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Tense

Thore Pettersson

many mental representations are kinematic or dynamic; they take place in time, yet no one has much of an explanatory model of time itself. Models either make a direct use of time, or else they simulate it. We use or mimic time; we do not have an explanation of it; we merely work with it so well that we think we understand it.

P.N. Johnson-Laird 1983:10

Introduction

Practically all modern analyses of tense systems are ultimately based on Reichenbach 1947 and by that, at least indirectly, on Jespersen 1924. Although different models vary in certain details, they all refer to the Jespersen–Reichenbach time axis. The function of tense (and aspect for that matter) in discourse has frequently been characterized as giving information about the temporal and spatiotemporal relationship between discourse events as such, as well as between the speaker and the discourse (e.g. DeLancey 1982, Kamp & Rohrer 1983, Partee 1984, Comrie 1976, 1985, Cooper 1986, Dowty 1986, Hinrichs 1986). One can observe that in volumes such as Tedeschi & Zaenen 1981 or Hopper 1982 there is not one single paper that queries Reichenbach's time concept. Even cognitively oriented linguists who otherwise focus upon the parallel between language and spatial relations do adhere truly to Reichenbach's paradigm. The distinction between the "three natural and fundamental aspectual classes" proposed by Langacker 1982: 265, i.e. imperfective processes, perfective processes and states, are characterized in terms of duration and their trajectories are related to the time axis (cf. Gawrońska 1993:73f.). Evidently, Aristotle's idea concerning the nature of the verb category is very firmly rooted in contemporary linguistics, even among those representatives of the discipline who bear a reputation of utmost sophistication in philosophical matters.

Jespersen's model

Jespersen 1924, in spite of his otherwise unorthodox approach to classical grammar, has no objections to the Aristotelian postulate about the tenses of the verb. For Aristotle, the whole thing was a matter of classifying the main parts of speech–nouns and verbs. He proposed in his *De interpretatione* that the decisive feature for the division was the ability of verbs of signalling temporal relations: *rhēma dé esti tò prossēmaîon khrónon* – cf. Robins 1979:26. Although the Alexandrian grammarians later found other characteristics, such as mood and aspect for example, the time feature has remained so significant that it has never been questioned. Traditional denominations of the verb and the tense category such as German *Zeitwort* and Russian *время глагола* bear witness to Aristotle's influence.

As far as Jespersen is concerned, his criticism of Madvig's 1857 classification of the Latin tense system is of course correct. However, he does not for a moment consider the possibility of getting rid of the old Aristotelian leaven. On the contrary, Jespersen 1924:256f. explicitly claims that "there can be no doubt that we are obliged (by the essence of time itself, or at any rate by a necessity of our thinking) to figure to ourselves time as something having one dimension only, thus capable of being represented by one straight line", accordingly:

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————————————————————— O ————————————————————→
      A past              B present          C future
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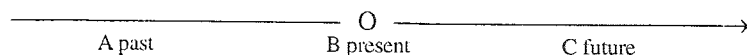
Given this scheme of the main notional times and corresponding grammatical tenses of natural languages (which do not necessarily have to occur morphologically or syntactically in every language), Jespersen inserts intermediate "times", Aa, Ab, Ac, Ca, Cb, Cc, indicating the relative value of a certain point in the past and in the future respectively. That is to say, the points Ab and Cb are oriented with regard to some point in the past and in the future exactly as the main times A and C are oriented with regard to the present. Aa is a notional before-past (grammatical ante-preterit) and so on.

Reichenbach's model

In Jespersen's model, there is no place for the perfect. This is just as it should be, because, says Jespersen, the perfect is nothing but a specific present tense, containing in addition to the purely temporal reference the element of result. "It is a present, but a permansive present: it represents the present state as the outcome of past events, and may therefore be called a

retrospective variety of the present" (Jespersen 1924:269).[1] Many later linguists follow Jespersen in this respect and talk about the perfect as a two-point present.

There is nothing sensational in Jespersen's claim, everything being well-known to the student of classical languages. As a matter of fact, Jespersen's interpretation of the perfect is the general opinion of contemporary grammarians as well. So Comrie 1976:56 defines the perfect accordingly: "a present state is referred to as being the result of some past situation" and Moens & Steedman 1988 state that "a perfect transforms an event into a consequent state". Similarly Lascarides & Asher 1993:456f. look upon the perfect as the consequent state of a certain event holding at a point in time preceding the point *now*.

Jespersen applies the three-point structure to the perfect (and the future perfect – Jespersen 1924:256). Reichenbach's innovation is that he extends this structure to all tenses. According to Reichenbach 1947:288 "the time indication given by the tenses is of a rather complex structure". Just to relate a certain verb token to the point of speech will not do, because it will only furnish us with three tenses and the number of tenses is "obviously" greater. It is, however, quite possible that Reichenbach is mistaken. The English tense system is far from as complex as was supposed by Reichenbach and his followers. Moreover, Reichenbach's model contains a number of inadequacies which makes it cumbersome for rational linguistic research:

a. The Reichenbach system, does not make a clearcut difference between tense and modality. There is, for example, no good explanation of the fact that tense forms express modality in conditional sentences:

(1) Had I only got money, had I left this bloody country

Reichenbach 1947:338, partly in opposition to Jespersen, conjectures that the difference between the English moods, the indicative, the subjunctive, and the conditional, could be described in terms of the pragmatic capacity of the categories. Thus the indicative expresses assertion in the Russellian sense (|–). The subjunctive (as in *if he were*) and the conditional, on the

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[1]The truth of the assertion that the perfect is a variety of the present and not of the past can, according to Jespersen, be seen from the fact that the adverb *now* can stand with it: *Now I have eaten enough*. My intuitions for English are not sufficiently good, but I assure that the corresponding Swedish adverb *nu* is compatible with both the perfect and the simple preterit. Thus I can say both *Nu har jag fått nog* (perfect) and *Nu fick jag nog* (preterit) 'Now I've got enough'. Both sentences are perfectly grammatical.

other hand, express "either absence of assertion or the assertion that the clause is false, i.e. the assertion of the negation of the clause". Accordingly, both predications in

(2) If he were your friend, he would have helped you

are negated. It is obvious that Reichenbach argues as a philosopher, not as a linguist. The interpretation that he is **not** your friend and that he did **not** help you follows by implicature. There is nothing in the tense forms as such that actually expresses the denial of the assertions in question ascribed to (2) by Reichenbach. The way Jespersen 1924:320 and 1931:114 handles the issue is much more to the point: he allows for a tripartition of notional moods: necessity, possibility, and nonpossibility. Otherwise mood is for Jespersen a syntactic category, not a notional one.

b. Certain constructions with modal auxiliaries are regarded as future tenses, while other equally efficient ways of expressing intended activities are regarded as "transcriptions". So for example, a construction such as *he would win* in

(3) I did not expect that he would win the race

is characterized as expressing the posterior past (R – E – S), whereas in

(4) I did not expect that he was going to win the race

we meet a "transcription", which nevertheless renders the same structure, i.e. R – E – S. In other words, the system cannot be used for deciding what is tense and what is not. The same criticism can of course be directed at Jespersen who speaks about temporal versus non-temporal uses of the tenses.

c. The model is difficult to use for computational interpretations of actual verbal phrases. Reichenbach gives *Now I shall go* the interpretation S,R – E, whereas *I shall go tomorrow* must be interpreted as S – R,E. The simple future, then, is capable of two interpretations. In spite of Reichenbach's own exploration the R point is often practically unpredictable. How should, for example, a sentence such as *Now, I shall go tomorrow* or *I shall go today* be interpreted? Moreover, and this is a serious defect, the model leads in a considerable number of cases to erroneous predictions, which Reichenbach either does not comment upon at all or gives ad hoc explanations for.

d. Reichenbach himself admits that his schemes do not always predict what he had expected. As an example he mentions *I saw him ten years ago* with the remark that German and French would use the present perfect here. His conclusion of this and other cases and his discussion of the historical origin of tenses in different languages runs as follows:

> The history of language shows that logical categories were not clearly seen in the beginnings of language but were the result of long developments; we therefore should not be astonished if actual language does not always fit the schema which we try to construct in symbolic logic. A mathematical language can be coordinated to actual language only in the sense of an approximation. (Reichenbach 1947:298)

No researcher should be content with a tool that can only be used for approximations. For some curious reason most linguists nevertheless are happy with such a state of affairs. They seem to be so fond of approximations that they actually feel horror at finding out how matters are in reality.

e. The postulation of two uses of R, the principle of the permanence of the reference point on the one hand and the more general rule of the positional use of the reference point on the other, is cumbersome. It turns out that many grammarians found it exceedingly difficult to decide what kind of animal the R point actually is. Indeed, Dahl 1985:133 is so confident in Reichenbach's R that he designates it the role of a common denominator for his cross-linguistic category PERFECT. Other researchers, on the other hand, run into difficulties. Lindstedt 1985 has to invent two different Rs to capture the Bulgarian past future perfect. Davidsen-Nielsen 1990:60, following Maegaard & al. 1981, adds a point B (i.e. basis time) for the corresponding tenses in English and Danish. Comrie 1985 attempts to revise Reichenbach's system in such a way that there is an unlimited set of reference points R_1, R_2, R_3, and so on. Thieroff 1992 redefines R so that it cannot be co-extensive with S and adds to the system a certain point O, to be read *Orientierungszeit*. Examples of this type are legion.

f. If you try to describe tense relations in terms of the time concept, you will not be able to explain the fact that one and the same phenomenon is expressed by different tenses in different languages and in the same language according to the situation. In English you use the simple past for expressing politeness: *Could you, please, pass me the salt?* In Swedish we would nor-

mally prefer the present: *Vill du räcka mig saltet?* [2] In English you use the present in questions of the type *Where do you come from?* In Russian, on the other hand, you will use what is conventionally characterized as the future: *Откуда вы будете?* [*Otkuda vy budete?*], lit. 'From where you will be?'.

g. The model is psycholinguistically and sociolinguistically implausible. It is used under the assumption that the time concept is a linguistic universal in spite of the fact that languages such as Indonesian certainly lack anything that could be held to be equivalent to tense markers. Indonesian so-called temporal adverbs like *akan, sudah, belum* etc. express nothing but a culture dependent modality. The standard answer given by unmarried people when asked about their family status is *saya belum kawin* 'I am not married yet'; ???*saya tidak kawin* 'I am not married' (without any reference to a future possibility of becoming married) sounds extremely odd.[3] Burmese is also a language which does not have tense in the traditional sense (cf. Omel´janovič 1971:89ff.).

Time is a culturally relative concept in other respects as well. We are used to counting hours, days, months, etc.; in the traditional Inuit society, on the other hand, you would count time in terms of sea-dogs. Consequently, the Inuit hunter says *two seals ago*, no matter whether the time indicated by the expression was three hours or two weeks. Nevertheless, linguists normally accept the primitive time concept (as represented by Jespersen and Reichenbach, i.e. as a straight line) as linguistically relevant. Most linguists do not take a stand on the question at all. However, one can find assertions like the following in the literature: "Such a conceptualization of time must be assumed to be shared by all human beings" (Davidsen-Nielsen 1990:54). It is quite possible that Davidsen-Nielsen is mistaken – see Lakoff & Johnson 1980 for an alternative way of considering the concept in question. Compare also the motto of this paper.

How complex are tense systems?

Consider the examples of Bulgarian simple and compound tenses (Table 1), compiled from the Academy Grammar of Bulgarian (Stojanov 1983) and Beaulieux 1933. As indicated in the comments one could extend the system

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[2] The exact Swedish equivalent *Kunde du räcka mig saltet?* would in a neutral situation sound hostile.
[3] Thanks to Barbara Gawrońska for providing me with the Indonesian example.

Table 1. Bulgarian simple and compound tenses.

пиша [piša]	'I write, I'm writing' (present–impf.)
напиша [napiša]	'I write' (present–pf., gnomic)
ще пиша [šte piša]	'I'll write, I'll be writing' (future–impf.)
ще напиша [šte napiša]	'I'll write' (future–pf.)
писвам [pisvam]	'I readily write' (hypothetical future)
писах [pisax]	'I wrote' (aorist–impf.)
написах [napisax]	'I wrote' (aorist–pf.)
пишех [pišex]	'I wrote' (imperfect–impf.)
писал бях [pisal bjax]	'I had written' (pluperfect)
писал съм [pisal săm]	'I may have written' (perfect)
писал съм бил [pisal săm bil]	'it's said that I've written' (pluperfect II)
пишел съм [pišel săm]	'it's said that I wrote' (imperfect II)
бих писал [bix pisal]	'I would write' (conditional present)
щях да пиша [štjax da piša]	'I would have written' (conditional preterit)
щял съм да пиша [štjal săm da piša]	'it's said that I would write' (conditional present II)
щял съм бил да пиша [štjal săm bil da piša]	'it's said that I would have had written' (conditional preterit II)

All forms can principally also be used with the prefix на- [*na*-], which will give the forms the perfective aspect. The copula съм [*săm*–impf.] can be replaced by its perfective equivalent бъда [*băda*]. The particles *ще* and *да* can be combined: *ще да напиша* [*šte da napiša*] 'I will probably write'.

much more. The reason why I have not made the list longer is simply a matter of aesthetics: I wanted the table to fit on to one printed page.

It should be evident that this way of presenting a morphosyntactic system of verbal forms and collocations of verbal expressions is not efficient. First of all, one would like a description to be realistic, i.e. it must be construed in such a way that it is psychologically and neurologically plausible: it must be compatible with what we can assume a human brain can handle. A paradigm like that in Table 1 is obviously not plausible from a neurological point of view (cf. Pettersson 1983). Even if we disregard this aspect, it is pedagogically awkward. No living being, human or not, will be able to learn a language by studying such a paradigm. It is furthermore highly unattractive for economical reasons. A researcher who believes in neither neurology nor pedagogy would nevertheless be obliged to use Occam's razor.

As far as Bulgarian is concerned, Lindstedt 1985 presented a description that is aesthetically and logically exceedingly superior to the one of Table 1.

It is, however, no less complex. As a matter of fact, it is even more complex than the ones of Beaulieux and Stojanov. The reason is, primarily, that Lindstedt has fallen in Reichenbach's trap and in addition has swallowed Dahl's idea of the boundedness of the action as the defining feature for the aspect category. In my opinion, both approaches are entirely wrong and can do nothing but add to the redundancy of tense/aspect descriptions.

There is of course nothing wrong in trying to factorize the features that make up a tense/aspect system. So far Lindstedt is fully right and many people both before and after him have tried to do the same thing. On the other hand, it is not the task of a philosopher to teach the linguist how to do linguistics. The philosopher's obligation – if he is interested in linguistics at all – is to advice methods for efficient linguistic research. Both Reichenbach and Vendler are, to all appearances (I'm no philosopher myself), excellent philosophers. As far as linguistics is concerned, however, they are dilettanti. Therefore, let us try to define the three main components, typically intermingled in verbal systems all over the world, from a strictly linguistic point of view tentatively in this way:

tense   =   the distinction between the spatially present (the actu-
              ally or virtually observable) and the non-present
aspect   =   the distinction between the constant (the unique, the to-
              tal) and the non-constant
mood   =   the distinction between the factual (the true) and the
              imaginable or possible[4]

The compositionality of grammatical markers

The Bulgarian tense/aspect system provides us with constructions composed of affixes, particles and auxiliaries. How these different elements collaborate to form verbal complexes of the most intriguing richness is beautifully demonstrated by Lindstedt 1985. I intend to return to complicated systems of the Bulgarian type in another context, but the rest of this paper will be devoted to less complicated systems, exemplified mainly with English and Swedish.

Let us as a first step consider the nature of the English auxiliaries. In order to be able to compare, say, an Italian verb form such as *canterebbero* (3 ps.pl. conditional of *cantare* 'sing' – Matthews' 1970:108 example) with

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[4] The definitions were originally formulated on behalf of a lecture I held some ten years ago at Lund University. The formulations have been changed here for **tense** (to agree with what will be proposed in this paper) and for **aspect** (which is a concentrate of Gawrońska 1993:167ff.). The definition of **mood** differs marginally from the original one.

its English equivalent [*if*] *they would sing* one has to make it credible that at least the auxiliary *would* behaves functionally not very differently from the Italian ending *-erebbero*. In other words, the auxiliary should be semantically fully equivalent to a grammatical ending. Davidsen-Nielsen 1990:22, referring to a proposal of Spang-Hanssen 1983, enumerates the following four criteria for deciding whether auxiliaries could be held to fulfill the requirements in question (more criteria can be found in Spang-Hanssen's original paper):

(i)   The meaning of an auxiliary is general and abstract. Apart from se-
       mantically empty words – like English *do* – its content is analysable
       in terms of temporal, aspectual, modal, or diathetic values.
(ii)   An auxiliary is functionally dependent in the sense that it is impos-
       sible to modify it without simultaneously modifying the lexical verb
       it combines with. In other words, Aux + V can only be modified
       globally.
(iii) The addition of an auxiliary does not affect the lexical restrictions
       of the verb it combines with.
(iv)   An auxiliary is attached to a lexical verb without any intervening
       infinitive marker, i.e. it governs a bare infinitive or a participle.[5]

The criteria are important, since they no doubt are very similar to characteristics of verbal inflections. Hence, English *would* could be supposed to be grammatically equivalent to one or more of the exponents of the Italian ending *-erebbero*. Although I am not fully convinced that auxiliaries and endings can be equalled so easily, I will accept the argument for the sake of discussion. However, irrespective of how morphologically and/or syntactically complex verbal constructions may be described, there is

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[5] Observe that according to this criterion the Swedish auxiliary *kommer* as in *Jag kommer nog aldrig att bli färdig med den här artikeln* 'It looks like I never will finish this paper' is no auxiliary proper. It is, however, possible that the *kommer att* is on its way to become a real auxiliary. The following letter to the press was published in a Swedish newspaper in March 1994, where the author complains that certain people in television programs delete the infinitive marker (I refrain from a translation–after all, this is nothing but a footnote):

> Offentligt önskar jag "hänga" en viss klick personer, främst inom TV Nordic, TV 3 och i viss mån TVZ som slarvar förskräckligt med vårt svenska språk vad gäller uttrycket "kommer att". Så här kan det låta i en reklamsnutt med textremsa eller i en filmöversättning: –Han kommer åka till Stockholm i morgon. – Jasä, men det kommer jag strunta i. – Hoppas det kommer bli oväder. – Men de har sagt det kommer bli sol... Man utelämnar helt enkelt detta viktiga "att". Ett sätt att försöka förnya språket kanske, men ack så vedervärdigt att räka ut för! Vill ej utnämna mig till något slags språkexpert men just detta sätt att ändra på ord så att allt blir fel gör mig förtvivlad och jag hoppas att detta språkbruk ej kommer att slå igenom för gott!
> **Gertrud**

no point in a description if it is not based on an attempt to determine the semantics of the constituting elements, the figurae as Hjelmslev 1943:37ff. called them. That is to say, Matthews' observation that the exponents of morphologically complex forms overlap is no final answer to the nature of morphology. It could very well be the case that his features are not the figurae but rather labels for properties, derivable from the figurae. The same thing with syntactically complex constructions.

A new approach to the tense category

It follows that we should, at first hand, try to determine the semantics of the atomic elements, building up a complex construction, no matter whether the construction as such is composed by suffixes/endings or segmentally free elements.

The first step will be to exactly settle the main division between tenses. For English and Swedish the distinction is without the slightest doubt that between the present and the preterit. But it should not be determined in the traditional way, in temporal terms, as a distinction between a point *now* and a point *then*. Rather, the distinction is intrinsically of a spatial nature. The present should therefore be understood as meaning 'in this room' and the preterit as indicating 'in another room'. The distinction made in this way is favourable in many respects:

a. It makes Reichenbach's R point superfluous.
b. It disproves the conception of time as a straight line. Even if Comrie 1985:5 is right when he asserts that cyclicity is the defining feature of the cognitive time conception of human beings, it will not force us to superimpose the cyclicity as such upon a linear conceptualisation of time.
c. It removes the future from tense systems. The future will simply be a kind of mood according to the definition above, a view which is compatible with, for example, Lyons 1977:816.
d. It is in accordance with the cognitivist approach to time. Time as a concept is ultimately anchored in spatial notions and is universally represented in spatial metaphors (cf. Lakoff & Johnson 1980).
e. It explains why three-year-old children master tense expressions without having any conception of the time dimension. For example, they do not know the semantics of words such as *yesterday* or *to-morrow*, and yet they use the tenses almost impeccably.

The reason why it has been so hard to detect that the tenses of the verb have nothing to do with time is obvious. We learn verbal systems very early in life. Calenders, clocks and other instruments for measuring time, on the other hand, we are taught to make full use of several years later. That we use tenses or tense expressions we will be informed about first at school. When you as a linguist study verbal systems, you will never suspect that Aristotle's fallacy could pass unnoticed for more than two millenia. You are so indoctrinated that you simply take it as God's truth.

There are other factors that stand in the way of our eyes as well. Although we are all well aware of the close connection between the time and space concepts, there are words that have an exclusive temporal reference as opposed to their spatial counterparts: adverbs such as *now* and *then* versus *here* and *there*, conjunctions like *when* and *where*, etc. On the other hand, local prepositions are also used indiscriminately to signify temporal relations – *in London*, *in September*. Moreover, most languages – at least the European ones – are full of spatial metaphors for temporal relations. Suffice it to mention expressions like *space of time* (Sw. *tidsrymd*, Ger. *Zeitraum*, Fr. *espace de temps*) or *take place* (Sw. *äga rum*, lit. 'own room', Ger. *stattfinden*, Fr. *avoir lieu*, Ru. *иметь место* [imet´ mesto], lit. 'have place'). One of the most popular metaphors for time is actually that of a container. Time is a room filled with events and situations.

Last but not least, the very term *presence* is indeterminate in its spatial and temporal connotations. Nevertheless, if you are present under certain circumstances, you are present primarily in the spatial, not the temporal sense.

The present is what is **here**. Consequently, sentences such as

(5a) I love you
(6a) I loved you

should be interpreted as (5b) and (6b) respectively:

(5b) 'I feel a warm affection for you in this room/at this place'
(6b) 'I feel a warm affection for you in another room/at another place'

Observe that the interpretation (6b) is absolutely neutral between the past and the conditional readings. This explains why a word-form such as English *would* cannot but take the conditional reading. The semantics of the very verb *will* precludes the preterit form from being interpreted as referring to the past.

The figurae

The reinterpretation of the main division within the tense category shall for no means be taken to be universal. Indonesian and Burmese were mentioned earlier as examples of languages that do not possess verbal expressions for neither the notion 'in this room' nor that of 'in another room'. Following a proposal made by Barbara Gawrońska (personal communication), I will claim that even languages such as Russian, Czech and Polish lack tenses in the above sketched sense; the outcome of the distinction is at least quite different from that of English and Swedish. More about the Russian tenses follows below in connection with the treatment of the so-called past participle.

Now to the complex tenses, the perfect and the pluperfect. According to the definition of tense above, the future, it should be remembered, is no tense but a mood and thus subject for quite another study. The two additional tense constructions are composed from the present and preterit forms of the verb *have* (Swedish *ha*) + an uninflected participle. To get a grip of the English and the Swedish tense systems in all their detail, we have to determine the semantics of the auxiliary on the one hand, and the value or function of the participle on the other.[6]

Have

Benveniste 1966: section 15 gives ample evidence that the evolution of auxiliary *have* and possessive *have* should be thought of in parallel fashion. There is much to indicate that the common origin and the common evolution of *have* is still reflected in its two main uses. In other words, *have* is lexically indeterminate as to its functions as main verb or auxiliary. There is no intrinsic difference between, say, *I have money* or *I have slept*. In both cases I predicate about myself that I'm in the possession of a property. It follows that we could define the semantics of *have* as indicating presence related to a possessor.[7] The difference between *have* and *be*, another verb in many languages used as a tense auxiliary, is that *be* lacks the possessor component. *Have* expresses inherent presence, whereas *be* expresses unmarked presence. For reasons I do not understand and that will be subject for fur-

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[6] I deliberately disregard the English progressive in this context. After all, the progressive is no tense either but rather an Aktionsart, as has been demonstrated convincingly by Gawrońska 1993:175.

[7] A generally accepted opinion tells us that the original meaning of at least Germanic *have* was 'hold in one's hand'. If this was so, it is quite clear why *have* could take on tense auxiliary function.

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ther study, no other verbs indicating presence or existence seem to be able to take the function of tense auxiliaries.

The participle

It has long been observed that participles differ from adjectives in that the ordinary adjective typically indicates that the referent of the grammatical subject is in a particular state, whereas the participle signals that the referent has at some time been in a different state. Langendoen 1970:76 demonstrates the difference with these examples:

(7a) The soup is hot
(8a) The soup is heated

However, there are more differences between ordinary adjectives and participles than those Langendoen hinted at. If you utter (7a) you simply make an assertion of the present state of the soup. Uttering (8a), on the other hand, you will indicate a quality of the soup that is irretrievably inherent to the soup. As far as the heated soup exists, it will remain heated, no matter what changes otherwise occur with respect to its state. It is interesting to notice that this difference, inherent quality versus momentary or accidental quality, is grammaticalized in Russian. To express an inherent quality Russian uses the short form of the adjective (and participles are morphological adjectives), whereas the accidental quality is rendered by the long form. Consequently, (7a) and (8a) will be translated into Russian as (7b) and (8b) respectively:

(7b) Суп горящий [sup gorjaščij – long form][8]
(8b) Суп подогрет [sup podogret – short form]

Let us now hypothesize that this very characteristic of participles is the decisive feature making up the function of the participle as a constituting element of a complex tense construction. That is to say, a participle will express a property ascribed to the referent of the theme (normally the grammatical subject) as constant and irretrievable. Thus the perfect and pluperfect equivalents to (5) above, viz.

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[8] *Суп горящ* [sup gorjašč – short form] would normally be impossible for pragmatic reasons. However, if you have in mind a spelled soup, irretrievably hot, the sentence is grammatical.

(9a) I have loved you
(10a) I had loved you

should be allotted the following interpretations:

(9b) A warm affection for you characterizes me as an irretrievable fact in
this room (nothing is said about the fact whether I still love you or
not, but by implicature the sentence gets the default interpretation 'I
don't love you anymore')
(10b) A warm affection for you characterizes me as an irretrievable fact in
another room, i.e. I don't love you

One reminder should be made with respect to the above interpretations.
They are construed on the basis of my competence as a native Swedish spea-
ker. When speaking English I transfer my Swedish habits to the English
tense system with some few amendments according to what I've learnt from
school grammars in English, and this tactic works extraordinarily well. I
will very seldom, though not to say never, make a mistake. However, from
the fact that I have an almost perfect command of the English tenses does
not follow that the figurae of English and Swedish are identical. There are
at least two differences between English and Swedish that should be kept in
mind and that possibly could lead to revisions of my tentative inter-
pretations above.

The English auxiliary, as opposed to the Swedish one, appears, in collo-
quial speech, almost without exception as an ending amalgated to the subject
NP (*Henry's left his umbrella at home*; *I'd killed you, if I'd had a weapon at
hand*). If this peculiarity is of relevance for the interpretation of the whole
tense complex is hard to tell, but the possibility should not be excluded.

The preterit form and the participle in English are morphologically
identical in a considerable number of cases, even if they belong to the so-
called strong or irregular verbs. Not so in Swedish. Here the preterit form
is always morphologically distinct from the corresponding participle. More-
over, the specific participle form (called *supinum*) used in complex tense
constructions is, in turn, very often morphologically distinct from the cor-
responding attributive or predicative participle (cf. *Jag har skrivit* (su-
pinum) *ett brev/en artikel* 'I've written a letter/a paper' vs. *Brevet är skri-
vet* (participle) 'The letter is written' or *Artikeln är skriven* (participle)
'The paper is written').

Such circumstances should not be neglected when we are trying to deter-
mine the atomic values of the constructions we are interested in. So rather

than claiming that the interpretations (5, 6b; 9, 10b) above actually and in
every respect agree with what the corresponding English sentences in a neu-
tral situation would express, I will venture to say that they are in accord-
ance with the meaning of the Swedish counterparts

(11a) Jag älskar dig
(11b) Jag älskade dig
(11c) Jag har älskat dig
(11d) Jag hade älskat dig

Conclusions

The Russian equivalent to (6a, 9a, 11b, 11c), in fact the three initial words
of one of Pushkin's most euphonious poems, is

(12) *Я вас любил* [Ja vas ljubil]

Russian is peculiar among the Indoeuropean languages in so far as it has
no possibility of forming complex tenses, neither with the aid of suffixes,
nor with auxiliaries (a trait shared with at least Polish). There is one present
tense and one preterit, the latter in fact a participle declined for gender and
number but not for person. I am no native speaker of Russian, but I have
studied the peculiarities of Russian grammar more intensively than I have
with regard to any other language. Therefore it could be advisable to take
my proposal seriously. I conjecture that the value of the Russian preterit
participle is semantically identical to that of the Swedish supine form. Con-
sequently, the very form *любил* conveys the information that my affection
for you is an irretrievable fact characterizing me; nothing in the form as
such tells us if the state remains or not. By implicature, however, the very
fact that Pushkin did not use the present form *люблю*, which is the explicit
expression for the notion 'in this room', indicates that Pushkin's words
should be taken to mean: I don't love you any more. But there is, in opposi-
tion to Swedish (and possibly English), nothing in the Russian preterit form
per se that indicates that my love is located in this or another room.

The difference may seem futile. Nevertheless, it reveals a fact about the
structure of specific languages that has elapsed the adherents of the Prin-
ciples-and-Parameters theory. When all facts about languages of the world,
universally and specifically, have been taken into full account, we have to
face the disturbing fact that, although individual languages now and then are
structurally similar, the number of parameters by necessity must be innu-

merable. Thus, if there is a universal grammar, its properties must be established in quite another way than has been done hitherto.

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Appending X-bar Grammar (AXG) for Syllables

Bengt Sigurd

Introduction and background

Syllable structure, consonant clusters and word phonotactics have been studied in many languages, particularly during the heyday of structural linguistics. The phonotactic structure of Swedish monosyllables and words is analyzed in great detail in Sigurd 1965, a book which constitutes the background of this paper. A great number of regularities and constraints are noted and formulated there and many of these have been utilized in the rules presented in this paper. One of the main observations is that consonants occur in a certain order in the clusters and can be said to show a varying tendency to occur close to the vowel (sonority, Jespersen 1897; vowel adherence, Sigurd 1955). Thus, when *r* and *l* are combined (only finally in *-rl)*, *r* has the greatest vowel adherence as it must occur closest to the vowel. When *l* and *k* occur, *l* must occur close to the vowel, which is witnessed finally in *-lk* and initially in *kl-*.

The order constraints may be expressed by a partial rank order between the consonants involved, e.g.

r < l < j, v < m < n < b, p, g, k, f < d, t < s

There is an ongoing discussion about the universality of such an ordering and other combinatory phonotactic restrictions (see Basbøll 1977, Clements 1990). It is possible to formulate very general rules based on features, e.g. the rule that a voiceless consonant must always occur outside a voiced consonant, a stop must always occur outside liquids and nasals, if two consonants of the same type combine finally (in Swedish) the dental must always occur last *(-rl, -mn, -gd, -pt, -kt. -fs)*. Some of these generalizations will be utilized in the rules presented below. The other main observation to be made is that certain consonants combine, others do not, although their order follows the sonority scale. Thus *t* and *d* have clearly less sonority