**Imperfectivity and Complete Events**

Atle Grønn, University of Oslo.

1 Introduction

The category of viewpoint aspect (Smith, 1997) – that is, the opposition between perfective and imperfective verb forms – plays an important role in language families such as Slavic and Romance. Imperfectivity is cross-linguistically associated with the ‘subinterval property’ (atelicity), which is characteristic of both the progressive and habitual-iterative readings. If a sentence, whose main verbal predicate is in the imperfective aspect, is true of a certain temporal interval, then the same sentence is also true of subparts of this interval. However, both in Slavic and Romance the imperfective may also refer to complete events in which case this inference does not go through. What are the implications of these puzzling complete event readings for the ‘universal’ notion of imperfectivity?

I propose in this paper an analysis couched in event semantics of the factual Imperfective (‘konstatacija fakta’) in Russian and Imparfait narratif in French which shows that the two complete event readings in question have nothing in common. The point is that these specific interpretations of the imperfective viewpoint arise in competition with other tense-aspect grams in the verbal system, and the role of the Imperfective in Russian is very different from the Imparfait in French, inasmuch as only the latter is marked and therefore expected to get a uniform interpretation.

2 The Data

The most important subsets of the complete event readings of the Imperfective in Russian are analysed as so-called ‘existential Ipf’ (ex. 1, 2) and ‘presuppositional Ipf’ (ex. 3) in (Grønn, 2004).

(1)  Vanja chital_{imperfective-past} ‘Vojnu i mir’.

Vanja has read ‘War and Peace’.

(2)  Vanja priezzhal_{imperfective-past} v Moskvu.

Vanja came to (visited) Moscow.

(3)  A: Krasivo ukrasili_{perfective-past} elku.

B: Kto ukrashal_{imperfective-past}? (??ukrasil_{perfective-past}) (from Rassudova)

A: They decorated the [Christmas] tree beautifully.

B: Who decorated it?

A semantic representation of example (1) should encode the speaker’s assertion that there exists a complete past event of Vanja reading ‘War and Peace’. The second example is similar, but see section 6.2 for some further discussion.

The imperfective verb in speaker B’s utterance in the discourse of (3) also conveys the fact that there exists a complete past event of the type denoted by the VP. However, in this case
the existence of the event is not asserted, but presupposed since it is already entailed in the input context through speaker A’s utterance containing the perfective verb ‘ukrasili’. In the dynamic two-dimensional representational format of Discourse Representation Theory (Kamp, 2001), the difference between (1) and (3) is primarily captured through declaring the verb’s event argument in the assertoric vs. presuppositional component, respectively.

The complete event interpretation of the Imparfait in French is often dubbed ‘imparfait narratif’, reflecting the fact that it typically occurs in contexts of narrative progression, as witnessed by examples such as (4) below:

(4) A huit heures, les voleurs entraient_{imparfait} dans la banque, ils discutaient_{imparfait} avec un employé, puis se dirigeaient_{imparfait} vers le guichet principal. (from Jayez)
At eight, the robbers entered the bank. They discussed with a clerk and then they moved towards the main desk.

This usage of telic VPs equipped with the imperfective viewpoint (‘entraient – entered’) is completely ruled out in Russian, where the factual Imperfective can never move the narration forward. In Russian, the Perfective aspect occurs happily in contexts of narrative progression and the factual Imperfective is effectively blocked in this environment. Indeed, the complete event reading of the factual Imperfective is compatible with event anaphora, as we saw in example (3) above, but one cannot use the Imperfective in Russian to assert the existence of a complete event at a punctual or contextually given interval, as in the French case above. Hence, phenomena such as temporal anchoring or temporal anaphora interact quite differently with the imperfective viewpoint in French compared to Russian.

Furthermore, we note that the Imparfait narratif occurs with Vendlerian achievements, such as ‘entraient’ and ‘se dirigeaient’, while the factual Imperfective applies to accomplishments like ‘chitat’ ‘Vojnu i mir’ or ‘ukrashat’ elku’. This distinction in the telic properties of the VPs being input to the imperfective operators in the two languages under discussion is not merely a coincidence, as we will see in section 5.

3 Towards bipolarity

The tense-aspect systems of Russian and French have developed quite differently from a common Indo-European source. While French partly retains the original inflectional category Imperfect:Aorist, Russian, like other Slavic languages, is now equipped with a more derivational like aspectual category Perfective:Imperfective. Interestingly, both contemporary French and Russian have the formal means to express a complete/incomplete event opposition, and, furthermore, both French and Russian will eventually end up with a formal opposition between two members of the aspectual category in past tense, cf. table 1 and 2.

<table>
<thead>
<tr>
<th>Written/earlier French</th>
<th>Old Church Slavic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imparfait (lisais)</td>
<td>Imperfect (chitaakh”)</td>
</tr>
<tr>
<td>Passé simple (lus)</td>
<td>Aorist (chitakh”)</td>
</tr>
<tr>
<td>Passé composé (ai lu)</td>
<td>Perfect (jesm’ chital”)</td>
</tr>
</tbody>
</table>

Table 1: First round. Inventory of past tense-aspect forms exemplified through the verb ‘to read’ (1. p. sg.)
<table>
<thead>
<tr>
<th>Spoken/Modern French</th>
<th>Russian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imparfait (lisais)</td>
<td>Imperfective (chital)</td>
</tr>
<tr>
<td>Passé composé (ai lu)</td>
<td>Perfective (prochital)</td>
</tr>
</tbody>
</table>

Table 2: Second round. Inventory of past tense-aspect forms exemplified through the verb ‘to read’ (1. p. sg.)

The emerging simplified picture of a binary opposition is not shared by some other Slavic and Romance languages, e.g. Bulgarian and Portuguese, which display a greater variety of tense-aspect grams, and therefore also a somewhat different set of usages of the imperfective viewpoint. The hypothesis to be explored here is that the more or less idiosyncratic complete event readings of the imperfective viewpoint in Russian and French should be understood in light of the competition between two forms in a closed system. I will claim that the ways in which the aspectual opposition is morpho-syntactically expressed in table 2 largely determine the use of imperfectivity with complete event readings in the languages under consideration. This implies that the analysis presented here does not extend to cover imperfective complete event interpretations in, say, Bulgarian, which does not reduce to a clear-cut aspectual opposition, but where a derivational (Slavic) system coexists with an inflectional (Romance) system and furthermore interacts with a complete inventory of perfect tenses.

4 Key ingredients of the analysis

4.1 Markedness and competition

The analysis to be presented restores some traditional insights, notably concerning the rather problematic notion of markedness. The Jakobsonian idea of applying markedness theory to grammatical categories such as aspect has a long history in Slavic linguistics, but it has lately lost in popularity. However, in my opinion, with the advent of Optimality Theory (OT), we finally have the tools to implement markedness theory in a formal analysis. Furthermore, markedness theory can serve as a guide for the semanticist: Since it is well-established that the Perfective is marked in Russian – viewpoint aspect in Russian is first and foremost a grammaticalisation of telicity expressed through prefixation – the analysis should start with an invariance definition of perfectivity, and the range of usages of the unmarked Imperfective should follow from competition between the marked and the unmarked forms.

In French, the picture is the opposite inasmuch as the perfective like Aorist (the Passé simple) is historically the unmarked form, cf. (Breu, 1998). According to the traditional view of French aspectologists like Guillaume, the Passé simple stands outside the complete/incomplete event opposition, see (Jayez, 1999). I will therefore propose an explicit semantics for the Imparfait, which is expected to have an invariant meaning due to its markedness.

Note that in contemporary spoken French, there are no unmarked aspectual forms. The marked member of the original aspectual opposition has proven more viable than the unmarked. The presence of the Imparfait and the orthogonal composite perfect has made the Passé simple superfluous in the following way: Whenever the Passé simple is used with atelic predicates it can easily be replaced with the Imparfait, as in (5) below:

(5) Il travailla\textsubscript{passé simple} beaucoup. ⇒ Il travaillait\textsubscript{imparfait} beaucoup.

He worked a lot.
In many cases of the Passé simple being applied to telic predicates with a complete event interpretation, the Passé composé enters the scene, since perfect tenses by default have a complete event interpretation with telic predicates, cf. (Bohnemeyer and Swift, 2004). However, the possibility of an Imparfait narratif in certain aoristic contexts blurs the straightforward correlation between the Passé simple and the Passé composé, since also the Imparfait may, in the right context, function on the traditional domain of the Passé simple.¹

In Russian, like in French, we have a neat aspectual opposition in past tense. However, in Russian the unmarked form is in no danger of disappearing. The imperfective viewpoint is simply necessary to maintain an aspectual opposition, since no other aspectually loaded grams are available in the grammar. The fact that morphological composite perfect tenses disappeared in Russian was related to a more general loss of the copula. As shown in (Grønn, 2004), the functions of perfect tenses may still be rendered in contemporary Russian by simple past forms of perfective and imperfective verbs. In the case of present perfect readings, this is rather trivial since the categories of present perfect and simple past are truth-conditionally equivalent (with telic predicates). The difference is merely that a simple past makes use of the utterance time as a default evaluation time, while a present perfect explicitly designates the utterance time as the time for which the resultant state of the event holds.²

4.1 Viewpoint aspect as temporal relations
Following recent approaches to viewpoint aspect – in the spirit of (Klein, 1995) – I treat aspect as a temporal phenomenon interacting with tense through Reichenbachian temporal parameters. The complete event reading of the Perfective in Russian can be captured by the inclusion relation $e \subseteq t$, saying that the run time of the event $e$ is properly included in the assertion time $t$. The latter notion refers to the time interval on which the speaker focuses, an interval which is typically denoted by a temporal adverbial, as in (6):

(6) Chasov v shest' vechera poobedali. (Internet)
We had dinner around six p.m.

A semantic representation for this sentence should include a condition like $e \subseteq t$, where $e$ represents the event of eating dinner, while $t$ equals the frame time of approximately one hour denoted by the adverbial. In absence of temporal adverbials or context times, the assertion time parameter is merely restricted by past tense, and then equals ‘the whole past preceding the current evaluation time’.³ Note that the Reichenbachian reference time parameter is here split into the

---

¹ Breu, like the present paper, compares the tense-aspect systems of Slavic and Romance from the perspective of markedness theory. However, in view of the Imparfait narratif, Breu is wrong when he claims that in a translation of viewpoint aspects from Romance to Slavic (or the other way) the marked aspect of the source language, say French, always corresponds to the same unmarked form in the target language, say Russian. Breu thus predicts that the marked Imparfait translates into the unmarked Imperfective in Russian, but the marked Imparfait narratif in French always corresponds to the marked perfective viewpoint in Russian. On the other hand, Breu is right when he points out that the unmarked form of the source language does not tell us which form to choose in the target language (Breu, 1998: 95).

² The case of covert past perfect readings in Russian, however, is much more complicated. See (Grønn, 2004) for a lengthy discussion.

³ The evaluation time parameter will here be represented by the distinguished variable $t_0$, which equals the utterance time whenever it occurs free in the semantic derivation, cf. (von Stechow, 1995).
assertion time and the evaluation time, and it is given a more empirical foundation inasmuch as the assertion time gets its value from overtly expressed temporal adverbials and tenses.

The progressive reading of the Imperfective can be rendered through the opposite inclusion relation, that is, $t \subseteq e$. Hence, we have the tools to capture the substantial aspectual opposition between (6) and (7):

(7) My obedali\textsuperscript{imperfective-past}, kogda u moego druga proizoshel\textsuperscript{perfective-past} pristup. (Internet)
    We were having dinner, when my friend had a heart attack.

In example (7), the assertion time $t$, which corresponds to the time denoted by the adverbial kogda/when-clause, is properly included in the time of the event of having dinner. In other words, the speaker merely focuses on a proper subpart of the eating event, and the aspectual configuration should only license an inference to an incomplete event of having dinner. For all we know, the dinner event may be interrupted in the real world (the famous imperfective paradox).

In virtue of being unmarked, the imperfective viewpoint in Russian may also refer to complete events, as in example (8):

(8) Ty segodnja obedal\textsuperscript{imperfective-past} v restorane! (Internet)
    You had dinner in a restaurant today!

In (8), we get an ‘existential Ipf’ interpretation, that is, the speaker asserts the existence of a complete event of having dinner within the subinterval of ‘today’, which precedes the utterance time. Thus, the unmarked imperfective is compatible with totally opposite inclusion relations, and it seems impossible to find an invariant meaning of this viewpoint. This is in fact also what markedness theory suggests: There is no such thing as the meaning of imperfectivity in Russian since the imperfective viewpoint merely amounts to the non-use of the perfective.\footnote{An imperfective sentence such as (9) can therefore be considered as underspecified without further context, but will in practice (that is, given a specific context) get one out of three interpretations, as indicated in the English translation:}

(9) Ja obedal\textsuperscript{imperfective-past}.
    I was having dinner. \textit{(at some particular time)}
    I used to have dinner. \textit{(regularly)}
    I have had dinner. \textit{(today)}

In the semantics proper, what we should retain from this discussion is the invariant analysis accorded to the perfective viewpoint, which can be spelled out as follows in a compositional version of Discourse Representation Theory:

(10) Perfective aspect in Russian $\Rightarrow$
    $\lambda P \lambda t [e \in P(e), \ e \subseteq t]^{5}$

\footnote{The general approach to the Russian Imperfective presented in this paper is slightly different from the analysis in (Grønn, 2004), where the role of markedness theory was deemphasised. The perfective operator takes a set of events $P$ (a tense- and aspectless VP) as input and gives a set of assertion times $t$ as output. The aspectual operator contributes to the declaration (existential quantification) of the event variable $e$ of type $P$ and further}
In section 6, we will see how the Russian Imperfective in the right context can receive a complete event interpretation in competition with the Perfective. But first, I will turn to the French aspectual system, which requires an explicit semantics for the marked form Imparfait.

5 A semantics for the Imparfait in French

As stated in the previous section, aspect is a temporal phenomenon which interacts closely with tense. However, the syntax-semantics interface appears to be somewhat different in Russian and French. In Russian, viewpoint aspect (e.g. the perfective prefix ‘po-’) is assumed to be located below tense (e.g. the past tense morpheme ‘-l’) in the syntactic input to the semantic interpretation. If we respect the surface structure of French, we have to treat the Imparfait (the suffix ‘ai’ in ‘lisait’) as a marker of both aspect and past tense. Nevertheless, I will argue that the logical type of the Imparfait in French is similar to that of aspectual operators in Russian. In the compositional semantics, when the Imparfait applies to the VP (an aspect- and tenseless sentence radical), we end up with an expression which contains information pertaining both to tense and aspect, but which is still in need of further temporal anchoring. To be more concrete, a sentence like (11) below is bad out of context, since there are no contextually salient times to fill the temporal parameter of the aspectual and tense-like configurations:

(11) ?? Marie ouvrait\textit{imparfait} la porte. (from Jayez)
Mary was opening/opened the door.

This observation relates to a significant difference between the Imparfait in French and the Imperfective in Russian. The Imparfait is not a self-sufficient past tense, but partly anaphoric…

We capture this by letting the expression in (11) denote not a (dynamic) truth value, but a \textit{function from times} to (dynamic) truth values. The expression is only interpretable when the function is satisfied by a temporal argument, notably a contextually salient time $t_c$.

In this respect, there is a connection between narrative progression, characteristic of the Imparfait narratif, and anaphoricity: The event denoted by the imperfective verb picks up the contextually salient resultant state of the preceding event and moves the narration forward. At the same time, given our uniform treatment of the Imparfait, this anaphoricity effect is not restricted to Imparfait narratif, but, as noted by Smith, there is a link between anaphoricity and imperfectivity \textit{tout court}:

More generally, sentences with imperfective viewpoints are often dependent on other information in the manner typical of anaphora [...] The partial information given by imperfectives, and the fact that they are frequently used for backgrounding, conspire to produce this effect. (Smith, 1997: 90).

\footnote{Smith clearly has the incomplete event reading (progressivity) in mind.}
Like aspectual operators in Russian, the Imparfait thus takes a set of events as input and gives a set of times as output, which is in need of further specification. But what is the semantic contribution of the Imparfait? The answer to this question must contain two parts since the Imparfait is both a past tense and an aspect. Concerning the tense part, I propose a presuppositional treatment, such that the contribution of past tense amounts to presupposing that the assertion time is located prior to the current evaluation time: $t < t_0$, cf. the approach to tense semantics in (Heim, 1994). In our dynamic DRT-framework, the semantic representation is split into an assertoric part and a presuppositional part (Kamp, 2001). Accordingly, the condition relating to past tense belongs to the latter, which is here marked with the label ‘Presupposition’.

More challenging is the question of which aspectual configuration should be accorded to the Imparfait. Importantly, the Imparfait, as a marked verb form, should get a uniform interpretation, like the perfective viewpoint in Russian. Given the characteristic atelic properties of imperfectivity, the configuration $t \subseteq e$ (as in the Russian sentence (7) above) is a natural candidate, but, obviously, this proper inclusion relation cannot capture the complete event interpretation of the Imparfait narratif. At the same time, the perfective inclusion relation $e \subseteq t$ clearly runs afoul of the *Hauptbedeutung* of the Imparfait, that is, the progressive. This leaves us with the configuration $t \subseteq e$, where $t = e$ is the extreme case of the Imparfait narratif, cf. similar considerations in (Jayez, 1998). I therefore propose, in a compositional framework, the following uniform analysis of the Imparfait, which solves the paradox of coexisting complete and incomplete event interpretations:

(12) The Imparfait in French

Assertion: $\lambda P \lambda t[elP(e), t \subseteq e]$ Presupposition: $[tl t < t_0]$

The Imparfait in French is not a pure progressive marker (unlike the periphrastic construction ‘être en train de’), but it still encodes contemporaneity. The progressive reading follows straightforwardly from (12), and, concerning the Imparfait narratif, the formal analysis in (12) captures an important intuition among French semanticists:

The [assertion time] is viewed as spanning the whole event [...] but not beyond [...], whence the peculiar flavour of the narrative imparfait: one follows completely some eventuality, then shifts to the next one, etc. (Jayez, 1999)

A closer inspection of the data pertaining to the Imparfait narratif further supports the analysis in (12). To obtain the configuration $t = e$, the intervals of both $t$ and $e$ are typically conceptualised as punctual. And indeed, complete event readings of the imperfective in Romance predominantly occur with Vendlerian achievements, that is, predicates which only consist of a culmination.

---

8 This simple empirical fact represents a serious blow to most previous uniform treatments in formal semantics of the French Imparfait. For instance, in the classical DRT-tradition following the famous analysis of (Kamp and Rohrer, 1983), the Imparfait is treated as a kind of *stativiser*, which only produces atelic interpretations.

9 For French, this correlation between punctual Aktionsarten and the narrative reading of the Imparfait is confirmed in the recent survey of (Hobæk Haff, to appear). Bonomi makes a similar observation in his uniformed treatment of the Imperfetto in Italian. He notes that imperfective accomplishment predicates may in some contexts get a narrative, complete event interpretation under the condition that they are perceived as punctual (Bonomi, 2004). Hence, for accomplishments we get some kind of coercion into their culmination, abstracting away from the activity part.
This analysis also puts considerable restrictions on the size of $t$ in the representation of the Imparfait, and it can therefore explain why the Imparfait narratif is ruled out in the main clause of contexts such as (13), where the Passé composé has to be used:

(13) Après que Marie est arrivée passé composé, Paul est parti passé composé (?partait imparfait).

After Mary came, Paul left.

The temporal clause ‘après que Marie est arrivée’ denotes an interval which spans from Mary’s arrival to an infinite future. Without any further restrictions, this interval is ruled out as the value of $t$ in the condition $t \leq e$ for two independent reasons. First, the presupposition induced by the past tense part of the Imparfait is not satisfied in this context. Second, concerning viewpoint aspect proper, this big interval cannot possibly equal (or be included in) the temporal trace of the event argument. On the contrary, this temporal frame is ideally suited for interacting with the Passé compose of ‘est parti’, which encodes the inclusion relation $e \subset t$. Perfect tenses, like the Passé composé in French, prefer big, indefinite assertion times, which easily include a complete event of the type denoted by the VP. Of course, the Passé composé is also restricted to past tense contexts, but this should naturally follow from a proper treatment of the morpho-syntax – semantics interface, where the present tense auxiliary ‘est’ further delimits the interval denoted by the ‘après-clause’ through establishing a right boundary (= the utterance time) of the assertion time interval.

Contrary to (11) and (13), an appropriate context for the narrative Imperfective is the following, where the value of $t$ is clearly identifiable and of the right size (despite a certain vagueness of big numbers like 100):

(14) Il y a cent ans naissait imparfait A. Malraux (from Hobæk Haff)

A. Malraux was born 100 years ago.

In my analysis, the hybrid nature of the Imparfait in French – being both a tense and an aspect – is respected at the morpho-syntax – semantics interface. The Imparfait produces the following output after having been combined with the VP:

(15) AspP (the mother node of the Imparfait and the VP) \[\Rightarrow \]

Assertion: $\lambda[e!VP(e), t \leq e]$ Presupposition: $[\forall t < t_0]$

This is not a (dynamic) truth value, hence not the representation of an interpretable sentence. Furthermore, the value of $t$ will not, unlike Russian, be supplied or restricted by morphological tense at the next stage of the semantic composition, since tense has already been smuggled into the presuppositional part by the Imparfait operator itself. From the discussion above, it follows that the input to the predicate of times in (15) is either a context time $t_c$ (temporal anaphora proper) or the time interval provided by a temporal adverbial $I_{adv}$, as in example (14). There

---

10This feature of the perfect is reminiscent of the kind of complete event interpretation of the Imperfective in Russian which I refer to as the ‘existential Ipf’. The Russian case thereby represents the opposite picture of what we observe with the Imparfait narratif in French, inasmuch as the former typically combines with a big, indefinite assertion time within which the event in question is properly included, cf. the ‘life time effect’ of Vanja having read ‘War and Peace’ in example (1). This feature of the existential Ipf in Russian follows from competition with the Perfective, which is characterised by the property of ‘definite temporal anchoring’.
seems to be a complementary distribution between these two times. Naturally, in the presence of a temporal adverbial which explicitly gives the value of the assertion time, there is no need to invoke parameters like $t_c$.

Whether we end up with $t_{adv}$ or $t_e$ at the top node of the semantic derivation has implications for how the presupposition of past tense is verified. If the derivation produces the aspectual configuration $t_c \subseteq e$, the presupposition should be verified inter-sententially, that is, in the input context of the utterance being processed. The variable $t$ in the presupposition of past tense is then to be unified with the context time $t_c$. A successful interpretation of the utterance in question requires, due to the past tense component of the Imparfait, that $t_c$ be located prior to $t_0$.

The presence of an overt temporal adverbial, like in (14) above, supersedes the need for a context time and invites the presupposition of past tense to be verified intra-sententially, by the sentence itself. The variable $t$ in the presupposition of (14) is therefore unified with the interval denoted by the adverbial ‘il y a cent ans – hundred years ago’.

### 6 Complete event readings and aspectual competition

Given the semantics accorded above to the marked perfective viewpoint in Russian and the marked imperfective in French, I approach in this final section the issue of how an analysis of the interaction with other tense-aspect grams in the verbal system can be made more precise through optimality theoretic reasoning.

#### 6.1 Viewpoint aspects in Russian and bidirectional OT

The phenomenon of competition in natural language has recently received much attention in the fast-growing framework of Optimality theory (OT), but what can OT tell us about aspectual competition in Russian?

Here I will make use of so-called bidirectional OT (Blutner, 2000), which, unlike unidirectional OT, takes into account the perspective of both the hearer and speaker. Bidirectional OT is designed to produce optimal <form, meaning>-pairs. Given a coarse-grained system where two forms (perfective and imperfective viewpoints) are correlated with two meanings (complete/incomplete events), we get the OT-tableau in table 3.

<table>
<thead>
<tr>
<th></th>
<th>complete event</th>
<th>incomplete event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfective</td>
<td>✓</td>
<td>✗*</td>
</tr>
<tr>
<td>Imperfective</td>
<td>2</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 3: A bidirectional OT-tableau for Russian aspect. First round.

---

11 Perfect tenses, like the Passé composé, typically occur in contexts where no context times or overtly expressed frame times are available. In the temporal calculus developed in (Grønn, 2004), the default ‘all time’ (represented by the distinguished variable $t_e$) is invoked for these cases. This interval is further restricted by past tense to produce the interval ‘all time before the current evaluation time’. Even if we allow for this default interpretation in the temporal system, it is not relevant for the Imparfait, since conditions such as $t_e \subseteq e$ or $t_e < t_0$ do not make sense.

12 As noted also in footnote 6, the formalisation adopted here treats intersentential and intrasentential phenomena, corresponding to anaphora (‘him’) vs. anaphors (‘himself’), on a par. This is, in certain respects, an idealisation.
For the purposes of the present discussion, I make use of a simplified algorithm, where ‘penalty points’ are added to a <form, meaning>-pair in the following way: One penalty point indicates the existence of either a competing form (given a certain meaning) or a competing meaning (given a certain form), while the value 2 signals two competitors, which typically amounts to competition from both sides. In this notation, 0 is therefore the best possible value, signaling a perfect one-to-one match between form and meaning.

Of the four candidates in table 3, only the pair <perfective, incomplete event> is barred – !* – in Russian since the Perfective is a marked form which explicitly refers to complete events. This implies that from the production side, if the speaker refers to an incomplete event, the Imperfective is obviously the winner, that is, the optimal choice (✓). However, the pair <imperfective, incomplete event> does not receive the value 0 by the algorithm, since the interpretation side of the unmarked Imperfective is not uniform. The presence of the factual Imperfective (complete event readings) in the system adds a penalty point to the pair <imperfective, incomplete event>.

Similarly, from the interpretation side, a complete event interpretation is the hearer’s optimal choice when encountering the perfective. But again, the pair <perfective, complete event> is not set to zero – this time because the production side is not one-to-one.

6.2 The factual Imperfective and partial blocking

Clearly, the factual Imperfective, that is, the pair <imperfective, complete event>, loses the competition with the Perfective both from the point of view of production and interpretation. The presence of a better candidate in both these cases results in two penalty points. It is hard to see how the factual Imperfective could emerge in Russian, and straightforward OT-reasoning would indeed predict that the pair <imperfective, complete event> be blocked. The complete event reading of the unmarked Imperfective loses the first round of optimisation.

Still, the data in section 2 above suggest that blocking does not leave this problematic form-meaning pair unemployed in actual Russian. We get what is known as partial blocking or pragmatic strengthening:

[T]he unemployed form may soon find a new job, generally expressing something closely related to but subtly different from the canonical interpretation that one might have expected. (Beaver and Lee, 2003: 140)

In the terminology of bidirectional OT, the factual Imperfective corresponds to the sub-optimal choice. It is used under special contextual conditions, when the blocking effects are cancelled. There are various sub-optimal interpretations of the Imperfective. What these complete event readings have in common, is that they function in contexts where the speaker hesitates to use the marked Perfective despite the presence of a complete event. As demonstrated in (Grønn, 2004), the Perfective prefers to see the aspectual configuration in the assertoric part and is characterised by final emphasis or current relevance of the event. Whenever these conditions are violated, the factual Imperfective may reappear on the scene and become the winner in a second round optimisation.

Consider for instance example (2) from section 2. Predicates like ‘prikhet/priezzhat’ – to arrive’ are known to have a lexically specified target state. The default interpretation is to assume that the target state holds at the end of the assertion time in case of a complete event of this type.
And, indeed, substituting the perfective ‘priekhal’ for the imperfective ‘priezzhal’ in example (2)
would suggest that the target state of Vanja being in Moscow still holds at the utterance time.
However, if the speaker wants to convey the message that the target state of a complete past event
of Vanja arriving in Moscow has been cancelled through Vanja’s departure, he should choose the
factual Imperfective, cf. table 4.

<table>
<thead>
<tr>
<th></th>
<th>e ⊆ t and target state validity</th>
<th>e ⊆ t and cancellation of target state</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfective</td>
<td>√ 1</td>
<td>!*</td>
</tr>
<tr>
<td>Imperfective</td>
<td>2</td>
<td>√ 1</td>
</tr>
</tbody>
</table>

Table 4: A bidirectional OT-tableau for complete events with target state predicates.
Second round optimisation of viewpoint aspect in Russian.

When a specific constraint on target state validity is taken into account, the complete event
interpretation of the Imperfective becomes the winner, which means that the pair <imperfective,
complete event>, known as the factual Imperfective, is deblocked.
This kind of reasoning also explains the distribution of viewpoint aspects in example (3)
from section 2, cf. table 5.

<table>
<thead>
<tr>
<th></th>
<th>e ⊆ t in the assertion</th>
<th>e ⊆ t in the presupposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfective</td>
<td>√ 1</td>
<td>!*</td>
</tr>
<tr>
<td>Imperfective</td>
<td>2</td>
<td>√ 1</td>
</tr>
</tbody>
</table>

Table 5: A bidirectional OT-tableau for complete events and information structure.
Second round optimisation of viewpoint aspect in Russian.

The perfective verb ‘ukrasili’ is used in (3) when the existence of the complete event of
decorating the Christmas tree represents new information and belongs to the assertoric content. In
the next utterance, the imperfective (‘ukrashal’) is preferred with event anaphora, since the
existence of a complete event of this type is known (entailed) in the input context, cf. the label
‘presuppositional Ipf’. The aspectual choice for the two utterances in the dialogue in (3) thus
follows from the bidirectional OT-tableau in table 5.

The OT-perspective demonstrated in the tableaux above points to the particular status of
implicatures arising from competition between two members of a grammatical category. At every
level of optimisation, we get a polarisation, effectively a pragmatic strengthening, of the
interpretations accorded to the two aspeetual competitors. In the case of table 5, the relevant
factor is not target state validity, but information structure. The mechanism is the same, though,
for both the interpretation of the Imperfective associated with ‘cancellation of target state’ and the
presuppositional Ipf. Pragmatic strengthening turns the factual Imperfective into the opposite of
the default role assumed by the Perfective.

6.2 Competition in French

The French case is somewhat trickier to make precise within the scope of this study. First, the
optimality theoretic treatment of aspeetual competition presupposes a detailed descriptive (and
formal) analysis of the data. Second, the category of viewpoint aspect in contemporary French belongs to an intermediate phase, for which it would be an idealization to say that the Passé simple has disappeared, although the form is clearly declining. The two stages of the evolution of the tense-aspect system in French referred to in section 3, are therefore coexisting in many narrative texts, where we find both the ‘old’ Passé simple and the ‘new’ Imparfait narratif with complete event interpretations in narrative progression, cf. example (16):

(16) Maigret reprit\textsuperscript{passé composé} la petite auto noire et, quelques minutes plus tard, il pénétrait\textsuperscript{imparfait (narratif)} dans la brasserie de la place de la République. (from Hobæk Haff) Maigret once more took the little black car, and a few minutes later he entered the café at the Republic square.

Still, the French system is clearly developing into a pure aspectual opposition in past tense between the Imparfait and the Passé composé. In a certain way, the two rounds of optimisation which we encountered in the Russian case, correspond to two different \textit{historical} stages in French, cf. the OT-tableaux in table 6 and 7.

<table>
<thead>
<tr>
<th></th>
<th>$t \subseteq e$</th>
<th>$e \subset t$</th>
<th>relevance of $t_0$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imparfait</td>
<td>$\sqrt{1}$</td>
<td>!*</td>
<td>!*</td>
</tr>
<tr>
<td>Passé simple</td>
<td>2</td>
<td>$\sqrt{2}$</td>
<td>!*</td>
</tr>
<tr>
<td>Passé composé</td>
<td>!*</td>
<td>2</td>
<td>$\sqrt{1}$</td>
</tr>
</tbody>
</table>

Table 6: A bidirectional OT-tableau for early/written French. ($\approx$ first round).

<table>
<thead>
<tr>
<th></th>
<th>$t \subseteq e$</th>
<th>$t = e$</th>
<th>$e \subset t$</th>
<th>relevance of $t_0$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imparfait</td>
<td>$\sqrt{1}$</td>
<td>$\sqrt{1}$</td>
<td>!*</td>
<td>!*</td>
</tr>
<tr>
<td>Passé composé</td>
<td>!*</td>
<td>!*</td>
<td>$\sqrt{1}$</td>
<td>$\sqrt{1}$</td>
</tr>
</tbody>
</table>

Table 7: A bidirectional OT-tableau for modern/spoken French. ($\approx$ second round).

In the first round (cf. table 6), the Imparfait, as the marked aspect, is accorded the semantics familiar from section 5. The Passé simple is the aspectually unmarked past tense, and is in principle neutral with respect to the complete/incomplete event distinction.\textsuperscript{14} On the other hand, as a pure simple past, the Passé simple does not explicitly relate to the utterance time, hence the barred third cell in table 6. The composite perfect, the Passé composé, is naturally the winner in case of relevance of the utterance time parameter. Still, the pair <passé simple, complete event> also emerges as a winner in this system. True, as the unmarked viewpoint, the Passé simple with a complete event interpretation is a relatively woundable winner, which faces competition both from the interpretation side ($t \subseteq e$) and the production side (the Passé composé).

At a later, second stage, the Imparfait narratif becomes a more visible challenger to the narrative usage of the Passé simple, probably because of the reluctance of the Passé composé to

\textsuperscript{13} For details concerning the Russian data, I refer the reader to (Grønn, 2004).
\textsuperscript{14} Whether the Passé simple exhibits incomplete event interpretations is perhaps debatable (since it loses to the Imparfait, anyway), but it clearly combines with atelic predicates.
occur with definite temporal anchoring or temporal anaphora. The narrative complete event reading of the Imparfait did not appear in the texts before the beginning of the 20th century, but, as shown in section 5, it is compatible with the invariant meaning of imperfectivity in French. In narrative texts, a division of labour naturally arises between the Imparfait narratif and the Passé composé, such that the former is used when contemporaneity holds (typically with a small assertion time and achievement predicate), while the latter occurs with accomplishments and/or big assertion times. As we can read out of table 7 – following the analysis in section 5 – the complete event reading of the Imparfait amounts to $t = e$, which is quite different from the condition $e \subset t$ of the Passé composé.

7 Conclusion

I have demonstrated in this paper that some apparent similarities between imperfective viewpoints in Russian and French are quite accidental. Insights from traditional markedness theory, notably the idea that only the marked form should be accorded an invariant meaning, have here been explored in the frameworks of formal semantics and optimality theory. Given the basic assumption that the Russian Imperfective is unmarked, while the French Imparfait is (initially) marked, I show how the different imperfective complete event readings arise in competition with other tense-aspect grams in a closed grammatical system. Crucially, while the Russian Imperfective, in the right context, is fully compatible with the perfective-like inclusion relation $e \subset t$, the marked Imparfait retains its meaning of contemporaneity even when it has a complete event interpretation in contexts of narrative progression. The so-called Imparfait narratif therefore encodes the condition $t = e$, and the Imparfait tout court amounts to the improper inclusion relation $t \not\subset e$.

8 References


