

TENSE AND TIME

1 INTRODUCTION

The semantics of tense has received a great deal of attention in the contemporary linguistics, philosophy, and logic literatures. This is probably due partly to a renewed appreciation for the fact that issues involving tense touch on certain issues of philosophical importance (viz., determinism, causality, and the nature of events, of time and of change). It may also be due partly to neglect. Tense was noticeably omitted from the theories of meaning advanced in previous generations. In the writings of both Russell and Frege there is the suggestion that tense would be absent altogether from an ideal or scientifically adequate language. Finally, in recent years there has been a greater recognition of the important role that all of the so-called indexical expressions must play in an explanation of mental states and human behavior. Tense is no exception. Knowing that one's friend *died* is cause for mourning, knowing that he *dies* is just another confirmation of a familiar syllogism.

This article will survey some attempts to make explicit the truth conditions of English tenses, with occasional discussion of other languages. We begin in Section 2 by discussing the most influential early scholarship on the semantics of tense, that of Jespersen, Reichenbach, and Montague. In Section 3 we outline the issues that have been central to the more linguistically-oriented work since Montague's time. Finally, in Section 4 we discuss recent developments in the area of tense logic, attempting to clarify their significance for the study of the truth-conditional semantics of tense in natural language.

2 EARLY WORK

2.1 Jespersen

The earliest comprehensive treatment of tense and aspect with direct influence on contemporary writings is that of Otto Jespersen. Jespersen's *A Modern English Grammar on Historical Principles* was published in seven volumes from 1909 to 1949. Jespersen's grammar includes much of what we would call semantics and (since he seems to accept some kind of identification between meaning and use) a good deal of pragmatics as well. The

aims and methods of Jespersen's semantic investigations, however, are not quite the same as ours.¹

First, Jespersen is more interested than we are in cataloging and systematizing the various uses of particular English constructions and less interested in trying to characterize their meanings in a precise way. This leads him to discuss seriously uses we would consider too obscure or idiomatic to bother with. For example, Jespersen notes in the *Grammar* that the expressions of the form *I have got A* and *I had got A* are different than other present perfect and past perfect sentences. *I have got a body*, for example, is true even though there was no past time at which an already existent me received a body. Jespersen suggests *I have in my possession* and *I had in my possession* as readings for *I have got* and *I had got*. And this discussion is considered important enough to be included in his *Essentials of English Grammar*, a one volume summary of the *Grammar*.

Jespersen however does *not* see his task as being merely to collect and classify rare flora. He criticizes Henry Sweet, for example, for a survey of English verb forms that includes such paradigms as *I have been being seen* and *I shall be being seen* on the grounds that they are so extremely rare that it is better to leave them out of account altogether. Nevertheless there is an *emphasis* on cataloging, and this emphasis is probably what leads Jespersen to adhere to a methodological principle that we would ignore; viz., that example sentences should be drawn from published literature wherever possible rather than manufactured by the grammarian. Contemporary linguists and philosophers of language see themselves as investigating fundamental intuitions shared by all members of a linguistic community. For this reason it is quite legitimate for them to produce a sentence and assert without evidence that it is well-formed or ill-formed, ambiguous or univocal, meaningful or unmeaningful. This practice has obvious dangers. Jespersen's methodological scruples, however, provide no real safety. On the one hand, if one limits one's examples to a small group of masters of the language one will leave out a great deal of commonly accepted usage. On the other hand, one can't accept *anything* as a legitimate part of the language just because it has appeared in print. Jespersen himself criticizes a contemporary by saying of his examples that 'these three passages are the only ones adduced from the entire English literature during nearly one thousand years'.

A final respect in which Jespersen differs from the other authors discussed here is his concern with the recent history of the language. Although the *Grammar* aims to be a compendium of contemporary idiom, the history of a construction is recited whenever Jespersen feels that such a discussion might be illuminating about present usage. A good proportion of the discussion of the progressive form, for example, is devoted to Jespersen's

¹By 'ours' we mean those of the authors discussed in the remainder of the article. Some recent work, like that of F. Palmer and R. Huddleston, is more in the tradition of Jespersen than this.

thesis that *I am reading* is a relatively recent corruption of *I am a-reading* or *I am on reading*, a construction that survives today in expressions like *I am asleep* and *I am ashore*. This observation, Jespersen feels, has enabled him to understand the meaning of the progressive better than his contemporaries.² In discussing Jespersen's treatment of tense and aspect, no attempt will be made to separate what is original with Jespersen from what is borrowed from other authors. Jespersen's grammar obviously extends a long tradition. See Binnick for a recent survey.³ Furthermore there is a long list of grammarians contemporaneous with Jespersen who independently produced analyses of tenses. See, for example, Curme, Kruisinga and Poutsma. Jespersen, however, is particularly thorough and insightful and, unlike his predecessors and contemporaries, he continues to be widely read (or at least cited) by linguists and philosophers. Jespersen's treatment of tense and aspect in English can be summarized as follows:

2.1.1 *Time*

It is important to distinguish *time* from *tense*. Tense is the linguistic device which is used (among other things) for expressing time relations. For example, *I start tomorrow* is a present tense statement about a future time. To avoid time-tense confusion it is better to reserve the term *past* for time and to use *preterit* and *pluperfect* for the linguistic forms that are more commonly called past tense and past perfect. Time must be thought of as something that can be represented by a straight line, divided by the present moment into two parts: the past and the future. Within each of the two divisions we may refer to some point as lying either before or after the main point of which we are speaking. For each of the seven resulting divisions of time there are *retrospective* and *prospective* versions. These two notions are not really a part of time itself, but have rather to do with the perspective from which an event on the time line is viewed. The prospective present time, for example, is a variety of present that looks forward into the future. In summary, time can be pictured as in Figure 2.1.1. The three divisions marked with A's are past; those marked with C's are future. The short pointed lines at each division indicate retrospective and prospective times.

2.1.2 *Tense morphology*

The English verb has only two tenses proper, the present tense and the preterit. There are also two tense phrases, the perfect (e.g., *I have written*) and the pluperfect or anteperfect (e.g., *I had written*). (Modal verbs,

²A similar claim is made in Vlach [1981]. For the most part, however, the history of English is ignored in contemporary semantics.

³Many of the older grammars have been reprinted in the series *English Linguistics: 1500-1800 (A Collection of Facsimile Reprints)* edited by R.C. Alston and published by Scholar Press Limited, Menston, England in 1967.

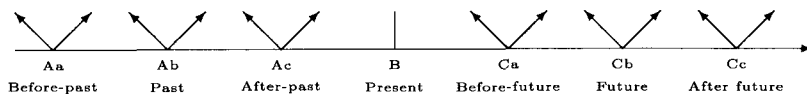


Figure 1.

including *can*, *may*, *must*, *ought*, *shall*, and *will*, cannot form perfects and pluperfects.) Corresponding to each of the four tenses and tense phrases there is an *expanded* (what is more commonly called today the *progressive*) form. For example, *had been writing* is the expanded pluperfect of *write*. It is customary to admit also future and future perfect tenses, as in *I will write* and *I shall have written*. But these constructions lack the fixity of the others. On the one hand, they are often used to express nontemporal ideas (e.g., volition, obstinacy) and on the other hand future time can be indicated in many other ways.

The present tense is primarily used about the present time, by which we mean an interval containing the present moment whose length varies according to circumstances. Thus the time we are talking about in *He is hungry* is shorter than in *None but the brave deserve the fair*. Tense tells us nothing about the duration of that time. The same use of present is found in expressions of intermittent occurrences (*I get up every morning at seven* and *Whenever he calls, he sits close to the fire*). Different uses of the present occur in statements of what might be found at all times by all readers (*Milton defends the liberty of the press in his Areopagitica*) and in expressions of feeling about what is just happening or has just happened (*That's capital!*). The present can also be used to refer to past times. For example, the *dramatic* or *historical* present can alternate with the preterit: *He perceived the surprise, and immediately pulls a bottle out of his pocket, and gave me a dram of cordial*. And the present can play the same role as the perfect in subordinate clauses beginning with *after*: *What happens to the sheep after they take its kidney out?* Present tense can be used to refer to future time when the action described is considered part of a plan already fixed: *I start for Italy on Monday*. The present tense can also refer to future events when it follows *I hope*, *as soon as*, *before*, or *until*.

The perfect is actually a kind of present tense that seems to connect the present time with the past. It is both a retrospective present, which looks upon the present as a result of what happened in the past and an inclusive present, which speaks of a state that is continued from the past into the present time (or at least one that has results or consequences bearing on the present time).

The preterit differs from the perfect in that it refers to some time in the past without telling anything about its connection with the present moment. Thus *Did you finish?* refers to a past time while *Have you finished?* is a question about present status. It follows that the preterit is appropriate with words like *yesterday* and *last year* while the perfect is better with *today*, *until now* and *already*. *This morning* requires a perfect tense when uttered in the morning and a preterit in the afternoon. Often the correct form is determined by context. For example, in discussing a schoolmate's Milton course, *Did you read Samson Agonistes?* is appropriate,

whereas in a more general discussion *Have you read Samson Agonistes?* would be better. In comparing past conditions with present the preterit may be used (*English is not what it was*), but otherwise vague times are not expressed with the preterit but rather by means of the phrase *used to* (*I used to live at Chelsea*). The perfect often seems to imply repetition where the preterit would not. (Compare *When I have been in London*, with *When I was in London*).

The pluperfect serves primarily to denote before-past time or retrospective past, two things which cannot easily be kept apart. (An example of the latter use is *He had read the whole book before noon*.) After *after*, *when*, or *as soon as*, the pluperfect is interchangeable with the preterit.

The expanded tenses indicate that the action or state denoted provides a temporal frame encompassing something else described in the sentence or understood from context. For example, if we say *He was writing when I entered*, we mean that his writing (which may or may not be completed now) had begun, but was not completed, at the moment I entered. In the expanded present the shorter time framed by the expanded time is generally considered to be *very recently*. The expanded tenses also serve some other purposes. In narration simple tenses serve to carry a story forward while expanded tenses have a retarding effect. In other cases expanded tense forms may be used in place of the corresponding simple forms to indicate that a fact is already known rather than new, that an action is incomplete rather than complete or that an act is habitual rather than momentary. Finally, the expanded form is used in two clauses of a sentence to mark the simultaneity of the actions described. (In that case neither really frames the other.)

In addition to the uses already discussed, all the tenses can have somewhat different functions in passive sentences and in indirect speech. They also have uses apparently unrelated to temporal reference. For example, forms which are primarily used to indicate past time are often used to denote unreality, impossibility, improbability or non-fulfillment, as in *If John had arrived on time, he would have won the prize*.⁴

⁴From the contemporary perspective we would probably prefer to say here that *had*

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