 tons* (cf. ex. (1-05) above) is odd in English. In fact, it is odd for two reasons. First, the colossos of Rhodos does not exist at TT, i.e., right now. Hence, it cannot be right now in the posttime of weighing 100 tons. Second, weighing 100 tons is a permanent property of the colossos, and therefore, it does not make sense to speak of a “posttime property” in this case. By contrast, the German counterpart *Der Koloss von Rhodos hat 100 Tonnen gewogen* is perfectly normal. It simply states that right now (if TT is not shifted), the world, as it were, is after a time at which the colossos of Rhodos weighs 100 tons. And this is correct, if there is some time in the past at which the colossos of Rhodos has this weight.

There are two conclusions to be drawn. First, the analysis of Perfekt and present perfect proposed in (2-01) seems to correct to be correct. Both perfects consists of (a) a tense component, which is slightly different in the two cases - TT INCLUDES TU vs. TT SHIFTABLE WRT TU -, and (b) the aspectual component TT AFTER TSit. Second, this analysis is not sufficient, because it does not consider the exact way in which the various meaning components interact with each other in the finite sentence: The subject may but need not be included in the scope of those elements (nonfinite auxiliary and past participle marking) that jointly express the posttime, i.e., the aspectual component.

5 Concluding remarks

The analysis proposed is relatively straightforward. It gives a uniform temporal meaning to the two language-specific instantiations of the grammatical category “perfect”. This meaning consists of two strictly time-relational components. All that is needed are temporal relations between time spans; three such time spans are distinguished: TU, i.e., the time at which the sentence is uttered; TT, the time about which something is said; and finally TSit, the time at which the situation described by the sentence obtains. It appears that this elementary repertoire suffices to account for at least all typical uses of the Perfekt and the present perfect; it also accounts for the differences between them. We surely cannot claim, however, that all possible uses are indeed covered; as all tense forms, the perfect may have idiosyncratic functions that are not predictable from its general temporal meaning. This fact seems less of a challenge to us than the issue that has been raised at the end of the last section: how precisely are the various meaning components distributed over the entire finite sentence, and how do these interact with each other? These problems are much more complicated than has been indicated there; even a brief look at the interaction of temporal adverbials with the perfect (and tense forms in general) illustrates the point. But these problems are surely beyond the scope of this paper.

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