Temporal Reference, Aspect and Actionality.  
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UNDERSTANDING PERFECTIVITY — UNDERSTANDING BOUNDS.

In this paper, I shall outline a cross-linguistic model of perfectivity, understood as a cluster of meanings centred around the general notion of bound or limit. The emphasis is not going to be on new linguistic data, and my references do not strive for completeness; instead I am aiming at a rather high level of generalization in order to shed new light on some well-known differences between the aspectual systems of various languages. I shall also show how boundedness interacts with temporal reference in a manner which largely explains the so-called "simple denotation meaning" or "general-factive meaning" of the Slavonic Imperfective Aspect.¹

1. Temporal bound vs. material bound. As shown by Dahl (1985: 69ff.), there exists a cross-linguistically identifiable and quite widespread aspectual opposition which can be labelled the perfective : imperfective opposition. The identification of this opposition as such is not dependent on any semantic or formal definition, for the central idea of Dahl's book is to show that different languages can possess grammatical categories (grams) which cluster around the same prototypical uses, defined by means of example sentences in contexts.

As for terminology, "perfective" and "imperfective" are best-known, though their definitions may vary. Historically, they are based on the names of the Latin tenses perfectum and imperfectum; since these really are a perfective past tense and an imperfective past tense, respectively, I do not think any new terms are needed.²

According to Dahl, there is no universal tendency to morphologically mark the perfective aspect rather than the imperfective, nor the other way round. Most aspectologists agree, though, that semantically it is easier first to define the content of perfec-
tivity, and to treat imperfectivity as negatively defined. A central concept in the positive definition of perfectivity is *bound*: the perfective grams of various languages denote situations in which what happens attains some kind of limit, bound or endpoint. Situations of this kind may be referred to as *bounded situations*, or *events*.

The definition of the perfective in terms of boundedness is not incompatible with definitions based on the concept of totality (e.g., Comrie 1976: 16), but the concept of bound has the advantage of being more concrete (cf. Dahl 1985: 74ff.; Bondarko 1990: 6–10). Perhaps the best semantic treatment of boundedness so far is Bondarko's analysis of what he calls the "functional-semantic field of limitativity" (Russ. *limitativnost*; Bondarko & al. 1987: 45 ff.).

As pointed out by Dahl, there are types of bounded situations which are not denoted by the perfective in all of the languages possessing this kind of category. A case in point is presented in Dahl's typological questionnaire as follows (op.cit., 74–75; the verb in the sentence to be translated is left uninflected so as not to influence the translation):

*Context*: What did your brother do after dinner yesterday?

*Sentence*: He WRITE letters.

The Russian translation requires the Imperfective Aspect:

1. *On pisal pis'ma.*
   'He wrote (some) letters.'

However, in translating this sentence most "aspect languages" in Dahl's sample make use of the perfective — the Romance languages, for instance, would use their perfective past tenses. Between these types we find Bulgarian, which possesses both a Russian-like general perfective: imperfective opposition and a Romance-like inflectional perfective: imperfective distinction confined to the past (Lindstedt 1985). Accordingly, Bulgarian would use an Imperfective Aorist, i.e. the perfective past tense formed from an imperfective verb:

2. *Toj pisa pisma.*

The important thing here is the semantic partitivity of the direct object: if the meaning were 'He wrote *the* letters', Slavonic languages would use a Perfective verb.

Bertinetto and Delfitto (1992) have recently argued that the Russian Perfective: Imperfective opposition is not aspectual at all, though it is a boundedness opposition.
They subsume boundedness of this kind, as well as telicity, under the traditional notion of Aktionssart, or actionality. Crucial for their argumentation are sentences in which atelic situations are temporally limited and therefore bounded, such as:

(3) Mary danced until midnight.
(4) Mary danced for two hours.

Since here Slavonic would again differ from Romance, for instance, in using what is called the Imperfective Aspect (and Bulgarian would have an Imperfective Aorist), Bertinetto and Delfitto argue that the Slavonic opposition is really an actional, not an aspectual distinction — and the terms "perfective" and "imperfective" would be, under this definition, misleading if applied to Slavonic.

Bertinetto and Delfitto distinguish aspect and actionality by means of adverbial co-occurrence restrictions. Their definition is essentially semantic (cf. also Bertinetto 1986: 83ff.). It relegates to actionality the semantic property often associated with the Slavonic Perfective, namely that something is done up to its natural end-point:

(5) On napisal pis'mo.
   'He wrote a/the letter.' (Context as in sentence 1 above)

Here the Russian verb is Perfective; in Bulgarian, a Perfective Aorist would be used.

Now, it is of course possible to define aspect and actionality in this way. It is important to notice, as also pointed out by Dahl, that Slavonic aspect is by no means a prototypical aspect system when viewed cross-linguistically. But I think nothing is gained by accepting Romance-like distinctions as defining properties of perfectivity and imperfectivity, either. After all, Slavonic, Romance and many other languages agree in using what is called the perfective in (5), and sentences of this kind form a clear cross-linguistic focus of the postulated category (Dahl 1985: 78). Sentences (1) through (4) only seem to illustrate an important distinction between various languages outside this semantic focus.

I propose the following solution. Perfectivity is semantically based on the notion of attaining a bound, but this bound is not conceptualized identically in all languages. The Slavonic Perfective basically expresses the attainment of what I call the material bound, i.e. something which forms a natural end-point of a situation by virtue of its being just the kind of situation it is. Slavonic aspect is therefore based on telicity: telic situations have a potential bound, and when it is reached, the Perfective is used. On the other hand, Romance aspect, for instance, is connected with the notion of temporal bound, something which even an atelic situation can have.
The distinction between "material bound" and "temporal bound" closely resembles what Bondarko (1987: 46ff.) calls the "internal bound" and "external bound", respectively. The temporal bound is external in the sense that it "does not depend on the character of the action itself, being determined by factors external to it" (ibid., my transl.). It can also be considered "external" because in the layered aspectual structures I have described as "aspectual nesting" (Lindstedt 1984; 1985: 169ff.), it does not occur in the innermost layer.

If a single situation is considered, a material bound always entails a temporal bound. However, habituality changes this because a series of habitually repeated bounded situations is in itself an unbounded situation. The Russian Imperfective, for instance, is the normal way of expressing habituality.\(^5\) We can conclude that a necessary condition for the Russian Perfective Aspect to be used is that both the temporal and the material bound be attained, while in the Romance-type situation only the temporal bound is necessary.

Although the temporal bound and the material bound are conceptually distinct, they are also instances of the same general notion of bound, and in prototypical perfective sentences such as (5) above they are closely connected. Therefore I prefer not to assign them to different semantic domains, all the more so as the concept of bound is even more complex in natural language (cf. Bondarko 1987: 46ff. on some of the possible distinctions).

2. Material bound and temporal reference. Sentences such as the following Russian example have been extensively discussed in Slavonic aspectology:

(6) Poprobuyu. Kogda-to davno ja rešal eë.
I'll try. A long time ago I solved it.

In this example (from Vlasova & al. 1980: 19), the interesting thing is the Imperfective Past rešal 'solved' instead of the corresponding Perfective rešil. In a different context ja rešal eë would mean 'I was working on the problem', but here it is clear that both the material and temporal bound are attained: the speaker really solved the problem at some time during his life.

This is the notorious obščefaktičeskoe značenie ('general-factive meaning') or the "simple denotation function" (Forsyth 1970: 82ff.) of the Slavonic Imperfective. By virtue of its alleged unmarkedness, the Imperfective is said to represent both the Perfective and Imperfective when it has to be stated whether something ever took
place or not. The Perfective refers to a more concrete occasion, as in:

(6') Konečno. Ja tol'ko čto rešil ee.
    Yes, of course. I've just solved it.

Bondarko (1987: 49) writes that in sentences like (6) — his example is ja užě čital ětu knigu 'I've already read this book' — we are dealing with an "implicit bound": we know that the bound is attained both in (6) and (6'), but in (6) this fact is not formally marked. However, an "implicit bound" can hardly be said to be a type of bound in the same sense as temporal and material bounds are; the expression of the bound may be implicit, but otherwise it seems that in the real world exactly the same kind of material and temporal bound is reached in the situations referred to by these two sentences. Therefore we must ask what it is in (6) that blocks the expression of the bound.

First it should be noted that the use of the Slavonic Imperfective to denote temporally and materially bounded situations does not occur in narratives, but only in dialogues.6 In Weinrich's (1964) terminology, this phenomenon belongs only to the "besprochene Welt", not to the "erzählte Welt". What is clearly involved here is non-specific temporal reference: in (6) it is stated that there was an instance of solving the problem in the past, but what is referred to is not a specific occasion. The same holds true for most hackneyed Russian examples of this kind, such as:

(7) Ty čital "Annu Kareninu"?
    'Have you (ever) read Anna Karenina?'.

Non-specific temporal reference is of course typical of the perfect in languages which possess such a gram (cf. Dahl 1985: 137–138). In dialogues, the distinction between the Slavonic Imperfective and Perfective often parallels the distinction between the so-called experiential (or existential) and resultative meaning of the perfect tense in such languages. This is seen even more clearly in Bulgarian, which does possess a separate Perfect Tense. The following example from Yordan Yovko's short story is illustrative (Maslov 1959: 285; discussed in Lindstedt 1985: 225):

(8) — Ti viždal li si Indže, starče?
    — De šte go vidja, sinko. Onzi, kojto go e vidjel, ne e oživjal.
    "Have you [ever] seen [Imperfective] Indje, old man?"
    "Where could I see him, my son. He who has seen [Perfective] him has not survived."

Clearly the material bound is expressed only when it is relevant to the ensuing state of affairs. In narratives a material bound is always relevant in this way, for each
event in the plot line forms the context for all subsequent events. With a non-specific past time reference, on the contrary, the only state of affairs to which the attaining of a material bound can be relevant is the present state of affairs — because a non-specific past occasion is precisely an occasion without a temporal context. Consequently, in such a context an experiential meaning requires the Slavonic Imperfective aspect. In Reichenbachian terms, the material bound is expressed only if it is relevant to, or rather at, the point of reference.

Another way of expressing this result is to say that a material bound is always a link between two states of affairs. The first of these is the state of affairs in which the event takes place, but for the second, ensuing state of affairs there are two possibilities: either it is the one which immediately follows — and this presupposes a narrative — or it is the present one, and in the latter case the material bound is only mentioned if the relevant results are still present. The Imperfective Aspect is used in (6) or (7) above because no clear results are present at the moment of speech. In (6), the speaker is certain only that he did solve the problem some time in the past, but he is not sure whether he can reproduce the solution now; in (7), the speaker is not claiming that reading Anna Karenina would change the world in any specific fashion.

In languages whose perfective aspect is based upon the notion of temporal bound, no such interplay between expressing the bound and temporal reference can be observed. On the other hand, it seems the Slavonic situation has a near parallel in another language in which material bound is grammatically relevant, viz. Finnish.

In Finnish, the opposition between the Accusative and Partitive direct object is often used to express the attainment / non-attainment of a material bound:

(9a) Rakensin saunaan.
    'I was building a sauna [Partitive].'
(9b) Rakensin saunan.
    'I built a sauna [Accusative].'

However, the question "Have you ever built a sauna?" must be translated with a Perfect Tense and a Partitive object, as in (10a); sentence (10b), with an Accusative object, is definitely odd or even ungrammatical:

(10a) Oletko koskaan rakentanut saunaan?
(10b) *Oletko koskaan rakentanut saunan?

In the same way, "Have you ever killed a snake?" is translated with a Partitive object, though the meaning is clearly that the killing was successful:
(11) Oletko koskaan tappanut käärmettä?

The combination a Perfect Tense and an Accusative object becomes grammatical if the sentence is resultative; thus, it is possible to ask:

(10) Oletko rakentanut saunan?
    'Have you built a sauna [Accusative]?'
(11') Oletko tappanut käärmeen?
    'Have you killed a snake [Accusative]?'

These are questions you might ask if you visit somebody and see a new sauna building in his yard, or see him coming with a dead snake hanging from a stick.

Finnish and the Slavonic languages have rather different aspectual systems. Nevertheless, in both cases experiential sentences block the expression of the material bound; it can be expressed only if some kind of resultativity is present, i.e., if the attainment of the bound is relevant to some specific state of affairs. In Finnish and Bulgarian, this can clearly be seen in the way aspect marking interacts with the different meanings (experiential vs. resultative) of the perfect.

In Russian the situation is more complicated: there is no separate perfect tense, and it cannot be simply stated that all Imperfectives of the "general-factive meaning" correspond to an experiential perfect in, say, English. It is, however, well-known that there exists significant cross-linguistic variation as to how non-specific the temporal reference must be for a perfect to be used. The crucial thing seems to be that at least narrative contexts are incompatible with a typical perfect — or a typical experiential, if it exists as a separate gram in a language (Dahl 1985: 137ff.; cf. also Lindstedt 1985: 102ff.); and narratives are precisely the context in which the "general-factive" Imperfectives are not used.

Thus, in narratives the Slavonic aspect opposition (or the partly similar Finnish opposition, for that matter) expresses simply the attainment or non-attainment of a material bound at the time the event took place and the relevance of the bound to the events that immediately followed. On the other hand, in non-narratives, with a present point of reference, it expresses the relevance of attaining that bound from the perspective of the present state of affairs. Therefore, it is better to speak about the interaction of both of the Slavonic aspects with temporal reference, rather than assume a special "general-factive" or "simple denotation" function for the Imperfective only. It remains to be seen if this explanation can also be extended to different modal contexts.

On the other hand, since attaining a temporal bound is not associated with the ideas of telicity and an ensuing state of affairs, temporal reference does not seem to
interact with the expression of such a bound. This is why experientiality and temporal specificity are not relevant to the perfective: imperfective opposition in all of the languages in which it exists.

Notes

1. This paper greatly benefitted from the discussion at the Cortona Tense-Aspect Meeting. I have now been able to reach what I think is a substantially better explanation of the facts than I presented at the conference, especially as regards the interplay between material boundedness and temporal reference (section 2).

2. Notice, however, that the Latin perfectum is not a good example of a "perfect"; in this respect, the term "perfect" is more problematic than "perfective".

3. But the progressive, though partly connected with the imperfective, must be defined positively (Dahl 1985: 90ff.).

4. The traditional names of grammatical categories in each language are here written with an initial capital letter, when necessary, so as to distinguish them from names of cross-linguistic categories.

5. But this does not hold true for all of the Slavonic languages (see Mønnesland 1984).

6. In narrative contexts there may also be other uses of the Imperfective (such as "two-way movement") which have been explained with its alleged semantic unmarkedness, but which are not accounted for by the present theory. Since I do not think "semantic unmarkedness" really explains anything at all, I do not regret this apparent loss of generality.

7. Notice the Imperfective verb čitat' 'to read', instead of the Perfective pročitat', in spite of the fact that what is referred to is clearly the reading of the whole book.

8. This is most obvious with singular countable objects; with mass nouns or plurals the Partitive may simply express indefinite quantity; see Heinämäki (1984) for further information. Furthermore, what is traditionally called the Accusative in Finnish is really a syntactic cover term for Nominative and Genitive objects.

Bibliographical references

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