Lexical and grammatical aspect

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1 Introduction

Verbal aspect is one of three major verbal categories of languages of the world, the other two being tense (see Chapter 20) and modality (see Chapter 21). The commonly accepted definition of the term aspect comes from Comrie (1976: 3, citing Holt (1943: 6)), according to which aspectual categories express “ways of viewing the internal temporal constituency of a situation.” Even if there are occasionally quibbles with this formulation, it captures the essence of aspectual categories: they express (relatively objective or subjective) perspectives of the temporal structure of individual events and their relations with each other, without regard to a fixed temporal reference point (usually the time of speech). The latter is the domain of tense.

Since Smith (1997) there has been a consensus that the categories covered by the term verbal aspect consist of two distinct sets of phenomena that interact in various ways. The term may, on the one hand, refer to the temporal structures of the default construals of the situations expressed by individual lexical verbs. Such phenomena are generally labelled lexical aspect. Lexical aspect is a “covert” linguistic category (cf. Smith (1997: 39)), i.e. it is not directly encoded by grammatical morphemes, but surfaces in various restrictions on the usage of verbal grammatical morphemes in a given language, e.g. their combinability with temporal adverbials. On the other hand, verbal aspect may refer to grammatical categories that are explicitly marked by grammatical morphemes in individual languages. Such categories are less tied to default construals of situations, i.e. they tend to reflect more subjective construals of a situation by the speaker. These latter categories fall under the heading grammatical aspect.

An examination of the state of aspectology reveals a disjoint field, largely because much of the Germanic and general linguistic literature considers lexical aspect to be the primary domain of investigation, whereas other traditions, such as the Slavistic literature, have focused on the grammatical aspectual categories that are prominent in their linguistic systems (cf. Sasse (2002)). Moreover, within any given tradition there have been disagreements on relatively basic issues. Therefore, this discussion can only provide an overview of some major issues in the study of verbal aspect; due to limits on space only a few aspectual systems can be considered—those of English, Mandarin Chinese and the Slavic languages. Section 2 discusses lexical aspect; section 3 discusses grammatical aspect; section 4 discusses Slavic systems as cases of rich and complex systems; section 5 discusses referential
parallels between verbal aspect and nominal categories; and section 6 briefly presents some directions of current approaches and future directions.

2 Lexical aspect

As pointed out above, much of the general aspectological literature focuses on the inherent aspectual properties of the situations expressed by lexical verbs (i.e. verb constellations consisting of verbs and their complements). Thus, such properties are usually referred to as “lexical aspect” (cf., e.g., Filip (2012)). Here I employ the term situation type, following Smith (1997).

Vendler’s (1957) classification of types of verbal situations remains in widespread use today and is the point of departure for any discussion of situation type. Vendler divided verbs into groups according to two diagnostics: (1) Can a verb occur in the progressive tense in English? (2) Can it collocate with adverbial time phrases of completion such as in an hour? These diagnostics combine to produce four types of situations: states, activities, accomplishments, and achievements. Vendler’s diagnostics reflect different temporal properties, namely whether a situation is durative (i.e. has extension in time), dynamic (i.e. characterized by motion/change as a result of the expenditure of energy), and telic (i.e. proceeding toward an inherent endpoint), as elaborated by Smith (1997). States (e.g. know, believe) have duration, but are neither dynamic nor telic. Activities (e.g. push a cart, draw) have duration and are dynamic, but are atelic. Accomplishments (e.g. build a house, draw a circle) have duration, are dynamic, and are also telic. Achievements (e.g. reach the summit, find an object) have no duration, as they are momentary situations, but are dynamic and telic.

Achievements, though momentary, tend to allow collocation with time adverbials of completion such as in an hour because they often presuppose some preliminary activity leading up to the achievement itself. For example, He reached the summit in two hours means that the reaching of the summit occurred after two hours of preliminary activity, i.e. ascent. This feature of achievements is common across languages.

Since Comrie (1976) and especially Smith (1997) Vendler’s four-fold typology has been extended to include a second class of momentary situations, semelfactives, e.g. sneeze, spit, wave. Semelfactives differ from achievements by being atelic. That is to say, although they are momentary, they are not inherently goal-directed, nor do they produce obvious natural results. The currently accepted typology is given in Table 19.1 (see Chapter 22 for further possible distinctions):

<table>
<thead>
<tr>
<th>State</th>
<th>Activity</th>
<th>Accomplishment</th>
<th>Achievement</th>
<th>Semelfactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Durative</td>
<td>+ Durative</td>
<td>+ Durative</td>
<td>− Durative</td>
<td>− Durative</td>
</tr>
<tr>
<td>− Dynamic</td>
<td>+ Dynamic</td>
<td>+ Dynamic</td>
<td>+ Dynamic</td>
<td>+ Dynamic</td>
</tr>
<tr>
<td>− Telic</td>
<td>− Telic</td>
<td>+ Telic</td>
<td>+ Telic</td>
<td>− Telic</td>
</tr>
</tbody>
</table>

Beyond this basic typology of situations, two other distinctions based on the lexical properties of verb collocations deserve mention. The first is the distinction between stage-level states and individual-level states (cf. Carlson (1977)). Stage-level states (e.g. be hungry, be available) last only temporarily (for “stages” of an entity’s existence). Individual-level states (e.g. be tall, be intelligent) are permanent, and last throughout an entity’s existence. Individual-level states are maximally static among the situation types. Stage-level states are
similar to activities in that they are situations that typically come to an end (though it must be stressed that they are atelic, i.e. not goal-oriented). However, stage-level states differ from activities in that they are not dynamic (i.e. involve no expenditure of energy).

The second is a three-way division of telic verbs based on the kind of progress toward the goal/end-state profiled by a verb. Tenny (1994) distinguishes incremental-theme verbs, change-of-state verbs, and “route verbs” according to the kind of change involved. In the case of incremental-theme verbs (or verb constellations) such as *eat an apple*, the patient “measures out” the event in that the object is increasingly affected as the event progresses: the scalar change is measured in terms of the increments of apple consumed, which “correspond to the temporal progress of the event” (15) until the apple is completely consumed and the event ends. Incremental-theme verbs always represent accomplishments in Vendler’s typology, because a process precedes the endpoint. With change-of-state verbs the change does not necessarily proceed incrementally through the patient; rather, the scalar change often occurs “along measurable degrees of change in some property central to the verb’s meaning” (17), e.g., *ripen* (intransitive) and *open* (transitive). Many change-of-state verbs involve multi-valued scalar attributes, e.g. *ripen* or *dry*, and thus represent accomplishments. Other change-of-state verbs involve only two values, e.g. *open* or *die*. As the transitions expressed by such two-valued change-of-state verbs are momentary, this group is a significant source of Vendler’s achievements. The path objects of “route verbs” (i.e. motion verbs that take the route as an object) as in *walk the Appalachian trail* measure out the event in a scalar manner in that the increments of the path covered correspond to the temporal progress of the event. As such, they represent accomplishments. However, a difference between route verbs on the one hand and incremental-theme verbs and change-of-state verbs on the other is that the objects of route verbs are not changed by the event, but are simply reference objects.

It must be pointed out that while individual verbs may have default construals with regard to situation type (such as *build* as an accomplishment), situation types cannot be reduced to properties of verbs alone. Thus, whereas *eat* without an object is most likely to be interpreted as an activity (cf., e.g. *eat for fifteen minutes*), the addition of an individuated object, e.g. *eat an apple*, creates an accomplishment. Temporal adverbs can have the same effect: unmodified *see* is quite often a state, whereas *see something suddenly* is an achievement. Thus, the term “lexical aspect” is somewhat of a misnomer; lexical aspect is really a property of verb constellations or clauses. A change in situation type through the addition of arguments and/or adverbials is often termed *aspectual coercion*: *eat* is by default an activity, but the addition of an object (*eat an apple*) “coerces” the predicate into an accomplishment; similarly, *sneeze* is by default a semelfactive, but adding an adverbial of duration, e.g. *sneeze for a whole minute*, “coerces” the predicate into an activity.

As mentioned in section 1, situation types are covert categories in that they are not directly encoded by specific morphemes. Rather, their existence manifests itself through restrictions on the usage of verbs referring to different kinds of situations. (Languages with aspectual oppositions generally have restrictions similar to those that form the basis for Vendler’s diagnostics.) Despite the covert nature of the categories of situation type, they surface in a wide variety of (if not all) languages, and thus must reflect basic principles of human cognition.

### 3 Grammatical aspect (viewpoint aspect)

Grammatical aspect refers to aspectual categories that are explicitly coded by individual morphemes. Since Smith (1997) grammatical aspect has often been labeled *viewpoint aspect*, which reflects the idea that grammatical aspect is less objective than the categories of
situation type, expressing instead subjective construals of a situation as either completed or in progress, etc. Unlike the Vendlerian classes of situation type discussed in section 1 (states, activities, accomplishments, achievements, and semelfactives), which are stable across large numbers of languages (with minor variations), the grammatical categories that fall under the rubric of viewpoint aspect exhibit a much wider variation both in their particular meanings and their morphology. For this reason, it is almost impossible to make cross-linguistic generalizations about viewpoint aspect that also characterize the system of viewpoint aspect in an individual language in anything but the most basic terms.

The grammatical categories that constitute viewpoint aspect consist of meanings that are related to the categories of lexical aspect, but never (or rarely) encode situation type directly. The most common viewpoint categories are perfective (PF) and imperfective (IMPF). Thus, according to Dahl (1985) the most common aspectual opposition across languages is the PF:IMPF opposition. Dahl (1985: 69) points out that unlike most other tense/aspect/modality categories, which are characterized by quite regular markedness relationships, the PF:IMPF opposition exhibits rather unclear markedness relationships across languages. That is to say, no generalization can be made concerning which member of the opposition tends to be morphologically marked. The reason for this is the aforementioned semantic and morphological diversity of categories of viewpoint aspect.

Following Comrie (1976), the perfective may be defined as expressing a situation that is viewed as a single, complete whole, without distinguishing the individual phases that comprise it. Dahl (1985: 78) describes what might be considered the prototype of a perfective verb: it expresses (a) a “single event, seen as an unanalyisable whole,” which has (b) a “well-defined result or end-state” and which is (c) “located in the past”; further, the event is (d) “more often than not [. . .] punctual,” or at least it is (e) construed as a “single transition from one state to its opposite.” Features (b) and (e) reflect the fact that in the default case it is telic situations that are coded perfective, as salient results and end states only exist with accomplishment and achievement predicates. Here it should be pointed out that while perfective verbs (verb forms) are typically telic, atelic perfective verbs (verb forms) occur to varying degrees in various languages. Such atelic perfectives are often called Aktionsarten (primarily in the Slavistic literature); common Aktionsarten are the delimitative, which limits a situation in time (e.g. Russian poxodit’ “walk for a while”), and the ingressive, which expresses the inception of a situation (e.g. Russian zapet’ “[suddenly] start singing”), among many others. Such verb types are also called procedurals, as the term Aktionsart is often used in the meaning of “lexical aspect” generally.

The imperfective, according to Comrie (1976: 24), focuses on the internal temporal structure of a situation. Dahl (1985: 76) takes issue with this formulation, and questions whether imperfective verb forms such as that in John was sitting in a chair necessarily focus on any “internal structure,” and whether the totality of the sitting situation is relevant at all. To get around this issue, one might say that the imperfective views a situation without reference to its temporal boundaries or the aforementioned well-defined result/end-state.

The imperfective typically expresses situations that are continuous, ongoing, and/or habitually repeated. The latter two imperfective meanings are often coded directly by grammatical morphemes. Thus, many languages have the progressive (PROG) as a category, which views a situation as continuing, but is ordinarily restricted to non-stative (dynamic) situations, cf. English She is reading a book. Some languages also have habitual as a viewpoint category, which views a habitually repeated situation imperfectively, i.e. as an unbounded macro-situation, cf. English He used to go out on Friday evenings.

As Comrie (1976: 27) observes, habitual repetition should be kept distinct from iterativity and distributivity. Whereas habituality refers to the repetition of a situation on different
occasions (e.g. *We usually go out on Friday evenings*), iterativity refers to the repetition of a situation on a single occasion (e.g. *He snapped his fingers three times*). Again, habituality is a subcase of imperfectivity. But iteratively repeated situations easily allow for both the imperfective and the perfective viewpoint, depending on whether the repetitions are viewed as continuing (e.g. *I felt him patting me on the shoulder a few times*) or summarized as a complete, whole situation (e.g. *He patted me on the shoulder a few times and kissed me on the forehead*). Distributivity is a special case of iterativity where an iterated situation is distributed over all of a set of entities, as indicated by universal quantifiers (e.g. *He smashed all of the windows*), and has a high correlation with the perfective viewpoint.

Finally, there is the **perfect**, which views a situation that occurred at some point in time as linked to an ensuing state that is on hand at a later temporal reference point, usually the present, as in the case of the present perfect (e.g. *She has read the book*). A reference point in the past yields the past perfect (e.g. *She had read the book*) and a reference point in the future yields the future perfect (e.g. *She will have read the book*). As the perfect does not really concern the temporal constituency of situations themselves, and is as much a category of grammatical tense as one of aspect, it is not discussed further here (see Chapter 20).

Categories of viewpoint aspect do not generally exist in isolation, but form oppositions with categories expressing either a contradictory or neutral viewpoint. As mentioned above, the most common opposition appears to be the PF:IM PF opposition. In many languages, the PF:IMPF opposition is restricted to the past tense. Thus, in French the primary opposition is between the *passé composé/passé simple* (perfective) and the *imparfait* (imperfective; cf., e.g. Garey (1957)). Further, as Dahl (1985: 82–83) points out, in numerous languages the perfective category is restricted to the past (often termed *aorist*), whereas the imperfective is then subdivided into the present tense and an imperfective past tense (often termed *imperfect*). In such systems the present and the imperfective past share one stem, whereas the perfective past is formed from another. As Dahl points out, this system is common in Indo-European languages (and existed in Proto-Indo-European) as well as in non-Indo-European languages such as Classical Arabic, in which we can see the common elements of the present and the imperfective past quite clearly, as shown in Table 19.2.

A minority of languages do not restrict the PF:IMPF to the past tense. For example, though Classical Greek lacks the opposition in the present and future tenses, it does have separate perfective and imperfective forms in the past tense, the subjunctive, optative, and imperative moods, as well as in all participles. The Slavic languages are another well-known case; they tend to lack the PF:IMPF opposition only in the (actual) present tense and in certain participles. But even in languages that do not restrict PF:IMPF to the past tense, the propensity to mark the PF:IMPF opposition in the past can still be evident. For example, Bulgarian, a Slavic language, has in addition to its derivational PF:IMPF opposition (which is not limited to the past tense) an independent, inflectional *aorist:imperfect* opposition in the past tense. Here it is worth pointing out that languages with a PROG:NON-PROG opposition (such as English) do not commonly restrict it to the past tense (cf. Dahl (1985: 92–93)).

### Table 19.2 PF:IMPF in Classical Arabic (Dahl 1985: 83)

<table>
<thead>
<tr>
<th></th>
<th>Arabic</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF</td>
<td><em>kataba</em></td>
<td>“he wrote”</td>
</tr>
<tr>
<td>IMPF</td>
<td><em>yaktubu</em></td>
<td>“he is writing”</td>
</tr>
<tr>
<td>IMPF Past</td>
<td><em>ka:na yaktubu</em></td>
<td>“he was writing”</td>
</tr>
</tbody>
</table>
Regarding the motivation for the tendency for the PF:IMPF opposition to exist primarily in the past tense, it is well known that the present tense is generally incompatible with the perfective aspect, because situations that are ongoing at speech time cannot simultaneously be identified as totalities (completed). (An interesting exception to this incompatibility is the case of performative utterances, in which the completion of the event in question is literally simultaneous to its utterance, as in *I hereby pronounce you man and wife*, cf. Langacker (1990: 90). It should also be pointed out that the lack of the PF:IMPF opposition in the present is primarily characteristic of the actual present, i.e. the state of affairs actually on hand at speech time; habitually repeated events in the present are freely coded perfective in many languages.) Thus, the general lack of the PF:IMPF opposition in the present tense is no mystery. In contrast, there has been almost no discussion of why the PF:IMPF opposition is more common in the past than in the future. Klein (1994: 114) simply takes it for granted that “[l]anguages, like old people, have a liking for the past.”

However, the tendency to have the PF:IMPF opposition in the past and not in the future can be explained as a result of different cognitive strategies in the two domains of time. As past events have already occurred and thus have ultimately fixed (if nevertheless occasionally unclear or unknown) causal relationships to the state of affairs at the time of speech, people are often interested in “forensically” establishing what events have occurred, what their mutual relationships and ultimately their relationships to the state of affairs at the time of speech are. Moreover, telling about what has already happened includes to no small extent telling about interruptions and unexpected events that occurred while other events were in progress. Conversely, none of the future has occurred, and our statements about the future primarily communicate goal-oriented plans and other idealized speculations about what is yet to happen. A further complication regarding the future is the fact that the anticipated time when the results of future events will be on hand is not the present, but some subsequent, post-event time in the future, so that there are no fixed causal links between future events and the state of affairs at speech time. For these reasons, it seems that there is a lesser need to encode aspectual distinctions in the future tense than in the past.

Of course, complex mutual relations between situations can be relevant in the future, but in the default case humans tend to speak about the future in terms of goal-oriented planning as opposed to what situations will be going on at a particular point in time and what events will be located within those ongoing situations. Thus, it makes sense that languages would be more likely to conventionalize viewpoint aspect oppositions in the past than in the future, and leave the latter to some kind of neutral viewpoint. The assumption that statements about the future are more likely to concern goal-oriented plans and other idealized speculations about future events can also explain why, as Dahl (1985: 93) observes, the English progressive occurs relatively infrequently in the future tense. It can likewise explain why in Russian imperfective verbs occur relatively less frequently in the future tense than they do in the

<table>
<thead>
<tr>
<th>PF Verb</th>
<th>Past</th>
<th>Future</th>
<th>IMPF Verb</th>
<th>Past</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>sdelat’ “do”</td>
<td>4,088</td>
<td>2,265</td>
<td>delat’ “do”</td>
<td>2,126</td>
<td>1,018</td>
</tr>
<tr>
<td>napisat’ “write”</td>
<td>1,557</td>
<td>474</td>
<td>pisat’ “write”</td>
<td>1,271</td>
<td>173</td>
</tr>
<tr>
<td>pročitat’ “read”</td>
<td>610</td>
<td>238</td>
<td>čitat’ “read”</td>
<td>2,055</td>
<td>127</td>
</tr>
<tr>
<td>postroit’ “build”</td>
<td>357</td>
<td>125</td>
<td>stroit’ “build”</td>
<td>279</td>
<td>59</td>
</tr>
</tbody>
</table>

Table 19.3 Figures for four Russian aspectual pairs by tense and aspect
past tense. This can be seen in figures taken from the spoken language corpus of the Russian National Corpus (date of searches: 1 December 2013) for four common aspectual pairs of verbs, delat’/sdelat’ “do,” pisat’/napisat’ “write,” čitat’/pročitat’ “read,” and stroit’/postroit’ “build,” given in Table 19.3.

As can be seen from Table 19.3, the perfective future is considerably more frequent than the imperfective future, and chi-square tests for the aggregate tense figures from all four verb pairs (PF past: 6,612; PF future: 3,102; IMPF past: 5,731; IMPF future: 1377) confirm that the relatively higher frequency of the perfective in the future compared to the frequency of the perfective in the past is statistically significant ($\chi$-squared = 331, df = 1, p-value < 2.2e-16), with a small effect size (Cramer’s V = 0.14). Thus, the predominance of the English simple future and the Russian perfective future makes sense given that people tend to plan or conceive of future events in their completion and leading to their natural results, as opposed to being in progress and unfinished at a certain point in time, and speakers are thus much more likely to code future events with their default category for completed events.

As examples of viewpoint systems, let us now briefly consider English, Mandarin Chinese, and Russian. English is typologically ordinary in that it has a marked progressive construction be X-ing. The simple forms in English can be employed in cases where an event is viewed perfectly (e.g. He wrote the letter and sent it) and the simple form is often considered to be a marker of perfectivity, e.g. by Smith (1997). However, as Sasse (2002: 258) has pointed out, there are problems with viewing the simple forms as markers of perfectivity: it occurs readily with unbounded states (e.g. I knew that for a long time). Further, it is easy to attest in processual contexts (e.g. As I wrote the letter, my hands started to shake). Therefore, it is better to consider the English simple forms as aspectually neutral. Put somewhat differently, English does not really have the PF:IMPF opposition, but a PROG:NON-PROG opposition. As mentioned above, in addition to the progressive English also has a habitual construction for the past tense: used to X. Thus, it seems that English is relatively rich in imperfective markers, but has no real perfective marker. (The role of the perfect may be ignored here, as it occurs in both perfective contexts, e.g. He has just crossed the bridge, and imperfective contexts, e.g. We have been living here for many years; it relates a past situation to the speech situation regardless of its temporal constituency.)

Mandarin Chinese appears to have a rich, morphologically heterogeneous system for the marking of viewpoint aspect. According to Xiao and McEnery (2004), in Mandarin Chinese there are four different kinds of perfective markers on the one hand, and four different imperfective markers on the other. An overview with their characterizations of the markers is given in Table 19.4.

Perfective -le refers to a situation as a totality that actually occurs prior to some reference point, usually in the past but sometimes in the future; an example is (1).

<table>
<thead>
<tr>
<th>Table 19.4 Perfective and imperfective markers in Mandarin Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfective</td>
</tr>
<tr>
<td>-le</td>
</tr>
<tr>
<td>guo</td>
</tr>
<tr>
<td>Reduplication</td>
</tr>
<tr>
<td>Resultative</td>
</tr>
<tr>
<td>Verb</td>
</tr>
<tr>
<td>Complements</td>
</tr>
</tbody>
</table>

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(1) wo zuotian xie-le yi-feng xin (Xiao and McEnery 2004: 96)
   I yesterday write-PF one-CLF letter
   “I wrote a letter yesterday.”

(A related particle is sentence-final change-of-state le. It is not restricted to the past tense, but occurs in the present and immediate future as well. The relationship between actual -le and change-of-state le has been subject to debate; see Xiao and McEnery (2004: 90–95) for a discussion.) Experiential guo occurs to distance a situation from the present, in a way similar to the English experiential perfect, as in (2).

(2) ta zai Lundun zhu-guo san-nian (Xiao and McEnery 2004: 138)
   he in London live-exP three-year
   “He [has once] lived in London for three years.”

Reduplication in Mandarin Chinese has a delimitative function, i.e. it expresses that a situation continued for some (relatively brief) period of time; reduplication is not incompatible with the perfective marker -le, as shown in (3).

(3) ta xiao-le xiao shuo [. . .] (Xiao and McEnery 2004: 138)
   he smile-PF smile say
   “He smiled a little and said [. . .]”

The last perfective marker consists of the class of resultative verb complements, which are directional adverbs, adjectives, or verbs that typically signal the completion of a situation or the attainment of a resultant state. It is unclear how many resultative verb complements exist, beyond the seven directional resultative verb complements (neither Smith (1997) nor Xiao and McEnery (2004) give any information in this regard). An example of an adjectival resultative verb complement is given in (4).

(4) ta xi-ganjing-le yifu (Xiao and McEnery 2004: 161)
   he wash-clean-PF clothes
   “He washed his clothes clean.”

According to Xiao and McEnery (2004: 159) resultative verb complements are the most productive way of indicating perfectivity in Mandarin Chinese.

Let us now briefly turn to the four imperfective markers in Mandarin Chinese. Durative zhe expresses open-ended situations without any reference to their boundaries, and typically occurs in background predicates, as in (5).

(5) na haizi ku-zhe yao baba (Xiao and McEnery 2004: 185)
   that child cry-DUR want dad
   “While crying, that child called out for her father.”

Progressive zai differs from durative zhe in that it rarely occurs with stative verbs, as the progressive requires dynamic predicates (see the above description of the English progressive); moreover, progressive zai does not occur in background clauses (Xiao and McEnery 2004: 207).

The final two imperfective markers are inceptive qilai (lit. “get up”), which expresses the beginning of an open-ended situation, and continuative xiaqu (lit. “go down”), which
expresses continuation of a situation that was previously begun. Examples are given in (6a) and (6b) respectively.

(6) a  
\[\text{shuo-zhe haiziqi de xiao-qilai} \]  
\[\text{say-DUR childish PRT laugh-INC} \]  
\[\text{“Having said that, [she] started to laugh like a child.”} \]

b  
\[\text{Wang Hu kan-le lianzhang yi-yan, you shuo-le-xiaqu} \]  
\[\text{Wang Hu look-PF company commander one-CLF then say-PF-CONT} \]  
\[\text{“Wang Hu took a look at the company commander, and then went on talking.”} \]

This cursory description cannot begin to address the complexities of the Mandarin Chinese system of viewpoint aspect. However, it serves to illustrate some basic points that are relevant to the study of viewpoint aspect systems. First, a comparison of the brief descriptions of English and Mandarin Chinese systems of viewpoint aspect shows them to be quite different. The English system may be described as consisting of an asymmetrical inflectional PROG:NON-PROG opposition (without a clear perfective category, and complemented by an inflectional \textit{perfect:non-perfect} opposition), whereas the Mandarin Chinese system consists of a \textit{PF:IMPF} opposition, though each member of the opposition is marked by four semantically distinct morphemes, which appear to include particles as well as compounded elements (resultative verb complements and the inceptive and continuative markers).

Second, the aspectual status of some of the Mandarin Chinese aspectual markers presented above is less than clear. For instance, though Xiao and McEnery (2004) consider experiential \textit{guo} a perfective, it appears to occur mainly in background material (cf. Ming (2010: 143) and the references cited there), which is a characteristic of imperfective verb forms. Ming also points out that “imperfective” inceptive \textit{qilai} can co-occur with perfective \textit{-le}; note also that continuative \textit{xiaqu} can as well, cf. (6b) above. This raises the question of their precise aspectual value. These and other issues concerning viewpoint aspect in Mandarin Chinese would be less puzzling if there were one or more reliable diagnostic tests for viewpoint perfectivity in Mandarin Chinese, which do not exist as far as I am aware. Failing such diagnostic tests, the assignment of a perfective or imperfective value to a given verb form is ultimately subject to the vicissitudes of different approaches.

The lack of any diagnostic tests for viewpoint perfectivity is a significant problem in aspectology. The lack of any criteria with cross-linguistic validity is surely connected to the fact that the \textit{The World Atlas of Language Structures} (WALS; \url{http://wals.info/chapter/65}) characterizes perfective in minimal terms: a verb form is considered perfective if it is “the default way of referring to a completed event” in a given language. This characterization is problematic in the case of English, in which the simple forms are the default means for referring to completion actions, but also easily occur in processual contexts, as pointed out above. Further, if such definitions of the perfective (e.g. Comrie’s “a situation viewed as a single, complete whole”) really captured the semantic essence of perfective markers, it should be relatively easy to establish a reliable cross-linguistic diagnostic test for viewpoint perfectivity.

Given the apparent inadequacy of the definitions of the perfective based on totality/completion, perhaps the essence of the \textit{PF:IMPF} opposition lies in the realm of discourse. Hopper (1979) has argued that the cross-linguistic function of aspect is to express the foreground/background distinction (perfective \(\approx\) foreground, imperfective \(\approx\) background). As appealing as this hypothesis is, it encounters problems of its own. First, the correlation between perfective
and foregrounding varies from language to language (cf. section 4). Second, the concepts of foreground and background are difficult to define in a falsifiable way, and it is possible that different languages operate with different versions of these categories. Third, the foreground/background distinction is characteristic primarily of narrative discourse, and it is not clear exactly how these concepts are relevant for conversational discourse.

One way around this problem is to analyze viewpoint perfectivity in terms of a cross-linguistically stable prototype (cf. Dahl’s description of the “prototypical perfective” given above) with secondary functions in various languages. There is nothing wrong with this approach, but it nevertheless seems relatively trivial, and a prototype approach based on totality/completion may benefit from the addition of a referential notion such as that of a “token of a situation” (see section 5).

The aforementioned problems are a reason why the Slavic aspectual systems will probably never lose their relevance for the study of aspect. In Slavic languages there are two clear diagnostics for perfective verbs: (1) perfective verbs can never be used in answer to the question “What are you doing now?”; (2) perfective verbs can never occur as the complement of a phase verb, e.g. begin, finish. Thus, the Slavic languages present an opportunity to examine a system of viewpoint aspect where there is almost no ambiguity about the aspectual value of verb forms. Further, as mentioned above, the Slavic PF:IMPF opposition is not restricted to past-tense forms, but organizes almost the entire verbal system independently of tense and mood. For these reasons, a brief description of viewpoint aspect in Russian is given next, and is followed in section 4 by a discussion of aspectual differences between the Slavic languages.

The PF:IMPF opposition in Russian is expressed not by inflected endings, but by affixation. Perfective verbs typically contain one of seventeen perfectivizing prefixes, e.g. s-delat’ “do, make,” pere-pisat’ “rewrite”; there is one perfectivizing suffix, semelfactive -nu-, cf. e.g. xoxotnut’ “giggle once/give a giggle.” Imperfective verbs either contain no perfectivizing prefix, e.g. delat’ “do, make,” or if they do they contain a specifically imperfectivizing suffix, e.g. pere-pis-yvat’ “rewrite.” Thus, for the vast majority of its verbal lexicon, Russian expresses viewpoint aspect through a system of derivationally related pairs of verbs, as shown in Table 19.5.

Each verb of each aspect has a full paradigm. However, morphologically present-tense perfective verb forms do not express the actual present, but primarily the future and occasionally habitually repeated events; present active participles are limited to the imperfective aspect, and past active and passive participles are limited to the perfective aspect. The indicative tense paradigm for Russian aspectual pairs is given in Table 19.6.

Table 19.5 The Russian system of aspectual pairs

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>s-delat’ “do, make”</td>
<td>delat’ “do make”</td>
</tr>
<tr>
<td>pere-pisat’ “rewrite”</td>
<td>pere-pis-yvat’ “rewrite”</td>
</tr>
<tr>
<td>xoxotnut’ “giggle once”</td>
<td>xoxotat’ “giggle”</td>
</tr>
</tbody>
</table>

Table 19.6 Russian viewpoint aspect and tense

<table>
<thead>
<tr>
<th>Perfective</th>
<th>Imperfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past</td>
<td>Past</td>
</tr>
<tr>
<td>s-delal “he made”</td>
<td>delal “he was making”</td>
</tr>
<tr>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>s-delaeet “he will”</td>
<td>delaeet “he is making”</td>
</tr>
<tr>
<td>Future</td>
<td>Future</td>
</tr>
<tr>
<td>make/he makes”</td>
<td>budet delat’ “he will be making”</td>
</tr>
</tbody>
</table>
The derivational nature of Russian aspect might create the impression that it is in fact a type of lexical aspect, i.e. that it merely codes situation type, but nothing could be farther from the truth. Rather, despite their unusual morphological marking, perfective and imperfective verbs are highly sensitive to contextual and discourse factors. This can be seen in examples (7a, b).

(7) a  Segodnja prišel nožik [...] nož super! (Internet)
   today arrived.PF little knife knive terrific
   “The pocketknife arrived today [...] the knife is terrific!”

   b  Mneodin nožik uže prišel, sejčas v zakaze vtoroj. (Internet)
   me one little knife already came.IMPF now in order second
   “One pocketknife already came to me, now a second one is on order.”

In (7a) the perfective is used because the speaker is interested in the natural result of the event in question, i.e. the qualities of the knife that has arrived. In contrast, in (7b), an imperfective verb is used although it expresses a single, completed action, because the speaker is interested not in the concrete result of the arrival of the knife, but in confirming that knives ordered in that manner do arrive.

The examples in (7) demonstrate the sensitivity of the Russian PF:IMPF opposition to discourse factors (i.e. the concerns of the speaker). In the next section, more Slavic data are adduced to illustrate differences between individual aspectual systems regarding the relationship between lexical and grammatical aspect.

4 Typology versus individual languages: the case of Slavic

In section 3 it was mentioned that systems of viewpoint aspect, and systems with a PF:IMPF opposition in particular, exhibit a wide variation in terms of their morphology and the precise semantic meanings. This section briefly shows that even within the Slavic languages, which are usually considered to represent a single system of viewpoint aspect, there are important differences concerning the interaction between lexical and grammatical aspect as well as the referential functions of perfective and imperfective verbs.

Recall from section 3 that there is a correlation between the perfective viewpoint and telic situation types. Telic situations (accomplishments and achievements) tend to be coded perfective, as are semelfactives; states are consistently imperfective, and activities tend to be coded imperfective. The Slavic languages break down into a western group (Czech, Slovak, Sorbian, and Bosnian/Croatian/Serbian) and an eastern group (Russian, Ukrainian, Belarusian, Bulgarian, and to a lesser extent Polish) with respect to the degree to which these correlations hold. In what follows Russian and Czech are taken as representative of the eastern and western groups (respectively). Recall from example (7b) in the previous section that in Russian a single, completed situation in the past may be coded imperfective in certain discourse contexts. In contrast, in Czech a single, completed action in the past must be coded perfective, as shown in (8).

(8) Mně jeden kapesní nůž už přišel, druhý mám teď
    me one pocket knife already came.PF another I have now
    objednaný.
    ordered
   “One pocketknife already came for me, I have ordered another one.”
In the eastern group, the correlation between perfective coding and telic situations is frequently overridden by discourse considerations, whereas this correlation is much stronger in the western group of languages. In other words, situation type is less relevant to the coding of viewpoint aspect in the eastern group than it is in the western group.

Likewise, the correlation between atelic activities and imperfective coding is stronger in the western group, whereas atelic activities can easily be expressed by perfective verbs in the eastern group. This is shown in (9), in which Czech allows an imperfective activity verb in a sequence of events (9a), whereas Russian regularly employs a perfective delimitative verb (9b).

(9) a  *Stalin chvíli mlčel, pak se otázal:*  
Stalin while was silent.IMPF then REFL asked.PF:  
„Má čím válčit?”  
has what.INST to wage war

b  *Stalin pomolčal, potom sprosil: — U nego est’ čem*  
Stalin was silent.PF then asked.PF by him is what.INST voevat’?  
to wage war  
“Stalin was silent for a while, then asked: ‘Does he have anything to fight with?’”

Again, situation type is less relevant for the coding of viewpoint aspect in Russian, whereas in Czech situation type conditions the coding of viewpoint aspect to a relatively high degree.

If viewpoint aspect in Czech is conditioned by situation type to a relatively higher degree than in Russian, this suggests in fact that viewpoint aspect in Czech and the other western languages is a relatively more objective category (i.e. it is more dependent on default temporal construals of types of situations), whereas viewpoint aspect in Russian and the other eastern languages is relatively more subjective (i.e. the speaker has more choice in his/her construal of a situation in time). The degree of the correlation between the perfective and foregrounding and the imperfective and backgrounding in the two groups of languages supports this idea. For example, in Russian narratives perfective verbs tend to be restricted to sequences of events, whereas in Czech perfective verbs occur frequently in background clauses. This is evident in differences in the coding of viewpoint aspect in contexts of negation. Negation is commonly considered a case of backgrounding, particularly when a predicate is negated over an interval of time. In such contexts, the imperfective is required in Russian, as shown in (10a), whereas Czech allows the perfective, as shown in (10b).

(10) a  *Ona nikogda ne priznavalas’ v ètom.*  
she never not admitted.IMPF in this.  
“She never admitted this to him.”

b  *Nikdy se mu ke svému hladu nepřiznala.*  
never SELF him to own hunger NEG.admitted.PF  
“She never admitted her hunger to him.”

As “admit” is a telic predicate, Czech appears in this case to code the predicate perfective according to its situation type—the perfective verb phrase expresses that no complete event of admitting took place, and the background function of the clause is irrelevant for coding. In contrast, in Russian the temporal diffuseness of a backgrounding clause is more important for the coding of viewpoint aspect than its underlying situation type, and the imperfective is required.
The preceding discussion provides only a glimpse into the aspectual differences between the western and eastern groups of Slavic. It nevertheless shows that even within a single language family, differences in the category of viewpoint aspect can be considerable, and involve differing interrelationships between situation type and viewpoint aspect. It also suggests that there may be a one-way implicational relationship between situation types and the perfective: a language will allow some atelic situations to be coded perfective only if allows telic situations to be coded perfective, but the reverse is not true.

These differences also raise the issue of the adequacy of the typological definitions of the perfective given above. The definition of the perfective as a single, complete whole fairly accurately describes the usage patterns of the Czech perfective, but cannot account for the usage patterns of the Russian perfective. Thus, it seems that in some languages the referential function of viewpoint aspect is considerably more complex than Comrie’s definition given in section 3. With regard to Russian, we may say that beyond the expression of events as totalities, a crucial referential function of perfective verbs is to signal that a situation is unique within a given temporal context (for extended discussions, see Leinonen (1982) and Dickey (2000)).

5 Parallels between nouns and verbs
The previous section briefly raised the issue of the referential functions of grammatical aspect. This section continues that line of thinking by pointing out some parallels between the reference of nouns and verbs, first for situation type (based on Mehlig (1996)) and then for viewpoint aspect.

As is well known, there are two types of nouns: count nouns, which refer to discrete, countable entities (e.g. bicycle, chair), and mass nouns, which refer to uncountable substances (e.g. milk, flour) (see Chapter 16). The discreteness of the referents of count nouns stems from the fact that they have natural bounds. The referents of mass nouns do not. Thus, the referent of a count noun is heterogeneous, i.e., no subpart of it can be described by that count noun. In contrast, mass nouns are homogeneous, i.e., any subpart of the referent of a mass noun can be described by that mass noun. For example, a part of a bicycle cannot be referred to as a bicycle, whereas a portion of a larger quantity of milk can be referred to as milk. That is to say, the principle of arbitrary divisibility is valid for mass nouns, but not for count nouns. Further, the principle of cumulativity or additivity is valid for mass nouns: If milk is added to some quantity of milk, the result can still be referred to as milk. The principle of cumulativity is not valid for count nouns.

The various situation types show analogous properties: telic situations are bounded by their temporal endpoints in the same way that count nouns are bounded in space. Thus, accomplishment and achievement predicates are discrete and heterogeneous, and the principle of arbitrary divisibility is not valid for them. For example, no subportions or constituent phases of the accomplishment fix a lock can be referred to as fix a lock. (This is a matter of default construals: reference to subparts, or internal phases, of an accomplishment can be coerced by imperfective categories, e.g. be fixing a lock.) Semelfactives such as sneeze pattern with telic situations in this regard due to their inherent boundaries. In contrast, atelic situations are unbounded in time in the same way that mass nouns are unbounded in space. They are thus homogeneous, and the principles of arbitrary divisibility and cumulativity are valid for them. For example, any subportion of the activity sit can be referred to as sit, and someone may sit for just a little longer than they already have, and the whole situation will still be referred to as sit. These parallels are summarized in Table 19.7.
Thus it seems that situation type and the count/mass distinction reflect the same distinctions applied to the spatial entities that are the referents of nouns and to the temporal entities that are the referents of verbs. That is to say, the concepts of boundedness, homogeneity, and heterogeneity are conspecific to space and time.

Parallels between nominal categories and viewpoint aspect are less straightforward, and there has been far less agreement in this area. One reason is that such comparisons are complicated by the considerable differences in the way we relate to nouns and verbs. As Langacker (2009) observes, nominal and verbal grammatical categories (Langacker’s term is grounding categories, i.e. grammatical categories that specify the relationship of a lexical unit to the “ground” of the speech situation) are based on “different epistemic concerns”: nominal categories function to identify instances of a type of object, whereas verbal categories function to establish the existence/occurrence of an instance of a type of event. Inasmuch as this is true, verbal categories should generally show a weaker impulse to express the unique identifiability of a situation. However, in recent years there have been attempts to draw parallels between the category of referentiality in nouns (definite vs. indefinite) and the PF:IMPF opposition in aspect languages, particularly for Russian aspect. Leinonen (1982) argues that the Russian perfective signals that an event is temporally definite, i.e. uniquely locatable in a particular temporal context. More recently, Ramchand (2008) argues that the Russian perfective signals that the event is located by a definite assertion/reference time. A more general approach is taken by Leiss (2000), who suggests that cross-linguistically the shared function of nominal definiteness categories and verbal aspect is to express a TYPE (indefinite noun phrases; imperfective aspect) versus a specific TOKEN (definite noun phrases; perfective aspect). Despite some complications, an approach of this kind allows for a fuller recognition of the prominent discourse functions of aspect in some languages and enables us to make better sense of them. If languages with aspectual systems that lend themselves to a direct comparison with systems of nominal reference are relatively rare, this is due to the aforementioned differences in the way we relate to the referents of nouns and verbs.

### 6 Current approaches and future directions

Current approaches to aspect understandably vary according to whether the subject is lexical or grammatical aspect. Since Dowty (1979) investigations of lexical aspect have been dominated by studies with formal semantic approaches, e.g. Rothstein (2004) (see Chapter 4). There have also been many formal semantic investigations of grammatical aspect in recent years, e.g. van Lambalgen and Hamm (2005). Similarly, Discourse Representation Theory has found application in the analysis of the discourse effects of aspect systems, cf. e.g. Gronn (2003) for Russian.

In general, recent decades have witnessed a recognition that the discourse effects of grammatical aspect cannot be ignored in a semantic analysis of the category, and analyses of these
effects have been made for numerous individual languages. Quantitative methods have been also increasingly employed to provide more accurate empirical bases for analysis; a very recent example is Janda’s et al. (2013) study of the nature of prefixation in Russian.

As for future directions, two areas of inquiry that are already proving their importance are psycholinguistic approaches to aspect and studies of the acquisition of aspect in children (see Chapter 26). Psycholinguistic approaches to grammatical aspect are still in their infancy, but aspectual coercion has been the subject of several psycholinguistic investigations, cf. Bott (2010) and the references cited there. On the basis of several experiments, Bott concludes that the interpretation of situation type does not remain underspecified during processing; rather, situation type is immediately determined on the basis of probabilistic information and context. Further, the smallest domain for determining the situation type of a verb is the verb together with its arguments and adverbials. Bott’s conclusion supports the idea that situation type is not a matter of verbs but of verb constellations (cf. section 1).

Investigations of the acquisition of aspect have established that situation aspect is grasped by children by the time they are three years old (cf. Wagner (2012) and the sources cited there). They have also established that early on children tend to restrict the perfective forms to telic predicates in the past tense, and restrict imperfective verb forms to atelic predicates in the present tense (cf. again Wagner (2012) and the references cited there). Wagner argues that this is a consequence of lower demands on informational processing that these combinations impose. Similarly, Stoll (2005) establishes that telic perfectives are learned by Russian children earlier than Aktionsart perfectives, such as ingressive verbs, and that the acquisition of the latter is dependent on their narrative competence. While many psycholinguistic studies of verbal aspect and investigations of the acquisition of aspect to date have confirmed pre-existing hypotheses, these approaches will certainly facilitate the resolution of various controversial issues and increasingly result in the development of innovative general hypotheses.

Further reading


Michaelis describes and analyzes the aspectual system of English, with a particular focus on the perfect.

References

Lexical and grammatical aspect


Related topics

Chapter 20, Tense; Chapter 21, Modality; Chapter 23, Event semantics; Chapter 24, Participant roles.