
The Tenses of Verbs

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A particularly important form of token-reflexive symbol is found in the tenses of verbs. The tenses determine time with reference to the time point of the act of speech, i.e., of the token uttered. A closer analysis reveals that the time indication given by the tenses is of a rather complex structure.

Let us call the time point of the token the *point of speech*. Then the three indications, 'before the point of speech', 'simultaneous with the point of speech', and 'after the point of speech', furnish only three tenses; since the number of verb tenses is obviously greater, we need a more complex interpretation. From a sentence like 'Peter had gone' we see that the time order expressed in the tense does not concern one event, but two events, whose positions are determined with respect to the point of speech. We shall call these time points the *point of the event* and the *point of reference*. In the example the point of the event is the time when Peter went; the point of reference is a time between this point and the point of speech. In an individual sentence like the one given it is not clear which time point is used as the point of reference. This determination is rather given by the context of speech. In a story, for instance, the series of events recounted determines the point of reference which in this case is in the past, seen from the point of speech; some individual events lying outside this point are then referred, not directly to the point of speech, but to this point of reference determined by the story. The following example, taken from W. Somerset Maugham's *Of Human Bondage*, may make these time relations clear:

But Philip ceased to think of her a moment after he had settled down in his carriage. He thought only of the future. He had written to Mrs. Otter, the *massière* to whom Hayward had given him an introduction, and had in his pocket an invitation to tea on the following day.

The series of events recounted here in the simple past determine the point of reference as lying before the point of speech. Some individual events, like the settling down in the carriage, the writing of the letter, and the giving of the introduction, precede the point of reference and are therefore related in the past perfect.

Another illustration for these time relations may be given by a historical narrative, a quotation from Macaulay:

In 1678 the whole face of things had changed . . . eighteen years of misgovernment had made the . . . majority desirous to obtain security for their liberties at any risk. The fury of their returning loyalty had spent itself in its first outbreak. In a very few months they had hanged and half-hanged, quartered and emboweled, enough to satisfy them. The Roundhead party seemed to be not merely overcome, but too much broken and scattered ever to rally again. Then commenced the reflux of public opinion. The nation began to find out to what a man it had intrusted without conditions all its dearest interests, on what a man it had lavished all its fondest affection.

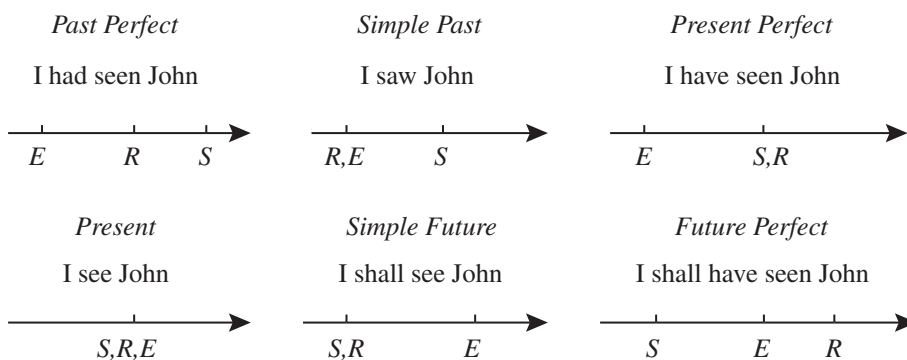
The point of reference is here the year 1678. Events of this year are related in the simple past, such as the commencing of the reflux of public opinion, and the beginning of the discovery concerning the character of the king. The events preceding this time point are given in the past perfect, such as the change in the face of things, the outbreaks of cruelty, the nation's trust in the king.

In some tenses, two of the three points are simultaneous. Thus, in the simple past, the point of the event and the point of reference are simultaneous, and both are before the point of speech; the use of the simple past in the above quotation shows this clearly. This distinguishes the simple past from the present perfect. In the statement 'I have seen Charles' the event is also before the point of speech, but it is referred to a point simultaneous with the point of speech; i.e., the points of speech and reference coincide. This meaning of the present perfect may be illustrated by the following quotation from Keats:

Much have I traveled in the realms of gold,
And many goodly states and kingdoms seen;
Round many western islands have I been
Which bards in fealty to Apollo hold.

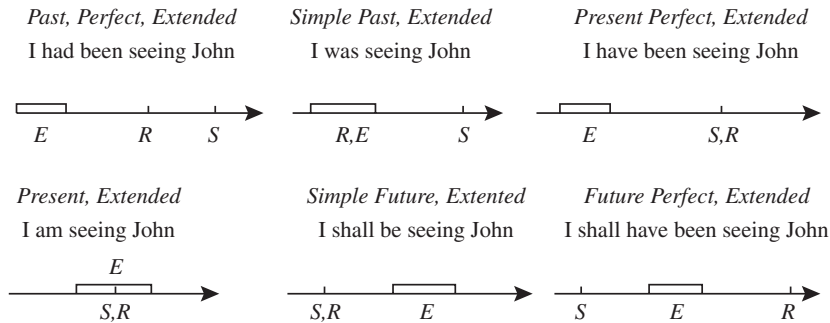
Comparing this with the above quotations we notice that here obviously the past events are seen, not from a reference point situated also in the past, but from a point of reference which coincides with the point of speech. This is the reason that the words of Keats are not of a narrative type but affect us with the immediacy of a direct report to the reader. We see that we need three time points even for the distinction of tenses which, in a superficial consideration, seem to concern only two time points. The difficulties which grammar books have in explaining the meanings of the different tenses originate from the fact that they do not recognize the three-place structure of the time determination given in the tenses.¹

We thus come to the following tables, in which the initials 'E', 'R', and 'S' stand, respectively, for 'point of the event', 'point of reference', and 'point of speech', and in which the direction of time is represented as the direction of the line from left to right:



¹ In J. O. H. Jespersen's excellent analysis of grammar. (*The Philosophy of Grammar*, H. Holt, New York, 1924) I find the three-point structure indicated for such tenses as the past perfect and the future perfect (p. 256), but not applied to the interpretation of the other tenses. This explains the difficulties which even Jespersen has in distinguishing the present perfect from the simple past (p. 269). He sees correctly the close connection between the present tense and the present perfect, recognizable in such sentences as 'now I have eaten enough'. But he gives a rather-vague definition of the present perfect and calls it 'a retrospective variety of the present'.

In some tenses, an additional indication is given concerning the time extension of the event. The English language uses the present participle to indicate that the event covers a certain stretch of time. We thus arrive at the following tables:

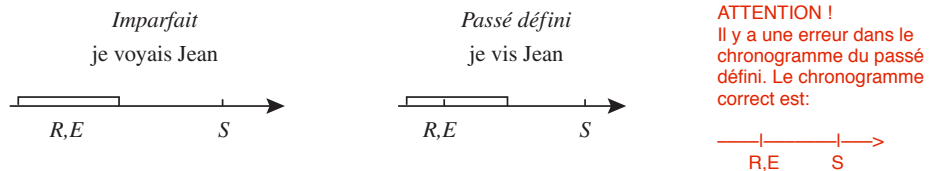


The extended tenses are sometimes used to indicate, not duration of the event, but repetition. Thus we say ‘women are wearing larger hats this year’ and mean that this is true for a great many instances. Whereas English expresses the extended tense by the use of the present participle, other languages have developed special suffixes for this tense. Thus the Turkish language possesses a tense of this kind, called *muzari*, which indicates repetition or duration, with the emphasis on repetition, including past and future cases. This tense is represented by the diagram



An example of this tense is the Turkish word ‘görürüm’, translatable as ‘I usually see’. The syllable ‘gör’ is the root meaning ‘see’, ‘ür’ is the suffix expressing the muzari, and the ‘üm’ is the suffix expressing the first person ‘I’.² The sentence ‘I see’ would be in Turkish ‘görüyorum’; the only difference from the preceding example is given by the inflection ‘üyor’ in the middle of the word, expressing the present tense. The Greek language uses the *aojist* to express repetition or customary occurrence in the present tense. The aorist, however, is originally a nonextended past tense, and has assumed the second usage by a shift of meaning; in the sense of the extended tense it is called *gnomic aorist*.³

German and French do not possess extended tenses, but express such meanings by special words, such as the equivalents of ‘always’, ‘habitually’, and so on. An exception is the French simple past. The French language possesses here two different tenses, the *imparfait* and the *passé défini*. They differ in so far as the *imparfait* is an extended tense, whereas the *passé défini* is not. Thus we have



² Turkish vowels with two dots are pronounced like the German vowels ‘ö’ and ‘ü’.

³ This shift of meaning is explainable as follows: One typical case of the past is stated, and to the listener is left the inductive inference that under similar conditions the same will be repeated in the future. A similar shift of meaning is given in the English ‘Faint heart never won fair lady’. Cf. W. W. Goodwin, *Greek Grammar*, Ginn, Boston, 1930, p. 275.

We find the same distinction in Greek, the Greek imperfect corresponding to the French imparfait, and the Greek aorist, in its original meaning as a past tense, corresponding to the French passé défini. Languages which do not have a passé défini sometimes use another tense in this meaning; thus Latin uses the present perfect in this sense (historical perfect).

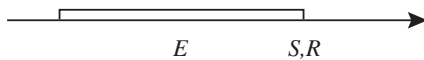
We may add here the remark that the adjective is of the same logical nature as the present participle of a verb. It indicates an extended tense. If we put the word 'hungry', for instance, in the place of the word 'seeing' in our tables of extended tenses, we obtain the same extended tenses. A slight difference in the usage is that adjectives are preferred if the duration of the event is long; therefore adjectives can often be interpreted as describing permanent properties of things. The transition to the extended tense, and from there to the permanent tense, is seen in the examples 'he produces', 'he is producing', 'he is productive'.

When we wish to express, not repetition or duration, but validity at all times, we use the present tense. Thus we say 'two' times two is four'. There the present tense expressed in the copula 'is' indicates that the time argument is used as a free variable; i.e., the sentence has the meaning 'two times two is four at any time'. This usage represents a second temporal function of the present tense.

Actual language does not always keep to the schemas given in our tables. Thus the English language uses sometimes the simple past where our schema would demand the present perfect. The English present perfect is often used in the sense of the corresponding extended tense, with the additional qualification that the duration of the event reaches up to the point of speech. Thus we have here the schema

English Present Perfect, Second Usage

I have seen him



In the sense of this schema we say, for instance, 'I have known him for ten years'. If duration of the event is not meant, the English language then uses the simple past instead of the present perfect, as in 'I saw him ten years ago'. German and French would use the present perfect here.

When several sentences are combined to form a compound sentence, the tenses of the various clauses are adjusted to one another by certain rules which the grammarians call the *sequence of tenses*. We can interpret these rules as the principle that, although the events referred to in the clauses may occupy different time points, the reference point should be the same for all clauses—a principle which, we shall say, demands *the permanence of the reference point*. Thus, the tenses of the sentence, 'I had mailed the letter when John came and told me the news', may be diagrammed as follows:

- (1) 1st clause: $E_1—R_1$ — S
 2nd clause: $R_2, E_2—S$
 3rd clause: $R_3, E_3—S$

Here the three reference points coincide. It would be incorrect to say, 'I had mailed the letter when John has come'; in such a combination the reference point would have been changed. As another example, consider the compound sentence, 'I have not

decided which train I shall take'. That this sentence satisfies the rule of the permanence of the reference point is seen from the following diagram:

- (2) 1st clause: $E_1—S, R_1$
 2nd clause: $S, R_2—E_2$

Here it would be incorrect to say: 'I did not decide which train I shall take'.

When the reference point is in the past, but the event coincides with the point of speech, a tense $R—S, E$ is required. In this sense, the form 'he would do' is used, which can be regarded as derived from the simple future 'he will do' by a back-shift of the two points R and E . We say, for instance, 'I did not know that you would be here'; this sentence represents the diagram:

- (3) 1st clause: $R_1, E_1—S$
 2nd clause: $R_2 —S, E_2$

The form 'I did not know that you were here' has a somewhat different meaning; it is used correctly only if the event of the man's being here extends to include the past time for which the 'I did not know' is stated, i.e., if the man was already here when I did not know it. Incidentally, in these sentences the forms 'would be' and 'were' do not have a modal function expressing irreality; i.e., they do not represent a conditional or a subjunctive, since the event referred to is not questioned. The nonmodal function is illustrated by the sentence 'I did not know that he was here', for which the form 'that he were here' appears incorrect.

When a time determination is added, such as is given by words like 'now' or 'yesterday', or by a nonreflexive symbol like 'November 7, 1944', it is referred, not to the event, but to the reference point of the sentence. We say, 'I met him yesterday'; that the word 'yesterday' refers here to the event obtains only because the points of reference and of event coincide. When we say, 'I had met him yesterday', what was yesterday is the reference point, and the meeting may have occurred the day before yesterday. We shall speak, therefore, of the *positional use of the reference point*; the reference point is used here as the carrier of the time position. Such usage, at least, is followed by the English language. Similarly, when time points are compared by means of words like 'when', 'before', or 'after', it is the reference points to which the comparison refers directly, not the events. Thus in the above example (1) the time points stated as identical by the word 'when' are the reference points of the three clauses, whereas the event of the first clause precedes that of the second and the third. Or consider the sentence, 'How unfortunate! Now that John tells me this I have mailed the letter'. The time stated here as identical with the time of John's telling the news is not the mailing of the letter but the reference point of the second clause, which is identical with the point of speech; and we have here the schema:

- (4) 1st clause: S, R_1, E_1
 2nd clause: $E_2—S, R_2$

For this reason it would be incorrect to say, 'Now that John tells me this I mailed the letter'.

If the time relation of the reference points compared is not identity, but time sequence, i.e., if one is said to be before the other, the rule of the permanence of the reference point can thus no longer be maintained. In 'he telephoned before he came' R_1 is said to be before R_2 ; but, at least, the tenses used have the same structure. It is different with

the example, 'he was healthier when I saw him than he is now'. Here we have the structure:

- (5) 1st clause: $R_1, E_1—S$
 2nd clause: $R_2, E_2—S$
 3rd clause: S, R_3, E_3

In such cases, the rule of the permanence of the reference point is replaced by the more general rule of the *positional use of the reference point*. The first rule, therefore, must be regarded as representing the special case where the time relation between the reference points compared is identity.

Incidentally, the English usage of the simple past where other languages use the present perfect may be a result of the strict adherence to the principle of the positional use of the reference point. When we say, 'this is the man who drove the car', we use the simple past in the second clause because the positional principle would compel us to do so as soon as we add a time determination, as in 'this is the man who drove the car at the time of the accident'. The German uses here the present perfect, and the above sentence would be translated into 'dies ist der Mann, der den Wagen gefahren hat'. Though this appears more satisfactory than the English version, it leads to a disadvantage when a time determination is added. The German is then compelled to refer the time determination, not to the reference point, but to the event, as in 'dies ist der Mann, der den Wagen zur Zeit des Unglücksfalles gefahren hat'. In such cases, a language can satisfy either the principle of the permanence of the reference point or that of the positional use of the reference point, but not both.

The use of the future tenses is sometimes combined with certain deviations from the original meaning of the tenses. In the sentence 'Now I shall go' the simple future has the meaning $S, R—E$; this follows from the principle of the positional use of the reference point. However, in the sentence 'I shall go tomorrow' the same principle compels us to interpret the future tense in the form $S—R, E$. The simple future, then, is capable of two interpretations, and since there is no prevalent usage of the one or the other we cannot regard one interpretation as the correct one.⁴ Further deviations occur in tense sequences. Consider the sentence: 'I shall take your photograph when you come'. The form 'when you will come' would be more correct; but we prefer to use here the present tense instead of the future. This usage may be interpreted as follows. First, the future tense is used in the first clause in the meaning $S—R, E$; second, in the second clause the point of speech is neglected. The neglect is possible because the word 'when' refers the reference point of the second clause clearly to a future event. A similar anomaly is found in the sentence, 'We shall hear the record when we have dined', where the present perfect is used instead of the future perfect 'when we shall have dined'.⁵

Turning to the general problem of the time order of the three points, we see from our tables that the possibilities of ordering the three time points' are not exhausted. There are on the whole 13 possibilities, but the number of recognized grammatical tenses in English is only 6. If we wish to systematize the possible tenses we can proceed as follows. We choose the point of speech as the starting point; relative to it the point of reference

⁴ The distinction between the French future forms *je vais voir* and *je verrai* may perhaps be regarded as representing the distinction between the order $S, R—E$ and the order $S—R, E$.

⁵ In some books on grammar we find the remark that the transition from direct to indirect discourse is accompanied by a shift of the tense from the present to the past. This shift, however, must not be regarded as a change in the meaning of the tense; it follows from the change in the point of speech. Thus 'I *am* cold' has a point of speech lying before that of 'I said that I *was* cold'.

can be in the past, at the same time, or in the future. This furnishes three possibilities. Next we consider the point of the event; it can be before, simultaneous with, or after the reference point. We thus arrive at $3 \cdot 3 = 9$ possible forms, which we call *fundamental forms*. Further differences of form result only when the position of the event relative to the point of speech is considered; this position, however, is usually irrelevant. Thus the form $S-E-R$ can be distinguished from the form $S, E-R$; with respect to relations between S and R on the one hand and between R and E on the other hand, however, these two forms do not differ, and we therefore regard them as representing the same fundamental form. Consequently, we need not deal with all the 13 possible forms and may restrict ourselves to the 9 fundamental forms.

For the 9 fundamental forms we suggest the following terminology. The position of R relative to S is indicated by the words 'past', 'present', and 'future'. The position of E relative to R is indicated by the words 'anterior', 'simple', and 'posterior', the word 'simple' being used for the coincidence of R and E . We thus arrive at the following names:

<i>Structure</i>	<i>New Name</i>	<i>Traditional Name</i>
$E-R-S$	Anterior past	Past perfect
$E, R-S$	Simple past	Simple past
$R-E-S$ } $R-S, E$ } $R-S-E$ }	Posterior past	—
$E-S, R$	Anterior present	Present perfect
S, R, E	Simple present	Present
$S, R-E$	Posterior present	Simple future
$S-E-R$ } $S, E-R$ } $E-S-R$ }	Anterior future	Future perfect
$S-R, E$	Simple future	Simple future
$S-R-E$	Posterior future	—

We see that more than one structure obtains only for the two *retrogressive* tenses, the posterior past and the anterior future, in which the direction $S-R$ is opposite to the direction $R-E$. If we wish to distinguish among the individual structures we refer to them as the first, second, and third posterior past or anterior future.

The tenses for which a language has no established forms are expressed by transcriptions. We say, for instance, 'I shall be going to see him' and thus express the posterior future $S-R-E$ by speaking, not directly of the event E , but of the act of preparation for it; in this way we can at least express the time order for events which closely succeed the point of reference. Languages which have a future participle have direct forms for the posterior future. Thus the Latin 'abitus ero' represents this tense, meaning verbally 'I shall be one of those who will leave'. For the posterior past $R-E-S$ the form 'he would do' is used, for instance in 'I did not expect that he would win the race'. We met with this form in an above example where we interpreted it as the structure $R-S, E$; but this structure belongs to the same fundamental form as $R-E-S$ and may therefore be denoted by the same name. Instead of the form 'he would do', which grammar does not officially recognize as a tense,⁶ transcriptions are frequently used.

⁶ It is sometimes classified as a tense of the conditional mood, corresponding to the French conditional. In the examples considered above, however, it is not a conditional but a tense in the indicative mood.

Thus we say, 'I did not expect that he was going to win the race', or, in formal writing, 'the king lavished his favor on the man who was to kill him'. In the last example, the order $R-E-S$ is expressed by the form 'was to kill', which conceives the event E , at the time R , as not yet realized, but as a destination.

Incidentally, the historical origin of many tenses is to be found in similar transcriptions. Thus 'I shall go' meant originally 'I am obliged to go'; the future-tense meaning developed because what I am obliged to do will be done by me at a later time.⁷ The French future tense is of the same origin; thus the form 'je donnerai', meaning 'I shall give', is derived from 'je donner ai', which means 'I have to give'. This form of writing was actually used in Old French.⁸ The double function of 'have', as expressing possession and a past tense, is derived from the idea that what I possess is acquired in the past; thus 'I have seen' meant originally 'I possess now the results of seeing', and then was interpreted as a reference to a past event.⁹ The history of language shows that logical categories were not clearly seen in the beginnings of language but were the results 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.

⁷ In Old English no future tense existed, and the present tense was used both for the expression of the present and the future. The word 'shall' was used only in the meaning of obligation. In Middle English the word 'shall' gradually assumed the function of expressing the future tense. Cf. *The New English Dictionary*, Oxford, Vol. VIII, Pt. 2, S-Sh, 1914, p. 609, col. 3.

⁸ This mode of expressing the future tense was preceded by a similar development of the Latin language, originating in vulgar Latin. Thus instead of the form 'dabo', meaning the future tense 'I shall give', the form 'dare habeo' was used, which means 'I have to give'. Cf. Ferdinand Brunot, *Précis de grammaire historique de la langue française*, Masson et Cie., Paris, 1899, p. 434.

⁹ This is even more apparent when a two-place function is used. Thus 'I have finished my work' means originally 'I have my work finished', i.e., 'I possess my work as a finished one'. Cf. *The New English Dictionary*, Oxford, 1901, Vol. V, Pt. I, H, p. 127, col. 1-2. The German still uses the original word order, as in 'Ich habe meine Arbeit beendet'.