

SEMANTICS OF THE TEMPORAL ADJUNCT CONSTRUCTION AND TIME CONGRUENCY

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The following paper deals with the grammatical construction of the temporal adverbs *yesterday*, *today* and *tomorrow*, highlighting their semantic characteristics. For this, and following the Construction Grammar framework developed by Fillmore, I revise critically the grammatical construction proposed by this author for the previous temporal adverbs. Sustaining this semantic description on the cognitive notions of target and landmark, the adjuncts *yesterday*, *today* and *tomorrow* are explained in relation to the Calendar Unit of *day*, where the adverbs precede, equal or follow the reference time or landmark. Nevertheless, Fillmore's approach turns out to be incomplete, since it is only concerned with the inherent semantic features of these time adjuncts. Consequently, another section is devoted to some characteristics of the interaction between time adverbs and the other elements of the clause, this time resting on the semantic notion of Time Congruency, which will yield significant syntactic consequences.

1. Introduction

Construction Grammar (Lakoff 1987; Goldberg 1995; Fillmore and Kay 1999) is a grammatical model which must be inserted in the functionalist and cognitivist tradition of language. The basic tenet of this grammatical model is that traditional constructions—i.e. form-meaning correspondences—are the basic units of language. In this sense, constructions should always include information about linguistic form (syntactic information), information about meaning (semantic information) and information about the language uses in actual conversation (pragmatic information).

According to Goldberg (1995: 4), “a construction is defined to exist if one or more of its properties are not strictly predictable from knowledge of other constructions existing in the grammar.” From this definition, it follows that morphemes, for instance, are clear instances of constructions in that they are pairings of meaning and form that are not predictable from anything else; but phrasal patterns can also be considered constructions if their form/meaning cannot be predicted from the properties of their component parts or from other constructions.

Nowadays, research on the field of Construction Grammar involves the study of many grammatical factors as constructions, such as verbs, prepositional phrases, idioms, conjunctions, rhyme, relativization, etc.; however, as far as time adjuncts are concerned, very little attention has been devoted to them as evoking constructional templates. This paper, therefore, will deal with the grammatical construction for the temporal adverbs

yesterday, *today* and *tomorrow*, focusing mainly on their semantic features. The discussion will proceed as follows: first of all, I briefly consider the semantics of positional temporal adverbials, and then, I move on to the elaboration of a more specific representation, grounded on Fillmore (2001). Finally, I comment on some characteristics regarding the contribution of temporal adverbs to the meaning of the entire sentence.

As I am mostly interested in the inherent semantic properties of *yesterday*, *today* and *tomorrow*, little attention will be paid to other topics like metaphorical extensions. Nevertheless, I consider this issue an interesting and relevant topic, which can open up new paths for further research.

2. Positional temporal adverbials

Depending on their meaning, temporal adverbials have a wide range of functions and can be classified into different types. Following Klein (1994: 149) adverbs such as *yesterday*, *today* and *tomorrow* are called *positional temporal adverbials*—henceforth TADV-P. These adverbials specify time spans in relation to other time spans, which are supposed to be given in a context. That is, they refer to a span of time within which, at some point of time, the events took place. Other examples include: *at three o'clock*, *after the party*, etc.

According to Klein (1994: 150), positional temporal adverbials “single out some interval, or a set of intervals, from their domain of reference—that is, from the set of time intervals which some time structure provides.” These time spans are distinguished from others, first, by their position within the time structure, i.e. their position on the time axis, and second, by their boundaries. Depending on that specific position, there are three possible relations that can be held between some time span (t) and the time of the utterance (TU)¹: t may include TU, as in (1a); precede it, as shown by (1b); or follow it, as happens in (1c):

- (1) a. *Today* is Peter’s graduation
- b. You should do your work *before* it’s late
- c. The class will start *much later*

As regards time span boundaries, usually the lexical content of TADV-P presupposes a structuring of time in terms of days, minutes, seasons, years, etc. In this way, Fillmore (2001) classifies these temporal units in relation to cyclic changes in the environment: measurement units (MUs) which designate temporal spans measurable by certain time-keeping means (e.g. *year*, *month*); calendar units (CUs), which are cyclically recurring temporal units fitted into a scale of absolute time, such that when one ends the next one begins (e.g. *century*, *millenium*); and calendar subunits (CSUs) which are are cyclically recurring time points (e.g. *weekend*, *halloween*, *today*).

1. Klein (1994) defines TU in relation to two more concepts: topic time (TT) and time of situation (Tsit). In a sentence like *The light was on*, there is a distinction between the time at which the light was on (Tsit) and the time for which such a claim was made (TT). Both are different from the time at which the utterance is made (TV).

The lexical content of TADV-P makes reference to a clear boundary—it must be a day. Following the terminology above, they can also be said to belong to calendar units; that is, they are cyclically recurring temporal units. They differ, however, in the relation they have with the day including the time of the utterance. Thus, the lexical content of *today* is the day which includes TU; the lexical content of *yesterday* is the day which precedes the day which includes TU; and the lexical content of *tomorrow* is the day which follows the day which includes TU.

Nevertheless, it is wrong if we assume that the time span boundaries in these cases extend over a full day. Rather, the time span denoted by these adverbs refers to some underspecified interval within that day. Elaborating on this assumption, Klein (1994: 152) puts forward the following definitions:

- *Today*: at some undetermined interval within the day which includes TU.
- *Tomorrow*: at some undetermined interval within the day which follows the day which includes TU.
- *Yesterday*: at some undetermined interval within the day which precedes the day which includes TU.

As Klein (1994) remarks, and with respect to the previous definitions of *yesterday*, *today* and *tomorrow*, there are some special cases that should be considered. First, the concept of day underlies cultural variation; that is, we tend to assume that a day goes from midnight to midnight, but this is not true in all cultures. This can be seen in examples like *Today, the party begins at 1.00 a.m.*, in which, according to the standard division of days, the party will take place *tomorrow*, although but we usually refer to it as *today*.

Other exceptional cases have to do with metaphorical extensions. This can be seen in the following examples from the BNC, where *today* has been, by far, the adverb most frequently used metaphorically:

- (2) a. The Ozone layer, as an environmental issue, is the most essential at the moment, and can be fixed *tomorrow* if everyone wanted
- b. Love letters that *yesterday* were precious, photographs of girls, wives, children, parents—all smiling up at no one
- c. *Today*, the OMV also takes care of the less privileged, and the handicapped
- d. *Today* such dancers are rare, but others can assume these roles because technique has advanced
- e. We are talking about governing and developing South Africa *today*, not *tomorrow*

In these cases, the boundaries for *today*, *tomorrow* and *yesterday* do not stand within the limits of one single day. Instead, they are extended metaphorically, meaning “at present,” “at a future time” and “at a past time” respectively. Another interesting case where the boundaries of the time spans are quite undetermined concerns examples like the following:

- (3) Don't do *tomorrow* what you can do *today*

This example also involves a metaphorical extension, but in this case *today* does not refer just to “at present,” neither does *tomorrow* to “a future time.” *Today* in (3) could

apply to any day, now and in the future. Klein (1994: 154) explains cases like this in relation to the time of utterance; in this way, example (3) is not related to any particular TU, but is supposed to hold for any TU.

Having set out the general semantic characteristics of positional temporal adverbs, the following section will deal with a more specific semantic representation of the adjuncts *yesterday*, *today* and *tomorrow*, grounded on Fillmore (2001).

3. Construction Grammar and the semantic representation of *yesterday*, *today* and *tomorrow*

As stated above, for the semantic representation of *yesterday*, *today* and *tomorrow* I will largely follow Fillmore's work (2001) on "Mini-Grammars of Some Time-When Adjuncts in English." This work conforms the Construction Grammar framework as established by Fillmore and Kay (1999), which I refer the reader to for further information. Thus, in the present section, I critically revise Fillmore's (2001) grammatical constructions for time adverbials.

As regards the grammatical constructions for temporal adverbs, Fillmore applies a basic construction called the Vector Construction, from which the others emerge. One of the main concepts is that of the temporal target, i.e. the time at which or within which some event occurs or some state of affairs obtains. This construction concerns phrases that identify a temporal *target* as being at a particular *distance* from, and in a particular *direction* from, an implicit or explicit temporal *landmark*. A temporal landmark is a moment or period in time, or an event seen as taking place in a particular time period, with respect to which the location of some other time point is calculated; since we are dealing with time, the direction attribute permits only two possible values, "before" or "after"; and distance is distance in time. A more detailed representation of the construction for time-adjuncts is given in the following figure:

Name	= Location wrt Landmark
Meaning	= T is Dis Dir Lm
Domain	= []
Landmark	= []
Direction	= []
Distance	= []
Text	= []

Figure 1: The Vector Construction

The semantic information common to all such expressions can be seen in that part of Figure 1 which is below the "Name" and above the line reading "Text = []." The semantic features identified here include the domain in which the pattern holds (in our case, time), plus a landmark, a direction, and a distance. The attribute domain is specified as time. Once the domain is specified, other properties of constituents that instantiate the construction must be compatible with the idea of time. That is, the landmark has to be a time expression, or reference to an event occurring in time; the distance has to be

measurable in temporal units; and the direction has to be one of the two temporal directions, “before” (“earlier than”) or “after” (“later than”). The meaning of the whole (in the second line) expresses that the target (T) is described as located at a distance (Dis), in a particular direction (Dir) from the landmark (Lm). Finally the text attribute in the last line will stand for the lexical entry.

For the representation of *yesterday*, *today* and *tomorrow*, the vector construction requires some modifications. In the first place, time-adjuncts like *yesterday*, *last night*, *next week*, etc. locate the target by way of a reference to a CU, like day, year, month, etc. These expressions also call for an anchoring landmark; this landmark is contained in a CU identified in the semantics of the construction (possibly the one that includes the target) and is generally “now.” The general representation for this construction is given in figure 2:

Name	= Location in Calendar Unit
Meaning	= T is in #2[] which #3[] (a relation) the #2[] which includes #4[]
Domain	= time
CU Type	= #2[]
Relation	= #3[]
Distance	= #4[]
Text	= []

Figure 2: Semantic structure for temporal location in CUs and CSUs

In this case, the value of the attribute meaning is marked with what Fillmore (2001) terms *unification indices*, since the other constituents (CU type, relation, distance) provide the information needed for that value; in other words, the properties that these constituents exhibit must be copied into the values marked with the same unification indices under the attribute meaning. It should be noticed that a new attribute has been introduced, that of “Relation.” In this case, *relation* stands for a relation between the temporal unit containing the target and that containing the landmark.

Applying this to the time-adjuncts under study here, we can say that *today* locates the target within the calendar day that also includes the landmark (the landmark is “now”). In *yesterday* and *tomorrow*, therefore, the relation is specified as “precedes” and “follows” respectively. The following figures give the semantic representation of the adverbs *yesterday*, *today* and *tomorrow*:

Name	= Location in Calendar Unit
Meaning	= T is in #2[day] which #3[equals] the #2[day] which includes #4[now]
Domain	= time
CU Type	= #2[day]
Relation	= #3[equals]
Landmark	= #4[now]
Text	= [today]

Figure 3: Semantic representation of *today*

Name	= Location in Calendar Unit
Meaning	= T is in #2[day] which #3[precedes] the #2[day] which includes #4[now]
Domain	= time
CU Type	= #2[day]
Relation	= #3[precedes]
Landmark	= #4[now]
Text	= [yesterday]

Figure 4: Semantic representation of *yesterday*

Name	= Location in Calendar Unit
Meaning	= T is in #2[day] which #3[follows] the #2[day] which includes #4[now]
Domain	= time
CU Type	= #2[day]
Relation	= #3[follows]
Landmark	= #4[now]
Text	= [tomorrow]

Figure 5: Semantic representation of *tomorrow*

In all these three cases, the value for the attribute landmark is “now,” since we are dealing with deictic day names. In other words, the target is identified by means of implicit reference to the moment of speaking (“now”).

To summarize, we may say that Fillmore’s (2001) analysis has yielded an elaborate account as regards the inherent semantic features of time adverbials. Nevertheless, his approach turns out to be incomplete in terms of providing a detailed and full description of the grammatical construction for those adverbs; that is, his study is solely concerned with the inner semantic characteristics of time-adjuncts. Consequently, the following section is devoted to some characteristics of the interaction between time adverbs and the other elements of the clause, this time resting on the semantic notion of Time Congruency put forward by Klein (1994). As we shall see, this interaction will result in significant syntactic consequences concerning tense and time-adjuncts.

4. Temporal congruency

As stated above, in this section, I touch on some aspects of the TADV-P contribution to the entire meaning of the sentence. That is, I deal with some incompatibilities and interactions between TADV-P and the other elements of the clause. The present discussion will primarily rest on the different contributions of TADV-P to finite (FIN) and non-finite (INF) components, namely infinitivals.

According to Klein (1994: 176), a TADV-P can either narrow down the time span

associated with FIN (FIN-specification) or it can contribute to the lexical content expressed by INF and hence specify the time of the situation (INF-specification). This can be illustrated by the following examples:

- (4) a. Tom Cruise went to Spain yesterday
 b. I want to see Sara today

In (4a), the tense of the finite verb *went* only expresses that the topic time (TT)—the time to which the assertion made in (4a) is confined—is somewhere before the time of the utterance (TU). Therefore, it is the TADV-P *yesterday* which makes the TT explicit by providing a “frame” in which the TT must fall, i.e. the action must have taken place within the boundaries of *yesterday*. In (4b), the time of the situation as described by *to see him* is entirely undetermined by its lexical content. However, the time of the situation as described by *to see him today* specifies this lexical content and limits it to a time span comprehended within the boundaries of *today*.

Before analyzing the possible interactions between FIN/INF and TADV-P, some incompatibilities concerning FIN and time adverbs should be considered. If we look at the following examples:

- (5) a. *He talked with her tomorrow
 b. *Peter’ll marry her yesterday
 c. He is meeting the president tomorrow
 d. Susan will paint the wall today
 e. He went to the store today

Sentences (5a) and (5b) display obvious mismatches, given the incompatibility between past tense and future adverbs in the first case, and future tense and past adverbs in the second. Since future tense can be expressed not only by the enclitic form ‘ll, but also by other means like present tense, example (5c) is perfectly grammatical. The temporal adverb *today*, however, constitutes a different case; this adverb can appear with present, future (5d) and past (5e) tenses. This can be justified by the inner meaning of *today*: *today* does not only refer to the present moment (“now”), but to the time span preceding and following that “now.” That is, we conceptualize time as a linear flow, as a path, in which each “event” is located as preceding, coinciding or following the time of the utterance.

Other examples involving some kinds of incongruencies are given in (6):

- (6) a. *Your friend was Chinese yesterday
 b. *New York is in America today
 c. *The book was red yesterday

All the examples in (6) sound quite odd in a usual communicative setting.² However, in terms of tense, both the temporal adverbs and the FIN predicates cannot be said to be

2. The sentences in (6) could make sense in other kinds of “specific” or metaphorical settings; thus (6a), for instance, would be understandable if in the context of a carnival party, the speaker were talking about somebody’s disguise.

incompatible. Klein (1994: 81) justifies these discrepancies according to the kind of lexical content implied. In this way, he labels the lexical contents expressed in (6) as *o-state lexical contents*: there is no TT-contrast, and “hence no time span about which the opposite assertion could be made explicit.” To put it in other words, the meaning implied in (6) refers to an “absolute” time; that is, in (6b) for instance, New York was, is and will always be in America. Consequently, in (6), the time span associated with FIN cannot be narrowed down with a TADV-P, unless we are dealing with a specific/metaphoric communicative setting.

We will turn our attention now to the interaction between FIN/INF. As discussed above, the time of a situation as described by *to see him* is entirely undetermined by its lexical content. Nevertheless, apart from a TADV-P, INF may be further specified by a tense operator, such as *to have* + past participle (e.g. *He claimed to have seen him*). Furthermore, Klein (1994) remarks that non-finite constructions such as infinitivals are also related to some FIN-time, that is, to the time of the governing finite verb. This is demonstrated by incompatibilities like:

- (7) a. *It is nice to see you yesterday
 a'. It was nice to see you yesterday
 b. *Pat was happy to work there tomorrow
 b'. Pat will be happy to work there tomorrow

In (7a) the incompatibility between tense and *yesterday* cannot be attributed to the predicate *see* as implying an inherent present (or future) meaning, since we get appropriate sentences like (7a'). Similarly, *work* does not have a past meaning as evidenced by (7b'). According to this, Klein (1994: 166) postulates the principle of Temporal Congruency:

TEMPORAL CONGRUENCY: If a finite verb FIN governs some non-finite component INF, then FIN-time falls into INF-time.

However, FIN does not only express TT, it also has a lexical content which may influence the relation between FIN and INF. Klein (1994: 171) proposes the following examples:

- (8) a. *He plans to work yesterday from two to four
 b. He plans to work tomorrow from two to four

The first sentence, (8a), is ungrammatical since it violates Temporal Congruency. But, according to Klein, so does (8b), since *TT* includes the time of utterance, and *INF-time* excludes this time of utterance. However, the sentence is appropriate, since *to plan* and similar verbs (e.g. *intend*, *promise*, etc), transfer their *TT* into the “pretime” of *INF*, rather than into *INF-time* itself. In this case, *Pretime* is defined by Klein (1994: 84) in relation to the time of a situation (*TSit*); that is, given the entire time of a situation, there is a range of possible *TTs* before that *TSit* (*pretime*) and after that *TSit* (*posttime*). Consequently, Klein (1994: 172) restates the Temporal Congruency principle as follows:

TEMPORAL CONGRUENCY: a finite verb FIN, which governs a non-finite component INF, projects T(FIN) into T(INF) or, if it is a pretime verb, into the pretime of T(INF).

However, Klein does not consider many other cases where there is a more evident and clearer violation of Time Congruency. I refer to examples like:

- (9) a. He decided to leave tomorrow
 b. Tom wanted to clean his car tomorrow

Both examples in (9) clearly violate Time Congruency; that is, even though the FIN-time (past) is not projected into INF-time, both sentences are grammatical. Other verbs that usually violate Time Congruency include *want*, *hope*, *expect*, *decide*, etc., usually referred as cognition or state predicates.³

One of the main consequences that can be drawn from this section is of a clear syntactic nature and concerns the scope of tense operators and time-adjuncts in the sentence.⁴ Thus, as remarked in a previous section, a grammatical construction should always include pragmatic, semantic and syntactic information. Nevertheless, Fillmore's (2001) constructions only dealt with the main semantic features of time adjuncts, disregarding any references to syntactic and/or pragmatic characteristics. In this respect, the study of grammatical constructions by functional models of language, such as Role and Reference Grammar (Van Valin and LaPolla 1997), may be a helpful guideline. Van Valin and LaPolla (1997: 432) consider grammatical constructions "as specific constellations of morphosyntactic, semantic and pragmatic properties" and they also posit the existence of a set of syntactic templates representing the possible syntactic structures in the language. As far as time adverbials are concerned, Van Valin and LaPolla (1997: 164) relate them to tense operators in the sense that they contribute to the tense of the sentence and take part in the operator projection.⁵ However, while tense operators modify the clause, time-adjuncts affect usually the core of the utterance⁶ (and sometimes the clause when they are placed in special positions); this may be illustrated by (10):

- (10) a. Mary wanted to go on holiday tomorrow
 b. Yesterday, I saw Peter playing tennis

In (10a), the time-adjunct *tomorrow* modifies the second core of the clause, that is, *to go on holiday*. On the other hand, in (10b), the adverb *yesterday*, which is placed in left-detached position, modifies the whole clause *I saw Peter playing tennis*.

In contrast with RRG, and within the theory of Functional Grammar—FG—(Dik 1984, 1997), Dik establishes a much clearer distinction between tense operators and lexical

3. See Van Valin and LaPolla (1997: 115) for more information about predicate types (*Aktionsart*).

4. Although the present paper is intended to focus primarily on the semantic characteristics of the time adjunct construction, I have deemed it significant to deal with some of the syntactic properties of time adverbs as a direct consequence of the restatement of the Time Congruency principle.

5. See Van Valin and LaPolla (1997: 166, 170) for adverbials participating in the operator projection.

6. The explanation for adverbials functioning as core modifiers is evidenced by their relation to some complex structures. For further information I refer the reader to Van Valin and LaPolla (1997: 169).

means for expressing temporality, calling the latter ones level 2 satellites. Moreover, in FG both tense operators and level 2 satellites affect the same layer of the clause, the core.

Turning now to the concept of Time Congruency, while this principle seemed to comply with Van Valin and LaPolla's claim that tense operators affect the whole clause, the exceptions found to that principle might result in a different interpretation for such a claim. That is, in sentences like *He decided to leave tomorrow*, the time denoted by *to leave* is only specified by *tomorrow*, given the incompatibility with the operator of past tense "decid -ed." Consequently, given the previous evidence, and agreeing with Dik (1997), I would propose considering tense as a core modifier. Thus, in the previous example, the past tense operator would only affect the first core *He decided*, and *tomorrow* would modify the second core, *to leave*.

6. Conclusion

In this paper, I have outlined the main semantic features of the grammatical construction for the time-adjuncts *yesterday*, *today* and *tomorrow*, largely following Fillmore (2001). Nevertheless, it must be borne in mind that while Fillmore considers the representations given above as complete grammatical constructions, they merely specify semantic information and should be completed with syntactic and pragmatic features. In this way, and elaborating on the functional grammatical theories of RRG and FG, some relevant syntactic characteristics have emerged from the interaction of time adverbials with finite and non-finite predicates. In a similar fashion, some significant pragmatic features as regards the time-adjunct construction might emerge from the interaction of semantic and syntactic elements in the sentence, though I leave this for another study.

Consequently, the grammatical constructions for time adverbials proposed by Fillmore (2001) do not specify enough information, and in my opinion, they mostly deal with temporal relations as expressed by time adjuncts. Thus, in order to comply with the basic tenets of Construction Grammar, lexical constructions such as *yesterday*, *today* and *tomorrow*, instead of consisting of definite constructional templates like those of Fillmore, should integrate a more exhaustive analysis in terms of their main semantic, syntactic and pragmatic features. As a result, whereas the Construction Grammar framework may seem a straightforward analysis for several well-established structures (e.g. *It was your mother who killed the cat*), it seems the study of lexical items would require a thorough compositional analysis in order to compile their most relevant linguistic characteristics.

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