The Semantics and Pragmatics of the Russian Factual Imperfective

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0.2 Notational Conventions

0.2.1 Abbreviations

Ag Agent (a thematic role, often associated with syntactic subjects)
ASp Aspectual Operator (Ipf or Pf)
AspP Aspect Phrase (a level at the syntax-semantics interface)
CT contrastive topic
DRS Discourse Representation Structure (the representational format of DRT)
DRT Discourse Representation Theory (Kamp and Reyle 1993)
F focus
ft frame time
iff if and only if
Ipf imperfective aspect
LF Logical Form (mostly used in the sense of generative syntax)
OT Optimality Theory
Pf perfective aspect
Pl Place (a thematic role)
SDRT Segmented Discourse Representation Theory (Asher and Lascarides 2003)
Th Theme (a thematic role, often associated with syntactic objects)
TP Tense Phrase (a level at the syntax-semantics interface)
vd* verbum dicendi

0.2.2 Some technical expressions

assertion time the time on which the speaker focuses, and in relation to which the event is localised
context change potential a semantic type in dynamic semantics which corresponds to the semantic type of truth values <ct> in static semantics
Davidsonian refers to the kind of event semantics where the verb is given an additional eventive argument in the logical form
distinguished variable refers to a variable whose value is set by convention whenever it occurs free
dynamic semantics ≈ a semantic theory which is able to deal with discourse phenomena (like anaphora), as opposed to ‘static semantics’ which assigns truth-conditions to sentences
evaluation time the current perspective of the speaker/interpreter
event semantics a semantic theory which makes use of events as individuals in the model
frame time a time usually provided by a temporal (frame) adverbial; often equals the assertion time
Gricean refers to the kind of pragmatic implicatures ‘discovered’ by the philosopher Paul Grice.
logical type In type-logical semantics each (morpho-)syntactic constituent is accorded a certain type (appears conventionally as a subscript in angular bracket-
ets), which determines its combinatorial potential.

**neo-Davidsonian** refers to a version of event semantics with thematic roles in
the logical form

**reference time** here used as a cover term for ‘assertion time’, ‘evaluation time’
and ‘frame time’

**type** see ‘logical type’.

### 0.2.3 Symbols (and standard interpretation of variables)

# semantically anomalous or pragmatically infelicitous expression

\( \models \) ‘entails’

\( \triangleright \) defeasible, common-sense entailment

\( \rightarrow \) material or strict implication (if)

\( \leftrightarrow \) biconditional (iff)

\( \Rightarrow \) 1. implication (if) (≈ DRT-notation)

2. semantic translation (e.g. of an operator)

3. the optimal candidate (‘winner’) in OT

\( \Leftrightarrow \) biconditional (iff) (≈ DRT-notation)

\( <^* \) here used as an abbreviation for ‘Past*’, i.e. ‘the whole past’, cf. definition
in chapter 5.3.

\( \prec \) [first argument] ‘(temporally) precedes’ [second argument]

\( \succ \) [first argument] ‘(temporally) follows’ [second argument]

\( \multimap \) temporal abutment (the second interval starts where the first ends.)

\( \bigcirc \) temporal overlap

\( \subseteq \) proper inclusion

\( \subseteq \) inclusion

\( \sqsubset \) proper part of

\( \sqsubset \) part of

\( \cup \) union

\( \cap \) intersection

\( \in \) ‘in’ (is an element of)

\( \exists \) existential quantifier (‘there is . . . ’)
∀ universal quantifier (‘for all ’)
∧ ‘and’
∨ ‘or’
¬ negation (‘not’)

<B,F> refers to a Background-Focus partitioning (ordered pair) of an utterance

P, Q . . . variables ranging over VPs
K, K . . . variables ranging over DRSs and/or propositions
E, R, S (Reichenbach 1947) = e, t, s* (respectively)
e, e_1, e_2 . . . e', e'' . . . events (and/or: temporal trace of the event in question)
t, t_1, t_2 . . . t', t'' . . . reference times

t_0 the evaluation time parameter (a so-called ‘distinguished variable’)
t_∞ a maximally indefinite interval, treated as ‘all time’ (a so-called ‘distinguished variable’)
t_c context time, i.e. a contextually (anaphorically) given time.
s* the utterance time

π_1, π_2 . . . variables over speech act referents in SDRT

[U_A][Con_A][U_P][Con_P]  
= U_A = universe of the assertoric DRS
= Con_A = conditions of the assertoric DRS
= U_P = universe of the presuppositional DRS
= Con_P = conditions of the presuppositional DRS

<i>, <s>, <c> . . . refer to the semantic type of (morpho-)syntactic constituents: i = times; s = events; c = context change potentials; complex types <a,b> are assigned to expressions which denote functions with arguments of type a and values of type b.

λ lambda terms are used to express functions. The expression λx_{<a>}[P(x)]_{<b>} is a function of type <a,b>. If we add an argument y_{<a>} to this expression, we get an expression of type b: λx_{<a>}[P(x)]_{<b>}(y) = [P(y)]_{<b>},
Chapter 1

Introduction

1.1 Object of Study

This thesis is an investigation into the semantics and pragmatics of the factual imperfective in Russian. The object of study is part of the larger picture of Aspectuality and Temporality, i.e. phenomena which in Russian are notably expressed through the category of aspect. It is widely held that aspect—a formal opposition between perfective (Pf) and imperfective (Ipf) verbs—is the defining category of the Russian language. There is consequently an extensive amount of research in this field.

I have in this dissertation chosen to focus on some intriguing usages of Ipf, where the imperfective past denotes complete events. We refer to this reading as factual Ipf (cf. the traditional Russian terms ‘konstataciya fakta’ and ‘obščefaktičeskoe značenie’). This is a particularly interesting use of the imperfective, since it apparently functions on the territory of its competing aspectual rival, the perfective, which invariably is associated with ‘complete events’. Despite the prominent place of aspectual studies in Slavic linguistics, the nature of factual Ipf and its role in the aspectual system remains one of the major puzzles in the field.

In this work, we will compare factual Ipf to other imperfective readings, and we will contrast the use of factual Ipf and Pf. The topic of the thesis can be illustrated with the prototypical example in (1):

(1) Vanja čitali ‘Vojnu i mir’.
Vanja was reading ‘War and Peace’.

or
Vanja has read ‘War and Peace’.

(2) Vanja pročitali ‘Vojnu i mir’.
Vanja (has) read ‘War and Peace’.

The aspectual opposition between the imperfective processual reading of (1) and the perfective in (2) has received much attention not just in Slavic linguis-
tics, but in all major works on grammatical aspect. In addition, the Russian data invites research into a phenomenon which has been labelled *aspectual competition*, that is, the fine-grained nuances guiding the speaker’s choice between factual Ip and Pf, which in the cases above both refer to ‘complete events’ of reading ‘War and Peace’.

On closer inspection, it turns out that factual Ip subsumes at least two quite different ways of referring to complete events located in the past. We will refer to these two main ‘factual readings’ as *existential Ip* and *presuppositional Ip*. These labels reflect the main hypothesis underlying this work, viz. that factual Ip can either assert or presuppose the existence of an event of the type of the verbal predicate. We will claim that this distinction is crucial in order to account for the range of data which are usually treated as factual Ip in Russian aspectology.

A major goal of this thesis is to explain the usage of the different variants of factual Ip and, if possible, give a unified semantico-pragmatic account of the readings in question. In this respect, we will also be concerned with one of the perennial questions in Russian aspectology, the question of whether factual Ip can be unified with other core meanings of the imperfective. Thus, in parallel, but at different levels of granularity, we will seek divergence and unity.

An analysis of these phenomena must take into account various features of aspectuality and temporality which interact in intricate ways. The most prominent factors are listed below:

- aspectual properties of the predicate, notably (a)telicity.
- the interaction of aspect and tense.
- the role of (factual) Ip in a ‘closed’ grammatical category of two members (Pf and Ip).
- information structure, notably the role of the verb in the focus-background division of the sentence.
- discourse structure, that is, the role of aspect in rhetorical relations beyond the sentence level.

With this in mind, one of the major goals of this thesis, from a methodological point of view, lies in the *formalisation* of the semantics and pragmatics of factual Ip. To this end, we will make use of the framework of *Discourse Representation Theory* (DRT) equipped with a *neo-Davidsonian event semantics*. This represents a novel approach to Russian aspect.

1.2 Data

The data used in this work come from various kinds of sources. We briefly comment on the nature of these sources here.

In some cases it will be convenient to discuss earlier analyses in the literature of specific examples. Where possible, we will refer to the scholar who introduced
the example. Note, however, that some examples are quite recurrent in the literature on the factual Ipf, and this often creates some confusion as to who, if any, should be credited for having introduced the example in question. In general, whenever we present an example without any reference of source, the example is our own (jointly constructed with the help of native speaking informants).

We provide new, fresh data from three main sources: the novel Dvenadcat’ stulev’ (‘Twelve Chairs’) by Ilf and Petrov, the Uppsala Corpus, and the Internet. The latter has been used in two different ways: We often refer to examples found accidentally on our favourite Russian web sites, in which case we refer to the web site in question. We have also searched for specific verb forms etc. using available search engines.

The vast majority of the examples discussed in this thesis is excerpted from the two electronic corpora mentioned above – the Uppsala Corpus and the Internet. Despite the obvious advantages of using corpora in semantic studies, this seems to be a neglected area in Russian aspectology. This is quite surprising considering the important role corpora could play for instance when comparing the frequency or preference for Ipf vs. Pf in specific syntactic environments. However, in this respect, our own work represents at best only a small step in the right direction, as our use of corpora is admittedly too unsystematic to qualify as a ‘corpus study’ of Russian aspect.

The major obstacle which restricted our use of corpora, concerns the rather trivial fact that there is no efficient way – at least to our knowledge – of systematically, with the electronic tools presently available, detecting factual Ipf in texts. This may, in theory at least, not be the fault of the corpora and the search engines, but may instead be due to our inadequate understanding of the kind of linguistic context and cue phrases etc., which license or trigger factual Ipf.

1.3 Organisation of the Thesis

This introductory chapter concludes with a brief overview of aspectuality and temporality in Russian, with focus on the notions of ‘elicity’ and ‘trivial aspectual pair’ (1.4). Next, in 1.5, we give an informal presentation of different readings of the imperfective, including subspecies of factual Ipf. In 1.6, we illustrate the difference between the crucial notions of aspectual opposition and competition by looking at the basic semantico-logical properties of grammatical aspect. Finally, in 1.7, the categorial status of Ipf is given some consideration in light of markedness theory.

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1 A curious, but fairly typical case, is the following: Dickey (2000, 122) attributes an authentic example from Chekov’s ‘the Cherry Orchard’ to Israelii (1998, 64). Israeli, on the other hand, refers to Paducheva (1996, 51), who actually borrowed the example from Forsyth (1970, 89)...

2 We carried out a systematic, manual search for occurrences of past imperfective verb forms in this novel.

3 This is an untagged electronic corpus compiled at the University of Uppsala. It consists of Russian prose from the 20. century, that is, written texts of contemporary standard Russian.
In chapter 2, we discuss the rationale behind our approach, and introduce the formal framework, viz. event semantics couched in Discourse Representation Theory (DRT). This chapter also contains the basic compositional analysis at the syntax-semantics interface of the two aspectual operators (Pf and Ipf) as inducing different temporal relations.

Chapter 3 is exclusively devoted to factual Ipf. We discuss different diagnostics for factual Ipf (notably cooccurrence with temporal adverbials of various kinds), and propose a positive working definition for factual Ipf. The definition is aimed at differentiating factual Ipf from other imperfective readings, hence narrowing down the range of data to be considered. In this respect, a non-trivial choice is our restriction of factual Ipf to telic predicates (aspectual competition).

Chapter 4 contains a rather thorough review of previous proposals in the literature on factual Ipf. We have divided this chapter into 5 sections which reflect 5 different approaches to the subject matter. Although we draw on important insights established by researchers in the field, none of the earlier accounts are directly comparable with the analysis presented here. This thesis introduces a framework and level of formalisation that are alien to traditional Slavic linguistics.

The next 3 chapters (5–7) contain our analysis of factual Ipf, with focus on its two main variants: existential Ipf and presuppositional Ipf. There is a certain asymmetry between the two factual readings, which is reflected in the organisation of this thesis. It is almost trivial to capture the existential reading in our framework. However, the interaction of existential Ipf and other temporal phenomena (past tense, temporal adverbials) is challenging for the kind of compositional semantics assumed here. Chapter 5 is devoted to this issue, where we present a ‘temporal calculus’ for Russian, with particular focus on existential Ipf and the possibility of past perfect readings.

In chapter 6, we focus mainly on presuppositional Ipf, whose analysis requires quite an elaborate tool kit, because one has to explicitly distinguish between the assertoric and presuppositional level of the sentence. We present a compositional, formal analysis of presuppositional Ipf and its interaction with information structure (background-focus division of the sentence). We also show how DRT can account for the behaviour of these presuppositions in context. Finally, we address the issue of why factual Ipf occurs frequently in questions.

In chapter 7, we broaden the perspective somewhat and look at how the findings of the preceding chapters relate to the phenomenon of aspectual competition. In this final chapter, both existential Ipf and presuppositional Ipf are contrasted with Pf. In view of the competition between factual Ipf and Pf, we propose some additional parameters for the analysis of the viewpoint operators. Much focus is on existential Ipf and the pragmatic effects arising from the competition with the ‘temporal anchoring’ of Pf, both at the sentence level and beyond.
1.4 Aspectuality and Temporality in Russian

This thesis is not the place for a comprehensive introduction to the immense field of aspect in Russian. We must restrict the presentation to some basic features of aspectuality and temporality, which are relevant for the study of factual Ipf. Hopefully, these introductory remarks will still give an idea of why aspect is such a hot topic in studies of the Russian language.

1.4.1 Trivial Aspectual Pairs

The defining feature of the grammatical category of aspect in Russian (and Slavic) is the quite systematic presence of aspectual pairs. Every verb is either perfective (Pf) or imperfective (Ipf), with a large number of 'verbal concepts' having both a perfective and imperfective form in different tenses and modi. Thus, one characteristically needs two ‘verbs’ (verb forms) with their respective inflections in order to represent a full paradigm of one particular lexical verb meaning.

Let us have a look at the morphological machinery responsible for the formation of perfective and imperfective verb forms. The general picture is this: *Simplex verbs* denoting activities such as ‘writing’ and ‘reading’ are imperfective, that is, ‘pisat’ and ‘citat’, respectively. Combined with a *prefix*, this imperfective verb stem becomes perfective, and we get ‘napisat’ and ‘procitat’, respectively. Perfectivisation is closely related to telicisation of the predicate (see below), and the prefixed verbs above therefore only occur as transitive verbs with an appropriate internal object.

Each simplex verb may combine with a number of different prefixes, but only the combinations provided in the previous paragraph give rise to (trivial) aspectual pairs. Take for instance ‘pisat’, which has a trivial partner formed by addition of the prefix ‘na-’. If we instead combine ‘pisat’ with the prefix ‘pro-’, following the pattern of ‘citat’/procitat – to read’, we do indeed get a perfective verb ‘propisat’, but this lexeme is not an aspectual partner to the simplex verb. There is a substantial lexical difference between ‘pisat’ and ‘propisat’, inasmuch as the latter means ‘to prescribe’.

Importantly, however, the perfective ‘propisat’ – to prescribe’ gets a true aspectual imperfective partner ‘propisvati’ – to prescribe’ through a process of *suffixation* (here: the suffix ‘-yva’), known as secondary or derived imperfectivisation.

The basic story is therefore that both prefixation (perfectivisation) and suffixation (imperfectivisation) play an important role in the morphological make-up of the system. This dual process will even in certain cases give rise to ‘aspectual triplets’ with three lexically quasi synonymous verb forms:

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4 Readers familiar with Russian will notice that the presentation is oversimplifying at this stage. To mention a few points: Aspectual pairs are also formed by suppletion (‘govorit’/skazat – to say’), and there is a large, productive class of ‘biaspectual verbs’, like ‘organizovat’ – to organise’, which according to semantic and syntactic tests should be treated as two homonyms forming an aspectual pair. Finally, for some inherently telic predicates the simplex verb is perfective: ‘dat’/davat’ – to give’.
simplex verb – prefixation – suffixation

\[ \dot{\text{žec}}^i \quad \dot{\text{sžec}}^p \quad \dot{\text{sžigat}}^i \]  (‘to burn up’)

At the semantic (and syntactic) side, there are various tests for identifying perfective and imperfective verbs. One classic test relates to their different interpretation with present tense morphology. Consider again the verb ‘pisati\(^p\)/napisati\(^p\) – to write’:

(3) On \textit{pišet}\(^i\) pis’imo.
He is \textbf{writing} a letter.

(4) On \textit{napišet}\(^p\) pis’mo.
He \textbf{will write} a letter.

Despite the identical inflection (‘-et’) in the two cases, there is an important difference between the two sentences, inasmuch as only the imperfective verb gets a \textit{present} tense interpretation, while the perfective verb is interpreted as \textit{future} tense. Aspectual pairs such as ‘pisati\(^p\)/napisati\(^p\)’ are known as \textit{trivial pairs} (Paučeva 1996), since the two members, so we claim, do not differ in lexical semantics. These pairs are the focus of attention in this thesis as they form the basis for both aspeсtual opposition and competition, and as we will see later on, factual Ipf plays a crucial role in the latter.

A trivial pair can be identified through \textit{Maskov’s criteria}. If the two members of an aspeсtual pair are indeed lexically synonymous – and thus form a trivial pair – Maslov’s criteria predict that it be possible, or even necessary, to replace Pf with Ipf in certain contexts (Maslov 1984, 66). The most frequently used diagnostics are the correlation between singular events in Pf and the use of Ipf in iterative contexts, as in (5) below, and the transformation of a past tense context to historical present tense, as in (6):

(5) Včera on \textit{napisal}\(^p\) ej pis’mo. \textbf{⇒}
On každyj den’ \textit{pisal}\(^i\) ej pis’mo. (Forsyth 1970, 153)
He \textbf{wrote} her a letter yesterday. \textbf{⇒}
He \textbf{wrote} her a letter every day.

(6) On \textit{pročítal}\(^p\) pis’mo, \textit{zasmejalsja}\(^p\) i \textit{otdal}\(^p\) ego Vale. \textbf{⇒}
On \textit{čítaet}\(^i\) pis’mo, \textit{smeetsja}\(^i\) i \textit{otdaet}\(^i\) ego Vale. (Forsyth 1970, 41)
He \textbf{read} the letter, \textbf{laughed}, and \textbf{gave} it to Valja. \textbf{⇒}
He \textbf{reads} the letter, \textbf{laughs}, and \textbf{gives} it to Valja.

The tests tell us that while there are indeed ‘grammatical’ reasons for choosing one or the other aspect in the cases above, both aspeсtual partners are used to denote the same kind of ‘complete event’, and are thus lexically synonymous.\(^5\) In effect, Maslov’s criteria thereby relate the notion of ‘trivial pairs’ to \textit{telic} (‘pred’anye’) verbal predicates. It follows from this view that many verbs – be they perfective or imperfective – do not have a trivial aspeсtual partner.

\(^{5}\) See (Paučeva 1998) for a more detailed discussion of Maslov’s criteria.
1.4.2 Telicity

The semantic notion of (a)telicity ("(ne)predel’nost") is crucially linked to the manifestation of aspectuality ("aspektual’nost") in any language, including Russian. On what grounds can we refer to the trivial pairs above as being telic in nature? The issue is rather complex as Russian aspect (Pf vs. Ip) interacts in intricate ways with (a)telicity. In fact, the major controversies in contemporary studies of the aspectual system in Slavic stem from different views on how aspectual pairs relate to telicity.

In support of the traditional view in Slavic aspectology that trivial pairs are inherently telic (Karolak 2001, 15), consider a pair of VPs such as ‘perežitiuiperschodie’ ulici – to cross the street’, which can be used to depict a situation corresponding to Ol’ga being the Agent of the event e in figure 1.1.

Figure 1.1: Telic descriptions of ‘reality’

\[ \begin{array}{c}
\text{\textbf{e}} \\
\hline
\text{\textbf{e}_1} \\
\hline
\text{\textbf{e}_2} \\
\hline
\text{\textbf{e}_3} \\
\end{array} \]

Let us, for the sake of the argument, abstract away from specific readings of the imperfective as we try to apply our VPs to the situations in figure 1.1. In that case, the speaker can only choose one of the Russian VPs above if the situation corresponding to e or e, holds in the real world. On the other hand, if the speaker wants to convey the message that the activity of Ol’ga merely amounts to walking in circle in the middle of the street (e,1), then neither of the members of the pair ‘perežitiuiperschodie’ ulici’ is available. The point is that our initial VPs provide a determinate endpoint (telos), which here is the end of a certain path (the street), and this inherent telos somehow has to be conceptually salient if the speaker wants to describe a situation as a crossing of the street.

Furthermore, trivial aspectual pairs cannot refer to events which go on beyond the telos provided by the VP. If the event actually corresponds to Ol’ga’s crossing two streets, i.e. one street after the other, this situation cannot be properly rendered by our VPs, even though each of the two main subparts (e + e,) of this complex event e, can:

‘crossing the street(e)’ + ‘crossing the street(e,3)’ ≠ ‘crossing the street’
Thus, in the general case, the VPs ‘pereći’/‘perechodi’ uliču’ refer to events which are instantiated if and only if a single street is crossed by some Agent. This brief discussion is supposed to illustrate the fact that telicity is a property of predicates $P$ (such as VPs). We can capture this formally as follows, making use of a ‘proper part’-relation ($\sqsubset$) between events:

- **Definition of telicity (simplified)**

  $P$ is telic if $\forall e \forall e'[P(e) \land P(e') \rightarrow \neg e' \sqsubset e].$

Applied to our initial example, this says that two events which both can be described truthfully by the predicate $P$ (e.g. as a ‘crossing of the street’), cannot stand in any ‘proper part relation’ to each other. This holds for $e$ and $e_2$ in figure 1.1, which are temporally disjoint, and which both instantiate a crossing of the street. Furthermore, since the event $e_2$ of ‘walking in circle in the middle of the street’ may eventually be considered as a proper part of the event $e$ of type $P$, $e_1$ itself cannot be referred to by the predicate $P$. Similarly, in some contexts it would be reasonable to consider $e$ to be a proper subpart of a bigger event $e_2$ of crossing two streets. But $e_2$ itself cannot be truthfully described by $P$, i.e. as a ‘crossing of the street’.

The converse of telicity is *atelicity*. While telic predicates are *heterogeneous*, the atelic ones have the property of *homogeneous reference*. For atelic predicates, such as ‘guljat’ v parke – to walk in the park’, the opposite of telicity thus holds. That is, any subevent $e_1$ (down to a certain minimal size) of an event $e$ of walking in the park can also be described as a ‘walking in the park’ (aka ‘divisive reference’ or ‘the subinterval property’ (Dowty 1979)), and, in the other direction, the sum of a collection of subevents of ‘walking in the park’ is also a ‘walking in the park’ (aka ‘cumulative reference’).\(^7\)

Given the assumption that trivial aspectual pairs are telic, we predict that ‘guljat’ v parke’ cannot participate in any *trivial* aspectual pair. This conforms to the traditional view of the perfective ‘poguljat’ v parke – to walk in the park (for a little while)’ being a perfectiva tantum (a so-called ‘procedural’) standing outside the main aspectual system.

There is a whole battery of tests which capture the notion of telicity (Dowty 1979). In (Borik 2002), some of these tests are applied to Russian data. One classic test is the behaviour of verbal predicates in combination with temporal adverbials on the form *in for x time* under a single event reading. Telic predicates felicitously cooccur with so-called ‘interval adverbials’ (‘za + NP’ in Russian), while atelic predicates combine with ‘measure adverbials’ (adverbs of duration expressed by NPs in accusative case, possibly preceded by the preposition ‘s’). It is only appropriate to invoke a temporal upper *bound* (‘in [za]

---

\(^5\)The definition is oversimplifying in some respects. For instance, telicity as defined here, does not make a *final proper subpart* count as, say, ‘a crossing of the street’. This is perhaps unreasonable, but could be dealt with in a more elaborate definition. We prefer to keep the definition simple in order not to obscure the presentation, and the relevant points for factual imp.

\(^7\)See (Bach 1986), (Křížka 1992) and (Křížka 1998) for a more detailed discussion, including a more elaborate formalisation of (a)telicity and related concepts.
x time’) for an event denoted by a telic (‘bounded’) predicate. The speaker thereby signals that the endpoint/telos is located below this upper bound, or, in other words, that a complete event described by the telic predicate has occurred within the specific interval in question. See (Dowty 1979), (Paslawskaja and von Stechow 2003) and (Alexiadou et al. 2003, xxf.) for a semantics for these adverbials which formally captures their interaction with (a)telicity.

The straightforward correlations in Russian are as follows:

(7) Vanja pročital$^t$ knigu \{ za \ #\{0 \} \} dva časa. [telic]
    Vanja read the book \{ in \ #for \} two hours.

(8) Vanja igral$^t$ v futbol \{ 0 \ #za \} dva časa. [atelic]
    Vanja played football \{ for \ #in \} two hours.

Of course, for Russian, these tests do not tell the whole story, as a substitution of the aspectual value may change the combinatorial possibilities:

(9) Vanja čital$^t$ knigu \{ 0 \ #za \} dva časa.
    Vanja was reading the book \{ for \ #in \} two hours.

How is this compatible with the claim that trivial pairs such as ‘citat$^t$/pročital$^t$ knigu – to read the book’ are inherently telic? Indeed, the imperfective operator triggering a processual reading in (9) is responsible for some kind of atelicisation of the VP (Brecht 1985). Furthermore, in a zero-context, as in constructed linguistic diagnostics like (9), the traditional tests will often force such a processual reading on imperfective verbs. But this is not to say that (9) is on an equal footing with cases like (8). If we return to Maslov’s tests, such as the behaviour of these predicates in historical present tense, we do get the expected combinatorics for the telic candidate, while the atelic ‘igrat$^t$’ v futbol – to play football’ still only cooccurs with measure adverbials:8

(10) Za dva časa Vanja pročityvaet$^t$ knigu i srazu edet$^t$ v gorod. (historical present tense)
    Vanja reads the book in two hours and then goes to town.

(11) Vanja igraet$^t$ v futbol \{ 0 \ #za \} dva časa i zatem edet$^t$ v gorod. (historical present tense)
    Vanja plays football \{ for \ #in \} two hours, and then goes to town.

8True, the secondary imperfective ‘pročityvaet’ – to read’ is more idiomatic than ‘citat’ – to read’ in this particular environment. However, this does not change our main point.
However, our main motivation for insisting on the telic nature of aspectual pairs has to do with the availability of factual IpF readings, as will become clear throughout this thesis. In the right context, where a factual reading is forced upon the interpreter, the telicity of the imperfective member in a trivial pair shows up:\footnote{In general, the temporal indefiniteness of factual IpF does not pattern with the temporal definiteness of ‘za-adverbials’, as witnessed by the following data:}

\((12)\)  
Petja uže \textit{peresekal} \(\#\) \(\epsilon\) \(\text{čot kanal}\)  
\[ \left\{ \begin{array}{l} \text{za} \\ \#\theta \end{array} \right\} \text{ počasa.} \]

Peter \textit{(has)} already \textit{crossed} this channel \(\left\{ \begin{array}{l} \text{in} \\ \#\text{for} \end{array} \right\} \) half an hour.
(Borik 2002, 47)

\((13)\)  
Ja uže \textit{perečitvyla} ‘Vojnu i mir’  
\[ \left\{ \begin{array}{l} \text{za} \\ \#\theta \end{array} \right\} \text{ dva dnja (na sporo).} \]
Ekaterina Rachilina, p.c.)  
\textit{I have} \textit{already read} ‘War and Peace’, \(\left\{ \begin{array}{l} \text{in} \\ \#\text{for} \end{array} \right\} \text{ two days (for a bet).} \)

We thus adopt the view that imperfective VPs such as ‘\textit{peresekal} \# \epsilon \text{čot kanal}’ to cross this channel’ should be classified as telic, but having the potential to be atelicised through a processual reading. This traditional position has more recently also been defended in (Schoorlemmer 1997), (Verkuyl 1999) and (Borik 2002). Still, there is an important amount of literature which endorses a different view, viz. the intuitively appealing idea (had it not been for factual IpF) that Pf encodes telicity, while IpF \textit{tout court} encodes atelicity. For those who defend this idea, factual IpF is, naturally, not the centre of attention. We will occasionally return to this issue below since it is related to another important question concerning where Russian aspect should be located at the syntax-semantics interface and how the category of aspect in Russian relates to other phenomena of aspectuality.

### 1.4.3 Russian Aspect in the Big Picture

A major concern to this work is the relation between meaning and linguistic form. Our aim is to capture the semantics of Russian aspect, notably the imperfective in its factual reading. This endeavour requires a strategy for treating
the category of aspect in the larger picture at the (morpho-)syntax-semantics interface. In this respect, consider the following simple sentence:

(14) Karpov užé proigrýval matě Kasperovu.

Karpov has already lost a match to Kasperov.

The first thing to do is to locate the imperfective morphology, which in our case above is represented by the suffix ‘-yva’. But in order to propose a semantics for ‘-yva’, which reflects the contribution of imperfectivity to the meaning of (14), we need to make some assumptions about the semantic scope of ‘-yva’ relative to other constituents in this sentence. The position defended in this thesis is that ‘-yva’ is an operator (functor) taking an eventuality description as input.\(^{10}\) We argue that the ‘extended VP’ or ‘sentence radical’ ‘Karpov proigr- matě Kasperovu’ is a true description of events in which Karpov loses a match to Kasperov. This expression thus combines with the interpretation we eventually accord to ‘-yva’ to give the ‘tenseless sentence’ ‘Karpov proigrýva- matě Kasperovu’, which in turn combines with the tense node, in this simple case represented by the past tense morpheme ‘-l’.\(^{11}\)

We can picture this underlying hierarchical structure thus:

[tense[aspect[eventuality description]]]

Alternatively, we can represent this basic architecture in a tree as in figure 1.2.

Figure 1.2: Tense-aspect architecture for (14)

```
TP: [[Karpov proigrýval matě Kasperovu]]
     [−l]  AspP: [[Karpov proigrýva- matě Kasperovu]]
     [−yva] VP: [[Karpov proigr- matě Kasperovu]]
```

Adopting the configuration of (14) in figure 1.2 is not an innocuous choice. Concerning the perennial question in Slavic aspectology of whether aspect is

\(^{10}\) This will become clearer when the framework (event semantics) is properly introduced in chapter 2. Suffices it here to say that ‘eventualities’ is a cover term introduced in (Bach 1986) for events and states.

\(^{11}\) The assumption that aspect is hierarchically located below tense is rather uncontroversial in the syntax-semantic literature, cf. (Giorgi and Plaiesi 1998).

From a morphological point of view, the tense system in Russian is very transparent and instantiates a prototypical private opposition à la Jakobson, ±-l’, where presence of the ‘-l’-morpheme is interpreted as [+Past]. As we will see in chapter 5, however, the picture is more complicated when it comes to defining the actual semantic contribution of (past) tense.
derivational (‘slovoobrazujúci’) or inflectional (‘slovozmenitel’nyj’) in nature, the location of ‘-yva’ in the tree in 1.2 amounts to analysing Russian aspect on a par with truly inflectional categories, such as the passé simple/imparfait opposition in French. We argue that the systematic semantic patterns in the asperscan system of Russian make the Pf/Ipf opposition comparable to the functioning of grammatical inflectional categories, at least from a semantic point of view.

There are different aspects of aspectuality playing a role in natural language, and the question of inflectional vs. derivational asperscan categories is related to a distinction between outer asperscan and inner asperscan (Verkuyl 1999). In figure 1.2, the inflectional-like imperfective operator has scope over the whole VP, and thus pertains to ‘outer asperscan’. The contrast between ‘outer’ and ‘inner’ can be understood literally in terms of the syntactic location of aspect, but it also corresponds to a semantic opposition between two realms of asperscan, referred to in Smith’s two-component theory of asperscanuality as viewpoint aspect (outer aspect) and situation type (inner aspect) (Smith 1997).12

But what then hides behind the notions of ‘inner aspect’ and ‘situation type’? Situation types refer to meta-semantic properties of verbal predicates such as (a)topicity, and relate directly to Vendler’s famous classification (Vendler 1957). In this respect, the widespread use of the term Aktionsarten has caused some confusion in the linguistic community. In the Vendlerian tradition, the term is often used as synonymous with ‘situation type’, but it was originally introduced in Slavic linguistics to cover a particular phenomenon of ‘sublexical prefixation’, characteristic of the Slavic verbal system.13

One point which we must emphasise is that a derivational view on Russian aspect in fact brings us back to the (a)topicity discussion in the previous section. Proponents of the derivational hypothesis typically treat the Pf/Ipf opposition as a systematic means of conveying (a)topicity, cf. (Brecht 1985) and (Bertinetto and Delfitto 2000). The category of aspect in Russian is thereby treated as representing a grammaticalisation of (a)topicity (Dahl 1985, 210).

At the syntax-semantics interface, this linking of the Pf/Ipf distinction to the telic/atelic dichotomy typically amounts to considering ‘-yva’ as a V- or VP-modifier (‘eventuality modifier’) located inside the VP.14 Related to a derivational analysis, is also the ontological approach, advocated for instance in (Piñón 1995), which posits a sortal distinction between events on the one hand, and processes/states on the other. The idea is that perfective verbs, which are telic, denote events, while imperfective atelic verbs denote processes and states.

12In Slavic asperscanology, this distinction is sometimes referred to as ‘vid’ vs. ‘aspektual’nost’ (Maslov 1984, 10).
13The so-called ‘Aktionsarten’ in Slavic relate typically to perfectiva tantum, i.e. perfective verbs which focus on specific aspects or ‘phases’ of the situation, such as the event’s inception (‘zakrêat’—to begin to cry’). The presence of these Pf.s in the asperscan system is intriguing in many ways (see Filip to appear for a recent discussion), but it can safely be ignored here, since (factual) Ipf does not play any role in this subsystem.
14See (Piñón 2001) for a very advanced treatment of these issues in the framework of event semantics.
Again, the presence of factual Ipf makes this view problematic. Clearly, Ipf in cases like (14) does not denote processes or states, but represents a telic description of events of Karpov losing to Kasparov. We accordingly treat the category of aspect in Russian as pertaining to viewpoint aspect, to adopt the term popularised by Smith’s model.15

But if (im)perfective morphology does not merely encode (a)telicity, then what is the semantic contribution of these operators? As a point of departure, consider the well-known definition given in Comrie’s classical work:

- “[A]pects are different ways of viewing the internal temporal constituency of a situation” (Comrie 1976, 3).

Perfectivity, according to Comrie, “indicates the view of the situation as a single whole, without distinction of the various separate phases that make up that situation” (Comrie 1976, 16). Unfortunately, this description also fits our factual Ipf. The contrast implicit in Comrie’s definition is therefore between Pf and the processual/progressive reading of Ipf, where the latter “pays essential attention to the internal structure of the situation” (Comrie 1976, 16).

What we will retain from these quotes, is the idea that aspects provide a temporal perspective on the situation, cf. the English terms ‘aspect’/’viewpoint’ and the Russian equivalents ‘vid’/’rakurs’. Indeed, both situation type and viewpoint aspect represent the speaker’s conceptualisation of the situation in temporal terms. But while situation type is a covert category which is only manifest indirectly through the speaker’s lexical choice of predicate [±Telic], viewpoint aspect is more transparent in our analysis. The overt morphological marking of this category will be reflected semantically through the introduction of a temporal parameter, a reference time (Reichenbach 1947). Importantly, this reference time, which we label the assertion time (Klein 1995), further interacts with tense which is located higher up in the tree. In the formal set-up to be presented in chapter 2, we will thereby make precise the wide-spread intuition that aspect in Russian is a temporal category.

1.5 The Semantic Diversity of Ipf

We here give an informal overview of (a subset of) the multiple interpretations associated with Ipf in Russian. We divide Ipf into three core meanings: the processual, habitual-iterative, and factual. We then show that the latter label covers a group of readings which can be further split into a more fine-grained classification.

15The term ‘viewpoint aspect’ is actually slightly problematic, cf. chapter 2.2. It is also a bit of an overkill, since ‘aspect’ originally came to use in linguistics as a translation of the Slavic noun ‘vid’, which literally means ‘viewpoint’. In Russian translations of Smith’s work, ‘viewpoint’ is rendered as ‘rakurs’ (= ‘perspective’), so the terminological roundabout continues.
1.5.1 A Three-way Classification of Ipfs

Aspectologists working on aspect in Russian are faced with the challenge of accounting for a wide range of different meanings and usages of the imperfective aspect.\(^\text{16}\) As a first approximation to these data, it is natural to make some kind of a semantic classification, grouping intuitively closely related readings together. Consider for instance the main interpretations of (15):

\begin{enumerate}
\item ... Ja obedali, ...
\item I was having dinner (at some particular time);
\item I used to have dinner (regularly);
\item I have had dinner (today)
\end{enumerate}

The meaning of the verb form ‘obedali’ is underspecified in this zero-context, since no temporal adverbials or other specification of the context is provided. In actual use, i.e. in a specific discourse, the semantics of ‘obedali’ – to have dinner – in past tense more or less falls into 3 different groups, as illustrated in the English translation of (15). Examples (16) – (20) below exhibit unambiguous occurrences of the same verb.

The most prominent meaning of the Russian imperfective is represented in sentences like (16), where the process of having dinner unfolds at the time (i.e. ‘reference time’) when an incident occurs:

(16) My obedali, kogda u moego druga proizoshed pristup. (Internet)

We were having dinner when my friend had a heart attack.

This meaning of Ipfs is referred to as ‘processnoe značenie’ or ‘aktual’-noe značenie’ in Russian linguistics. It is usually translated by the English progressive (‘-ing’), but it has a wider use than the progressive; hence we will refer to this as the processual reading to avoid confusion. This label is also supposed to cover more idiosyncratic usages, notably the durative reading (Timberlake 1985b), where the process of having dinner is explicitly measured in time:

(17) Obedali s kostrom s trech do četyrech časov dnja [...] (Internet)

We had dinner by the bonfire from 3 p.m. to 4 p.m. [...] 

In chapter 3.4.2, we will motivate the choice of treating the durative as an instance of the processual reading. Note that the semantic puzzles associated with the progressive in the semantic literature are also relevant for the processual reading in Russian (Zucchi 1999), since the latter subsumes the former. Thus, on encountering the imperfective ‘obedali’ in (16), the interpreter is not informed of the endpoints of this dining event. We do not know when the speaker and his friends started having dinner, and, more importantly, we cannot tell whether the

\(^{16}\text{We use the terms 'meaning' and 'usage' as nearly synonymous concepts in a pre-theoretical way. To avoid confusion, we often prefer the more theory neutral term 'reading' which covers both (semantic) meaning and (pragmatic) usage.}\)
dinner was eventually brought to its natural conclusion or instead interrupted in
the actual world. The fact that we can use a telic predicate in the imperfective
aspect to refer to events which need not culminate (in our world), is part of the
imperfective paradox (Dowty 1979).

There is a general consensus that the processual reading is the Hauptbe-
deutung of Ipf in contemporary Russian, cf. (Padočeva 1996) and others.
The next prototypical meaning of the imperfective, both in Russian and cross-
linguistically, is the habitual-iterative reading as illustrated in (18) and (19).

(18) Tak my žili včetverom – mama, papa i ja s sestrenkoj. Obedali na
pervom etaje. (Internet)
This is how the four of us lived – mum, dad, and my sister and I. We
had dinner on the first floor.
(19) Filipenko S.M. neodnokratno obedali v stolovoj kolchoza bez oplaty.
(Internet)
S.M. Filipenko had dinner repeatedly without paying in the canteen
at the collective farm.

In both these examples, complete events of having dinner are instantiated
repeatedly. There are good reasons cross-linguistically to distinguish between the habitual
and the iterative as the former is typically instantiated by imperfective forms, while the latter is more often conveyed by the perfective (Dahl
1985). However, the Russian aspectual system is quite idiosyncratic in this re-
spect (also compared to other Slavic languages), with its predominant use of
Ipf also in the iterative. In the two cases above, example (19) with the overt
quantificational expression comes closer to the iterative reading. In this work,
we will for convenience group the two readings together, reflecting the fact that
Russian typically turns to Ipf for expressing reference to plural events.18

The main focus of this work will be on a third important group of imperfec-
tive usages in past tense, namely the peculiar cases where Ipf denotes possibly
singular instantiations of complete events, that is factual Ipf, as in (20):

(20) Dva vora sidjali v portovom kabake.
A: Ty segodnya obedali v restoranе!
B: Otkuda ty znas’?
A: U tebya novoe pal’to. (Internet)
Two thieves are sitting in a bar.
A: You had dinner in a restaurant today!
B: How do you know?
A: You’ve got a new coat.

Anticipating the definition to be given in chapter 3, we can single out the
defining features of factual Ipf as follows:

17It seems plausible to consider ‘obedat’ in the cases discussed here as member of the
trivial pair ‘obedat’/poobedat’ – to dine. These verbs have something like an incorporated
internal object, viz. the dinner (‘obed’), which explains why they behave as being telic.
18See chapter 3.4.3 for a discussion of some more fine-grained distinctions.
• reference to complete events
• telic predicates
• singularity of events
• location of the events in the past

Given its interpretation in (20), the verb form ‘obedalii’ complies with this list, and is therefore classified as an instance of factual Ipff.

1.5.2 The Factual Dichotomy

We will explore the hypothesis that we can distinguish between two major subgroups of factual Ipff, depending *grosso modo* on whether the existence of the event denoted by the verbal predicate is *asserted* (focused) or *presupposed* (backgrounded). Our claim is that making this distinction is necessary to account for *all* the data which are treated as factual Ipff in Russian aspectology.

The two main readings of factual Ipff are here labelled *existential Ipff* and *presuppositional Ipff*, which are illustrated in (21) and (22), respectively:

(21) Ja vaši očerki o Sibiri čitali, mne oni očen’ uravjatia. (Uppsala Corpus)

I have read your essays on Siberia, I like them a lot.


And the children cried out: Dad, dad . . . Why did he die? Well, my friends, why do you ask me? I’ve got nothing to do with it. Did I kill him?

This reflects a distinction which was suggested already by (Rassudova 1982, first edition: 1968) and Forsyth (1970), and further developed in the works of Padučeva. These authors use terms like ‘existential Ipff’ and ‘actional Ipff’. While we have adopted the former term, we are less comfortable with the connotations of the latter (cf. in particular chapter 4.5.2), hence our choice to replace it with a label which reflects the essence of our *presuppositional* account (cf. chapter 6) of this subset of factual Ipff.

Forsyth’s original distinction is formally based on intonational factors (intonational focus on the verb = existential Ipff; deaccentuated verb = actional Ipff). This provides a useful diagnostic in most cases, but the *semantico-pragmatic* analysis proposed here does not hinge solely on this parameter. For instance, we will argue in chapter 6 that a similar distinction is found in wh-questions, where the test related to intonational factors does not apply, cf. also (Israeli 1998, 57).

In this respect, our account is closer to (Padučeva 1996) which contains the most detailed overview and classification of the relevant data. However, we propose in chapters 5–7 a more elaborate, and in many respects novel, analysis of the dichotomy.

25
It should be noted that there is a long tradition in the literature of merging
the existential and presuppositional Ipfs into a single usage of Ipfs. The data
considered in such treatments are often heavily biased towards the existential
variant. Although we should ultimately strive towards a unified account of the
data, we believe there are some important differences among the two readings,
which should not be left unaccounted for. The principal semantico-pragmatic
distinction is related to the representational level, e.g. in the sense of DRT. This
concerns the question of where the aspectual content is expressed, i.e. either
in the assertoric part (existential Ipfs) or the presuppositional part (presupposi-
tional Ipfs). However, one can also argue that this factual dichotomy requires
more fine-grained subclassifications. This is notably the case with existential
Ipfs, which in fact will be used as a cover term for three different, but closely
related subgroups.

1.5.3 Subgroups of Existential Ipfs

The two main factual readings are asymmetric in some respects. While pre-
suppositional Ipfs is always characterised as being simply ‘presuppositional’ (it
goes without saying given the proposed label), the pragmatic functions of the
existential reading are more diversified.

There are three subgroups of the existential variant which are worth men-
tioning already at this stage. The borderlines are not always clear, but we
frequently refer to different types of factual readings, and it is therefore conve-
nient to introduce some labels which cover the prototypical cases.

‘Experiential Ipfs’

We coined the term ‘experiential Ipfs’ in (Gronn 2001) to refer to usages of
factual Ipfs which resemble the experiential perfect in languages which exhibit
an analytic perfect, cf. (Pancheva 2003). In the experiential reading, factual
Ipfs asserts that the underlying event is instantiated at some time prior to the
current evaluation time of the speaker. The focus of the speaker in these cases
is not on the details concerning the actual instantiation of the event at some
particular time in the past, but may instead relate to phenomena such as the
Agent’s ‘experience’. In this respect, the intended meaning of experiential Ipfs
in (23) could be paraphrased as in (24):

(23) Kto čital’ ‘Vojnu i mir’?
Who has read ‘War and Peace’?

(24) ‘Who has the property of belonging to the set of people who have ex-
perienced an event of reading ‘War and Peace’?’ (Gronn 2001, 82)

The reference to ‘experience’ should not be taken too literally (cf. chapter
4.2). This label somewhat sloppily characterises a pragmatic epiphenomenon
of the existential reading. Why does the speaker refer to some event in the
past when focus is actually on the current state of affairs? Because some Agent
whose properties are relevant at the utterance time has ‘experienced’ the event in question.

Note that ‘experiential Ipfs’, like all aspectual usages which locate an event at a certain interval, implies an existential statement. We will in the following often prefer the more general term ‘existential Ipfs’ to cover these cases, such as the ones below:

(25)  Já i ranšie slýsal o takich slučajach.
    
    I’ve heard of such things before. (Maslov 1987, 208)

(26)  Ty čto-nibud’ delal, papa, čtoby pomešat pížonu pisat’ mne?
    
    Have you done anything to stop John writing to me, Father? (Maslov 1987, 208)

‘Cyclic Ipfs’

This particular subspecies of existential Ipfs is similar to the experiential reading in asserting the existence of a ‘complete’ past event. The difference is related to the kind of reference time at which the event in question occurs. In what we dub ‘cyclic Ipfs’, the reference time (focus of the speaker) is an interval chosen from a cycle of contextually determined intervals of identical type:

(27)  Kstati, vy obedali, druz’ja? (Internet)
    
    By the way, have you had dinner, my friends?

For the question in (27) to have any pragmatic relevance in an actual discourse situation, the hearer will infer the additional information that the speaker refers to today’s dinner. The verb ‘obedali’ belongs to a group of predicates which denote events occurring at reasonably regular intervals (cycles); for instance, one normally has dinner once a day. Factual Ipfs is here interpreted as relating the dining event to the closest interval in the pragmatically salient cycle, which is the day of the utterance time in (27).

This particular usage of factual Ipfs is identified in (Leinonen 1982) and (Chaput 1990). The latter author provides examples such as (28) and (29). Note that Chaput’s translations of these examples with the additional parentheses also capture the pragmatic salience of the utterance time, despite the past tense of the verb. This is reminiscent of the experiential usage.

(28)  Ty davali korove seno?
    
    Have you given the cow her hay? (She needs some grain.) (Chaput 1990, 296)

(29)  Ty segodija pokupali gazetu?
    
    Have you bought a newspaper today? (I would like to come along.) (Chaput 1990, 296)

In (28), the relevant cycle may be ‘twice a day’ (depending on how often cows eat hay), while in (29) the last element of the cycle in question is overtly
expressed (‘segodnja – today’). The nature of the cycle varies, of course, depending on world-knowledge: ‘podmetat’s pol – to wash the floor’ (once a week?), ‘umyvat’sja – to wash oneself’ (twice a day?), ‘kormit’ti rebenka – feed one’s child’ (four times a day?), ‘polucat’s stipendiju – receive the scholarship payment’ (four times a year?) etc., cf. a list of such VPs in (Padučeva 1996, 47).

‘Bidirectional Ipf’

The label ‘bidirectional Ipf’ (‘dvunapravlennoe značenie’) refers to a peculiar usage of the imperfective which has always amused aspectologists working on Russian. This idiosyncratic reading, also known as ‘two-ways Ipf’ or ‘Ipf of annulled result’, is characterised by a tacit cancellation of the ‘physical result’ of the event:

(30)  A: Iškal’ menja?
     B: Milicioner nedavno priežžal [ . . . ]. S otcom razgovarival. (Uppsala Corpus)
     A: Have they been looking for me?
     B: A police officer arrived recently. He talked to your father.

The choice of Ipf with the result-oriented predicate ‘priežžal’ – to arrive, come’ in the existential Ipf setting in (30), licences the inference that the police officer has left at the time when the dialogue above takes place. As pointed out in the literature, the main motivation for a bidirectional usage is to avoid the connotations which would arise with the use of Pf (Leinonen 1982, 201). In our case above, substituting ‘priečalP’ for ‘priežžal’ would imply that the police officer were still present. In fact, ‘priežžal’ with a bidirectional reading equals the sum of two instances of perfective verbs: ‘priežžal’ = ‘priečal’ + ‘ucecal’ – left’.

The bidirectional reading naturally occurs with motion verbs (in a broad sense), whose semantics is appropriate for forming antonyms (e.g. arrive vs. leave). But also VPs quite different from motion verbs may get a bidirectional interpretation if they have a reversible target state, cf. the following example and its characteristic translation, which implies that the window has been closed again.

(31)  Ty otkryval okno?
       Did you have the window open? (Israeli 1996, 9)

We consider bidirectional Ipf to be a variant of factual Ipf since it complies with all the four features listed in the previous section. This is also in line with how this reading is perceived in previous work, cf. (Leinonen 1982, 200ff.), (Glovinskaja 1982, 124), (Padučeva 1996, 22), (Dickey 1995, 110) and others. The difference between the experiential and bidirectional readings is merely related to the pragmatic implicature emerging with the latter reading, viz. that the result of the event has been reversed or cancelled. As we will show in chapter 7, this characteristic feature is related to lexical semantics, and the
reading in question is restricted to a subset of telic predicates (so-called ‘target state predicates’).

1.5.4 Overlapping Readings

To sum up, we have here suggested a coarse-grained three-way distinction between the temporal meanings of the imperfective past: the processual, habitual-iterative and factual readings.\(^\text{19}\)

This tripartition is convenient in an informal discussion of imperfective readings. Note, however, that this persistent talk about multiple readings of Ifp does not commit us to a view of the imperfective as genuinely ambiguous. In the formal analysis of Ifp to be proposed in chapter 2.3.3 (and in subsequent chapters), we will try to capture the different readings while respecting the crucial context-dependency of Ifp. This endeavour points to an underspecified semantics for Ifp.

In this respect, it goes without saying that the subdivision of factual Ifp proposed here is also highly conventional. There is in particular no clear-cut separation line between the different variants of existential Ifp detected above. For instance, how should we classify the occurrence of ‘obedal’\(^\text{î}\) in Liza’s (B’s) reply in (32)?

(32)  A: Liza, pojdem\(^\text{ï}\) obedal\(^\text{îš}!\)
    B: Mne ne chočetsja\(^\text{î}\). Ja včera uže obedal\(^\text{î}\).
    A: Ja tebja ne ponimaju\(^\text{î}\).
    (Dvenadcat\(^\text{î}\) stul’ev)
    A: Liza, let’s go for dinner.
    B: I don’t want to. I already had dinner yesterday.
    A: I don’t understand you.

True, Liza’s interlocutor (A) seems to be just as confused as the linguist. The point is that a factual reading of ‘obedal’\(^\text{î}\) normally invites a cyclic Ifp interpretation, but in this case the cyclic reading, which would make salient the interval ‘segodnja – today’, clashes with the overt temporal adverbial ‘včera – yesterday’. Indeed, the problems of interpretation facing speaker A in cases like (32) show, to some extent, the conventionalised status of the various subreadings of (factual) Ifp. In a felicitous discourse, different ‘candidate readings’ may be indistinguishable, but there should not be an overt clash between the salient interpretations.

One of our main goals in this work is to present an analysis which allows us to detect the speaker’s motivation for using (factual) Ifp in specific discourse situations. Consider in this respect the two last occurrences of the verb ‘zachodit’\(^\text{î}\) in (33):

---
\(^{19}\)We do not pretend to give an exhausted list of imperfective usages in Russian. In particular, we do not address the different modal and atemporal functions of Ifp.
In fact, why didn’t we visit his mother, as his closest friends? By the way, we did visit her. I went to visit her, but I didn’t want to tell it to Vena.

The sentence ‘Vpročem, zachodili’

containing a ‘reversible’ motion verb, has a bidirectional interpretation (‘come and go’, i.e. ‘drop by’, ‘visit’). It cannot have an anaphoric (≈ presuppositional) reading since the existence of the visiting event referred to in the first sentence (‘počemu my ne zachodili’...?) is not given or presupposed in the context of the second sentence (cf. chapter 6). Its existence is actually questioned and cast in doubt in the first sentence. On the contrary, the occurrence of factual Ipfl in the third sentence of the discourse (‘Ja zachodili’...’) is presuppositional, since the visiting event is indeed given/presupposed when this sentence is processed, due to the content of the second sentence. Example (33) thus illustrates how different (factual) Ipfl interpretations interact with the context in rather complex ways.

We will propose an analysis of factual Ipfl which makes the three readings associated with the pragmatic epiphenomena of ‘experience’, ‘cyclic reference time’ and ‘reversible target states’ – three subgroups of existential Ipfl. These cases are to be contrasted with presuppositional Ipfl inasmuch as they focus on the occurrence of the event described by the VP.

This overview of imperfective readings in Russian, which is biased towards factual Ipfl, is summed up in figure 1.3.

**Figure 1.3: A classification of imperfective readings in Russian**

```
Ipf
      /\      \      /
     /  \      \    /
    Progs, Durs, Habs, Inters
      /\    /\    /\  /
     /  \ /  \ /  \ /  \\n    Experiences, Bidirections, Cycles
```

### 1.6 The Logic of Aspectual Opposition and Competition

In searching for the meaning of a linguistic entity, in our case a verb containing viewpoint information (Pf/Ipfl), semanticists seek to identify the linguistically relevant entailments of that particular expression. The concept of entailment refers to the logically valid inferences which may be drawn from a set of premises.
Below, in order to illustrate the fundamental difference between the notions of aspectual opposition and competition, we will look at some cases where both the premises and inferences are linguistic expressions carrying viewpoint aspect. Simplifying slightly, the notion of aspectual opposition is used to characterise the processual (progressive) IpF vs. Pf, while aspectual competition refers to the relation of near-synonymy holding between factual IpF and Pf.

The question we ask in this section is the following: Given a truthful utterance containing one member of a trivial aspectual pair, what can be inferred about the other? Let us, for purposes of illustration, focus on the behaviour of the VPs ‘ubrala’/ubira’ kvartiru – to tidy the flat’ in sentences referred to as $\phi^p$ and $\psi^i$, respectively. The VPs in question form a trivial aspectual pair in the sense that the two members do not differ in their lexical semantics, only in aspectual properties.

### 1.6.1 From IpF to Pf

Is there an entailment from an utterance on the form $\psi^i$ to the state of affairs induced by $\phi^p$? The answer is no, as witnessed by the felicitous negation in (34):

(34) Anja ubiralala' kvartiru, no ne ubrala' ee.

Anja was tidying the flat, but did not tidy it.

The negation shows that IpF and Pf here refer to different states of affairs. We assume that Pf (‘ubrala’) denotes complete events of tidying the flat (cf. chapter 2). IpF is not incompatible with the whole flat being cleaned (see below), but (34) points to a specific interpretation of IpF which invalidates the inference to a complete event of tidying the flat. The example shows that explicitly denying the existence of the complete event interpretation conveyed by $\phi^p$, still makes the discourse coherent. This suggests that IpF can be used as long as a (possibly proper) part of the event of cleaning the flat was performed by Anja. As a result of this, the following entailment from (35) to (36) is invalid:

(35) Anja ubiralala' kvartiru.

Anja was tidying the flat.

$\not\Rightarrow$

(36) Anja ubrala' kvartiru.

Anja (has) tidied the flat.

This non-entailment from IpF to Pf is the driving semantic force behind the notion of aspectual opposition.

### 1.6.2 From Pf to IpF

Let us now look at the issue from the other side, viz. what can we infer about $\psi^i$, given the truth of the corresponding sentence $\phi^p$? An answer to this question
is indirectly provided by the contradiction (semantic anomaly) arising from a conjunction of \( \phi^p \) and a subsequent negated sentence \( \psi^i \): 

(37) \# Anja ubrala\(^p\) kvartiru, no ne ubiralal\(^i\) ee.

\# Anja cleaned the flat, but was not tidying it.

This obviously reflects the fact that if Anja, according to the complete event interpretation of Pf, has tidied the whole flat, she must have been engaged in tidying parts of the flat. Hence, we cannot negate \( \psi^i \) in (37), whatever part of the cleaning event \( \psi^l \) refers to. This means that we have the following entailment (modulo contextual reference time parameters):

(38) Anja ubrala\(^p\) kvartiru.

Anja (has) tidied the flat.

\( \vdash \)

(39) Anja ubiralal\(^i\) kvartiru.

Anja was tidying the flat.

The entailment from Pf to Ip\( \text{f} \) is logically valid in the sense that when a sentence containing the perfective member of a trivial pair is true, then the corresponding imperfective sentence must necessarily be true. In every context where we can find a state of affairs making (38) true, we can also find some (prior) state of affairs making (39) true.

### 1.6.3 Telic Predicates and the Event Nucleus

The above entailment relations follow from our intuitive conceptualisation of the internal structure of events denoted by telic predicates. There is a long tradition in the semantic literature of decomposing telic predicates (Dowty 1979), cf. also (Klein 1995) for Russian. We will return to some aspects of these approaches in chapter 2. We propose first to look at the so-called Event Nucleus (Moen and Steedman 1988, 18) in figure 1.4, which provides a 'snap-shot of the reality' depicted by telic predicates.\(^{20}\)

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\(^{20}\)One may question the ontological motivation behind decomposing events rather than linguistic expressions (predicates). We therefore make use of the Event Nucleus in a purely informal sense.

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32
The Event Nucleus represents the abstract (conceptual) format of a single event referred to by a telic predicate. The speaker can choose to *zoom in* on particular parts of the nucleus, and this is where viewpoint aspect enters the picture. For instance, processual Ipf corresponds to the speaker’s focusing on some part of the preparatory process. As to the semantic contribution of Pf, it necessarily includes the *culmination*.

Traditionally, Pf has been analysed either as zooming in on the whole Event Nucleus, or on the culmination alone. The first option coincides with the complete event analysis which we adopt in this thesis and implement formally in chapter 2. This way of interpreting the semantic contribution of Pf correlates with what in traditional feature approaches is labelled [+Totality]. The alternative interpretation of Pf is typically captured by the feature [+Result] (or its equivalents [+Boundary], [+Limit], [+Culmination] etc.). The culmination point in Moens’ figure is where the change from one state to another takes place, which means that this second version of Pf is also representative of analyses of Pf in terms of the feature [+Change].

Thus, Pf either *includes* the preparatory process [+Totality] or temporally *follows* the preparatory process [+Result]. This provides an intuitive explanation for why Pf entails Ipf, in as much as imperfective verbs normally *can* have a processual reading.

Similarly, the Event Nucleus confirms the invalidity of letting Ipf entail Pf. Since the future – unlike the past – is uncertain, the Event Nucleus tells us that if we only possess information pertaining to the imperfective being true of the preparatory process, we are not entitled to conclude that the event has culminated or will culminate in our world. The preparatory process may be interrupted or take another course.

1.6.4 The Case of Factual Ipf

We already know by now that Ipf is not restricted to denoting the preparatory process, and our favourite example (39) involving Anja’s tidying her flat may perfectly well have a factual reading in the right context. This factual Ipf interpretation comes semantically quite close to the corresponding perfective sentence. True, factual Ipf does not *zoom in* on the culmination, but just like Pf with its complete event interpretation, factual Ipf evaluates the event *retrospectively* (Padučeva 1996), that is, from the point of view of the consequent state in the Event Nucleus. Given that the consequent state of the event holds, one can also infer its culmination, hence factual Ipf ‘entails’ Pf. These affinities between factual Ipf and Pf form the semantic core of the so-called *aspectual competition*.

Saying that factual Ipf ‘entails’ Pf implies that factual Ipf can be separated from other imperfective readings. The terminology raises a *methodological* issue. We know that Ipf does not entail Pf, but does it make sense to relativise entailments to a particular reading of Ipf? In fact, this is not an unusual practice in the semantic literature, cf. the following statement from work in DRT “the question of [DRS1] entailing [DRS2] must be relativized to the different
possible readings of the text which these different DRSs express” (Kamp and Rossdeutscher 1994b, 167f.). This view represents a certain idealisation, but such a separation of different readings is feasible without committing oneself to an analysis of Ipf as being fundamentally ambiguous.

While the presence of imperfective morphology in itself gives us no clues as to which particular reading is intended by the speaker, we should try to specify the relevant elements of the set of contexts which systematically trigger a factual reading of Ipf. In this respect, it is an almost trivial – but methodologically substantial – fact that the meaning of Ipf is completely determined by the context.21 Our task is not simple, as will become clear in chapter 3, where we discuss some possible diagnostics for factual Ipf.

Nevertheless, most actual discourses are unambiguous as to the choice of a processual vs. a factual interpretation of Ipf.22 Assuming that we are able to identify a factual Ipf reading, our claim is that the sentence in question indeed refers to a complete event. One can therefore say that there is as an entailment arising from the set of ‘factual Ipf contexts’ to the corresponding perfective sentence. But what kind of linguistic cue phrases could help us disambiguate our imperfective sentences and pick out the set of contexts associated with factual Ipf?

Let us return to our initial predicates, and briefly illustrate some characteristic patterns for factual Ipf (cf. chapter 3 for more details). The existential reading can be identified through factors such as intonational focus on the verb – marked with the subscript [verb]P – as in (40), or cooccurrence with different adverbials such as ‘uže – already’, as in (41):

(40) Anja [ubirala]P kvartiru.
    Anja has tidied the flat.

(41) Anja uže ubiralaP kvartiru.
    Anja has already tidied the flat.

In (42) below, intonational focus on the Agent (Anja) unambiguously, at least in the context provided here, results in a presuppositional Ipf interpretation:

(42) A: Vidimo, kto-to ubiralaP kvartiru posle obeda.
    B: Da, segodnja [Anja]P ubiralaP kvartiru.
    A: Apparently, someone cleaned the flat after dinner.
    B: Yes, today Anja tidied the flat.

In all these cases, the entailment from factual Ipf to Pf goes through. All three occurrences of ‘ubirala’ above refer to complete events of tidying the flat.

21This observation goes back at least to (Forsyth 1970, 4).
22A methodological problem, though, is that the semanticist’s data tend to be constructed sentences out of context or in contexts which are too impoverished to let us decide among the candidate readings. On the one hand, this idealisation of the data is necessary in order to limit attention to the relevant questions, but on the other hand, this gives a somewhat distorted picture of natural language (Sarbu forthcoming).
albeit in somewhat different ways. In (40) and (41) the existence of a complete event is asserted, while for (42) we claim that the existence of a complete event is presupposed.

1.7 The Categorial Status of the Imperfective

In the previous sections we looked at some aspects of the coexistence of various readings of the imperfective past in Russian. As we prepare the terrain for an analysis of the imperfective operator(s), we should bear in mind the following key questions:

(i) Is the imperfective in Russian ambiguous or vague?

(ii) How is (i) related to the status of Ipfl as a member of a grammatical category which is formally expressed as a binary opposition (Pf vs. Ipfl)?

There is no straightforward answer to these questions. In the discussion of ambiguity vs. vagueness, which is central to the study of semantics, the way we perceive the category of aspect (ii) plays a crucial role. This section is therefore divided into two parts depending on whether Ipfl and Pf form an equipollent opposition or a subordinate opposition.

1.7.1 Ambiguity vs. Vagueness in an Equipollent Opposition

The category of viewpoint aspect in Russian has only two members, Pf and Ipfl. The ensuing rather clear-cut division of the lexicon of Russian verbs into two separate groups, and the existence of semantic criteria for keeping the groups apart, can justify an approach focusing on the semantics of each member of the category in isolation. This kind of analysis assumes – in terms of European structuralism – an equipollent opposition of the two members of the category. If we concentrate on Ipfl, then what is the semantic status of this aspect in an equipollent opposition, i.e. isolated from issues of aspectual opposition and competition?

After having identified different readings of Ipfl in section 1.5, we suggested in section 1.6 that the processual and factual readings of Ipfl have a different set of entailments, such that Ipfl factual entails a complete event, while Ipfl processual (or Ipfl tout court) does not validate this entailment. This at first seems to suggest that imperfective morphology in Russian is genuinely ambiguous at the semantic level. However, this conclusion is too hasty.

It is conceivable that an imperfective sentence φ is a truthful description of a class of contexts which model-theoretically consists of the union of the models which make the processual reading true and the models which make the factual reading true (and the models which make the habitual-iterative reading true etc.). In that case, we can treat Ipfl as vague by positing a general
meaning, which must be compatible with this rather heterogeneous set of readings/contexts. Thus, the existence of different readings is a necessary, but not a sufficient condition for ambiguity, cf. (Zwicky and Sadow 1975, 4).

This issue is ultimately also a question of the existence of one or several imperfective viewpoint operators. Schematically, we can picture the choice between ambiguity and vagueness as follows:

- **Ambiguity:**
  - $\text{Ip}_1 \approx \text{processual} \text{ Ip}_f$ (‘incomplete event reading’)
  - $\text{Ip}_2 \approx \text{factual} \text{ Ip}_f$ (‘complete event reading’)
  - $\text{Ip}_3 \ldots$ etc.

- **Vagueness:**
  - $\text{Ip} \approx \text{‘incomplete event reading’} \ + \ \text{‘complete event reading’} \ + \ldots \ \text{etc.}$

How can we decide between ambiguity and vagueness in the case of $\text{Ip}_f$? The traditional tests must be carried out with some caution since they are typically designed for quite different cases than viewpoint operators. This being said, some of the tests apparently indicate ambiguity, e.g. the ellipsis test (43) and the test checking for matching interpretation in conjunctions (44):

(43) Maša *probovala*¹ baltiškoe pivo. I Katja tože.

Maša \{ has tasted \\
       \hspace{1em} was tasting \} Baltic beer. And so \{ has \\
          \hspace{1em} was \} Katja.

(44) Maša i Katja *probovali*¹ baltiškoe pivo.

Maša and Katja \{ have tasted \\
       \hspace{1em} were tasting \} Baltic beer.

It is generally assumed that the elided material must be semantically identical to the overt form. If the imperfective is vague, it is predicted that both (43) and (44) can have a possible interpretation where different properties are attributed to Maša and Katja. This is so because the two different readings of Ip_f activated in that case can still be semantically equivalent according to the initial assumption of vagueness. For instance, it is conceivable that (43) is interpreted as attributing to Maša the ‘experience’ of having tried Baltic beer (factual Ip_f), while the ellipsis construction asserts of Katja that she was merely engaged in tasting Baltic beer at some covert reference time in the past (processual Ip_f). But this prediction is not borne out: Either it is asserted that both Maša and Katja have a certain ‘experience’ of drinking Baltic beer, or the sentence is used to convey the message that they were both in a process of beer tasting at some particular time in the past.

Thus, each of the two sentences (43) and (44) has only two readings if we limit our attention to processual Ip_f vs. factual Ip_f. This points to ambiguity of the past tense form of ‘probovat’¹, since vagueness would in principle allow four readings.

However, one may question the results of these tests, at least as soon as we try to formalise the semantics of Ip_f. In this work, the context dependency of
Ipf will be captured mainly through a reference time parameter, the so-called ‘assertion time’ (cf. chapter 2). Different kinds of assertion times give rise to different imperfective readings. Of course, the elided material and the ‘reduced conjunction’ in (43) and (44), respectively, have the same assertion time as the overt form. But then the outcome of the test is given in advance, so to speak, and it is not proven that Ipf is genuinely ambiguous. The tests cannot rule out the possibility of there being one vague imperfective meaning, varying with shifting reference times.

Indeed, from a semantic point of view, one is intuitively inclined to explore the vagueness hypothesis, since the lack of uniformity following from the ambiguity approach is unappealing and fails to explain the systematic morphosyntactic properties of imperfective verbs. Is there any independent evidence for vagueness? In fact, one can argue that a cross-linguistic approach to imperfectivity makes it plausible that the various Ipf readings in Russian have some features in common. The point is that if distinct languages fail to distinguish formally between a set of readings, this indicates vagueness. How could it be that formal markers of imperfectivity in different language families like Slavic and Romance exhibit similar patterns of semantic diversity if this diversity is not reducible to some simple ‘universal concept’ of imperfectivity? Such a cross-linguistic comparison will necessarily remain rather abstract, but with some important reservations it is possible to claim that for instance ‘l'imparfait’ in French resembles Ipf in Russian in so far as it exhibits both processual and habitual-iterative readings, in addition to the ability of referring to singular complete events (‘l'imparfait narratif’).23

The more attractive vagueness approach permits a unified semantics for each member of the category of aspect. The quest for a unified semantics of the two aspects is often referred to as the search for their invariant meaning.24 The invariant meaning of a ‘gram’, in the sense of (Bybee and Dahl 1989), should not be mixed up with its main meaning (Hauptbedeutung) – which remains the processual reading in the case of Ipf. An invariant meaning is necessarily more abstract – hence vague – since it is supposed to cover the essence of all the meanings of the gram.

1.7.2 Unmarkedness in a Privative or Subordinate Opposition

There is a third option, which somehow supersedes the ambiguity/vagueness distinction. It can be argued that the semantics of Ipf should be dealt with within a theory of markedness. This is another concept from the Prague school, developed by Roman Jakobson and his followers.

23In this respect, see chapter 4 and our discussion of (Breu 1998) and (Hedin 2000).

24This notion is a translation of the German Gesamtbdeutung which originated with Roman Jakobson's famous work on the Russian case system (Jakobson 1971/1936). There is a close relationship between the pair ambiguity/vagueness, familiar from general linguistics, and variance/invariance, which spread from the Prague school to Slavic linguistics.
Jakobson’s key observation was that two members of a closed category may be dependent on each other in rather intricate ways, and therefore we cannot exclusively focus on grammatical (here: semantic) properties of one member in isolation. A deeper understanding of the category is reached only through a comparison of the two members. In the case of Russian aspect, this led Jakobson to claim that Pf is marked (with a possible invariant meaning) and Ipf unmarked. Furthermore, since the grammar forces the speaker to choose one of the two viewpoint aspects even when focus is not on aspctual relations proper, Ipf – as the unmarked member – takes on this role as a default aspect.25

The question, however, is how the alleged unmarkedness of Ipf can be implemented in an operational semantic (or pragmatic) theory. Jakobson was rather sparse on the details on this point, since his focus was mainly on markedness in phonology and morphology. Indeed, his somewhat sketchy remarks are not straightforwardly applicable to the semantics of Russian aspect.

Jakobson’s basic idea seems to work for the prototypical cases of formation of aspecual pairs through prefixation of an imperfective simplex verb. In such cases, we can consider ‘čitat’ - to read’ as the unmarked member and the more complex ‘pročitat’” as the marked member. This opposition can be expressed through a binary feature [±Prefix], a so-called privative opposition. The imperfective has a negative feature [–Prefix], and is as such incompatible with the perfective [+Prefix].

This cannot be the whole story, though, since the allegedly marked prefixed imperfective verbs often have a derived imperfective partner. A simple glance at pairs like ‘ugovorit’/ugovarivat – to persuade’ should convince us that the secondary imperfective is morphologically more complex, hence morphologically marked. If we want to avoid treating ‘ugovarivat” as semantically marked in contemporary Russian, we must posit something like Dahl’s distinction between default meaning and (un)markedness, where the latter concept is restricted to morphology (Dahl 1985, 19).26 According to this terminology, ‘ugovarivat” is morphologically marked, but remains the default member of the aspecual pair from a semantic perspective. Of course, this adjustment implies a separation of morphology and semantics which somehow ruins the elegance of Jakobson’s original proposal.27

A somewhat different approach has been advocated by Chvany (1975). She argues in her influential work that the semantic opposition between Pf and Ipf is not privative (A vs. not A), but rather subordinate (A vs. no statement of A). The existence of factual Ipf is the key evidence for this view. In a private

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25Note in this respect, that Vendlerian states are imperfecta tantum in Russian. Accordingly, they do not form trivial pairs and fall outside the aspecual system, or at least the aspecual opposition proper. Ipf in Russian has therefore a different categorial status than for instance the marked progressive in English or ‘l’imparfait’ in French.
26Dahl ultimately ends up analysing grammatical aspect, from his typological perspective, as an equipollent opposition. As such, the category of aspect differs from other verbal categories like tense which normally has a marked member, e.g. past tense in Russian (Dahl 1985, 72).
27However, this non-compositional flair is in the spirit of recent work like (Pawlowska and von Stochow 2003), where it is argued that the semantics of categories like tense and aspect should not be equated with tense and aspect morphology.
opposition, Ipf (‘not A’) would be *incompatible* with Pf (‘A’), but this cannot be the case if ‘A’ is equated with ‘reference to complete events’. On the contrary, in a subordinate opposition, it is conceivable that Ipf indirectly, in certain contexts, expresses the meaning of Pf. While Pf explicitly encodes the complete event reading, a similar interpretation can follow from the use of Ipf in a ‘factual Ipf context’. The subordinate view thus allows for Ipf and Pf having overlapping functional domains. Furthermore, a subordinate analysis can be reconciled with the idea of Ipf being semantically *vague* or *underspecified*. What can be more vague than ‘no statement of A’? Hence, neither of the two viewpoint aspects should be treated as genuinely ambiguous. Note also that in general, the more specific subordinate opposite implies the other member (a ‘father’ is always a ‘parent’ (Zwicky and Sadock 1975, 6f.)), which complies with our entailment from Pf to Ipf in section 1.6.

The discussion above illustrates some of the problems for a straightforward application of markedness theory to Russian aspect. For this reason, contemporary Slavic aspectology is actually freeing itself from the grips of markedness theory. For instance, in a recent survey of Russian aspectology, Zaliznjak and Smelev (2000) propose to abandon the idea of an unmarked imperfective. The confusion is great in this area. In fact, for many of the cases discussed in this thesis, the interpretation of Ipf is pragmatically strengthened and ‘marked’ in competition with Pf. And this appears to be completely independent of the morphological make-up of the predicate.

What is important, however, is that (factual) Ipf must be understood in light of Pf. The speaker is always, in the case of trivial aspectual pairs, confronted with a choice between two alternatives. We will also advocate the idea of Ipf as being semantically vague or underspecified, but we will do this through a detailed analysis of *one* of its readings. The agenda for this work is thereby comparable in spirit to the following statement from one of the leading figures in Russian aspectology:

“Izolinovannoe tolkozenie každogo otdel’nogo značenija [...] privodit k tomu, čto značenie edinicy, kotoroe do načala analiza intuitivno vosprimimalo’ kak ‘odno i to že’, prevrašaetsja v spisok različnych. [...] Bylo by lučše, odnako, esli by udaloš’ posle ustanovlenija množestvennosti značenij vse-taki pokazat’, na čem osnovyvalos’ predstavlenie o ego edinstve.” (Padučeva 1996, 9f.)
Chapter 2

Some Ingredients for a Formal Analysis of Viewpoint Operators

This chapter contains a brief presentation of the framework adopted in this thesis. In 2.1, we introduce Discourse Representation Theory and Event Semantics. In 2.2, we start with the intuitive picture of the aspectual opposition as opposite temporal inclusion relations. We implement the idea formally in a compositional setting, and present a semantics for the aspectual operators in Russian.

In the last two sections, 2.3 and 2.4, we look at the formalisation of the aspectual operators in more detail. The issues discussed here are not always directly linked to factual Ipf, but constitute important preliminaries for an analysis of the role of factual Ipf in the aspectual system of Russian.

This chapter touches upon a certain number of technical issues. We must refer the reader to textbooks such as (Kamp and Reyle 1993) and (Heim and Kratzer 1998) for a more careful and detailed presentation of the formal tools used in this work.

2.1 The Framework

2.1.1 Introductory Remarks

The traditional approach to the semantics of aspect in Russian (cf. chapter 4) suffers from the fact that natural languages (e.g. English or Russian) are not the optimal tools for defining phenomena in natural language semantics. The field of Slavic aspectology is characterised by a situation where, as pointed out by Fowler (1996, 98), each aspectologist carefully explains how his own theory encompasses those suggested by everyone else – while it actually may be that they are perfectly compatible if stated in the same meta-language. The problem
is basically that aspectologists state their findings imprecisely in words. To escape this vicious circle, we need an unambiguous meta-language for describing the relevant semantic distinctions in the frequently ambiguous object-language.

This methodological point has traditionally not been given any consideration in Russian aspectology, with the exception of (Glovinskaja 1982) and, to some extent, (Padeceva 1996), which both attempt to apply Anna Wierzbicka's _format talkovanija_ to Russian aspect. However, this framework does not contain any semantic theory in the model-theoretical sense, and it remains unclear how it conceives of central notions such as 'meaning'.

In this thesis, we will make use of semantic representations which hopefully enable us to reach a higher level of precision. Formal languages based on predicate logic are most commonly used for these purposes. The natural language sentence is first translated into a _logical form_, which is then interpreted in a _model_. The meaning (e.g. truth-conditions) of an expression _φ_ of Russian is thereby given indirectly through a model-theoretic interpretation of the formal representation _ψ_ we assign to _φ_.

The format we choose to work with is a compositional version of _Discourse Representation Theory_ (DRT), enriched with a typed _λ_-calculus. DRT extends the traditional, static Montagovian truth-conditional semantics,\(^1\) and endorses a _dynamic_ view on meaning. Opponents of applying the machinery of formal semantics to phenomena such as Russian aspect often claim that some of the relevant distinctions in this field are too fine-grained to be captured by _truth-conditions_ alone. We agree, but our hope is that the dynamic aspects of DRT can come to our rescue in some of these cases.

The new conception of meaning developed in dynamic semantics amounts to calculating the meaning of an utterance in terms of its so-called _context change potential_. That is to say that the contribution of an utterance is seen in its ability to change the _input context_ by adding information and create a new _output context_, which in turn is the input context for the next utterance to be processed in the discourse. Every sentence is thus interpreted against a continually evolving context, cf. (Kamp et al. to appear, 29).

It therefore seems worth exploring whether the tools of dynamic semantics can capture the universally accepted _context dependence_ of the meanings and functions of Russian aspect. Note in this respect that the initial motivation behind the emergence of DRT in the late 1970-ies was (in part) related to an attempt to account for the discourse effects of viewpoint aspect in French. DRT has ever since proven to be one of the most promising frameworks for analysing temporal phenomena in discourse.

Unfortunately, current formal semantic and pragmatic theories of aspect have passed largely unnoticed in Slavic aspectology. Similarly, the Slavic data have not caught the attention of the formal semantics community. In our opinion, the theoretical study of Russian aspect has much to gain from broadening the horizon, and our hope is that this thesis will contribute to narrowing down

\(^1\)See (Hoepelman 1981) for an orthodox Montagovian approach to Russian aspect.
the gap between these two research communities.\footnote{In this respect, the present work shares some aspirations with (Piñón 2001) on the perfective viewpoint operator in Polish, Filip’s numerous articles on verbal prefixation in Czech, e.g. (Filip 2000), a DRT-study of aspect in Bulgarian (Damova 1999), and the inspiring work of Pashalinska and von Stechow (1999, and later versions) on tense and aspect in Ukrainian and Russian.}

\subsection{Event Semantics and DRT}

The DRS-language adopted here is equipped with events. The basic idea behind event semantics, which has become very influential in contemporary linguistics, is that ordinary sentences involve direct reference to events. One classic piece of evidence for this view can be found in the following example:

\begin{center}
\begin{tabular}{ll}
\end{tabular}
\end{center}

Volodja \textbf{died} in the war. \textit{It was yesterday, and today he was buried.}

The pronounal ‘eto’ picks up an antecedent in the preceding utterance, but what is the nature of this antecedent? The answer is obvious once we treat verbs such as ‘pogibnut$^{p}$’ – to die’ as (one-place) predicates of events. The event argument $e$ is a so-called \textit{discourse referent}, and occurs in our semantic representation in a \textit{condition} of the form ‘die($e$)’. The discourse referent $e$ can participate in various relations to other elements of the discourse, e.g. as an antecedent for ‘eto’.

Example (45) actually illustrates two independent phenomena which are easily combined into a coherent framework. The first is the need for event semantics. We refer the reader to (Eckardt 2002) and (Pietroski 2002) for various linguistic arguments in favour of this approach.\footnote{Cf. also (Piñón 1995) and (Link 1998) for a discussion of the ontological status of events.}

The second point here is the importance of a dynamic discourse-oriented theory, e.g. to capture the anaphoricity of ‘eto’. This is where DRT plays a crucial role. Together, DRT and event semantics provide an optimal framework for treating discourses like (45).

Let us have a look at the DRS-language used in this work. A DRS (Discourse Representation Structure) for the first sentence of (45), say $K_i$, can have the following appearance (simplified version):

\begin{center}
\begin{tabular}{|c|}
\hline
$e, x, y$
\hline
Volodja($x$) \\
war($y$) \\
die($e$) \\
Theme($e, x$) \\
Place($e, y$)
\hline
\end{tabular}
\end{center}

The DRS $K_i$ contains two main parts and is formally an ordered pair $<U_{K_j}, Con_{K_j}>$. Its first member is a set of \textit{discourse referents} \{e, x, y\}, i.e. the...
‘universe’ of the DRS, and the second member of the pair is a set of conditions \{Volodja(x), war(y)\ldots\} on the referents declared in the universe.

Throughout this work we switch between the pictorial box-notation above and a convenient linear pseudo-set notation, defined as follows:

- **Simplified DRS Notation**

\[ [x_1, \ldots, x_n] \mid \text{con}_1, \ldots, \text{con}_n] = \text{def} < \{x_1, \ldots, x_n\}, \{\text{con}_1, \ldots, \text{con}_n\} > \]

(Fabricius-Hansen and Sæbo to appear)

The linear representation of \( K_i \) would then be:

\[ (45-1') \ K_i : [e, x, y] \text{Volodja}(x), \text{war}(y), \text{die}(e), \text{Theme}(e, x), \text{Place}(e, y)] \]

The DRS \( K_i \) is **true** (the static version of meaning) in a model \( M \) if and only if there is an embedding (assignment function) \( f \) mapping the discourse referents (variables) of \( U_{K_i} \) onto individuals in the domain \( U_M \) which satisfy all the conditions of \( \text{Con}_{K_i} \), relative to \( M \). The presence of such a verifying embedding depends on the extensions of the predicates ‘Volodja’, ‘war’, ‘die’, ‘Theme’ and ‘Place’ in \( M \), according to an interpretation function \( I_M \). Formally, the truth-conditions of a simple DRS, containing no subordinate DRSs, can be stated thus:

- \( \llbracket K \rrbracket^M_J = \text{‘true’ iff } f(U_K) \in I_M(\text{Con}_K) \)

Let us return to the conditions in \( K_i \) above. Note that ‘war’ and ‘die’ are one-place predicates belonging to the meta-language. We are, of course, not interested in the lexical semantics of the English words ‘war’ and ‘die’, but it is convenient to use English in the DRS-language to represent the logical counterpart of the Russian words. Alternatively, we could have differentiated between vojna (object language, i.e. Russian) and vojna’ (meta-language, i.e. a predicate of the DRS-language).

Predicates like ‘Agent’, ‘Theme’, and ‘Place’ are not intrinsically linked to the general DRT enterprise, but we introduce these two-place predicates to represent thematic relations, in line with our conception of event semantics. Syntactic arguments like subjects, objects, and adjuncts are linked to their verbs

---

4 As we can see from \( K_i \), the DRS-language naturally contains variables for ordinary individuals \( (x, y, \ldots) \), besides events. We will later also add times \( (t, t_2, \ldots) \) to our models and representational language.

5 The syntax of DRS-languages is recursive such that (sub-)DRSs can be part of the set of conditions of the (main) DRS:

\[
K: \quad K_i : \]

See (Kamp and Reyle 1993) for a complete syntactic specification, and below for a recursive semantic interpretation of the main ingredients of the DRS-language.
via such secondary event predicates. This is accomplished by a suitable linking theory which we here simply assume to be available. Accordingly, the NPs 'Volodja' and 'vojnja - war' introduce discourse referents $x$ and $y$ which stand in Theme and Place relations, respectively, to the verb's event argument. This way of representing the participants of the event is known as neo-Davidsonian event semantics, cf. (Parsons 1990) and (Križka 1992).

It is time to make explicit some substantial differences between a dynamic version of DRT and ordinary predicate logic. The latter would represent the first sentence [1] of (45) as follows:

$$(45-1') \exists x \exists y [\text{Volodja}(x) \land \text{war}(y) \land \text{die}(e) \land \text{Theme}(e, x) \land \text{Place}(e, y)]$$

In contrast to this logical form, the DRS for $K_1$ above did not contain explicit existential quantifiers. This represents an asset of DRT since the declared discourse referents in a DRS remain accessible for anaphoric devices beyond the sentence boundary. In general, an antecedent is accessible for an anaphoric expression if the latter occurs within the 'logical scope' of the former. This is trivially the case when both discourse referents are declared in the same universe.

To illustrate this point, let us return to the case of event anaphora observed in (45). DRT, as its name tells us, is concerned with the interpretation of larger discourses. Hence the box representing $K_1$ will continue to expand until the whole discourse is processed. A neo-Davidsonian DRS for the second sentence [2] could be as follows:

$$(45-2') K_2 : [ [[ \text{In}(e_1, \text{yesterday}^*)]][e_1]]$$

The subscript DRS is here triggered by the pronominal 'étó'. This notational convention indicates that an antecedent for $e_1$ must be sought in the input context, that is in $K_1$. Current versions of DRT rely heavily on an analogy between presuppositions and anaphora (van der Sandt 1992). These two phenomena share the property of making (implicit) reference to entities present in the discourse context. The subscript DRS of $K_2$ is accordingly known as the presuppositional DRS.

When updating $K_1$ with $K_2$, we first resolve anaphoric dependencies. The presupposition of $K_2$ is resolved by unification of $e_1$ from $K_2$ with the suitable antecedent $e$ in $K_1$. In the next step, $K_2$ is merged with the non-presuppositional (assertoric) part of $K_2$. The merging operation ($\oplus$) is defined on the sets of discourse referents and the sets of DRS conditions as follows:

- **Merging of DRS $K$ with the context DRS $C$**

  $$C \oplus K = C \cup K$$

---

$^6$In DRT, existential quantification is built into the universe via the assignment function. A simple DRS is true in a model just in case there exists a verifying embedding for it, cf. the truth definition above. This ensures that discourse referents declared in the global universe ('top box') of a DRS are endowed with existential force, cf. (Kamp et al. to appear, 10).

$^7$See chapter 6 for further details.
In our initial example, having resolved the presupposition and merged the assertoric DRSs, we get the following result:

- \( \text{Update}(K_1)(K_2) = [c, x, y] \text{Volodja}(x), \text{war}(y), \text{Th}(e, x), Pl(e, y), I_n(e, \text{yesterday}^*)] \)

This preliminary DRS constitutes in turn the new context DRS against which a DRS \( K_3 \) for the third sentence (45.3) will eventually be interpreted.

In this scenario, we are not primarily interested in the truth-conditions of individual DRSs, but in the interaction of DRSs with the evolving context. The contribution of each utterance \( \phi \) is to update the current representation which itself informs the interpretation of \( \phi \). To capture this reciprocal interaction between context and utterances, we make use of the following dynamic interpretation \([\cdot]^{\text{dynamic}}\) of DRSs:

- **The Interpretation of DRSs as Context Change Potentials**
  A DRS \( K \) is interpreted – relative to a model \( M \) with a domain \( \text{Dom}_M \) and an interpretation function \( I_M \) – as a relation between input and output contexts, where contexts consist of embedding functions, that is assignments of values to discourse referents. DRSs thus denote sets of pairs of assignment functions:

  1. \( [K]^M,\text{dynamic} = \{ <f, g> \mid \text{dom}(g) = \text{dom}(f) \cup \text{U}_K \text{ and } g(U_K) \in I_M(\text{Con}_K) \} \)
  2. \( [K_1 \Rightarrow K_2]^M,\text{dynamic} = \{ <f, g> \mid f = g \text{ and } \forall h \in [K_1]^M, g : [K_2]^M, h \neq \emptyset] \}

For a complete specification of the dynamic semantics of DRS languages, we refer the reader to (Kamp et al. to appear) or (Lascarides and Asher to appear).

In the definition above, we have only listed the essentially dynamic aspects of the semantics. What is important here is the explicit reference to domains. Dynamic semantics thereby makes precise the idea that part of the contribution of many utterances is to make salient new discourse referents. This is particularly the case of non-subordinated assertions. The idea behind considering the denotation of \( K \) to be a set of pairs of assignment functions \( \{<f, g>\} \), is that \( g \) (the output context) records which new discourse referents introduced by \( K \) are available for subsequent anaphora. At the same time \( g \) inherits the variable assignments of \( f \) (the input context). We say that \( g \) extends \( f \), that is \( g \supseteq f \). This brings out the strength of dynamic semantics (see chapter 6 for more details), as similar phenomena cannot be satisfactorily dealt with in traditional static semantics.

### 2.2 The Aspectual Opposition as Inclusion Relations

But what about tense and aspect? Our representation of (45) above cannot possibly be accurate inasmuch as it ignores the semantic contribution of these
categories. This is not a shortcoming of the framework outlined in the previous section. In fact, the usefulness of introducing events into the semantics becomes particularly transparent in an analysis of aspectual and temporal phenomena. However, in addition to events, we have to introduce times in our ontology.

Following the analysis of Russian aspect in (Klein 1995), we treat viewpoint operators as establishing purely temporal relations between the event time and the assertion time. The event time is “the time at which some situation obtains”, while the assertion time is the time which the speaker focuses on, i.e. “the time for which an assertion is made by the utterance which describes the situation” (Klein 1995, 669).

Consider the prototypical aspectual opposition by comparing (46) and (47):

(46) Veera Vanja napisal pis’mo.
    Yesterday, Vanja wrote a letter.

(47) Kogda Anja vosla v komnatu, Vanja pisa pis’mo.
    When Anja entered the room, Vanja was writing a letter.

The two sentences report events of Vanja’s writing a letter. The semantic contribution of Pf is to assert that the time \( t \) associated with the interval ‘veera – yesterday’ (≈ assertion time) includes the time of the writing event: \( e \subseteq t \). In the present framework this takes the form of a DRS condition. Example (47), on the contrary, can reasonably be seen as an instance of the opposite inclusion relation: \( t \subseteq e \), cf. the pictorial representations in figures 2.1 and 2.2.

Figure 2.1: Pf as ‘\( e \subseteq t \)’

\[ 
\text{write a letter}(e) \\
\text{yesterday}(t) 
\]

It is worth noting that the idea of linking aspect to these temporal relations echoes insights which have been expressed informally in traditional Slavic aspectology, cf. Isačenko’s characterisation of the aspectual opposition (Ipf/Pf) in the following terms: “der Blickpunkt des Sprechers liegt inmitten/außerhalb eines Geschehens”, cited in (Timberlake 1985a, 155). The inclusion relations above also make sense in light of Comrie’s definition of aspect given in chapter 1.

\(^8\)In what follows, the event variable is used in two different ways: as referring to events proper and as referring to the run time of the event. This ambiguity is rather harmless, and it could easily be circumvented by introducing a temporal trace function \( \tau \) which maps events to their temporal extensions. The perfective condition would then correspond to \( \tau(e) \subseteq t \).
Treating viewpoint aspect in terms of such basic topological configurations has become quite standard recently, both in semantico-pragmatic theories like DRT (Kamp and Reyle 1993), cross-linguistic semantic studies like (Herweg 1991), (Binnick 1991) and (Smith 1997), and in generative approaches to the (morpho-)syntax-semantics interface, such as (Yadroff 1996) and (Giorgi and Pianesi 1998). These works are sometimes referred to as neo-Reichenbachian, since they represent extensions of some basic ideas expressed in (Reichenbach 1947). One of the first such studies of Russian was (Timberlake 1985a).

In the terminology adopted here, we depart from the above-mentioned authors in making use of the notion of ‘assertion time’, introduced in (Klein 1995). The assertion time, i.e. the speaker’s focus, can make the whole event visible (big assertion time), or only a part of the event becomes visible (small assertion time). In other words, it is not grammatical aspect which represents the ‘viewpoint’, as in Smith (1997), but the assertion time. In the metaphor below, we propose to replace ‘aspectual viewpoint’ with ‘assertion time’:

“Aspectual viewpoints function like the lens of a camera, making objects visible to the receiver. Situations are the objects on which viewpoint lenses are trained. And just as the camera lens is necessary to make the object available for a picture, so viewpoints are necessary to make visible the situation talked about in a sentence” (Smith 1997, 61).

The assertion time functions like the ‘lens of the camera’ in the sense that only the information made visible by the camera lens is asserted by the speaker. The effect of aspect is to widen or narrow down the assertion time relative to the event by establishing certain inclusion relations.  

2.2.1 A Compositional Semantics for Viewpoint Operators

In this work we want to explore the hypothesis that temporal phenomena in Russian be compositionally related. The principle of compositionality, also known as Frege’s principle, can be stated thus:

---

9 All the same, we will continue to talk informally about ‘viewpoint aspect’ in the sense of ‘grammatical aspect’ (as opposed to lexical aspect/Aktionsarten).
• The Principle of Compositionality

“The meaning of a complex expression is a function of the meanings of its parts and their syntactic mode of combination.” (Kamp and Partee 1995, 135)

Adopting this principle requires that we build the DRSs bottom-up at the syntax-semantics interface. To this end we combine λ-calculus and DRT.\footnote{\textsuperscript{10}}

Before we can present the translation of viewpoint aspects in λ-DRT, some technical preliminaries are called for. To ensure that the derivations are indeed compositional, and to give the λ-expressions a transparent semantic interpretation, we use an extensional type-logical language in the spirit of (Kratzer 1998). The set of types to be used in the present work is defined inductively as follows:

1. s is a basic type denoting the type of events.
2. i is a basic type denoting the type of times.
3. d is a basic type denoting the type of ordinary individuals.
4. c is a basic type denoting the type of ‘context change potentials’.
5. If a and b are basic types, then \(<a, b>\) is a complex type denoting the type of functions from expressions of type a to expressions of type b.

The possible denotations of the expressions we work with are events, times, ordinary individuals, ‘context change potentials’ (often referred to elsewhere as ‘ccp’), and functions made up from these four basic entities.

To the syntax of our DRS-language, cf. (Kamp and Reyle 1993) and (van Eijck and Kamp 1996), we add two clauses for λ-abstraction and λ-conversion:

• If \(X\) is a variable of type \(<a>\) occurring ‘free’ in a DRS \(K\) of type \(<b>\), then \(\lambda X K\) is an expression of type \(<a, b>\). (λ-abstraction)

• If \(Y\) is an expression of type \(<a>\) and \(\lambda X K\) is an expression of type \(<a, b>\), then \(\lambda X K(Y) = K'\) of type \(<b>\), where \(K'\) is obtained from \(K\) by substitution of \(Y\) for all free occurrences of \(X\) in \(K\). (λ-conversion)

Correspondingly, we add the following clause to the semantics of the DRS-language, cf. (Kamp et al. to appear, 38):\footnote{\textsuperscript{11}}

\[
\lambda x K\]^{M, \text{dynamic}} = \text{that function from } U_M \text{ to sets of pairs of embeddings relative to } M \text{ such that for } u \in U_M:\n\left[\lambda x K\right]^{M, \text{dynamic}}(u) = \{<f, g> | g = f \cup \{<x, u>\}\} \text{ and } [K]^{M, g} \neq \emptyset
\]

\textsuperscript{10}The λ-operator is used to construct functional higher order expressions \textit{intrinsically}. This tool is orthogonal to the dynamic merge/update operator in DRT, which applies \textit{interinsently}. For the formal background for λ-DRT, see (van Eijck and Kamp 1996).

\textsuperscript{11}For simplicity we only mention the case of λ-abstraction over an individual of one of the basic types s, i or d.
Using λ-expressions to represent functions of different complexity, we can build the DRSs compositionally, working bottom-up. This means that in order to formally capture the aspectual operators (ASP), we need to know the semantic type of expressions occurring as input and output values of these operators. In other words, where is ASP located in the semantic derivation?

We assume that ASP combines through functional application with the ‘aspect- and tenseless’ VP. The VP, including internal and external nominal arguments, is here treated as expressing properties of events. The details of the behaviour of nominal arguments and adjuncts at the syntax-semantics interface need not worry us in this study of viewpoint aspect. In the spirit of neo-Davidsonian semantics, we adopt a ‘conjunctivist conception’ of how the syntax (outside the domain of temporal phenomena) contributes to meaning (Pietroski 2002). We leave it open how the VP itself is composed, since this is immaterial for the semantics as long as the verb’s nominal arguments combine through set intersection, e.g.:

- \( \lambda e [ \text{read}(e) \cap \lambda e [ y \text{book}(y), \text{Th}(e, y)] \cap \lambda e [ x \text{Telja}(x), \text{Ag}(e, x)] = \lambda e [ x, y \text{Telja}(x), \text{Ag}(e, x), \text{read}(e), \text{book}(y), \text{Th}(e, y)] \)

In this thesis, the real work starts above the VP. So, ASP takes a set of events as input, but what is the output of this function? As we saw in the previous section, the semantic contribution of viewpoint aspect amounts to establishing a topological relation between the event argument \( e \) and a time argument \( t \). To capture the compositional nature of tense and aspect, we link this assertion time \( t \) to the interpretation of tense (and temporal adverbials). In this view, tense has scope over aspect, as it is commonly assumed in the literature on the morpho-syntax of the tense-aspect hierarchy, cf. (Yadroff 1996), (Giorgi and Pianesi 1998). The aspectual operators therefore map properties of events (eventuality descriptions, i.e. VP’s) into properties of times, as follows:

- \( \text{Pf} \Rightarrow \lambda P \lambda t [ e \mid P(e), e \subseteq t ] \)
- \( \text{Ipf}_{\text{procesual}} \Rightarrow \lambda P \lambda t [ e \mid P(e), t \subseteq e ] \)

These λ-expressions say that the aspectual operators are functions from event descriptions \( P \) (sets of events) to functions from times to context change potentials. Accordingly, aspectual operators have the complex type \( \langle \langle \text{sc} \rangle, \langle \text{ic} \rangle \rangle \).

Note that the viewpoint operators take care of declaring the event variable in the universe of the DRS (≈ existential quantification). That existential quantification of the event should be built into the semantics of the aspectual operator has become a common assumption in current work on the syntax-semantics interface, cf. (Paslawska and von Stechow 2003). Since viewpoint operators occur obligatorily in Russian, this implies that we do not need to invoke default existential closure of the event argument. In other words, the event argument in Russian is overtly realised in the morpho-syntax by the aspectual operator.
To take one example: The ‘aspectless’ VP ‘pisat’ pis’mo – to write a letter’ denotes a set of events: \( \lambda e \left[ \text{write-a-letter}(e) \right] \). This expression can be input to the perfective operator ‘na’–. The derivation goes as follows:

1. ‘pisat’ pis’mo’ \( \Rightarrow \lambda e \left[ \text{write-a-letter}(e) \right] \)
2. ‘na’ \( \Rightarrow \lambda P \lambda t [e \mid P(e), e \subseteq t] \)
3. \( [1 + 2] = \lambda P \lambda t [e \mid P(e), e \subseteq t] (\lambda e' [\text{write-a-letter}(e')]) \) (by functional application)
4. \( = \lambda t [e \mid (\lambda e' [\text{write-a-letter}(e')])(e), e \subseteq t] \) (by lambda conversion)
5. \( = \lambda t [e \mid \text{write-a-letter}(e), e \subseteq t] \) (by lambda conversion and deletion of unnecessary brackets)

After the aspectual operator has been applied, we thus end up at the AspP-level with a function of type \( <i,c> \), that is, from times to context change potentials. This function takes the assertion time \( <i> \) provided by tense and temporal adverbials as input. This gives a compositional account, through the assertion time parameter, of the interaction between aspect and other temporal phenomena, cf. chapter 5 for details.

A final representation for (46) in this format could then be as follows:

\[
(46') \quad [e, t, x, y \mid \text{Vanja}(x), \text{letter}(y), \text{yesterday}^* (t), \text{write}(e), \text{Ag}(e, x), Th(e, y), e \subseteq t, t \preceq s^*]
\]

### 2.2.2 On Reference Times

How does the present approach, and in particular the temporal relations associated with aspect, relate to Reichenbach’s influential work in temporal semantics? Reichenbach (1947) considers tense (and aspect) to express relations holding between three parameters, which are treated as points in time: \( E \) (event time), \( R \) (reference time), \( S \) (speech time). Reichenbach’s legacy is obviously felt in the present work as well.

However, there is a growing consensus in the literature that Reichenbach’s apparatus must undergo at least two major modifications. First, we have to reject Reichenbach’s ‘points in time’ and adopt an *interval* semantics, since the times in question are topologically related to each other, e.g. such that the event time constitutes a subset of the assertion time (\( e \subseteq t \)) etc.

Second, Reichenbach’s ingenious ‘reference time’ has engendered a considerable amount of confusion in the literature. The original use of this parameter is ‘overloaded’ as it assumes too many functions at once. In this work, we refer to the ‘reference time’ only informally as a cover term. Instead, following (Kamp and Reyle 1993, 594), (von Stechow 1995) and others, we make a distinction

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12 Timberlake (1985a) contains a critical discussion of Reichenbach’s parameters relative to Russian aspect, but Timberlake’s focus is different from ours.
between the temporal perspective of the speaker/interpreter, and the aforementioned assertion time. We refer to the speaker’s perspective as the evaluation time. The default value of the evaluation time is the utterance time, as for instance in (46) above with the deictic adverbial ‘včera – yesterday’. However, a problem for Reichenbach’s theory is that the evaluation time needs not equal the utterance time (Reichenbach’s $S$), but it is also importantly different from the assertion time.

To give an illustration, consider a slight modification of the aforementioned example (46):

(48) Nakonuše Volodja napisal pis’mo.

The day before, Volodja wrote / had written a letter.

In this case, the assertion time is a past time interval $t$ corresponding to the denotation of the adverbial ‘nakonuše – the day before’. Clearly, (48) is not evaluated relative to the utterance time $s^*$, but relative to a day $t_0$ which must be contextually given in the discourse situation.

A possible DRS for (48) is (48’) below, where we record the fact that the event of writing a letter is included in an interval $t$ which precedes a time $t_0$, which itself is prior to the utterance time. Presumably, the anaphoric evaluation time $t_0$ (cf. subscript notation) has a suitable antecedent in the input context.

(48’) $[e, t, x, y | \text{Volodja}(x), \text{letter}(y), \text{write}(e), \text{Ag}(e, x), \text{Th}(e, y)$,

$$t = \text{day-before}(t_0), e \subseteq \tilde{t} \left[ t_0 \mid t_0 \prec s^* \right]$$

While both $t$ and $t_0$ represent times (intervals), their roles differ considerably. It is important in the compositional process to be aware of the different roles played by assertion times and evaluation times. This is necessary in order to arrive at the correct final representation. Furthermore, given that we have access to the derivational history of some discourse, we can always trace back the origins of any temporal parameter.

2.3 A Closer Look at Ipf

2.3.1 Two Sources of Telicity

In this work, we treat Ipf as representing one gram. Considering the morphology of Ipf, this needs some justification, since imperfective verbs do not form a single, uniform class. There is notably a clear-cut morpho-syntactic distinction between simplex verbs and derived secondary imperfectives.

Our claim is that for trivial aspectual pairs, simplex verbs and secondary imperfectives behave similarly in the sense that the VPs in question can be

\footnote{The two reference time parameters ‘assertion time’ and ‘evaluation time’ carry numerous names in the literature. In DRT, they frequently appear as the ‘location time’ and the ‘perspective time’, respectively.}

\footnote{We use the ‘distinguished variable’ $t_0$ (von Stechow 1995) to denote the local evaluation time, cf. chapter 5.3.}

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shown to be *telic*. The source of telicity is different for the two cases, though. For secondary imperfectives it can be argued that telicity follows from the telic perfective verb (cf. the prefix) being input to Ipf (1). In the case of simplex verbs, telicity is solely derived from a compositional aspectuality, e.g. (Dowty 1986) and (Eckardt 2002), that (a)telicity shows up at different levels. For instance, most simplex verbs (V) are inherently atelic, but different parts of the sentence (especially direct objects) can make the event description come out telic at the VP-level.

Whether the aspectually loaded VPs ‘proigrjvat’* matč – to lose a match’ and ‘citat’* knigu – to read a book’ really are telic is much debated in the literature. Some arguments for the telicity view were presented in chapter 1. We will have more to say about this important issue in chapter 3, and also in the present section. One major reason for treating these VPs as telic is that we do not want to say that factual Ipf is responsible for ‘telicisation’ of an atelic VP. To the extent that factual Ipf can be seen as something like an independent ‘operator’, it behaves more like the *identity function*, taking a telic VP as input and giving a telic VP as output. This corresponds to the function of ‘simple denotation’ in the terminology of (Forsyth 1970).

Still, at least two (related) factors make it difficult to be conclusive on this matter. First, we have to take a stand on the relationship between semantic (a)telicity and morphological (im)perfectivity. Our point of view is influenced by our interest in factual Ipf – which arguably is associated with telicity, and thereby blurs the ‘atelicity ⇔ imperfectivity’-correlation. But in that case, we face the so-called ‘problem of indirect access’ (Zucchi 1999), which has recently also been addressed by Kratzer in a different setting:

15 There are also other, independent arguments against this correlation. To mention one: A certain number of imperfective VPs in Russian lack a processual reading altogether, on purely lexical grounds, and are necessarily telic. These predicates cannot possibly be *atelicised* in the sense of (Bredt 1985). The standard examples are *priezjat’* – to come’ and ‘nachodit’ – to find’. Hence, we have the following entailment from Ipf to Pf, cf. Padučeva (1996, 35):

(1) K tebe kto-to *prichodiš*
   Someboby *came* to visit you.

(2) K tebe kto-to *prišelP* (v nekotoryj moment).
   Somebody *came* to visit you (at a certain time).
"As semanticists, we have to find a way to unveil the meaning of bare verb stems. Only then do we have a chance to gauge the semantic contribution of verbal inflection." (Kratzer to appear)

The question is as follows: What are the properties of an aspectless VP in Russian? Zaocchi, assuming a tight correlation between (a)telicity and (im)perfectivity in Slavic, argues that this issue does not arise for Russian, unlike English, since Russian verbs always carry viewpoint aspect. In the theory presented here, we still have to decide whether 'citát' knigu' - that is the 'aspectless' VP being input to Ipf - is telic or atelic. Our claim is that it must be telic since it can combine not only with a zero-operator 'Ipfi', but also with 'pro-' to form a perfective verb. The VP 'citát' knigu' therefore allows for the formation of a trivial aspectual pair, cf. chapter 1.4.1. We find support for this position in (Paslawska and von Stechow 2003, 333), where it is argued that the (aspectless) root of transitive verbs "ultimately always has a telic interpretation in the sense that the entire object is affected". For details on compositional aspectuality, notably the interaction of verbs and nominal arguments, we must refer to the works of Krifka, Verkuyl, and others, such as (White 1994). Unfortunately, there are few in-depth studies of this important issue w.r.t. Russian, although some independent syntactic evidence for our view on compositional telicity in Russian is given in (Schoorlemmer 1997).

2.3.2 Factual Ipf and Imperfective Morphology in Light of (Klein 1995)

It is sometimes claimed that the functional domains of the two forms of the Russian imperfective (simplex verbs and secondary imperfectives) are different. Based on the historical origins of secondary imperfectivisation, the meaning of iterativity is linked to secondary imperfectives, while simplex verbs function in a broader set of aspectual contexts with the processual reading being most prominent. However, the experiments conducted in (Holden and Lozinska 1995) do not attest these form-function correlations in contemporary Russian. The survey concludes, interestingly, that among the secondary imperfectives, as a class, there is no significant preference for the iterative reading over the processual. And, furthermore, in the case of 'aspectual triplets', simplex verbs are often preferred to secondary imperfectives in an iterative context (Holden and Lozinska 1995, 157). Hence, there is no apparent reason for distinguishing between the functional domain of Ipf in simplex verbs and secondary imperfectives.

Does this hold for factual Ipf as well? In fact, there have been suggestions in the literature that factual Ipf should be linked to a particular subset of imperfective morphology. Moreover, quite contradictory claims have been made.

Klein (1995) presents a systematic semantic account of Russian aspect, closely respecting verbal morphology. Simplex verbs are referred to as 1-state

\[\text{Note in this respect that the intransitive 'citáť' is not paired with 'procitáť', since the latter requires an internal argument. The two members of a trivial aspectual pair must have identical argument structure ('valentnost'), cf. (Seljakin 1997, 212).}\]"
verbs, characterised by the subinterval property (cf. Vendlerian activities). These verbs are always imperfective. On the other hand, prefixed perfectives and secondary imperfectives are so-called 2-state verbs, where the two states in question are labelled ‘source state’ and ‘target state’. The make-up of 2-state verbs is reminiscent of the ‘Event nucleus’ from chapter 1, inasmuch as the ‘source state’ corresponds to the ‘preparatory process’, and the ‘target state’ represents the ‘consequent state’.  

For 1-state verbs, Klein proposes that the semantic contribution of Ipf amounts to a general relation of overlap between the event time and assertion time: \( e \cap t \). The overlap relation merely requires that \( e \) and \( t \) have some subinterval in common. This is compatible with simplex verbs having a factual Ipf interpretation, that is, a ‘complete event’ configuration \( e \subseteq t \) (Klein 1995, 693).

On the other hand, perfective 2-state verbs impose the condition that the assertion time \( t \) overlaps with both the source state and target state of \( e \), i.e. \( t \) extends over the ‘whole Event Nucleus’. The contribution of Ipf in derived imperfectives is to remove focus from the target state of a 2-state verb to the source state. In other words, “[a]dding an imperfective suffix to a 2-state verb marks its source state as [a] distinguished state for aspect marking” (Klein 1995, 685). According to (Klein 1995, 689), Ipf in this case imposes the condition that the assertion time \( t \) overlaps the source state, but not the target state. Klein’s theory thus achieves a nice unified picture of the semantics of imperfective morphology (‘overlap’), but it obviously does not provide a semantic account for the complete event reading of factual Ipf with secondary imperfectives.

Klein’s article is sparse on the role accorded to factual Ipf in his theory. In the case of secondary imperfectives, the requirement that the assertion time must not overlap the target state seems to be too strong. But this, of course, depends on our understanding of the crucial notions of ‘assertion time’ and ‘target state’. Consider the following standard example:

(49) Vy kogda-nibud’ vyigryval’ den’gi na turnirach? (Internet)

**Have** you ever **won** money in tournaments?

The utterance refers to complete events of ‘winning money’. In the theory of tense to be outlined in chapter 5, a typical factual Ipf like (49) will have the ‘whole past of the evaluation time’ as its assertion time, and a complete winning event is properly included in this big interval. In (Klein 1995), the target state apparently refers to the (whole) interval following the culmination of a complete event, but then we would have to say that the assertion time overlaps Klein’s target state in this case.

This is not compatible with Klein’s analysis of secondary imperfectives, saying that “[n]o assertion is made about whether the target state is reached or not, since the target state does not overlap with the assertion time” (Klein 1995, 692). Presumably, Klein’s use of the notion of assertion time and/or his view on the tense-aspect architecture differs here from the present approach.

\(^{17}\)We will use the notion of ‘target state’ in a more narrow sense in subsequent chapters.
In the informal discussion, Klein acknowledges that it is a common *implicature* that the target state is reached with secondary imperfectives (Klein 1995, 692). This suggests an analysis of factual Ipfs similar to a proposal made by Durst-Andersen. Durst-Andersen’s theory of Russian aspect also contains two states (‘P’ and ‘Q’) in the decomposition of secondary imperfectives.\(^\text{18}\) It is argued that the contribution of Ipfs is to assert that the source state ‘P’ holds, while no statement is made about the target state ‘Q’ (Durst-Andersen 1992, 156). In other words, a factual reading is not semantically encoded and may arise only as a pragmatic implicature.

If we make Klein’s theory compatible with this view, we end up with a different analysis of factual Ipfs for secondary imperfectives and simplex verbs. Only for the latter case is the availability of factual Ipfs captured by the semantics (the overlap relation). Does this point to a different distribution of factual Ipfs with simplex verbs and secondary imperfectives? We do find some support for this idea in for instance (Comrie 1976, 118) – who refers to the work of Rassudova – and (Fielder 1990). The latter writes:

“It is a fact of Russian that there is a marked tendency to use the imperfective as *konstatacija fakta dejstvija* more often when the aspectual pair consists of a simplex imperfective and a prefixed perfective”. (Fielder 1990, 264)

This “fact of Russian”, viz. the prominence of factual Ipfs with simplex verbs, has not been proven, though. In fact, Brecht (1985, 28) suggests the opposite picture, remarking that factual Ipfs typically occur with secondary imperfectives (!). Brecht’s theory can ‘explain’ this alleged correlation since secondary imperfectives encode a telicity effect through their prefix and derivational history. Alas, Brecht’s generalisation is no more convincing, as we can easily find simplex verbs with a factual Ipfs reading. It suffices to refer to Klein’s theory, and the quote above from Fielder.

Neither (Klein 1995) nor (Brecht 1985) are studies of factual Ipfs as such, and they do not pretend to solve the puzzles presented by this reading. Indeed, the brief survey above shows that is difficult to find a correspondence between form (imperfective morphology) and meaning (factual Ipfs). We believe that morphology is *not* the key element to an understanding of factual Ipfs.\(^\text{19}\) We conclude therefore that the aspectual system of Russian displays two functionally equivalent sources of telicity with imperfective verbs, and both show up in factual Ipfs.

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\(^{18}\) True, these states represent ‘mental pictures’ and do not have a temporal interpretation.

\(^{19}\) A few ‘exceptions’ are represented by some cases of ‘lexical semantics’. For instance, in aspectual ‘triplets’, it seems that secondary imperfectives occurring in VPs like ‘pročístval’ knigu do konca – read the book to the end’ are preferred over ‘čital’ knigu do konca – read the book to the end’ in contexts of factual Ipfs, cf. (Maslov 1981, 105) and (Paduševa 1998, 38).
2.3.3 Adjusting the Course: Ipfs as General Overlap

While we do not distinguish semantically between simplex verbs and secondary imperfectives, we retain Klein’s suggestion that Ipfs in Russian introduces an overlap relation between the event time e and the time t focused by the speaker. This relation is compatible with both the processual and factual readings (and also with the habitual-iterative).

The overlap relation $e \bigcap t$ entails that the event time and assertion time have a common subinterval, i.e. ‘interval-of-$e$’ $\cap$ ‘interval-of-$t$’ $\neq \emptyset$. A complete specification of the kind of event/interval-structure assumed here can be found for instance in (Kamp et al. to appear, 109f.). The basic relations are $\prec$ (precedence) and $\bigcap$ (overlap), which obey certain intuitively acceptable axioms. For instance, $\prec$ is transitive (a partial order), while $\bigcap$ is not. We require the overlap relation to be totally reflexive, symmetrical and non-transitive. In addition, we assume a meredology of events and times in the style of (Krifka 1992). The temporal inclusion relations, i.e. $\subseteq, \sqsubseteq, \supseteq, \sqsupseteq$, can be defined from the primitive temporal relations, given a part-structure ($\subseteq$) on events and times.

Factual Ipfs as such can be rendered by the more specific inclusion relation $e \subseteq t$, which is identical to the temporal relation we accord to Pf. The overlap relation is, in a sense, the common denominator for factual Ipfs $- e \subseteq t$ and the processual reading $- t \subseteq e$. In chapter 5, we discuss how the more specific interpretations $e \subseteq t$ and $t \subseteq e$ are triggered by the context, but we will from now on stick to the following revised translation of Ipfs:

- $\text{Ipfs} \Rightarrow \lambda PM[e \mid P(e), t \cap e]$

In the semantics for the imperfective operator, we abstract away from any possible differences between simplex verbs and secondary imperfectives. If we want to present a compositional picture of Russian viewpoint operators, for instance in the style of (Zucchi 1999), we have to make some adjustments.

The main challenge is represented by the secondary imperfectives. Consider the VP ‘prochityvat’ $\text{knigu} - \text{to read (through) a book}'. This expression is obviously closely connected to ‘prochitat’ $\text{p}$. And it is natural to assume that ‘-yva’ is an operator taking the perfective ‘prochitat’ $\text{p} \text{knigu’} as input. However, in section 2.2.1, we established that the semantic type of Ipfs is $\langle sc \rangle, \langle ic \rangle$, i.e. ‘-yva’ takes a set of events as input. Alas, ‘prochitat’ $\text{p} \text{knigu’} denotes a set of times, not events. This means that we have to type-shift ‘-yva’ such that it gets the semantic type $\langle ic \rangle, \langle ic \rangle$. But how does ‘-yva’ succeed in cancelling the semantic contribution of Pf? One possibility is the following:

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\[ \text{We could have posited a difference between factual Ipfs and Pf by representing the former with the stronger relation of proper inclusion: } e \subseteq t. \text{ This relation is perhaps too restrictive for Pf in general, since Pf may be compatible with the limited case where the event time fills the whole assertion time interval: } e = t. \text{ This is presumably the case when both the VP and the temporal adverbial are ‘punctual’. However, ‘proper inclusion’ probably holds only for existential Ipfs and not for factual Ipfs in general. The point is that presuppositional Ipfs can be anaphoric to events denoted by perfective verbs, and we therefore retain the slightly weaker } e \subseteq t \text{ for both factual Ipfs and Pf.} \]
1. pročítat\textsuperscript{P} knihu: λt[e | read-a-book(e), e ⊆ t]
2. -yva\textlangle<ic>,<ic>\textrangle \Rightarrow \lambda Qλt₁[t₂ | Q(t₂), t₁ ∩ t₂]
3. pročítat\textsuperscript{P} knihu [1 + 2]: λt₁[t₂, e | read-a-book(e), e ⊆ t₂, t₁ ∩ t₂]

We can - and must - think of \(t₂\) as the ‘temporal trace of \(e\),’ such that the condition \(e ⊆ t₂\) reduces to \(e = t₂\). The ‘old’ condition associated with ‘pro-’ accordingly becomes redundant when ‘-yva’ enters the derivation.

The difference between imperfective simplex verbs and secondary imperfectives is then manifested in their semantic types, \textlangle<sc>,<ic>\textrangle and \textlangle<ic>,<ic>\textrangle, respectively. This is not an important difference, though, as times and events are intimately related, and it is conceivable to treat events as times, cf. (Kratzer 1998). Furthermore, for our understanding of factual Ipf, this issue is of secondary importance as long as we end up with an overlap relation in both cases. Still, it may be that we should ultimately abandon compositionality at this fine-grained level. In this respect, Paslawska and von Stochow (1999, 51) claim that morphological aspect differs from semantic aspect, and that secondary imperfectivity is Russian is a purely morphological phenomenon. In the following we gloss over any possible differences between simplex verbs and secondary imperfectives.

Alas, even the relation \(e \circ t\) is not quite sufficient to capture all facets of Ipf. For the \textit{progressive} (a subset of the processual reading) conditions like \(e \circ t\) and \(t ⊆ e\) run afoot of the notorious \textit{imperfective paradox}. The problem has been at the heart of theoretical studies in aspect for the last 25 years, but we are not aware of any treatments of this phenomenon in Russian.

For the purpose of illustration, let us return to (47), repeated below as (50):

(50) Kogda Anja vosla\textsuperscript{P} v komnatu, Vanja \textit{písal} pis’mo.

When Anja entered the room, Vanja was writing a letter.

Due to the imperfective aspect in (50), no assertion is made about whether the event of writing the letter actually culminated. The described event segment needs not evolve into a complete event of the kind referred to by the VP. We are not entitled to infer that the event has culminated, since the focus of the speaker, encoded through the assertion time (≈ the ‘kogda-clause’), is only on some part of the event.

In that case, the event occurring in our world is not actually an event of Vanja’s writing a letter. This is a problem for a ‘naïve’ representation in the meta-language from which it follows that such an event \textit{exists}. The fact that the predicate in question can be truthfully used in the imperfective adds a \textit{modal} component to the processual reading. Simplifying slightly, we can say that Ipf can be used in (50) iff the activity undertaken by Vanja when Anja enters the room is such that it would normally result in an event of writing a letter. It may accidentally not turn out to be a writing of a letter in our world \(w₀\), but in all worlds \(w₁\), which are similar to our world \(w₀\) in all respects except for the writing event not being interrupted in \(w₁\), an event of the appropriate type

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will exist. This is a succinct version of some popular strategies for resolving the paradox, cf. (Dowty 1979) and (Landman 1992), which are key references for the progressive in English.

For simplicity, we can reduce the issue of ‘normality’ and modality to a similarity relation ‘≈’ between worlds, which is to be understood in the sense above (wₐ is a distinguished variable referring to ‘our world’, i.e. the world of evaluation). We then get the following revised DRS for (50).²¹

(50') \[ w₁, e, t, x, y \mid \text{Vanja}(x), \text{letter}(y), \text{when-Anja-came-in}(t), \text{write}(e)(w₁), wₐ \approx w₁, \text{Ag}(e, x), \text{Th}(e, y), t \subseteq e, t \prec tₐ \]

To implement this modal element, one could replace the imperfective condition \( e \cap t \) with a disjunction \( t \subseteq e \lor e \subseteq t \). The modality could then be smuggled into the first disjunct (the processual reading). The disjunction is probably flexible enough, as several of the relations admitted by \( e \cap t \) can in practice be excluded as irrelevant. For instance, the relation depicted in figure 2.3 is hardly relevant for the Russian data given our understanding of the assertion time parameter.

Figure 2.3: Example of topological relation admitted by \( e \cap t \)

Hence, it may be that nothing is lost in reducing the overlap relation to the disjunction above. Still, we will do this differently in the present work. In chapter 5, the two disjuncts will appear in the interpretation of IpF as a kind of pragmatic strengthening triggered by the context.

Furthermore, this is primarily a study of factual IpF, and we therefore gloss over issues of modality and world parameters in the following. The progressive needs not worry us here, since no paradoxes (but only a few puzzles . . . ) arise with factual IpF.

### 2.4 A Closer Look at Pf

#### 2.4.1 Some Complications for Pf as \( e \subseteq t \)

Analysing Pf as establishing the relation \( e \subseteq t \) between the event time and the assertion time, amounts to saying that the event is ‘complete’. As convincingly demonstrated in Klein (1995), many of the insights behind the traditional informal characteristics of Pf, such as the feature [+Totality], are captured by this

²¹ Since ‘pisat’ - to write - is a creation verb, the theme argument (the letter) should also be ‘intensionalised’. If Vanja’s writing activity is interrupted, there may never be a letter from Vanja.
inclusion relation. And, at the same time, this modest formalisation is much more transparent than the previous feature analyses.

The analysis proposed here allows us also to distinguish between ‘outer’ and ‘inner’ aspect, since only the former involves the assertion time parameter, which thereby reflects the overt morphological manifestation of perfectivity in Russian. Telicity (inner aspect) remains a meta-semantic property of verbs and VPs, which does not appear explicitly as a DRS-condition.

One may still ask what the semantic relationship between Pf and telicity amounts to. Although Pf typically takes a telic VP as input, the strong hypothesis ‘Pf $\leftrightarrow$ telicity’, where Pf is defined in terms of telicity and vice versa, is problematic in both directions, cf. similar remarks in (Borik 2002). As we know by now, a telic predicate is not necessarily rendered by Pf due to factual Ipf. Whether perfective verbs are necessarily telic is also far from obvious due to the existence of procedural like the ‘pojective’ etc.\(^{22}\) We need not take a stand on this issue here, since procedural (mostly perfectiva tautum) are outside the realm of aspectual competition. If we want to capture the correlation between Pf and telicity in trivial aspectual pairs, we can say that Pf-operators like ‘pro\text{-}1\text{-}’ checks for telicity:\(^{23}\)

- $\text{pro}_1 \rightarrow \lambda P \forall t \forall e [P(e), e \subseteq t]$ if $P$ is telic, undefined otherwise.

Still, there are certain data, even involving telic trivial pairs, where our analysis of Pf may appear insufficient. We will now address an issue related to Pf which indirectly turns out to have some repercussions on our understanding of aspectual competition and ‘presuppositional Ipf’. The phenomenon can be illustrated with the following example:

(51) Ja dolgo ubeždal\(^{2}\) prepodavatel’icu, čto v étom net nikakogo anarchizma, naoborot. Ubeždal\(^{2}\), no ne ubedil\(^{2}\).

I tried for a long time to convince the teacher that this was not a manifestation of anarchism, on the contrary. I tried to convince her, but I didn’t succeed. (Forsyth 1970, 104) (literally: ‘I was convincing her, but I didn’t convince her’)

The behaviour of Pf under negation in examples like (51) is intriguing since one gets a possible interpretation where only the culmination of the event is negated. The inference to the preparatory process (cf. the Event Nucleus) is not necessarily cancelled under negation. This would not be problematic if Pf were somehow analysed as $[+\text{Culmination}]$, but it does not quite fit into our view of Pf in terms of $e \subseteq t$.

\(^{22}\)See (Paslawski and von Stechow 2003) and (Filip to appear) for two opposite views on this issue. The former authors, following some suggestions in (Eckardt 2002), argue that not only ‘pročitat’\(^{”}\), but also ‘počitat’\(^{”}\) has a telic interpretation. The pojective variant is then supposed to mean “read [something] for a contextually specified amount of time”. Their idea is that the implicit temporal argument is contextually bound from outside and therefore outscops the pojective operator, making the VP telic.

\(^{23}\)The subscript on ‘pro\text{-}1\text{-}’ leaves it open whether ‘pro\text{-}’ behaves differently outside trivial pairs.
This has led some researchers, such as (Paduĉeva 1996, 54), to informally suggest a presuppositional analysis, viz. that Pf \textit{presupposes} the preparatory process (activity phase) and \textit{asserts} the culmination.\footnote{The idea is quite old, see (Weber 1978) for an early (critical) discussion.} This is in line with the established diagnostic according to which presuppositions project through negation.

Since we will later propose a presuppositional account of presuppositional IpP (chapter 6), we find it necessary to present our views on Pf as well. We argue that Pf is not presuppositional in the sense above.

2.4.2 Representing Lexical Decomposition in DRT

To handle cases such as (51), some kind of \textit{decomposition} of telic predicates is called for. In this respect, we adopt the framework of (Kamp and Rossdeutscher 1994b) which combines, within the DRT-format, event semantics and lexical decomposition in the tradition of Generative Semantics.

Let us consider the case below:

(52) \textbf{Anja ne ubrala\textsuperscript{a} komnatu.}  
Anja didn’t tidy the room / Anja didn’t finish tidying the room.

The VP ‘ubrat’\textsuperscript{b} komnatu – to tidy the room’, a typical representative of accomplishment predicates, can be analysed as a \textit{causative}. This means that some activity (e.g. ‘washing’) undertaken by the Agent \textit{causes} the Theme to become tidied up. We represent this underlying structure with the primitive predicates DO, CAUSE and BECOME, as in (Dowty 1979). The decomposition of the ‘aspectless’ VP being input to Pf can then be represented as follows (ignoring for perspicuity the semantic contribution of the nominal arguments):

- ‘Anja-ubr-komnatu’:
  \[ \lambda e[e'_r, e''_r] \text{room-BECOME-clean}(e'_r), \text{CAUSE}(e'_r, e''_r), \text{Anja-DO-tidying}(e''_r), e = e'_r + e''_r] \]

A DRS containing lexical decomposition of this kind is called a \textit{schematic} DRS (Kamp and Rossdeutscher 1994b, 121). It is used to represent the \textit{conceptual structure} of the causative VP. Some discourse referents occurring in a schematic DRS are underlined to indicate their special status as being unrealised by lexical items. As such, they are dubbed \textit{implicit discourse referents}. Note that the ‘normal’ discourse referent \( e \) is the sum-event of two implicit discourse referents.

When Pf applies to this schematic DRS, we get the following result (by functional application):

- ‘Anja-ubrat\textsuperscript{b}-komnatu’:
  \[ \lambda t[e', e''_t] \text{room-BECOME-clean}(e'_r), \text{CAUSE}(e'_r, e''_r), \text{Anja-DO-tidying}(e''_t), e = e'_r + e''_t, e \subseteq t] \text{ (preliminary version)} \]
Now comes the important point: Because of a certain division of labour between Pf and Ip, we propose that Pf is drawn towards the culmination of the event such that it transforms the implicit discourse referent $e'_1$ into a normal discourse referent $e'$. We then get the revised DRS below, where $e''$ (associated with the preparatory process) remains implicit.

- ‘Anja-ubrat *-komnata’:

\[
\lambda t[e, e', e''_1|room-BECOME-clean(e'), CAUSE(e', e''_1),
\]

Anja—DO—tidying($e''_1$), $e = e' \oplus e''. e \subseteq t$ [revised version]

We assume that operators like negation have access only to the set of normal discourse referents, and that negation outscopes aspect. This means that the negation in (52) can attach either to the sum-event $e$ (no activity of tidying was undertaken by the Agent) or to $e'$ (the tidying was left unfinished).

### 2.4.3 Implicature vs. Presupposition

The decomposition above opens for a purely pragmatic explanation of the behaviour of Pf under negation. The key element is the division of labour between Pf and Ip. Assuming that the unmarked imperfective is the default choice of the speaker when the (total) existence of an event is negated, it is quite natural that Pf under negation is drawn towards the culmination of the event. But this is merely a pragmatic implicature, i.e. a case of pragmatic strengthening.

By a Greco maxim of quantity, the hearer will infer from the speaker’s marked choice of Pf, that he wants to communicate a more specific meaning. If it were possible to deny the existence of the complete event, it would have been more economic to simply use Ip. The hearer therefore infers that there was some attempt or activity on the part of the Agent which did not culminate, i.e. only the attainment of the culmination point is negated.

We believe this analysis is better motivated than a presuppositional account of the same data. The negation test in itself is not a sufficient argument for associating perfective accomplishments with a presupposition. If Pf were to trigger a presupposition, one would expect that the discourse participants would have to verify or accommodate this presupposition unless it were embedded under some special operator blocking projection. However, Pf in ordinary declaratives shows few if any signs of carrying such a presupposition. We therefore get a difference between (53) and (54), which cannot be explained by the presuppositional strategy:

(53) \textbf{Ja vyzval}² taksi. (Padučeva 1996, 56)
\begin{quote}
I ordered a taxi.
\end{quote}

(54) \textbf{Ja ne vyzval}² taksi. (Padučeva 1996, 55)
\begin{quote}
I didn’t get a taxi. (literally: ‘I didn’t order a taxi.’)
\end{quote}

In the former case, there is no reason to assume that the preparatory process of the event is presupposed. This suggests that the implicature we are
dealing with in cases like (34) should not be treated as a presupposition, but as a pragmatic (and unstable) phenomenon. We will therefore reserve the presuppositional account to ‘presuppositional IpF’. But that is another story.
Chapter 3

The Factual Imperfective. Facts, Diagnostics and Definitions

This chapter lays the ground for the analysis to be presented in chapters 5–7. We try to justify our conception of factual Ipf in an informal setting. We start by discussing terminological issues and motivate the choice of the label ‘factual Ipf’ (3.1). Next, in 3.2, we give a purely descriptive overview of the data with focus notably on the interaction of factual Ipf (in particular existential Ipf) with temporal adverbials.

In the last part of the chapter, we delimit the range of factual Ipf w.r.t. other imperfective usages. In 3.3, we argue that factual Ipf with telic predicates indeed refers to complete events, contrary to what is often claimed in the literature. Finally, in 3.4, we give a precise, but practically oriented definition of factual Ipf.

3.1 Why Factual Ipf?

The reader was introduced to the phenomenon of factual Ipf at several occasions in chapter 1, but without any justification of the puzzling label ‘factual Ipf’.

The English adjective ‘factual’ is supposed to reflect the ‘fact’ component in the commonly used Russian labels konstatacija fakta and obščefaktičeskoe značenie. The latter Russian term, as noted in Padučeva (1998), is not easily translated into other languages. We actually adopt Padučeva’s own translation from her English written article (Padučeva 1992), where she presents an analysis of the so-called ‘factual Ipf’ among other imperfective usages. Padučeva does not explicitly motivate her English rendering of the relevant Russian terminology, but we believe her choice is preferable in some respects to the existing alternatives found in the literature. In fact, ‘factual Ipf’ subsumes the essence
of both *konstatacija fakta* and *obsčefaktičeskoe značenie*, while at the same time avoiding some unfortunate connotations of the two traditional terms.

### 3.1.1 Stating vs. Generalising

The term *konstatacija fakta* (*dejstvija*) is often used in text books and is popular and well-known among Slavists. It has been adopted and translated into English in (Brecht 1985, 27) and (Smith 1997) as ‘Statement of Fact’, cf. also the use of the term ‘constative’ in (Forsyth 1970) and (Comrie 1976). According to Leinonen (1982, 183), the Slavic tradition contrasts the alleged ‘konstatirujuščaja funkcija’ of IpF with the ‘informacionnaja funkciya’ of Pf. However, the dichotomy ‘statement’ vs. ‘information’ is not intuitively easy to grasp and does not seem to be well established in linguistics. Furthermore, the ‘statement’ function seems to imply that the fact in question is overtly stated, i.e. *asserted* in linguistic terms, but then the term does not adequately cover presuppositional IpF.

In his major work on aspect in Bulgarian (1959), Maslov coined the term ‘obobščeno-faktičeskoe značenie’. This term, non-substantially modified to ‘obsčefaktičeskoe značenie’, has been adopted by many aspectologists working on Russian.\(^1\) The label is furthermore frequently used in the English-written literature on this subject, where it is known as ‘the Imperfective General-factual’ (Leinonen 1982), (Dickey 1995) and (Israeli 1996).

The motivation behind the use of the epithet ‘general-factual’ is twofold: First, it is opposed to the so-called ‘konkretno-faktičeskoe značenie’, i.e. the aorist usage of Pf. Accordingly, (55), which requires Pf, is not considered a ‘general fact’, but a ‘concrete fact’.

\[
\text{(55) Tolstoj *napisal* ‘Vojnu i mir’}
\]

\[
\text{Tolstoj *wrote* ‘War and Peace’.}
\]

Then, what does it mean to be a ‘general fact’? It seems to be tacitly assumed in the literature that a ‘general fact’ is temporally indefinite, which is arguably characteristic of existential IpF. However, again, presuppositional IpF is *not* temporally indefinite, and comes therefore closer to the ‘konkretno-faktičeskoe upotreblenie’, as noted also in (Mehlig 1997b, 180).

A second problem is that the adjective ‘general-factual’ has connotations to ‘genericity’ (which is related to habitual IpF), and we do not want to conflate these different imperfective readings at this level of classification. Hence, not only the term ‘statement of fact’, but also ‘general-factual’ is problematic. We therefore prefer the shorter version ‘factual IpF’, which still respects the essence of the traditional Slavic labels without being biased towards existential IpF. The term ‘factual IpF’ is vague enough to do justice to both existential and presuppositional IpF.

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\(^1\)For references, see (Swan 1977, 525), (Leinonen 1982, 182), (Israeli 1996, 8). Cf. also the questionnaires in (seminar MGU 1997), which reflect current use of the terminology.
3.1.2 Facts vs. Events

But how do we motivate the reference to facts, present in the above labels?

Padučeva, following Arutjunova 1988, notes that the fact-component may in some cases serve to demarcate the ‘complete event reading’ of Ipf from the processual reading, cf. the different usages of Ipf in the examples below:

(56) Ne pomnjuť kto, no točno pomnjuť, čto prosili.stop vyložit in DivX/MPEG-4 proigrivateli. (Internet)
    I don’t remember who, but I do remember that somebody asked me to give links to DivX/MPEG-4 players.

(57) Ja pomnjuť, kak moi roditeli rasskazyvali, mne pro svoj cuvstva, kogda proizosla$^{6}$ ataka na Perl-Charbor: šoch, strach, gnev. (Internet)
    I remember how my parents told me how they felt when the attack on Pearl Harbour took place: shock, fear, anger.

The complement of the factive verb ‘pomniti’ – remember’ can be a proposition referring to either facts or events. The difference is actually encoded in the choice of conjunction. The factual conjunction ‘čto – that’ supports a factual reading of the embedded Ipf, while the eventive conjunction ‘kak – how’ results in a processual reading of the complement. The latter reading can be considered as ‘non-factive’ in the sense that the existence, or fact, of a complete event is not entailed (with telic predicates) due to the ‘imperfective paradox’.

However, beyond this possible correlation between imperfective readings and subcategorisation of factive verbs, there is little evidence that we need to invoke ‘facts’ in the analysis. The appropriateness of the label chosen here depends on what we understand facts to be. Padučeva (1996, 36) writes that “fakt – čto to, čto imeet mesto” (“A fact is something which takes place”), thereby suggesting a link to existential quantification over some entity. However, this does not answer the ontological question: What is the nature of the entity we claim (or presuppose) the existence of?

The philosophical literature on ‘facts’, e.g. Vendler (1967), does not seem to provide the answer we are looking for. Vendler, as noted by Padučeva (1996, 61), argues that facts are not anchored in time, they have no temporal extension, but simply represent some information which is known or unknown. This conception of facts is not compatible with aspectologists’ use of the adjective ‘factual’, cf. for instance Forsyth’s characterisation of factual Ipf as “a report or declaration that the action did occur” (Forsyth 1970, 82). Indeed, the temporal contours of the event are typically left unspecified on a factual reading, but this is different from saying that Ipf refers to situations which have no temporal extension. Forsyth’s ‘action’ is clearly not the same as Vendler’s ‘atemporal fact’.

In fact, when Maslov distinguishes between general-factual Ipf and the concrete-factual function of Pf, his reference to ‘facts’ should not be understood literally. As pointed out by Lindstedt (1985, 217), the adjective ‘factual’ in Maslov’s sense could be paraphrased as ‘reference to an event’ – the idea be-
ing that an event can be referred to either concretely or in a generalised manner, with Pf or Ipf, respectively.

Thus, the notion we are after is not facts per se, but events. Indeed, as argued in the previous chapter, aspecual operators in general, and factual Ipf in particular, serve to existentially close the verb’s event argument. Hence, ‘factual Ipf’ is to be understood along the lines of ‘realisation of the eventive argument of the verbal predicate’.²

### 3.2 Diagnostics for Factual Ipf

Which data should be classified as factual Ipf? One would think that aspecualists are bound to deal with more or less the same data. Still, on closer inspection of the literature, it turns out that the empirical range of factual Ipf is far from being well-established or universally agreed upon, except for certain core examples.³ This indicates that the nature of the imperfective, and in particular factual Ipf, is still not properly understood.

We focus in this section on some linguistically relevant factors which accompany and characterise the different kinds of factual Ipf. In this respect, there is a clear and important asymmetry between the two major subreadings of factual Ipf. While it can be shown that existential Ipf (and the bidirectional subvariant) interacts with a whole range of different adverbials and linguistic cue phrases, presuppositional Ipf is merely characterised by absence of intonational focus on the verb, and, perhaps, word order. The fact that there are few linguistics diagnostics which can inform us on the nature of this reading is an important observation in itself; and it will be further substantiated in the analysis of presuppositional Ipf in chapter 6. The below observations and diagnostics therefore apply mainly to existential Ipf.

In principle, we are interested in finding correspondences on the following form:

- Given the presence of \( z \), an occurrence of an imperfective telic predicate in past tense can (only) have a factual/existential/presuppositional reading’.

First, the stronger version of this generalisation – containing only – is possibly limited to the presence of ‘kogla-nibud’ – ever’. The case of ‘kogla-nibud’ seems to be a reliable test for retrieving factual Ipf, cf. the data provided below. In search for candidates for the value of \( z \) which unambiguously would rule out a ‘non-factual’ reading of Ipf, we consider also intonational focus on the verb. In both cases, we are dealing with existential Ipf.

²Note that in the semantic representation of natural language (as DRSs or in the format of predicate logic), it is in general unnecessary to explicitly represent Vendlerian facts in the sense of atemporal (un)known information. The fact-component is part of the illocutionary force of all declarative sentences. In a truth-conditional semantics, declaratives are treated as reporting on true ‘facts’ of some world. In other words, ‘It is a fact that there is an event \( e \ldots \)’ can, in the semantic meta-language, simply be shortened to ‘there is an event \( e \ldots \)’.

³There is also surprisingly little discussion of linguistic diagnostics such as adverbial tests, and ‘negative data’ concerning the unacceptability of factual Ipf in various environments.
Of course, we encounter various candidates for the value of \( x \) in the weaker version of the generalisation, that is linguistic cue phrases which *license* a factual (existential) reading.

The inverse of the above generalisation is also of interest, although the findings are trivial:

- An existential (factual) reading of Ipf *always* cooccurs with \( x \).

The value of \( x \) can here only be past tense and telic VPs, but these two factors will be part of the very definition of factual Ipf given in section 3.4.1. Absence of intonational focus on the verb does not rule out an existential reading, hence there is no one-to-one correspondence between intonational patterns and the existential reading. And it is furthermore obvious that the presence of the other candidate – “kogda-nibud” – is not necessary for licensing an existential reading.

We conclude from this that we cannot define factual Ipf merely in terms of syntactic/lexical/intonational environments. A definition must be semantico-pragmatic in nature.

### 3.2.1 A Note on Intonational Focus

We make use in this work of a purely pretheoretical notion of *intonational focus*, which here is marked with the subscript \( f \) on the focussed item.\(^4\) The phenomenon represents an important diagnostic in two ways.

First, as noted in chapter 1, intonational focus on the verb typically excludes a presuppositional reading. We refer to chapter 6 for illustrations and some possible counter-examples.

The second point to make is that intonational focus on the verb appears to rule out also a processual reading, and thereby demarcates existential Ipf from the *Hauptbedeutung* of Ipf:

\[(58)\quad \text{Ja} \; [\text{smotrela}^f] \; \text{etot glupoj fil'm.} \quad \text{(Glovinskaja 1982, 141)}
\]

*I have seen* that stupid movie.

This sentence can only have an existential interpretation, according to Glovinskaja (1982). In a similar vein, (59) below is ungrammatical since focus on the verb conflicts with the adverbial clause which in turn is only compatible with a processual interpretation of the matrix verb:

\[(59)\quad \#\text{Kogda ty povorili, ja} \; [\text{otkryval}^f] \; \text{oko}. \quad \text{(Pudueva 1996, 37)}
\]

*When you phoned me, I was opening* the window.

Note that this test can only be used in one direction – to rule out processual Ipf and, perhaps, positively identify existential Ipf. The *absence* of intonational focus on the verb is compatible with existential Ipf and thus does *not* impose a processual reading. In other words, access to the verb form alone, even in spoken

\(^4\) See (Kadmon 2001) for a discussion of prosody and intonation relative to the semantics-pragmatics interface.
discourse, is not sufficient to choose between different readings. If that were the case, it would indeed make sense to talk about a form-function isomorphism (Ipf \_ Reading1, Ipf \_ Reading2 etc.). Alas, intonational focus is not a decisive disambiguating factor for Ipf in Russian.

Let us now move to the interaction of factual Ipf and temporal adverbials, which constitute the primary diagnostics for a temporal category such as aspect.

### 3.2.2 Existential Ipf and Temporal Adverbials

Temporal adverbials are particularly important for our analysis of aspect since they determine, in combination with tense, the value of the assertion time parameter (cf. chapter 2.2.). On the other hand, temporal adverbials do not easily denote the evaluation time, at least in the case of factual Ipf (cf. also chapter 5). For instance, explicit adverbials referring to the utterance time are not acceptable:

(60) Vanja \{ # teper’ # sejčas \} probovalš kitajskju vodku.

Vanja has now tried Chinese vodka.

#### Discourse Reminders

The evaluation time is typically contextually given, or may be invoked by certain discourse reminders, revealing the current temporal perspective of the speaker:

(61) Načalo vsej ětoj istorii nado otnestiš k toj zime s sorok sed’mogo na sorok vos’moj, kogla ja toł’ko čto zakončilš svoju knigu, – o nej, esli pomniteš, ja uže upominalš. (Uppsala Corpus)

The beginning of this whole story is related to the winter of 47-48, when I had just finished my book, – if you remember, I mentioned the book to you earlier.

(62) Ja ved’ vseh preduprěždši, čto oktjabr’ v Piteré – čto cholođ i sl-jakot’. (Kasparov Chess 2001)

Well, I warned you all that October in St. Petersburg is cold and slushy.

(63) Privet, Serega. Ty znæš š, ja tol’ko čto čitalš vašu s Vovanom polemiku. (Internet)

Hi, Serjoga. You know, I just read your discussion with Vovan.

In all the cases above, the evaluation time equals the utterance time, cf. the present tense forms of ‘pomnite – remember (2.p)’ and ‘znæš – know (2.p)’. Dickey notes that factual (existential) Ipf is often accompanied by such discourse reminders, and relates this to the temporal indefiniteness conveyed by Ipf (Dickey 2000, 99f.), cf. chapter 4. The speaker’s use of discourse reminders can be considered a compensatory strategy in view of the indefiniteness of factual Ipf.
Frame Adverbials Modifying the Assertion Time

Temporal adverbials play a much more important role in modifying the assertion time than was the case above with the evaluation time. Factual Ipf frequently cooccurs with adverbials providing a big frame time for the event. In the right context, most frame adverbials can license an existential reading, as witnessed by some authentic examples below. The data also include bidirectional Ipf, cf. (69).

(64) V pozaproslovámu godu starik chytil rasskazyvali mne v Nižnej Zołotice o tom, kak promyšlal on na Murmane v tridcatých godach. (Uppsala Corpus)
The year before last in Nižnaja Zołotica, the old landlord told me how he did business on the Murman in the 1930-ies.

(65) Moguť soobsčit, čto dva goda nazad inžener Lesnych obraščalsja so svoim predloženiem v ministerstvo. (Uppsala Corpus)
I can inform you that two years ago the engineer Lesnychn made a request to the ministry with his proposal.

(66) Fedina že, kogda on umret, skoree vsego položat v Kolonnom zale [ ... ], gde – opjat’ že včera – vystupal chor Piatnickogo. (Uppsala Corpus)
When Fedin dies, a wake will probably be held in the Kolonnyi hall [ ... ], where – [ ... ] yesterday – the Piatnickii choir had a performance.

(67) Ja ničego, ničego ne skazala emu... – Ona imela v vidу dvornika, kotoryj snova segodnja, kotoryj uže raz za etu nedelju, predlagal eej svoi palačeskie uslugi. (Uppsala Corpus)
I didn’t say anything to him ... – She referred to the janitor who also today, she couldn’t remember how many times this week, offered her to take care of some dirty work.

(68) Ja čitali v detstve knigu ‘Čudesa Indii’. (Internet)
In my childhood I read the book ‘the Marvels of India’.

(69) Dva goda nazad El’čin priežšal na Frankfurtskuju jarmarku dlja učastiya v prezentacii [svoej knigi]. (Internet)
Two years ago Yeltsin came to the Frankfurt bookmarket to participate in a presentation of [his book].

Temporally Underspecified Adverbials

Existential Ipf typically combines with adverbs which do not locate the event at a specific, constrained interval. Factual Ipf prefers a big frame, provided for instance through vague relational adverbials like ‘ranše – earlier’:

(70) A voobsčte-to, kak tebya zovut? – Sanja ne rešiljaš skazat’ ‘vas’. No oni i vpravdu znakomy byli davno, i ‘ty’u Sani po-svojski proskakivalo i ranše. (Uppsala Corpus)
But what’s your name? — Sanja didn’t dare to use the ‘vy’-form. True, they had known each other for a long time, and Sanja had used ‘ty’ in his own manner earlier as well.

Another temporally underspecified adverbial is ‘kogda-to — at some time/a long time ago/once’. The adverbials ‘odnášdy/odin raz — once’ are often used quasi-synonymously with ‘kogda-to’. Unlike ‘ran’še — earlier’ in the previous example, these adverbials are not relational, i.e. they do not relate to the evaluation time parameter (cf. chapter 5).

(71)  Ja tože kogda-to mal’čiškoj v Krasnemujü Armiju prosilsjà, v ěskadron, — vsjomnili Kuzovkin, — a ne vzjali.  (Uppsala Corpus)
     As a little boy, I also once requested to join the troops of the Red Army, — Kuzovkin recalled, — but they didn’t accept me.

(72)  V professionalach amerikanec odnášdy vyigryval pojas po versii WBO, no bylo ěto davno.  (Internet)
     In professional boxing an American once won the WBO-title, but that was a long time ago.

(73)  Ja videla ego gorazdo čašće, čem tebja.  On dažē odin raz obedal zdes’.  (Internet)
     I saw him much more often than you.  He even had dinner here once.

     Note also the bidirectional Ipf in the following example:

(74)  Odnášdy on uže otvykal ot narkotikov.  (Glovinskaja 2001, 242)
     He has stopped taking drugs once before.

Singularity markers

A recurrent theme in the literature is the allegedly close relationship between factual Ipf and iterative readings, cf. chapter 4.5.1. An important test which in our view demarcates existential Ipf from iterative readings, is represented by the possibility of inserting ‘odnášdy’ or ‘odin raz’ (both literally meaning ‘once’). As we saw above, these two adverbials come close to ‘kogda-to’, but in addition they have a quantificational reading, i.e. ‘once’ as opposed to ‘twice’. A similar quantificational meaning is also present with ‘chot’ raz – at least once’ and ‘tol’ko raz – only once’. In our view, the coexistence of existential Ipf with these adverbials shows that factual Ipf cannot be reduced to a subset of the habitual-iterative reading. Consider the examples below where the quantificational meaning is prominent.

(75)  Pervyj rejting v turnire byl u menja, no [. . . ] Saša Moiseenko uže odnášdy vyigryval etot turnir i dvaždy stanovilsjà vtorým, čto govori-lo o tom, čto zdes on igraet’ osobennno sil’no, i ego vpolne možno bylo otnestî k favoritam.  (Joeblack 2002)
I was topseeded, but [...] Saša Moiseenko had won this tournament once already, and twice he had finished second, which suggested that he always plays well here, and that he could perfectly well be considered one of the favourites.

V bor'be za [vlast’ v Ul’janovskoj oblasti] Sergej Kirienko stolknetsja² s soproтивlением [Nikity Michalkova]. Nabljudateli otmeчajut³, что до сих пор Kirienko “is odnatsya stalkivalsja”⁴ s Michalkovym na trope voirny odin на odin: V dekabre 1999 года pervyj vyigral⁵ u vtorogo predvybornye teledebaty. (Internet)

In the struggle for [power in the Uljanovskaja region] Sergei Kirienko will face the opposition [of Nikita Michalkov]. Observers note that Kirienko has so far only once been confronted with Michalkov in a duel on the battlefield: In December 1999 the former won a pre-election television debate against the latter.

(77) Ty chot’ raz proboval id sidet”i v etom kresle? (Internet)
Have you tried at least once to sit in this chair?

(78) Ty chot’ raz ubival id kogo-to? Ili streljal”? (Internet)
Have you at least once killed somebody? Or shot?

(79) A: Ty vot chot’ raz umiral”?
B: Da, vrode umiral”i ... (Internet – science fiction)
A: Have you died at least once?
B: Yeah, I have kind of died ...

(80) A ubit”p ee ne udalos”p, pravda ja tol’ko raz proboval”. (Internet)
I didn’t succeed in killing her. True, I tried only once.

‘uže – already’

Another frequent guest with factual Ipf is the intriguing relational adverbial ‘uže – already’. The semantics and pragmatics of ‘uže’ and its cousins cross-linguistically is a complicated and much discussed story. The Russian variant has various usages, as pointed out in (Padučeva 1996, 60).

The adverbial is sometimes interchangeable with its dual, that is ‘esče – still’. Compare the following two examples, where the meaning of the adverbial can be paraphrased as “an event e of type P occurred earlier, and now an event e₁, also of type P is about to occur”:

(81) Po suti, eto budet matc-revanš. Kak uže soobščalos”, v našej rubrike ChessWatch, oni sygraļut” v klassičeskie šachmaty, bystrie šachmaty i blic. (Kasparov Chess 2001)

It will be like a rematch. As was already reported in our column ChessWatch, they will play classical, rapid, and blitz chess.
(82) Tret’ij lider – komanda Pol’ši – okazalas² na verchu neskol’ko neozidanno, no ja, pomnitsja¹, ešče iz Batumi peredaval⁴, čto na Olimpiade poljaci budut imet’⁵ očen’ boesposobnuju sbornuju. (WCR 2002)

The third joint leader – Poland – came as a slight surprise. Though, I recall that already in Batumi I reported that the Poles would get a very competitive team.

In some contexts, ‘uže’ is merely related to the possibility of some event of the same type occurring again in the future (Pâdučeva 1996, 60). Consider (83) below, where it is stated that Kasparov once lost a match to the computer Deep Blue, and therefore one cannot exclude the possibility of a similar event happening again.


The Kasparov–Junior match ended in a draw. Even a loss of Kasparov would not have come as a surprise. Kasparov has already lost to Deep Blue, as the programmers achieved that goal already in the last century.

In the above examples, the meaning of ‘uže’ is reminiscent of ‘kogda-to – once’. This is the typical usage of ‘uže’ with factual Ipf, but it is not generally considered to be the main function of ‘uže’. The standard temporal usage of this adverbial can informally be summed up as follows: (i) the event occurred earlier than expected, and (ii) some effects of the event hold at the evaluation time. This usage of ‘uže’ typically requires Pf (cf. chapter 7.), but the example below with factual Ipf apparently comes close to this temporal function:

(84) Mne uže zvonili⁹ iz gospital’ja pro tebya, u menja s nimi telefon, – skazala¹ Zinaida, slovno ob’jasnaja², počemu nícего ne rassprasivat³ u Tani pro ee ranenje. (Uppšala Corpus)

They have already called me from the hospital and told me about you. We had a talk on the phone. Zinaida said, as if she tried to explain why she didn’t ask Tanja about her wound.

However, the effects of the phone-call holding at the evaluation time are not linguistically encoded in (84), but arise as a purely pragmatic implicature. Hence, this is still not a temporal usage of ‘uže’ in a narrow sense.

The kogda-nibud ’-test

When factual Ipf is associated with the aforementioned adverbials, we must be cautious. All the adverbials considered so far cooccur also with Pf. An analysis of aspectual competition and the temporal adverbials in question can hopefully provide some insight into this parallel usage. There is one particular construction, however, which is practically excluded with Pf, viz. questions containing the polarity sensitive item ‘kogda-nibud’ – ever:

72
(85) Ty kogda-nibud’ odevali mužskoe beł’e? (Internet)
Have you ever worn male underwear?

(86) A: Vopros budet takoj: primenjal’ li ty kogda-nibud’ narkotiki?
B: Konečno, primenjal’. (Internet)
A: The question is as follows: Have you ever taken drugs?
B: Of course, I’ve taken drugs.

(87) A ty kogda-nibud’ eli odno jablko na dvoich s ženščinoj? (Internet)
But have you ever eaten an apple together with a woman?

(88) Ty kogda-nibud’ zamečal’ ètu detal’? (Internet)
Have you ever noticed that detail?

(89) Ty kogda-nibud’ sobstvenno-ručno ubivali imperatora-molocha? (Internet)
Have you ever single-handedly killed a king-lizard?

(90) U vas kogda-nibud’ padali iz ruk na pol toľko čito kuplennyj víčester [. . . ]? (Internet)
Has a newly purchased Winchester ever dropped from your hands to the floor?

(91) Ty kogda-nibud’ ošibalsja na scene, naprimer, padali ili neverno pel’? (Internet)
Have you ever made a mistake on the scene, for instance fell or sung falsely?

(92) Tebya kogda-nibud’ vyigrali věstujú? (Internet)
Have you ever been beaten completely, without taking a single point?

(93) A: Kto-nibud’ kogda-nibud’ nachodil železnyj NLO?
B: A kto-nibud’ NLO voobšče nachodil’? (Internet)
A: Has anyone ever found an iron UFO?
B: Has anyone ever found any UFO at all?

Even when the culmination of the event is lexically marked, factual IpF is preferred over Pf in this environment:

(94) Ty kogda-nibud’ { pročítvali
# pročitalo, (?) cital’ } roman Prusta do konca?
Have you ever read a novel by Proust to the end?

Note also that our informants prefer secondary imperfectives over imperfective simplex verbs in presence of adverbials like ‘do konca – to the end’ etc. Some similar examples are given below, cf. also the authentic examples in (97) and (98).

(95) Vy kogda-nibud’ { s’edali
# s’eli, (?) eli } arbuz celikom?
Have you ever eaten a whole melon?
(96) Vy kogda-nibud’ { vyučivali\textsuperscript{i} # vyučili\textsuperscript{p}, (?) ucili\textsuperscript{i} } sto stranica za čas?

Have you ever memorised one hundred pages in an hour?

(97) Interesno, a Vy kogda-nibud’ vylečivali\textsuperscript{i} čeloveka polnost’ju? (Internet) Interesting, but have you ever cured a man completely?

(98) Vaši predki kogda-nibud’ šzigali\textsuperscript{i} ved’m ili načinali\textsuperscript{i} revoluciju iz-za ceny na čaj? (Internet)

Did your ancestors ever burn witches or start a revolution because of the price of tea?

These data cast doubt on generalisations such as Petruchina’s claim that secondary imperfectives in aspunctal triplets (žeč\textsuperscript{i} – sžeč\textsuperscript{p} – šzigat\textsuperscript{d}; lecit\textsuperscript{y} – vylecit\textsuperscript{p} – vylečivat\textsuperscript{y} etc.) are unlikely to have a factual reading (Petruchina 2000, 166).

The data above show that, in the right context, there are few if any lexical restrictions on existential Ipf. Even prototypical achievement predicates like ‘nachodil’ – to find’ occur in this environment with a factual reading, cf. example (93). This is one of the main reasons why we have not put much emphasis on discussing taxonomies of predicates (achievements, accomplishments etc.) in the style of (Vendler 1957), except that we insist on the importance of the [±Felicity] parameter.

Interestingly, even verbs which typically get a so-called conative reading (cf. section 3.4.2 below), appear to have a factual interpretation in ‘kogda-nibud’-constructions.

(99) Ty kogda-nibud’ ne plati\textsuperscript{f} v avtobusach? Ja da. A ty kogda-nibud’ ugovarival\textsuperscript{i} konduktoršu zaplatit\textsuperscript{p} za svoj bilet? Ja da. (Internet)

Have you ever not paid on the bus? I have. But have you ever persuaded the conductor to pay your ticket? I have.

(100) A voobšče kto-nibud’ kogda-nibud’ sdaval\textsuperscript{i} ekzamen eksternom i bez vzjakiz? (Internet)

In general, has anyone ever passed an exam as an external student without bribes?

The question is whether for instance ‘ugovarival\textsuperscript{i} – persuaded’ in (99) should be interpreted literally as ‘persuaded’ (factual Ipf) or ‘tried to persuade’ (conative). According to native speakers, ‘ugovarival\textsuperscript{f}’ is closely associated with conation, but in this particular example a resultative interpretation is plausible. The same holds for (100), where ‘sdaval\textsuperscript{f} – passed an exam’ is not (necessarily) coerced into the conative ‘enroll for an exam’, but retains the stronger factual interpretation.

According to our informants, if the speaker wants to convey the meaning of conation in these ‘kogda-nibud’-contexts’, this should be done explicitly, for instance by using lexical verbs like ‘pytat’\textsuperscript{sja} – to try’. Compare the factual interpretation in (101) with the incomplete ‘proving-event’ in (102):
(101) Ty *kogda-nibud’ dokazyval* važnuju teoremu?
     *Have you ever proven* an important theorem?
(102) Ty *kogda-nibud’ pytalsja’ dokazat* važnuju teoremu?
     *Have you ever tried to prove* an important theorem?

3.3 Why Factual Ipf Refers to Complete Events

In this section we prepare the terrain for a working definition of factual Ipf by having a closer look at the ‘conventional wisdom’ that factual Ipf with telic predicates involves reference to a complete event. We have assumed so far that from the occurrence of a telic predicate with a factual reading (unlike a processual reading), we can infer the existence of an event of the type denoted by the predicate.

This assumption is sometimes made explicit, for instance in the following quote from Padučeva: “rezultativnym značeniem NSV my nazyvaem, neskolkó uslovnó, takó, kotoroe vključaet v sebja značenie parnogo SV” (Padučeva 1996, 34) (“the ‘resultative meaning’ of Ipf is the term we use for the meaning of Ipf which subsumes the perfectionive partner’, our translation). This is to say that Ipf used with a factual reading entails Pf, or, equivalently, a complete event. So far so good. However, on closer inspection of the literature, it turns out that there are conflicting views (often undeliberately expressed by one and the same author) on this issue.

3.3.1 The Weak Reading Strategy

Although it appears to be a contradiction, some scholars who talk informally about the ‘resultative factual Ipf’, seem to hold the view that even an inter-

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5 There is apparently also some confusion as to the notion of complete event. Consider for instance the impressionistic approach in (Chaput 1990):

“There are many ways in which an event can be perceived as incomplete, depending on the semantic make-up of the predicate. In some cases it might be perceived as a failure to achieve a goal, in others the lack of the desired result, in others the apparent ‘annulment’ of the action.” (Chaput 1990, 293)

Chaput illustrates her point with examples like (1) and (2), where the speaker’s illocutionary attitude to the utterance is indicated in the English translation.

(1) Vy *čitali* stat’ju?
   *Did you read* the article? (You don’t seem to know its contents.) (Chaput 1990, 293)

(2) Ty *ubirali’ komnatu*?
   *Did you clean* the room? (It still looks dirty.) (Chaput 1990, 293)

The questions above are admittedly felicitous in a context of disbelief that the event took place. However, this has nothing to do with the ‘semantic make-up of the predicate’ or factual Ipf as such. It is simply one of the basic functions of yes/no-questions to cast doubt about the occurrence of some particular event, and this is totally independent of the semantic contribution of aspect.
rupted preparatory process (recall the ‘Event Nucleus’ in section 1.6.3) may eventually qualify as an event denoted by a telic predicate on its factual reading. This line of thought is present in statements like the following: “By using the imperfective instead of the perfective form in Statement-of-Fact [i.e. factual] constructions, the speaker may be stressing that the situation is not complete or he may just choose not to stress that the situation is complete” (Brecht 1985, 29, our italics); “S vyborom nesoversennogo vida [in factual Ipf contexts] ostastsja otkrytym, dostigla oboznacajmaja situacija polozennogo ej ingerentnago predela ili net” (Mehlig 1997b, 168).

These quotes are not compatible with Padučeva’s characterisation of factual Ipf as ‘resultative’. Nevertheless, many authors (including Padučeva) seem to adhere to both these views simultaneously. To make the discussion more precise, we propose to distinguish between what we call the ‘Weak Reading Hypothesis’ (factual Ipf as referring to possibly incomplete events) and the ‘Strong Reading Hypothesis’ (reference to complete events).

If the weaker hypothesis is correct, we can no longer maintain the intuition that ‘the resultative Ipf subsumes Pf’. The weak reading invalidates the entailment to a complete event, that is to the instantiation of an event of the type denoted by the predicate. In fact, the weak reading restores the famous imperfective paradox in a new setting.

There are two aspects of the weak reading strategy worth mentioning. One version of this strategy comprises a partitive analysis, while the other involves non-monotonic reasoning.

The partitive analysis can be illustrated with the paraphrase in (103’) of the factual reading of (103).

(103) Ty čital’ëtu knigu?

Have you read this book?

(103’) Byl li ti zanjet ce cteniem? cf. (Švedova 1984, 17)

Were you engaged in reading it?

This version of the weak reading amounts to introducing a covert partitive operator w.r.t. the object NP. The claim is that the meaning of ‘čital’ëtu knigu – to read a book’ “allows but does not require all of (the referent of) its internal argument to be read” (Piñón 2001, 410).

We are not aware of any formal implementations of this interpretation of Ipf, but the idea is very much in the spirit of the influential work of Krifka (1992). Ignoring issues of intensionality, we should presumably end up with something like the following representation of (104), according to the partitive analysis:

(104) Vanja čital’ ‘Tichij Don’.

Vanja has read ‘Quiet Don’.

Maria Todorova is currently working on similar ideas in an analysis of aspect in Bulgarian, couched in a Neo-davidsonian event semantics (p.c.).
(104') \( [e, y', y, x, t] y' \sqsubseteq y, \text{Quiet Don}(y), \text{Vanja}(x), \text{read}(e), Ag(e, x), \text{Th}(e, y'), e \cap t, t < ss \)

We thus have a reading event \( e \) with \( y' \) as its theme. Note that according to this analysis, the VP ‘citaj’ “Tichij Don” is atelic, since there are (proper) subevents of reading ‘Quiet Don’ which also would qualify as a reading of the book in question. The point is that the formula imposes no requirements on the ‘size’ of \( y' \), which may in fact be any subset of the book. A very nice corollary of this analysis is that it provides a unified account of IpF, i.e. a formalisation which is compatible with both the processual and factual readings. A complete event reading arises iff \( y' \sqsubseteq y \land \neg y' \sqsubseteq y \). One could then combine the partitive analysis with a pragmatic notion of non-monotonicity and consider the conditions \( y' \sqsubseteq y \land \neg y' \sqsubseteq y \) to be the default choice with a ‘big’ assertion time.

That factual IpF only triggers a non-monotonic inference to a complete event has been argued for by Zuber (1990) with regard to Polish data. Consider the following sentence, which is familiar from our discussion of factual IpF in Russian:

(105) Już \( \text{czytalem}^i \) tę książkę. (Zuber 1990, 510)

I’ve already \textbf{read} this book.

Zuber claims that even in the presence of an adverbial like ‘już – already’, the inference from IpF to Pf is only non-monotonic (czytalem\(^i \) > przeczytalem\(^p \)), i.e. plausible, but not logically valid. This position is reminiscent of the proposal made by (Durst-Andersen 1992), that the complete event reading is only a pragmatic implicature, cf. chapter 2.3.2.

3.3.2 The Case for a Strong Reading

Although the partitive analysis is theoretically appealing in some respects, it does not quite do justice to the data. It predicts that any reading event involving any part of ‘Quiet Don’, is also a reading of ‘Quiet Don’ as such. But if the Agent has only read chapter 1 of the novel, can this event in hindsight be referred to as an event of reading ‘Quiet Don’?

Non-monotonic reasoning tells us that in lack of evidence to the contrary, a factual IpF like (104) indeed implies a complete event of reading the whole novel. This strategy is very similar to the kind of analysis applied to the English progressive in (Asher 1992). Asher argues that the inference from the Progressive of accomplishment predicates to a complete event is reasonable in the absence of information to the contrary.

However, concerning the Slavic data, there is an important difference in the strength of the inferences which the hearer will draw on the basis of a factual vs. a processual reading:

(106) Na dniach ja \( \text{čitali} \) pis’mo o molodom duchobor [ . . . ] (Internet)

The other day I \textbf{read} a letter about a young Duchobor.
(107) Kogda ja vošel\(^P\) v komnətu, Tolja čital\(^l\) pis'mo.

When I entered the room, Tolja was reading the letter.

The utterance in (107) may trigger a default inference that Tolja has read the letter at the utterance time. However, this inference is not actually favoured by the processual reading as such, but is rather due to the nature of letters (they tend to be rather short). If we replace the letter with the voluminous novel ‘Quiet Don’ in the same setting, the inference is more reluctant to arise:

(108) Kogda ja vošel\(^P\) v komnətu, Tolja čital\(^l\) ‘Tichij Don’.

When I entered the room, Tolja was reading ‘Quiet Don’.

For instance, if the speaker utters (108) in a situation where he entered the room an hour ago, it is not plausible, due to the size of ‘Quiet Don’, that Tolja has finished the novel at the utterance time. Note also that (108) is a true and perfectly normal description of a situation where Tolja at the assertion time had only read a couple of pages of ‘Quiet Don’.

On the contrary, the inference to a complete reading event given a factual interpretation, i.e. in sentences with a big assertion time, is much stronger. The speaker would refrain from uttering (106) if he had only read the first few lines of the letter. Therefore, if non-monotonicity is the tool we are looking for, we need to be able to distinguish between weaker and stronger notions of common-sense entailments. The survey of non-monotonicity in (Thomason 1996) suggests that such finer-grained tools are not yet available for our purposes, so we leave this issue here.

What does the linguistic evidence tell us? Does it favour a weak reading of factual IpF or a strong, complete event, reading? A ‘conjunction-contradiction’ test at first seems to support the weak reading hypothesis.\(^7\)

(109) A: Ty ubiral\(^l\) kvartiru?
B: Ubiral\(^l\), no ne ubral\(^P\).
A: Have you tidied the flat?
B: (#) Yes, but I didn’t tidy it.

The Russian discourse is coherent, but the English translation is definitely odd. Still, the dialogue above does not provide convincing (not to say conclusive) evidence for the weak reading hypothesis. It is conceivable that the two occurrences of ‘ubiral\(^l\) – tidied’ in (109) are not accorded the same meaning by speaker A and speaker B. We can imagine the following alternative interpretation and translation, which suggest that (109) may still not be an argument in favour of the weak reading of factual IpF:

(109\(^\prime\)) A: Ty ubiral\(^l\)\(\text{actual-}_i\) kvartiru?
B: Ubiral\(^l\)\(\text{processual-}_i\), no ne ubral\(^P\).
A: Have you tidied the flat?
B: I was tidying it (at a certain time), but I didn’t tidy it.

\(^7\)Cf. a discussion of similar examples in (Hohanicki 1973, 179) and (Leinonen 1982, 186f.).
The idea is that B’s reply is only coherent with a small, definite assertion time. This means that the explicit denial of the complete event in the second conjunct requires that the first VP has a processual (progressive) interpretation. Hence, discourses like (109) do not tell us much about factual Ipfs as such.

In order to test the factual reading, we should look at the effects of the conjunction-contradiction diagnostic in contexts which exclude the possibility of processual readings in disguise. A natural candidate for disambiguation of Ipfs in our case is the adverbial ‘uže – already’. Indeed, the presence of this word makes the conjunction infelicitous:

(110)  # Anja uže ubrala’ kvartiru, no ne ubrala².
   # Anja has already tidied the flat, but she didn’t tidy it.

The adverbial ‘uže’ rules out the possibility of a narrow and definite assertion time characteristic of the progressive. Hence, in the setting of (110), we have a factual reading, and the explicit denial (‘ne ubrala²’) of the existence of the complete event referred to by the imperfective VP is incoherent. This still does not prove that factual Ipfs has a strong reading. Unfortunately, it is hard to say whether the incoherence in (110) is due to the possibly strong reading of factual Ipfs, or a completeness effect induced by ‘uže’, or the fact that these constructed examples are always slightly artificial.

This being said, an argument for adopting the ‘strong analysis’ of factual Ipfs is that this reading can be shown to differ pragmatically from ‘partitive’ atelic VPs in languages like Norwegian. The difference between the two constructions is illustrated below in a similar environment as in the previous examples:

(111) Jeg leste i ‘Krig og Fred’ \{ en gang for 5 år siden \}. Jeg leste bare noen sider.
   Ja \{ odnaždy p’tat’ let nazad \} čitali ‘Vojnu i mir’. (♯) Pročital to’ko neskóko stranic.

The Norwegian sentence contains the preposition ‘i – in’, which makes the VP atelic, hence allowing for only a part of the book being read. The second sentence in the Norwegian example is a natural follow-up of the first sentence. On the other hand, the Russian discourse sounds odd. This would be unexpected if factual Ipfs had a weak reading, similar to the Norwegian VP.

The strong reading hypothesis can explain why (factual) Ipfs in (111) is not a good candidate for a translation of the Norwegian discourse. When the complete event is explicitly disclaimed, as in (111), Russian speakers find it necessary to invoke various repair strategies, making use of semantic course corrections (Wulf 2000):

(112) Vooobšče, ja čitali ‘Vojnu i mir’.
   No [Chotja], \{ po pravde v dejstvitetnosti \} ja pročital to’ko neskóko stranic.
In principle, I’ve read ‘War and Peace’. But [Though], \{ to tell the truth \} actually I’ve only read a few pages.

Semantic course corrections are characteristic of spoken discourse. In (112), these elements are triggered by the fact that the speaker feels obliged to compensate for his ‘ sloppy’ use of factual Ipfs. If factual Ipfs turns out not to be ‘literally true’ in discourses like (112), a natural explanation is that it lacks a weak reading.

To sum up, we argue that factual Ipfs with telic predicates implies a complete event. We get a similar inferential pattern with factual Ipfs as, say, with the perfect in Germanic, the imperfective perfect in Bulgarian (Pancheva 2003) or the habitual-iterative reading of Ipfs in Russian. The common feature for these cases is the (typically) big assertion time. If the speaker’s choice of a telic predicate is a truthful/felicitous description of the situation, the event must be complete, given the nature of the assertion time. This echoes (Bohnemeyer and Swift to appear), where it is argued that event instantiation in case of telic predicates is universally interpreted as an instantiation of a complete event.

Therefore, when Comrie (1976, 46) and others argue that no implication as to the completion or non-completion of the chair can be drawn from ‘on delai’ stul – he made a chair’ (Comrie’s example), we cannot fully agree. The point is that in any actual discourse context, ‘on delai’ stul will give rise to one implication or the other. A small assertion time will give a processual, incomplete event reading, but if the sentence is uttered ‘out of the blue’ in a zero context, then all the past is available as the assertion time and we get a complete event reading.

When we pointed out in chapter 2 that the overlap relation triggered by Ipfs can be pragmatically strengthened to the disjunction \( e \subseteq t \lor t \subseteq e \), we excluded indirectly the possibility of a ‘weak reading’. The conditions \( e \subseteq t \land P(e) \) entail a complete event of type \( P \) (factual Ipfs). We thus either get a complete event or a processual reading, and there is no room for a weak reading of factual Ipfs in this scenario.

### 3.4 Defining and Delimiting Factual Ipfs

In this section we delve into the issue of which data fall under the label ‘factual Ipfs’, taking the previous discussion on complete events into account. We give a working definition of factual Ipfs, which complies with how this reading is perceived in the literature. The definition is practically oriented, and has few theoretical bearings on Russian aspect. This simply reflects the fact that any classification of imperfective readings must be contingent and subjective as long as we do not assume the existence of a whole range of covert imperfective operators.

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8 Everybody seems to agree that the ‘have-perfect’ construction entails a complete event of the type denoted by the predicate.
3.4.1 From a Negative to a Positive Working Definition

What should the definition look like? As pointed out by Israeli (1996, 8), many scholars overtly or tacitly adopt a ‘negative’ definition of factual Ipfs, where this reading is simply opposed to the two major imperfective meanings from a cross-linguistic point of view, viz. the processual and the iterative-habitual.

The negative working definition could be spelled out as follows:

- **Negative Working Definition of Factual Ipfs**
  
  An imperfective predicate \( P \) is an occurrence of *factual Ipfs* if and only if \( P \) does not have
  
  (i) a processual reading
  
  or
  
  (ii) an iterative-habitual reading
  
  We adhere to the view that factual Ipfs is not an instance of the processual or the habitual-iterative.\(^9\) On other hand, the *other* implication following from this definition, viz. that the absence of both a processual and habitual-iterative reading is sufficient to license a factual reading, is definitely an oversimplification. As we will see below, there are several other ‘non-factual’ usages of Ipfs apart from the processual and habitual-iterative. We propose instead the following positive working definition:

- **Positive Working Definition of Factual Ipfs**
  
  The VP \( P \) is an occurrence of *factual Ipfs* if and only if:
  
  (i) \( P \) contains a verb marked with past tense and imperfective morphology, and
  
  (ii) the proposition\(^10\) \( \phi \) containing \( P \) entails the existence in our world of a past event of type \( P \), and
  
  (iii) \( \phi \) does not entail the existence of more than one past event of type \( P \) (hence \( P \) is singular and telic, cf. (Kriška 1998)), and
  
  (iv) \( \phi \) is not embedded under negation.

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\(^9\)This position is shared by most scholars, although it is not as uncontroversial as one may think. We will see in chapter 4 that Glovinskaja rejects this picture by treating the habitual-iterative as a subcase of factual Ipfs. Yet another possibility is offered by Padučeva, who adopts the tripartition of Ipfs called for by the negative definition as a point of departure, but ultimately attempts to reconstruct factual Ipfs as subcases of both the processual and the habitual-iterative, cf. chapter 4.5.1.

\(^10\)For simplicity, we do not make formally explicit the ‘world-argument’ in the semantics. A ‘proposition’ is here therefore merely a ‘sentence’ of type \(<c>\), which can be input to, say, negation, a question operator or a ‘default assertion operator'.
The definition is quite explicit and detailed. Nevertheless, it conforms to the traditional understanding of factual Ipf, e.g. as expressed in the works of Maslov, Forsyth and others. The way we have formulated the positive working definition, we are able to exclude a whole range of imperfective usages which would otherwise qualify as factual Ipf according to the negative definition. Now, let us look at how the conditions (i) - (iv) in the positive definition improve on the negative definition in being more restrictive, in line with our pretheoretical understanding of factual Ipf. Let us review the restrictions (i) - (iv) one by one.

3.4.2 A Complete Event in Our World

We refer to chapter 5 for some discussion of the restriction to past tense in condition (i), which was absent in the negative definition. Since tense and aspect have separate morpho-syntactic projections, this is not a trivial point. Nevertheless, the restriction to past tense adopted in this work is shared by the vast majority of scholars in the field.

Condition (ii) in the positive definition serves to demarcate factual Ipf notably from the processual (progressive) reading. Due to the imperfective paradox, the progressive reading, crucially unlike factual Ipf, does not entail the existence of a complete event of the telic predicate in question. This was demonstrated earlier in the entailment relations discussed in chapter 1.6.

Let us now turn to some more peripheral Ipf readings which would qualify as factual Ipf according to the negative definition (unless they are considered subcases of the processual or habitual-iterative readings), but which are ruled out by the positive definition. In all cases, this is a welcome corollary of the latter definition.

**Durative Ipf**

Durative Ipf (Timberlake 1985a) is characterised by the presence of a durative adverbial measuring the temporal extension of the event, as in (113):  

(113)  Ja dolgo dopisyvali ‘Romantikov’, i v vosem’ časov posel’ v kafe.

I finished writing “The Romantics” for a long time, and then around eight went to the cafe. (Timberlake 1985b, 38)

Based on sentences like (113), Timberlake (1985b, 38) makes the surprising claim that “the narrative interval [assertion time] includes the event time in both the aorist perfective and the durative imperfective.” In other words, we get the configuration $E \subseteq R$ (Timberlake’s notation) for Pf, durative Ipf and factual Ipf. Referring to Timberlake, Padučeva (1996, 10) groups the durative together with factual Ipf, reflecting the idea that the two readings trigger the same aspectual configuration.  

11 Also Mehlig (1997b, 169) treats the durative on a par with factual Ipf, but he assumes that both these readings refer to possibly incomplete events. Hence, Mehlig is an adherent of the weak reading hypothesis of factual Ipf.
We do not agree with those who group durative and factual Ipfs together. Still, we argue that the quote above from Timberlake can be justified, although the argument is tricky. In our view, durative Ipfs can be demarcated from factual Ipfs, given our definition of factual Ipfs, in two different ways. The analysis of the data remains the same in both cases. However, depending on how we understand the notion ‘predicate $P$’ in our definition, durative Ipf either fails to meet criterion (ii – ‘complete event’) or (iii – ‘telicity’).

To make this point clear, consider a prototypical case of durative Ipf like the following:

(114)  Ja čital$i$ ‘Brat’ev Karamazovych’s dvuch do čtyrech.

I was reading ‘Brothers Karamazov’ from 2 p.m. to 4 p.m.

As pointed out by Timberlake (1985a, 155), durative Ipfs does not entail that the predicate has reached its telos (inherent limit). Accordingly, neither (113) nor (114) entails a corresponding sentence with Pf:

- dolgo dopisyval$^i$ $\neq$ dopisal$^p$
- čital$i$ ‘BK’ s dvuch do čtyrech $\neq$ procital$^p$ ‘BK’

The choice between durative Ipfs and Pf is therefore not a case of aspectual competition, but comes closer to being an instance of aspectual opposition (cf. progressive vs. aorist). However, there are some important differences between the progressive and the durative which have caused some confusion in the literature. In our framework, adverbials like ‘dolgo – for a long time’ or ‘s dvuch do čtyrech – from 2 p.m. to 4 p.m.’ do not actually contribute to the assertion time parameter. Contrary to frame adverbials or ‘kogda-clauses’, durative adverbials behave more like event modifiers. The adverbial in these cases provides the temporal location of the event directly, and not via a relation with the assertion time parameter.

This means that for the analysis of cases like (114), we have to distinguish between different VP-layers. The extended VP ‘čitat’ B.K. s dvuch do čtyrech – to read B.K. from 2 p.m. to 4 p.m.’ is telic. The expression is not true of any proper subinterval, e.g. of a reading activity located between 2 p.m. and 3 p.m. The important point, however, is that durative adverbials subcategorises for atelic predicates. This follows from the semantics of these adverbials, as demonstrated in (Krifka 1998), and it explains why durative adverbials combine with imperfective verbs in Russian. Hence, the VP ‘čitat’ B.K. – to read B.K.’ must be atelic in the example above.

But how can a predicate referring to a reading of ‘Brothers Karamazov’ be atelic? This question naturally arises in light of our claim that a reading of ‘War and Peace’ is telic. The answer is that in examples like (114) there is a conflict between the durative adverbial and the verbal expression which is resolved through coercion (Moens and Steedman 1988). Since the constraint or presupposition on the adverbial is not satisfied (it requires an atelic input), the telic predicate $Q$ is coerced into an atelic interpretation $Q'$. The atelic version

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"is a predicate that applies to events e′ iff there is an event e such that \([Q'(e)]\), and e′ is a part of e" (Krifka 1998, 215).

Now we can see how Timberlake's claim that durative Ipf triggers the configuration \(E \subseteq R'\) can be justified. The event E is here of type \(Q'\). But since the coerced predicate \(Q'\) is atelic, it is trivially true – due to the subinterval property – that some event of this type holds at the reference time.

If we understand the predicate \(P\) in our definition of factual Ipf to correspond to the VP \(Q'\) above (i.e. the VP after coercion), then durative Ipf is not a case of factual Ipf according to condition (iii), which requires \(P\) to be telic. On the other hand, if we think of \(P\) as a variable representing the level corresponding to \(Q\) (i.e. the VP before coercion), condition (iii) is indeed satisfied. However, in that case, we do not have a complete event reading, and condition (ii) is violated.

This complex argument is what it takes to exclude (114) and similar examples from the domain of factual Ipf. Due to a certain vagueness as to the nature of \(P\) in our definition of factual Ipf, two different strategies are available, but the outcome is identical: durative Ipf is not a case of factual Ipf according to our theory.

**Conative Ipf**

The meaning of conation arises with certain telic predicates where Ipf triggers some kind of coercion to a preliminary stage. Focus is on a conscious attempt by the Agent to perform the action denoted by the VP, but the Agent does not actually instantiate an event of the type of the VP. The English translations of (115) and (116) bring out this volitional force of the conative reading through an additional lexical verb, cf. also (Forsyth 1970, 49).

(115) Ja odnázdy rešalš etu zadacu (Padučeva 1996, 21).

I once **tried to solve** this problem. (literally: I once solved this problem)

(116) Ty uznavalš rapisanie?

Did you **go to find out** the schedule? (Chaput 1990, 299) (literally: Did you find out the schedule?)

In chapter 7, we will argue that Ipf is unlikely to be used with a factual reading in cases like (115) and (116), due to the current relevance of the event at the evaluation time. Note in this respect that the definite NP ‘etu zadacu – this task’ in (115) implies a link from a past event of trying to solve a specific problem to the evaluation time (at which someone maybe tries to solve the same problem). If the problem in question had already actually been solved by the speaker, then the result of this solving event would have been highly relevant at the evaluation time. This scenario would require Pf.

Ipf can then only be used if the speaker, after all, refers to an **incomplete** event of solving the problem in (115). And this is how the meaning of conation
arises. The target state of the event has not been reached, and the examples above therefore pertain to aspectual opposition, rather than aspectual competition. Concerning the relation between conative Ipf and factual Ipf, we find it most natural to invoke condition (ii) in the definition. In this view, conative Ipf is not compatible with the restriction to complete events. Alternatively, we could say that the VP being coerced into the preparatory process violates telicity in condition (iii). Both these strategies are available, just as in the case of durative Ipf above. The important point, however, is that conative Ipf is not an instance of factual Ipf in our theory.

Following this line of thought, it seems that Smith’s analysis of Ipf in (117) below is incorrect. This example should have been translated and interpreted along the lines of (116).

(117) Ty **uznaval**, kogda my **uzzaem**?

Did you **find out** when we were leaving? (Smith 1997: 239)

Smith treats (117) as a case of factual Ipf, where “the receiver augments the information conveyed by inferring that the event occurred” (Smith 1997, 240). However, factual Ipf is not licensed in this context due to the current relevance of the event. Pf (‘uznalp”) must be used in Smith’s scenario, unless the speaker for some reason intends a conative reading parallel to the one in (116). Hence, there is no reason to interpret the occurrence of the verb form ‘uznaval” differently in the two cases, despite what the English translations of (116) and (117) actually suggest.

‘Modal Ipf’

Condition (ii) of the definition of factual Ipf not only requires the instantiation of a complete event, but also that the event occurs in our world. Hence, we exclude the possibility of the event argument being embedded under modal operators.

Apart from the modal component of the imperfective paradox w.r.t. the progressive reading, there are other ‘modal’ usages of Ipf in past tense in Russian which, to our knowledge, have not received a coherent treatment in the literature. Consider for instance the two occurrences of Ipf in the following example:

(118) Aukcionsnyj torg **otkryval’s**i v p’yat’ casov. Dostup graždan dlja obozrenija veščoj **nacinalsja** s četyrech. Druz’ja javlils’p v tri [ . . . ] (Dvednadcat’ stul’ev)

The auction was scheduled (literally: **opened**) for 5 p.m. The inspection of the items was to start (literally: **started**) at 4 p.m. The friends came at 3 p.m.

From the aspectual usage in these three sentences, we can conclude that the friends turned up at 3 p.m. This follows from the perfective ‘javlils”p”. However, the use of Ipf in the two preceding sentences does not, strictly speaking, validate (at the evaluation time) the inference that the auction actually opened at

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5 p.m. in the world of evaluation (that is the world to which the heroes belong at 3 p.m.), nor that the heroes were allowed to inspect the items at 4 p.m. Both 'otkryval'sja' and 'nacinalsja' have a future in the past (conditional) interpretation. In our terminology, a past evaluation time precedes the assertion time.

A slightly different example is given below:

(119) Izdes' belye srazu pobeždali putem 19 f5. (JoeBlack)

And here white could have won immediately with 19 f5. [from annotations of a chess game]

The difference from the previous example is that world knowledge (including the conventions of chess annotations) tells us that the event of playing the move 19 f5 did not occur in the actual world (i.e. in the actual chess game). The move 19 f5 remains an unrealised possibility after black's 18. move. Substituting Pf ('pobedili' – won') for Ipf in (119), would amount to asserting that the move was actually played in the game.

Relating (118) and (119) to our positive definition of factual Ipf, we note that this use of Ipf is incompatible with the part of condition (ii) which restricts the occurrence of the event to our world.

3.4.3 Entailment to One and Only One Event

We move further down the list, and look at the third condition of the positive definition of factual Ipf given above.12

On the Restriction to Singularity

As pointed out in (Dickey 2000), examples like the ones below should perhaps qualify as factual Ipf:

(120) Moi roditeli vstrečali Lazara vsego paru raz, no oni počemu-to schodili po nemu s uma.

My parents had met Lazar only twice, but they had loved him like crazy, for no reason [. . . ] (Dickey 2000, 118)

(121) Maša risovala kružok pjeť raz.

Maša drew a circle 5 times.

True, the proposition \( \phi \) expressed in (120) explicitly refers to a plurality of meeting events, hence \( \phi \) obviously entails more than one meeting. But the predicate is still telic.

Something similar holds for (121). The utterance entails the existence of 5 drawings, but it entails only one macroevent of drawing five circles, hence a case of factual Ipf. We have two different VP-layers: 'risovali' kružok –

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12 Recall that we encountered this condition in the discussion of durative and conative readings as well.
to draw a circle’ and ‘risovat’ kružok pjat’ raz – to draw a circle 5 times’, but contrary to what we observed with durative Ipfs, both these VPs are telic. Unlike durative adverbials, the quantifying expression ‘pjat’ raz – 5 times’ does not subcategorise for atelic VPs.

Following (Dickey 2000), we can classify the examples above as repetitives, characterised by a limited repetition induced by a quantification adverbial. Repetitives are clearly different from habitual/generic statements, but we also propose to make a non-trivial distinction between repetitives and iteratives. These two labels are often used synonymously, so where is the difference? ¹³

In this work, by ‘iterative Ipfs’ we refer to the use of Ipfs in cases where the ‘extended VP’ denotes a non-delimited plurality of events. The universal quantification is often implicit, but ‘iterative Ipfs’ also occurs with explicit markers of plurality like ‘mnoţo raz / neodnokratno / neskol’ko raz – many times’ etc. For convenience, we group habitual Ipfs and iterative Ipfs together since both exhibit the property of atelicity. This is different from repetitives which can be telic at each VP-level. We therefore agree with (Pupinin 2002, 181), who argues that ‘ograničeno-kratnoznačenje’ i.e. ‘repetitive Ipf’, patterns with factual Ipfs, cf. also chapter 4.5.1.

Given these informal definitions, we can continue to demarcate factual Ipfs from the habitual-iterative readings of Ipfs, as in the negative working definition which considers habitual-iterative Ipfs and factual Ipfs to be mutually exclusive. This does not mean, however, that our understanding of factual Ipfs is incompatible with situations where events of type P have occurred repeatedly.

From a model-theoretic point of view, factual Ipfs is underspecified/vague as to the existence of more than one event in the model which satisfies the predicate P. Existentially quantifying over the event argument e (or, equivalently, declaring this variable in the DRS universe), does not preclude the existence in the model of several (temporally distinct) events which satisfy P. This means that the standard ‘factual Ipf question’ of whether someone has read ‘War and Peace’, can be felicitously answered with a ‘da – yes’ also in cases where the Agent has read the novel twice, or every once a year.

A sentence containing a predicate P is true with a factual Ipfs interpretation if it is possible to find an event token in the past instantiating the event type denoted by P. If the interpreter finds such an event token in the model, the search stops. In this sense, it is irrelevant whether there are other events of the same type in our model. What matters here is that a sentence with a factual Ipfs interpretation does not entail the existence of a non-delimited plurality of events.

**Telicity and Aspectual Competition**

The requirement in (iii) that P be telic considerably reduces the range of data. Indeed, the presence of Ipfs with atelic *imperfectiva tantum* such as ‘viset’ ¹⁵ –

¹³ The distinction is more transparent in the terminology of Slavic aspectology, where ‘ograničeno-kratnoznačenje’ (repetitives) is contrasted with ‘neograničeno-kratnoznačenje’ (iteratives).
to hang’ and ‘rabotať’ — to work’ in (122) and (123), respectively, is not very exciting, as these verbs do not have a trivial perfective partner.

(122) Vot na etoj stene viselă kartina. (Padučeva (1992, 113) from Apresjan)

Here on this wall there hung a picture.

(123) Včera ja rabotal’ v restoranе.

Yesterday, I worked in the restaurant. (Swan 1977, 520)

This is not to deny that IpF in (122) and (123) occurs in typical ‘factual IpF contexts’, i.e. with a ‘big’ assertion time. In this respect, Glovinskaja (1982) and Padučeva (1996) distinguish between ‘resultative’ and ‘non-resultative’ factual meanings, depending on whether the predicate has a telic or atelic interpretation.

We take a practical stand and relate factual IpF to the phenomenon of *aspectual competition* between IpF and Pf. We can therefore safely ignore atelic predicates.14 The phenomenon of aspectual competition, which only occurs with telic predicates, represents the ultimate challenge for any search for an *algorithm* predicting the speaker’s aspectual choice in Russian.

What is aspectual competition? Aspectual competition is to be contrasted with the standard aspectual opposition, and refers to cases where IpF transgresses its processual reading. However, the notion, which goes back to the Prague linguist Vilem Mathesius (1938), cf. (Hulanicki 1973, 174), is not used uniformly in the literature. On a narrow understanding of aspectual competition, it only applies to cases of ‘full synonymy’ between IpF and Pf (if that exists), cf. (Rassudova 1982, 51) and (Smith 1997, 241). Since ‘full synonymy’ is, arguably, an illusion, Padučeva (1996, 53) refers to this phenomenon as the *so-called* aspectual competition (‘tak nazyvaemya konkurrencija vidov’). Padučeva (1996, 61) argues that there must be some systematic differences between Pf and factual IpF since the two aspects are (almost) never interchangeable in authentic contexts. We will elaborate on this point in chapter 7.

In this work, the notion of aspectual competition is used in a broad sense. The phenomenon applies here also to contexts where substitution of Pf for IpF (and vice versa) is clearly *not* meaning preserving. For instance, we include cases of bidirectional IpF vs. Pf in our understanding of aspectual competition:

(124) Anja \{ *priečala* \\
\{ *priezžala* \} v Moskvu.

Anja \{ has come \\
\{ made a visit \} to Moscow.

In contrast to aspectual opposition (processual IpF vs. Pf), the aspectual relation between the event argument and the assertion time in (124) remains

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14In making this choice we indirectly blur the parallel between factual IpF vs. Pf on the one hand and experiential perfect vs. perfect of result on the other. A feature of experiential perfect cross-linguistically is precisely its ability to combine with atelic predicates, cf. (Pancheva 2003). However, as we argue in chapter 5, factual IpF is a cluster of phenomena, many of which are orthogonal to the experiential reading.
unaffected by aspektual substitution. Both Pf and Ipf refer to complete events, but they differ in residual aspektual relations (here: whether or not Anja left Moscow at some later time). This broad understanding of aspektual competition can be formulated thus:

- **Aspektual Competition:**
  Pf and Ipf are in aspektual competition in a sentence $\phi$ if the ‘main aspektual relation’ $A$ (i.e. $e \subseteq t$) between the event argument $e$ and the assertion time $t$ is the same in $\phi_{pf}$ and $\phi_{ipf}$. It may be that $\phi_{pf}$ and $\phi_{ipf}$ differ in ‘residual aspektual relations’ $R$. That is, $A[\phi_{pf}] = A[\phi_{pf}]$, but $R[\phi_{pf}] = R[\phi_{pf}]$ or $R[\phi_{pf}] \neq R[\phi_{pf}]$.

We therefore do not exclude the possibility that the choice of grammatical aspect has repercussions beyond the main ‘A-configuration’ between $e$ and $t$. This is notably the case in (124), where the use of Ipf in addition supports the inference that Anja left Moscow some time after her arrival. This implication does not affect the relation between $e$ (the coming event) and $t$, but we may still want to encode this information in the semantico-pragmatic representation of the sentence. In the definition above we assume that such residual aspektual information belongs to a possibly empty slot $R$. Different kinds of residual aspektual information may prevent interchangeability of the two aspects even in contexts where both Ipf and Pf would refer to complete events.

### 3.4.4 The Case of Negation

Finally, we should say a word about factual Ipf and negation. The interaction of Ipf with negation is important for the understanding of the role of imperfectivity in Russian, especially since Ipf is the default choice in negated contexts (cf. the discussion in chapter 2.4.). However, condition (iv) of the definition of factual Ipf explicitly rules out negation from the domain of factual Ipf.

Ultimately, we would like to look at factual Ipf in light of data including negation, but this is a task which cannot be accomplished within the frame of this work. In this respect we follow the tradition of aspektual studies, which, alas, rarely give a uniform treatment of these phenomena. The reason is, of course, that negation is a particularly tricky issue.

True, we could provide an apparently straightforward formalisation along the following lines:  

(125) Ja ne proboval$^4$ vodki.
I have not tried vodka.

(125') $[t | t \prec s^*, \neg[e | e \subseteq t, \text{try-vodka}(e), Ag(e, P^*)]]$

But how do we explain the prominent role of Ipf under negation? Different factors seem to play a role. It may have to do with the status of Ipf as being unmarked, and/or it may be that negation is a stativiser, cf. (Kamp and Reyle

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$^4$See (Kamp et al. to appear, 103) for how we arrive at this (simplified) formula.
1993) and others. This latter option echoes the use of Ipf with stative predicates (imperfectiva tantum), but it blurs the parallel in (125) with the eventive factual Ipf.

Contrary to negation, some other propositional operators (like the question operator) do not seem to have any major impact on the aspectual choice. Therefore, as the data in 3.2 demonstrate, we include questions as a possible environment for factual Ipf. The question itself does not entail a complete event, but the underlying proposition does. Similarly, our definition does not rule out factual Ipf from occurring, say, in the antecedent of a conditional:

(126) No, k sožalenju, kak humorist on umer⁹ (esli kogda-nibud’ roždalsja⁹).
(Internet)

But unfortunately, he is dead as a comedian (if ever born).

But again, this is not completely unproblematic. In (126) the polarity sensitive item ‘kogda-nibud’ is licensed by a conditional. Is this fundamentally different from (127) below, where the polarity sensitive item ‘nikogda’ is licensed by an obligatory negation particle (‘ne’)?

(127) – Nikogda ja ĕtogo ne govorili⁶! – zakričali⁶ Trubeckoj.
– Vy ne govorili⁶. Vy pisali⁶. (Dvenadcat’ stul’ev)
– I have never said it! – Trubeckoj cried out.
– You didn’t say it. You wrote it.

Intuitively, the imperfective usage of ‘govoriti’ – have said’ in (127) comes very close to ‘roždalsja’ – was born’ in (126). Compare these examples also with the following cases containing the polarity sensitive ‘kto-nibud’:

(128) Ja do sich por ne znaju⁴, čital⁴ li moj faks kto-nibud’ ili net. (Kasparov Chess 2002)
I still don’t know, if anyone read my fax or not.

(129) Vrjad li kto-nibud’ streljal⁴ v nich prežde, no ruž’e vnušalo⁴ im podožrenie, i oni uketeli⁴ podal’še [ . . . ] (Uppsala Corpus)

It was unlikely that anyone would have shot at them, but the rifle made them suspicious, so they flew away [ . . . ]

(130) No pesni i pjıski Fedja ljubili⁴, ešče ljubili⁴, kogda kto-nibud’ priežžali⁴ ili uezžali⁴. (Uppsala Corpus)

Fedja had always enjoyed singing and dancing. Especially, when someone arrived or left.

In these three examples of factual Ipf (!), the licensors of ‘kto-nibud’ are ‘ne znaju’ – I don’t know; ‘vrad li – hardly’; ‘kogda – when(ever)’, respectively. Obviously, these data are part of a larger picture where Ipf thrives in contexts of polarity sensitive items, negation, modality etc. It is therefore admittedly a slightly arbitrary decision to exclude examples like (127) from an analysis of factual Ipf, because of the presence of ‘ne’, while we include all the other cases. But tradition is on our side.

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Chapter 4

Earlier Accounts of Factual Ipf

We start this chapter by giving a short overview of the history and state of the art of factual Ipf (4.1). Then we focus on five main strategies which all have contributed to the understanding of factual Ipf (4.2–4.6).

The first strategy to be discussed (4.2) is the idea of linking factual Ipf to the experiential perfect. The role of past tense plays a central role for this kind of approach to factual Ipf. Next, we consider the implications for factual Ipf of the widespread idea of treating Ipf as the default, unmarked member of the aspectual category (4.3). Approaches to factual Ipf based on markedness theory typically reduce the semantic contribution of this imperfective reading to a minimum (simple denotation of the VP). In 4.4, we look at works on factual Ipf which, on the contrary, emphasise the positive (pragmatic) contribution of Ipf, as such being more or less orthogonal to issues of (un)markedness. We notably consider a case study of discourse functions associated with factual Ipf. In 4.5, we return to more semantically motivated approaches. We discuss the idea of subsuming factual Ipf under the other core meanings of Ipf, viz. the habitual-iterative and processual readings. Finally, in 4.6 we consider some ambitious attempts of incorporating factual Ipf in a unified account of the imperfective, either in terms of temporal indefiniteness or by emphasising the so-called ‘type-referring’ function of Ipf.

The reader should keep in mind that our classification of earlier accounts is rather coarse-grained. Individual contributions to the field which are here subsumed under a certain ‘strategy’, may have important points in common with analyses treated elsewhere in this chapter. We therefore frequently refer to the same authors in different sections.
4.1 An Overview

The study of factual Ipf goes back at least to Mazon (1914, 202f.), who, in his advanced ‘Grammaire de la langue russe’, was one of the first to single out the speaker’s choice of Ipf when referring to ‘une action généralisée’.

In the Russian-speaking part of Russian linguistics, factual Ipf has received due attention only in relatively recent times, viz. in the in-depth textbook of Rassudova (1982) (the first edition goes back to 1968), (Glovinskaja 1982), and, in particular, in Padučeva’s important articles, collected in (Padučeva 1996). Several of Padučeva’s articles give a detailed analysis of the semantics and pragmatics of factual Ipf, and constitute the most insightful overview of the data.

Apart from the works of the above mentioned authors, factual Ipf has naturally also been discussed in more general terms by leading Russian aspectologists, such as Maslov, Bondarko, Petuchina and others. However, to our knowledge, no single monograph or dissertation in or outside Russia has been devoted exclusively to factual Ipf, with the only exception of L.N. Svedova’s textbook (1984) addressed to students of Russian (as a foreign language).

In addition to Padučeva’s prolific work, there exists a dozen of articles primarily dealing with factual Ipf (and aspectual competition) in Russian. The ones to be discussed here include (Hulanicki 1973), (Vogeleer 1993), (Dickey 1995), (Israeli 1996), (Mehlig 1997a), (Israeli 1998), (Hedin 2000) and (Mehlig 2002). We will also draw attention to other sources which are relevant to our subject – such as for instance (Breu 1998) – although the latter does not primarily pretend to solve the puzzles of factual Ipf.

Factual Ipf has also received some attention in more general, standard works on aspectuality in Russian, e.g. in the landmark monograph of Forsyth (1970). In this respect, Leinonen’s dissertation (Leinonen 1982) is equally of great interest, since much of her discussion directly or indirectly relates to factual Ipf. Occasionally we refer to ideas on factual Ipf expressed in global theories of Russian aspect, such as (Durst-Andersen 1992), (Klein 1995) and (Borik 2002), although none of these authors are primarily interested in factual Ipf as such.1

Finally, we should mention that factual Ipf in Russian has caught the attention of more cross-linguistically oriented studies as well, such as (Comrie 1976), (Dahl 1985) and (Smith 1997). Of course, several of the above mentioned works cannot be considered as ‘earlier accounts of factual Ipf’ in a narrow sense.

It is worth noting that none of the existing studies of factual Ipf are carried out within the semantico-pragmatic framework adopted in this thesis. In general, the literature on factual Ipf is quite traditional, without paying much attention to trends in linguistics. In a similar vein as purely descriptive grammars, such analyses are often based on good observations and sound intuitions. However, the lack of a rigorous theoretical framework makes it sometimes hard to evaluate their contribution to the field, or relate the analysis in question.

1As we recall from chapter 2, (Klein 1995) is an important source of inspiration for our general treatment of viewpoint operators.
to leading syntactic, semantic and pragmatic studies of aspectuality in general linguistics.

We should also keep in mind that the literature is far from being uniform as to the range of data being discussed. The existence of a distinction similar to the factual dichotomy adopted in chapter 1 (existential IpF vs. presuppositional IpF) has been more or less assumed also in the works of Rassudova, Forsyth, Leinonen, Paduèva, Mehlig and Israeli. But for the rest, the majority of analyses devoted to Russian aspect treat factual IpF as a single, homogeneous phenomenon, possibly distinguishing only between 'konstatación fakta' and the bidirectional reading. For some of these authors, factual IpF is primarily associated with core examples such as the famous question as to who has read 'War and Peace'. While all researchers show interest in this particular usage (i.e. 'existential:experiential IpF' in our terminology), other subgroups of factual IpF are frequently ignored.

4.2 Factual IpF as Experiential Perfect

Dahl (1985, 55) discusses the possible existence of a universal category 'Experience'. The hypothesis or prediction underlying his idea is that individual natural languages will make use of only one gram – in the sense of (Bybee and Dahl 1989) – in order to express the meaning of 'Experience'. The existence of factual IpF in Russian indeed supports this hypothesis, since it seems reasonable to argue that 'Experience' is always conveyed by the imperfective gram – on its existential reading, IpF thus subsumes 'Experience'.

In Germanic the role of expressing 'Experience' is taken on by the gram Perfect, which, as IpF in Russian, is also used to express other meanings besides the experiential reading. We therefore have the following correlation:

- 'Experience' ⇒ Perfect (in Germanic and Romance)
- 'Experience' ⇒ Imperfective (in Russian)

We can use this simple cross-linguistic analogy to show that the perfect in Germanic indeed has several quite different readings, cf. (Dahl 1985, 54f.). For instance, translations between English and Russian indicate that present perfect in English is ambiguous between a resultative perfect and an experiential perfect, as in the following case, where one form in English corresponds to two different grams in Russian:

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4There is also a more narrow understanding of the experiential category. A verb, whose lexical semantics conveys nothing but 'experience', is 'prichodišča' in its function as an 'experiential auxiliary' (Tomnola 2000, 466):

(1) Ostaivanje čujich interesov – delo čoroše. Toł'ko pri četom na kakom-to etape nado žertvovat' 'svojim, četo me prichodišča' delat'. (Chess Express 2003)

Defending the interests of others is a good thing. But then, at some stage, you have to sacrifice your own, which I have done.

---
Have you filled in a questionnaire?

Ty zapолнил анкету? (≈ resultative perfect)
Ty zapолнял анкету? (≈ experiential perfect)

Pancheva (2003) points out that this distinction between resultative perfect and experiential perfect has not received much attention in the tense-aspect research community, since it is not morphologically realised in languages like English. In Russian, the competition between Pf and IpF in (131) is at the heart of aspectual competition.

The correlation in (131) has also been used to make hypotheses about the existence of a covert (synthetic) perfect in Russian. In the case of factual IpF, this perfect is either taken to be corealised with imperfective morphology (Hulanicki 1973, 177) and (Borik 2002), or expressed through the past tense -ъ-l-morpheme (Leinonen 1982, 219ff.), (Breu 1998) and (Gronn 2001). In either case, factual IpF in Russian is treated – on its ‘experiential’ reading – as a perfect from a semantic point of view. As pointed out by the godfather of Slavic aspectology, the relationship between form and meaning in this field is extremely complex:

(Maslov 1987, 206ff.)

4.2.1 Perfect Configurations and Viewpoint Morphology

It has been argued that factual IpF is a cluster phenomenon, representing a mix of tense and aspect, a so-called ‘vido-vremennoe značenie’ (Glovinskaia 2001). The first detailed attempt to treat factual IpF in past tense as a semantic perfect was presented in (Hulanicki 1973). We will start by looking at this article.

As in our working definition, Hulanicki restricts his attention to factual IpF with telic VPs, where the meaning of completion (totality) is, as Hulanicki (1973, 175) puts it, “inherent in the imperfective verb form”. He argues that IpF is used in this construction as the unmarked member of the aspectual opposition, giving rise to ‘aspectual neutralisation’. The claim is that there is no aspectual difference between factual IpF and Pf, but the opposition is instead transferred to a different level: experiential perfect (IpF) vs. perfect of result (Pf).\footnote{In chapter 5 of the present work, developing some ideas of (Pasiławska and von Stechow 2003), we argue instead for a third option, viz. that the perfect-like interpretation is, in a sense, independent of morphology. The analysis in (Hulanicki 1973) can perhaps be seen as a pre-theoretical version of this ‘third option’.}

\footnote{Hulanicki actually uses the terms ‘actional perfect’ (IpF) and ‘stative perfect’ (Pf), respectively. In our setting, Hulanicki’s label ‘actional’ would be particularly confusing since it is used in a different sense than ‘actional’ in (Pančev 1996). For Pančev, ‘existential IpF’ is opposed to ‘actional IpF’, where ‘actional’ corresponds to our ‘presuppositional...
a representative of the traditional non-compositional feature approaches, Hulanicki (1973, 178) simply posits, without further discussion, the presence of Perfect in Russian as a covert grammatical category. The difference between experiential perfect (Ipf) and perfect of result (Pf) is expressed through the feature [±Continuity]. We can summarise Hulanicki’s feature analysis as in figure 4.1.

![Diagram](image)

**Figure 4.1**: The aspectual system according to (Hulanicki 1973)

<table>
<thead>
<tr>
<th>±Totality</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-Tot] Ipf</td>
</tr>
<tr>
<td>[-Perf] Pf</td>
</tr>
</tbody>
</table>

The experiential perfect (factual Ipf) is thus captured by the feature bundle {+Tot, +Perf, −Cont}, which is to be contrasted with the minimally different perfect of result (Pf). The latter is characterised by an unchanging result state [+Cont] following a past event. The binary opposition [±Continuity] corresponds more or less to ‘current relevance’ of the event [+Cont] vs. ‘gapping’ [−Cont], cf. chapter 7. The following minimal pairs illustrate the difference:

(132) Ja uže \{ kosit\ _i, skosit\ _P \} travu. (Hulanicki 1973, 177)

I have already mowed the lawn.

Hulanicki claims that Ipf gives rise to the inference that is should not be necessary to mow the lawn once more (since it has already been mowed), while Pf emphasises the result (the condition of the lawn after the mowing). The contrast is more salient with bidirectional Ipf as opposed to a perfect of result (Pf).

(133) On uže vstav\_i segodnja utrom (i prines\_p gazetu). (Hulanicki 1973, 177)

He has already got up this morning (and fetched the newspaper).

(134) On uže vstal\_P (značit, on možet načat\_p rabotati\_i). (Hulanicki 1973, 177)

He has already got up (so he can start working).

---

Ipf’. Hulanicki’s ‘actional perfect’ in fact comes closer to the ‘existential’ variant, but it is probably supposed to capture both, although he does not explicitly refer to possible subgroups of factual Ipf.
The experiential perfect, as with 'kosil' – mowed' and 'vstava' – got up' in the examples above, merely assumes some kind of indirect relevance of the past action with its present effects. While the perfect of result ('kosil' and 'vstal', respectively) "expresses the continuity of the effects of the past action during the period elapsed between the end of the action and the moment of speech", Hulanicki (1973, 176) claims that the experiential perfect "leaves this continuity unexpressed". For instance, the experiential perfect effect in example (133), contrary to (134), does not license the inference that the Agent is out of bed (which is the normal result of getting out of bed) at the utterance time. This is according to Hulanicki's analysis, but, in fact, one could argue for a stronger implicature following from bidirectional Ipf in (133). True, Ipf leaves "the continuity unexpressed", as Hulanicki puts it, but it also licenses a pragmatic inference to [+Gapping] (cancellation of target state), see chapter 7.

Hulanicki points to a nice result of his account in terms of hierarchically ordered features: The analysis reflects the intuition that the shift in meaning, say, from processual Ipf {–Tot} to factual Ipf {+Tot, +Perf, –Cont} is conceptually more involved than for instance going from aorist Pf {+Tot, –Perf} to a perfect of result Pf {+Tot, +Perf, +Cont}. While the latter shift involves a change in the value of the parameter at the second level [±Perf] in the hierarchy, the former shift in meaning produces a reverse w.r.t. to the basic aspectual opposition [±Tot] at the first level and thereby "imparts a diametrically opposed meaning" (Hulanicki 1973, 178).

It is only when Ipf is accorded the value [–Tot], that we have an 'aspectual opposition' between Ipf an Pf. In cases of aspectual neutralisation (or 'competition' in our terminology), the opposition is transferred to a lower level. How does this unified analysis of factual Ipf fare with the data?

The idea of treating factual Ipf in analogy with experiential perfect is obviously problematic for presuppositional Ipf. Presuppositional Ipf is anaphoric in nature and typically requires a definite time interval for the event. This kind of definiteness is quite alien to the indefiniteness effect of (experiential) perfect. Thus, while Hulanicki's analysis is able to capture some core cases of existential Ipf, it cannot be applied to all factual readings of Ipf in Russian.

A more recent attempt to explore the perfect-like configuration of factual Ipf is represented in Paduceva's work, where she advocates a Reichenbachian approach to Russian aspect. In (Paduceva 1998), her view on factual Ipf is reflected in the label retrospective Ipf. In Paduceva's theory, the defining feature of existential Ipf is the presence of a retrospective reference time. 7 'Retrospec-

---

6 Hulanicki excludes past perfect readings from his scheme, and invariably relates the perfect to 'the moment of speech'. We argue in chapter 5 that this is oversimplifying from an empirical point of view, and that past perfect readings should not be ignored in the discussion of factual Ipf vs. Pf. However, this criticism could easily be dealt with and incorporated in Hulanicki's analysis, as nothing in his theory fundamentally hinges on this point.

7 The term 'retrospective' has also been used in earlier works to qualify the experiential reading of factual Ipf, e.g. (Swan 1977, 522).

8 This part of Paduceva's analysis has also been adopted for instance by Mehlig (2002). Other aspects of her influential work are discussed elsewhere in this chapter, notably in section 4.5.
tive Ipf” has a clear parallel to perfect tenses. As noted by Comrie and others, the perfect is in nature retrospective, “in that it establishes a relation between a state at one time and a situation at an earlier time” (Comrie 1976, 64).

As we argue in chapter 2.2.2, it is problematic to adopt Reichenbach’s reference time parameter face value. One question which arises is how ‘retrospective Ipf’ relates to examples like the following:

(135)  A znaet’ li Vy, čto Putin 

god nadad 

probaval

prozondirovat poču, možno li kontrolirovat internet . . . (Internet)

But do you know that Putin a year ago tried to find out whether it was possible to control the internet . . .

In a Reichenbachian account one expects frame adverbials (‘god nadad – a year ago’) to denote the reference time (R), in order to give this notion some empirical content. But then it is not possible to maintain the retrospective configuration, i.e. that the event time precedes the reference time. Instead, we end up with the familiar inclusion relation: \( E \subseteq R \).

Padačeva (1997, 151) is aware of the unclear status of the reference time parameter R: “Ponajdie točki otičeta [ . . . ] ne oblača ni dostatočnoj opredeljenoj, ni pragmatičeskoj nagladnosti”. She therefore proposes, following (Apresjan 1995), to interpret R as the ‘observer’s temporal perspective’ (‘vremennaja lokalizacija nabljudatelja’). This suggests that Padačeva’s reference time parameter (‘točka otičeta’) in examples like (135) comes closer to our evaluation time than to the assertion time. The event is looked upon in hindsight, from a later evaluation time. Unlike the assertion time parameter, the evaluation time in (135) is not fixed by the adverbial modifier, and the event is indeed retrospective w.r.t. the evaluation time (utterance time).

However, the ‘observer’s temporal perspective’ is still not quite the same as our evaluation time. In our theory (cf. in particular chapter 5), past tense trivially gives rise to a retrospective configuration, irrespective of aspectual functions. This is not so in (Padačeva 1997), where processual Ipf in past tense is characterised by a synchronic temporal perspective.

Padačeva is not explicit on how these notions could be made formally precise. Instead she argues that the different perspectives associated with the processual and existential (factual) readings should be seen as different manifestations of discourse modes, such that processual Ipf with past tense occurs in a narrative mode (‘narrativný rejim’), while existential Ipf is restricted to dialogue mode (‘rečevý rejim’) (Padačeva 1997, 143). As Padačeva points out, her system has some non-trivial implications for the interaction between tense and aspect. Particularly striking is the suggestion that past tense is void of meaning (equals present tense) in combination with processual Ipf:

“V narrativnom režime forma NSV prošedšego vremeni terjaet svoj pervičny smysl. Prošedšee vremja oboznacăet zdes’ synchronnost’ točke otičeta [ . . . ], a ne predstavovanje [ . . . ] V rezultate v narrativnom režime formy prošedšego i nastojasčego vremeni ne sil’no otlikajutsja odna ot drugoj.” (Padačeva 1997, 143)
We have tried to sum up these different factors in table 4.1.

<table>
<thead>
<tr>
<th></th>
<th>Ipf</th>
<th>‘-’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existential Ipf [dialogue mode]</td>
<td>$R = S$</td>
<td>$E \prec S$</td>
</tr>
<tr>
<td>Processual Ipf [narrative mode]</td>
<td>$R \cap E$</td>
<td>$\emptyset$</td>
</tr>
</tbody>
</table>

Table 4.1: The interpretation of Ipf and past tense based on (Padučeva 1997). $R = \text{‘the temporal perspective of the observer’ (Apresjan 1995).}$

In line with this picture, Padučeva (1997, 153) claims that existential Ipf is a deictic category, since the event is always retrospective w.r.t. the utterance time. In chapter 5, we argue against this linking of factual Ipf to the utterance time parameter, since factual Ipf may also occur in contexts of a relative past, where the evaluation time is different from the utterance time. For Padučeva (1997, 153), the use of factual Ipf outside the dialogue mode is merely a ‘contextual’ phenomenon. But isn’t the range of aspectual and temporal readings always a question of context?

The aspectual relation induced by factual Ipf according to table 4.1 is simply $R = S$.\(^8\) This explains why Padučeva (1996, 21;31) claims that the ‘resultative’ meaning of factual Ipf is expressed through past tense ($E \prec S$), rather than through aspect. A similar position is also defended by Károlik (2001, 19).

This kind of analysis clearly does not pretend to give a compositional treatment of tense and aspect. In this respect, it differs from ours. True, in our own analysis in chapter 5, we are not able to maintain the idea of full compositionality. However, we do not want to blur the distinction between tense and aspect, and abandon a uniform treatment of tense on the one hand, and viewpoint operators on the other.

### 4.2.2 The Experiential Reading from a Typological and Diachronic Perspective

In this section, the main focus will be on analyses of factual Ipf which seek a parallel account of factual Ipf in Russian and the Experiential Perfect in Germanic and Romance. This kind of approach to factual Ipf typically tries to explain the semantics of this reading as following from an amalgam of typological, morphological and diachronic facts and observations. Alas, the exact nature of the interaction between these different levels often remains unclear. We will therefore first introduce the reader to some relevant background material before evaluating a concrete proposal presented in (Breu 1998).

Some ‘evidence’ for assuming a close relationship between the interpretation of tense in existential Ipf in Russian and experiential perfect in Germanic, is provided by a diachronic view on the past tense morpheme. The past tense marker in contemporary Russian developed historically from a past participle

\(^8\) Similar configurations are adopted in (Borik 2002). cf. section 4.3.1.
in a compound perfect construction with the copula verb ‘byt’—to be’. Although the ‘-l’-participle, after the loss of the copula, extended its functions into the realm of simple past, this does not necessarily imply that it lost all its functions as a perfect. This is why some Slavists prefer to say that the perfect developed into a general past tense. A general past can be understood as ambiguous between a simple past, present perfect and past perfect:

“The old Slavic compound Perfect form has in [most Slavic] languages lost its specific function in the tense-aspect (TA) system due to the disappearance of the simple past tense forms (Imperfect and Aorist). The ancient perfect construction [...] has taken over the functions of both, while it continues at the same time to include the perfect meaning.” (Tommola 2000, 441)

From a morphological point of view, central-European languages like French and German represent the opposite evolution with a decline of the aorist (simple past), and a composite perfect taking over the role of a ‘general past’.

(136) Vanja otkryl okno. (Russian)
   Jean a ouvert la fenêtre. (French)
   Jens hat das Fenster geöffnet. (German)

   Vanja/Jean/Jens \{ opened
          has/had opened \} the window.

Breu (1998) presents an original, though quite brief, investigation into the alleged link between factual Ipf and experiential perfect. This work is not confronted with the same problems as for instance (Hulanicki 1973) reviewed above as to covering the data. Breu’s agenda is quite different as he attempts to provide positive evidence that the so-called experiential reading only represents a proper subset of our factual Ipf.\(^9\) In fact, he goes as far as suggesting that the analysis of experiential Ipf should be separated altogether from what he defines as ‘factual Ipf’. While Breu supports the common view that the experiential reading of Ipf arises from a perfect interpretation of tense, he also makes the additional claim that the experiential reading is unrelated to other sources of factual Ipf.

Breu comes to this rather surprising conclusion by comparing the Slavic tense-aspect system with Romance. This comparison relies on the assumption that such a cross-linguistic parallel study can indirectly give some insight into the evolutionary process from Old Church Slavic to Russian. A crucial premise underlying this mixture of typology and diachrony is the idea that the verbal system of contemporary Romance languages exhibits some similarities with Old Church Slavic. The point of departure for this analogy is the observation that they both share the old Indo-European inflectional aspектual opposition in past tense in addition to a separate composite Perfect.

The alleged correlation is illustrated in table 4.2, which brings out certain structural similarities between Romance and Old Church Slavic:\(^10\)

\(^9\)Except that Breu includes also atelic predicates in the domain of experiential Ipf.
\(^10\)The verbal prefix ‘pro-’ can cooccur with the forms in Old Church Slavic, but at this stage
<table>
<thead>
<tr>
<th>French</th>
<th>Old Church Slavic</th>
<th>Russian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imparfait (lisais)</td>
<td>Imperfect (čitač)</td>
<td>Past Ipf (čital)</td>
</tr>
<tr>
<td>Passé simple (lus)</td>
<td>Aorist (čitač)</td>
<td>Past Pf (pročital)</td>
</tr>
<tr>
<td>Passé composé (ai lu)</td>
<td>Perfect (jesim’ čital)</td>
<td>Past Ipf [Pf] ([pro-čital]</td>
</tr>
</tbody>
</table>

Table 4.2: Inventory of past tenses. Paradigm for the verb ‘to read’ (1st person, singular) in past tenses.

The central question is what happens when the Old Church Slavic inflectional system is replaced with the derivational-like aspeetual category which is the hallmark of aspect in modern Slavic languages. As this transformation of the aspectual system takes place, several Slavic languages, like for instance Russian, undergo some additional processes, notably a general loss of the copula. As a result of this particular morpho-syntactic development, the composite perfect is replaced by a general past, which is not aspectually neutral, but coexists either with perfective or imperfective morphology.

It is not immediately clear how this relates to factual Ipf. In order to grasp Breu’s position on factual Ipf, we further have to invoke the notion of markedness, which according to Breu plays a different role in the Romance/Old Church Slavic system compared to contemporary Russian.

In this respect, the aorist was historically the unmarked form, while the imperfect was mainly restricted to a progressive reading. The aorist in Romance – just as in Old Church Slavic – was originally used as a default without, say, any restrictions to telicity (cf. also (Lehmann 2002, 120)):

(137) Je travaillai beaucoup. (French; ‘le passé simple’, i.e. the aorist)

I worked a lot.

The motivation behind the use of the unmarked aorist in (137) ‘mirrors’ the picture we find in contemporary Russian: In Russian, according to the Jakobsonian view, Ipf is unmarked. Ipf is prototypically used with atelic predicates (or ‘atelic readings’ of telic predicates), but in virtue of being unmarked it can have a telic interpretation (factual Ipf). In French, and presumably Old Church Slavic, the picture is reversed: The aorist is the unmarked form, and this gram, which is typically related to telic predicates, can also be used with atelic predicates. Breu holds the view that whenever the unmarked form is used as a default, i.e. not expressing its Hauptbedeutung, the issue of telicity is actually irrelevant (Breu 1998, 95).

From our perspective, it is a bit confusing that Breu (1998, 94) refers to this unmarked use of the aorist as obsčečaktičeskoe znacenie – in other words: a ‘factual aorist’ (!). The clue in Breu’s account of our factual Ipf, is his arguing for the existence of an experiential perfect which is historically independent of

it has presumably not acquired the grammatical meaning of perfective aspect.
this ‘factual aorist’. Breu (1998, 97) claims that the old Slavic perfect was aspectually ambiguous between a resultative and experiential reading, in a similar vein as for instance ‘le passé composé’ in French:

(138) J’ai lu ‘Guerre et Paix’. (French; le passé composé, i.e. the perfect)

I have [just] read ‘War and Peace’. (resultative perfect)
I have [once] read ‘War and Peace’. (experiential perfect)

For a period of transition we can assume that the ambiguous French sentence in (138) corresponds to the Old Church Slavic perfective perfect (jesm’ pročital) or the imperfective perfect (jesm’ čital). With the advent of the loss of the copula, the Russian system ended up with the familiar aspectual competition between ‘pročital’ and ‘čital’ for cases like (138).

It is well-known and universally agreed upon that the Old Indo-European aorist-imperfect distinction was taken over in Russian by the derivational system of perfective and imperfective verbs. Breu’s point is that the reconstruction of the Perfect was an orthogonal, though simultaneous, process which also manifested itself in the emerging derivational system. As a result, Russian became equipped with an ‘aspectually ambiguous past tense ‘-l’ (Breu 1998, 97). The reconstruction of the old Slavic tense/aspect-system resulted in heavy burdens being put on Ipf and Pf in past tense, since the two forms (past Ipf and past Pf) have to assume various functions from two different sources. Schematically, Breu’s analysis can presumably be represented as in table 4.3.

<table>
<thead>
<tr>
<th>French</th>
<th>Old Church Slavic</th>
<th>Russian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imparfait</td>
<td>Imperfect</td>
<td>Past Ipf</td>
</tr>
<tr>
<td>Passé simple</td>
<td>Aorist (Pf)</td>
<td>Past Pf</td>
</tr>
<tr>
<td>Passé simple (default)</td>
<td>Aorist (factual Ipf)</td>
<td>Past Ipf (factual)</td>
</tr>
<tr>
<td>Passé composé (res. perf.)</td>
<td>Perfect (Pf)</td>
<td>Past Pf</td>
</tr>
<tr>
<td>Passé composé (exp. perf.)</td>
<td>Perfect (Ipf)</td>
<td>Past Ipf (factual)</td>
</tr>
</tbody>
</table>

Table 4.3: Aspect in past tenses according to (Breu 1998)

For Old Church Slavic, the cell ‘Aorist (factual Ipf)’ indicates that we are dealing with an aorist form of a simplex verb (i.e. ‘čital’). Whether this form actually should be interpreted as a grammaticalised Ipf may be questioned. Breu is not explicit on this point, and it is not crucial for our purposes to settle the difficult question of dating these processes of grammaticalisation. Interestingly, contemporary Bulgarian exhibits apparently self-contradictory forms like the ‘Imperfective Aorist’. According to Comrie (1976, 23), the main function of such a complex gram is to present a complete event as a single whole (whence the aorist as marker of perfectivity), but with internal complexity (whence imperfective morphology).
It follows from table 4.3 that all aspectral past tenses in Romance and all
the corresponding tense and aspect combinations in Old Church Slavic (and, by
analogy, Bulgarian) are represented by simply two forms in Russian: Past Ipf
vs. Past Pf. But despite this poverty of morphological means, Russian still ends
up with a formal differentiation between the experiential perfect and perfect of
result, which are conflated in Romance (and Germanic).

From our point of view, the most important observation suggested by this
picture is that factual Ipf, according to Breu (1998, 88), has two different con-
genital and historical origins: “the experiential meaning of Ipf in Russian must
be separated from other cases of aspectral neutralisation, since it pertains to
perfect tense” (our translation).\(^\text{11}\)

In Russian, the experiential perfect has thus always been expressed by Ipf
(notably simplex verbs) in combination with the ‘-l’-participle. In addition, past
tense imperfectives in modern Russian inherit the functions earlier expressed by
the default (‘imperfective’) aorist. Breu is not explicit concerning the semantics
of this factual Ipf, except that it represents some kind of ‘naming of the action’
in contexts without narrative progression (Breu 1998, 98).

Despite some nice and intriguing diachronic and typological correlations sug-
gested by this account, its usefulness from a semantic point of view can be
questioned.

First, we find the one-to-one relationship between morphological tense and
semantic tense, which underlies this kind of approach, too rigid. Is it really
the case that the presence of the ‘-l’-participle is decisive for an experiential
reading? Then how can the following data be accounted for?

(139) Dvadcatyi vypusk ‘Partii nedeli’ vydal’sja nedjužinnym. Požaluj, éto
samyj močnyj kalambur, kogda-libo vychodivšiy iz-pod moego pera.
(WCR 2003)

The 12th issue of the ‘Game of the week’ was not one of a dozen. I think
this is the best play on words that has ever come from my pen.

(140) Dolžen li chodatajsjavusčij ob učebnom kreditе, ranee ego uže poluča-
všyi, obrašat’sja v bank ili summа kreditа vyplačivaetsja avtomati-
česki? (Internet)

\(^{11}\) Cf. again the interesting situation obtaining in modern Bulgarian, where ‘experiential
Ipf’ and ‘factual Ipf’ are expressed by different constellations:

1. Az sám čet’ ‘Pod igoto’. (present tense auxiliary + imperfective participle \(\approx\) ‘experien-
tial Ipf’)
   
   I have read ‘Under the Yoke’.

2. Az bjach čet’ ‘Pod igoto’. (past tense auxiliary + imperfective participle \(\approx\) ‘experien-
tial Ipf’)
   
   I had read ‘Under the Yoke’.

3. Az četoch ‘Pod igoto’. (imperfective aorist; \(\approx\) factual Ipf – typically used in narra-
tives.)
   
   I read ‘Under the Yoke’.

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Must an applicant, applying for credit, having already received [it at a previous occasion], send in the form to the bank, or will the sum automatically be granted?

We do not see any principled difference between factual Ip (or experiential Ip) and the constructions above, despite the fact that the past tense interpretation has a different source (past active participle) in (139) and (140). True, in our own positive working definition of factual Ip (chapter 3.4.1.), we link this reading to the presence of the ‘-l’-morpheme. However, that is merely a practical decision, and nothing in our analysis hinges on this point. In this thesis, we insist on a certain correlation between factual Ip and a semantic past, cf. chapter 5. This shows that we should be careful not to conflate semantic and morphological tense (Paslawska and von Stedhow 2001). A semantic past tense may have different morphological manifestations, as we just saw above. Similarly, it can easily be shown that a certain morphological tense may exhibit various ‘readings’.

Furthermore, a more detailed study of the data does not support Breu’s strong separation of the experiential and factual Ip. If Breu were right, then where do the intermediate cases, such as bidirectional Ip, belong? All the same, Breu is right in emphasising that the alleged ‘experiential perfect’ reading is orthogonal to other subgroups of factual Ip, which can cooccur with a definite assertion time.

Our own position is that the kind of typological and diachronic correlations discussed above is not directly relevant for a semantico-pragmatic account of factual Ip in contemporary Russian. In this respect, we depart from our approach in (Gronn 2001). We still believe that typological and diachronic studies can serve to put forward some hypotheses and predictions concerning the semantic behaviour of factual Ip. The considerations above thereby indicate some of the semantico-pragmatic potential of factual Ip.

4.2.3 The Agent’s Experience

In the experiential reading, the event is located in an indefinite past, but it still has significance for the situation obtaining at the evaluation time. If not, why should the speaker bother to mention the event in question? The analogy explored above between factual Ip and the experiential (perfect) suggests that an analysis of factual Ip should involve reference to notions such as the Agent’s experience and the experiential state. Is it reasonable to refer to the situation obtaining at the evaluation time as an ‘experiential state’? And what does it mean for the Agent to be in a certain experiential state?

The questions above lead us to a common intuition expressed in the literature, viz. that the topic of conversation in the case of factual Ip is the Agent. What is asserted is an attribution of some experience of an event to this Agent, cf. the following prototypical example:

(141) Sergej vešal‘ etu kartu (On znaet‘ kak êto delaetsja‘) (Puduceva 1992, 119)
Sergej (has) put this map on the wall. (He knows how it is done.)

(142) Džon čitali 'Annu Kareninu'.

John has read 'Anna Karenina'. (Hoepelman 1981, 122)

According to Gasparov (1990, 199), factual Ipf in cases like (142) “relates rather to the characteristics of the subject: it means that the past experience of the subject included the fact of reading the book.” Hoepelman (1981, 122) interprets his own example above as conveying the message that “John is someone who has the property of having read ‘Anna Karenina’.” In (Grønn 2001), we claimed that an example like (142) asserts that John is at the evaluation time (e.g. s*) in the experiential state of having read ‘Anna Karenina’, and the temporal interval of s* is part of some larger interval containing the experiential state.

The Agent can also appear as a kind of contrastive topic:

(143) Karpov otkryval turnir, a ego pomoćniki – Podgaec i Svešnikov – igrajut! (Joebllack 2002)

Karpov (has) inaugurated the tournament, while his trainers – Podgaec and Svešnikov – are playing!

Even though the event of inauguration of the tournament took place in the past, this fact is arguably relevant for Karpov at the utterance time (evaluation time), since it is contrasted with the property of playing – in present tense – attributed to some other Agents.

We can contrast these examples of factual Ipf with the following, where Pf is required:

(144) Džon \{ napisal \# \}

roman, kotoryj vyšel v prošlom godu.

John has written a novel which came out last year. (Durst-Andersen 1992, 160)

Durst-Andersen argues that examples like (144) have so-called patient-scope, as opposed to the agent-scope of factual Ipf in cases like (143) above. In (144), factual Ipf is arguably ruled out since the topic of conversation – or ‘discourse theme’ in Durst-Andersen’s terminology – is different from the Agent John. Durst-Andersen (1992, 160) claims that it is not possible in the same utterance to assert something about John in the main clause and something about a novel in the relative clause, since the discourse topics in that case would point in opposite directions.12

The correlation between Pf and the direct object was noted already in (Foryah 1970, 91), and was one of the main ideas explored in (Hopper and Thompson 1980). In light of our previous discussion in sections 4.2.1 and 4.2.2, we get a picture of aspeccual competition as in table 4.2.3.

12Durst-Andersen seems to make a good point, but example (144) is not the best illustration of this idea. Unfortunately, factual Ipf would here be ruled out also with ‘agent-scope’ due to the lexical semantics of ‘pisat’ – to write’. See chapter 7 for a discussion of this kind of creation verbs.
<table>
<thead>
<tr>
<th>Pf</th>
<th>topic: Patient</th>
<th>perfect of result ('object state' holds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual Ipf</td>
<td>topic: Agent</td>
<td>experiential perfect ('subject state' holds)</td>
</tr>
</tbody>
</table>

Table 4.4: Some alleged correlations in aspectual competition

Despite what it suggested in table 4.2.3, it is not clear that topicalisation of the Agent requires the Agent to be in a certain experiential state at the evaluation time. Indeed, some informal statements in the literature can be interpreted along these lines, but in chapter 5.2.1 we will give some arguments for de-emphasising the analogy with the category ‘Experience’. Furthermore, table 4.2.3 accords a certain informational status to the Agent, which can be questioned. The terminology may vary in different approaches, but the Agent is either topicalised (as opposed to focalised), thematic (as opposed to rhematic), or ‘given’ (as opposed to new information). However, this is not the only possible informational status of the Agent in interaction with factual Ipf.

(145) Kto šil’ etot kostium? Ja chotel’ s nim pogovorit’.
Who made this suit? I wanted to talk with him. (Israeli (1996, 13) from Rassudova)

The Agent in examples like (145) is clearly rhematic/focused, and the use of Ipf should be classified as an instance of presuppositional Ipf (cf. chapter 6). This and similar cases are orthogonal to the analogy with experiential perfect. Again, this points to the need of distinguishing between different subgroups of factual Ipf.

4.3 Factual Ipf and Unmarkedness

In chapter 1.7, we referred to the dominant role of markedness theory in the study of aspect in Russian. In this section we focus on some earlier explanations of the nature of factual Ipf, notably (Forsyth 1970) and (Smith 1997) and (Borik 2002), which are crucially based on the idea that Ipf is the unmarked member of the category of aspect.

It should be noted in this respect that factual Ipf is commonly referred to as the ultimate evidence – or at least the prototypical example – of Ipf being unmarked. As pointed out by Dickey (2000, 96), this widely held opinion has not encouraged in-depth studies of factual Ipf. It is a priori assumed that an explanation involving unmarkedness is always available for difficult cases of Ipf qua Pf.

4.3.1 Privative vs. Subordinate Opposition

As we recall from chapter 1, there is some terminological (and perhaps also more substantial) confusion and inconsistency in the literature as to what kind of (un)markedness should be accorded to Ipf.

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Historically, the derivational aspectual system in Russian developed as a grammaticalisation of lexical telicity, such that prefixed verbs were perceived as being perfective (Bren 1998, 95). Since Ipf through its factual reading can also be used in referring to complete events denoted by telic predicates, the opposition can be argued to be of a ‘subordinate’ character: Pf [±Telicity] vs. Ipf [±Telicity].

Unfortunately, several authors, such as (Forsyth 1970, 6) and (Hulanicki 1973, 175), refer to this kind of opposition, where Ipf may or may not express the positive meaning of Pf, as ‘privative’. However, following (Chvany 1975), we restrict the term ‘privative’ to the kind of opposition obtaining in closed systems where the unmarked member is unable to take on the positive value of the marked member (A vs. ¬A). With these terminological definitions in mind, it is clear that factual Ipf is by most scholars treated as an instance of Ipf being the unmarked member of a subordinate opposition.

A Privative Analysis

An exception to this way of treating factual Ipf is represented by Borik’s recent dissertation, where the aspectual opposition is in fact explicitly analysed as privative. Borik (2002) identifies Pf with two conditions which both must hold for a perfective sentence to be true, while Ipf is defined in negative terms as non-perfective. Thus, Ipf is used as the unmarked member if at least one of the two conditions on perfectionity is not met (Borik 2002, 8). The definition of Pf proposed by Borik is the following, where the variables have the classic Reichenbachian interpretation, except that they obviously refer to intervals rather than points in time:

• Pf in Russian is defined by the configuration:
  \[ S \cap R = \emptyset \land E \subseteq R \]

• Ipf is defined as non-perfective, i.e.:
  \[ \neg [S \cap R = \emptyset \land E \subseteq R], \]
  hence \[ S \cap R \neq \emptyset \lor E \nsubseteq R \] (Borik 2002, 193)

The first condition on Pf – that the reference time should not overlap the utterance time – is (primarily) supposed to reflect the fact that Pf with present tense morphology has a future tense interpretation. How is this system able to account for factual Ipf? Note first that the purely ‘aspectual configuration’ \( E \subseteq R \) is the default interpretation in this system. Hence, if the ‘tense-like’ condition (the relation between \( S \) and \( R \)) on perfectionity is violated, Ipf is automatically used and we can assume that the aspectual condition \( E \subseteq R \) remains unchanged. Of course, from a purely logical point of view, the system does not exclude the possibility of Ipf being triggered by a negation of both conjuncts in the definition of Pf. However, Borik seems to defend the view that \( E \subseteq R \) is true of Ipf by default when the first conjunct of the condition on perfectionity is negated. In a sense, this makes the progressive reading semantically marked compared to factual Ipf, cf. also similar ideas in (Forsyth 1970) below.
Since factual Ipf denotes complete events \((E \subseteq R)\), factual Ipf can, of course, only be defined negatively w.r.t. the first condition on Pf. Hence, according to Borik’s theory, the reference time and utterance time must overlap in the case of factual Ipf, that is, \(S \cap R \neq \emptyset\). This is also why Borik refers to factual Ipf as the ‘Present Perfect reading of Ipf’.

This analysis of factual Ipf is untenable for the following reasons: As we pointed out in chapter 2.2.2, we are sceptical about this way of making the reference time parameter \((R)\) carry too many functions. More importantly, Borik’s theory is problematic in view of our claim that factual Ipf should empirically not be restricted to an interpretation of tense as a ‘present perfect’ (cf. presuppositional Ipf and also certain cases of existential Ipf). We will argue in chapter 5 that a ‘present perfect’-analysis is not what we are after. This is most clearly demonstrated in cases where factual Ipf cooccurs with past perfect readings. Hence, the utterance time is not the only possible evaluation time on a perfect reading, and Borik’s theory oversimplifies in according the utterance time (Reichenbach’s \(S\)) an obligatory role in all aspectual configurations.

Nevertheless, we do not exclude the possibility of defining aspect in Russian as a truly privative opposition. However, we believe this can only be done by taking discourse semantics into account. At the ‘sentence level’, both Pf and factual Ipf refer to complete events, and the latter can therefore not simply be defined negatively w.r.t. the former. On the other hand, if we go beyond the aspectual configuration proper and include, say, a parameter such as [+Temporal anchoring], or [+Sequencing] (Barentsen 1998), we could possibly make a privative analysis viable. We refer the reader to chapter 7 for some ideas along these lines.

The Subordinate View

The idea is widespread that factual Ipf “serves as the basis for the positing of the imperfective/perfective distinction as one of ‘subordinate markedness’ (A vs. No-Statement of A)” (Brecht 1985, 28).

Presented in this way, it remains unclear what referential properties Ipf actually has. To illustrate the potential and limits of a feature-based subordinate theory, consider the opposition in lexical semantics between ‘woman’ and ‘man’ in English (or, say, ‘femme vs. homme’ in French):

- ‘woman’ [+fem]
- 1. ‘man’ [+fem]
- 2. ‘man’ [No statement of fem]

The English noun ‘man’ is ambiguous – it may either refer to male persons (as opposed to women) or it may denote mankind as such, being neutral as to the category of gender.

In fact, (Seljakin 1997) proposes a three-way division of the semantics of Russian aspect, which reflects this model. In this view, Pf and Ipf stand in a truly privative opposition [±Culmination] in addition to a subordinate opposition:

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- Pf [+Culm]
- 1. Ipf₁ [−Culm]
  2. Ipf₂ [No statement of Culm]

Factual Ipf is obviously captured by Ipf₂. The analysis is not particularly strong. For instance, it does not account for the ‘strong reading hypothesis’ proposed in chapter 3, that is, why factual Ipf with telic predicates refer to complete events. Furthermore, one would like to know on what grounds it is justified to separate the semantics of Ipf along the dichotomy [−Culm] vs. [No statement of Culm]. The two semantic categories are formally identical through imperfective morphology, and the ambiguity approach is therefore not intuitively appealing. In the model above, the ambiguity-effect is also peculiar in the sense that the two separate interpretations of Ipf relate to different levels. Ipf₂ is felt to be higher in the hierarchy than Ipf₁, but does this mean that factual Ipf stands ‘above’ the aspectual opposition?

True, these kinds of oppositions are quite pervasive in natural language. Consider for instance the category of number:

(146) U tebja est’ deti?
Do you have children?

This classic example is valid both for English and Russian. The observed pattern is the following: The plurality marker is ‘ambiguous’ between expressing plurality and being neutral w.r.t. to the number category, as in the example above. Accordingly, ‘da – yes’ be a felicitous answer to both the Russian and English question above, even if the addressee has only one child. This example further highlights the issue of obligatory grammatical categories. Nouns in Russian and English are necessarily marked for number, not completely unlike the characteristic obligatoriness of aspectual marking in the verbal system of Russian. Accordingly, Ipf can be perceived as a default which is used whenever aspectual issues are irrelevant for the speaker.

Nevertheless, the ambiguity hypothesis is less clear-cut in the case of imperfective aspect than with the category of number. Is it justified to draw the line precisely between [−Culm] and [No statement of Culm]? What about all the intermediate cases? Seljakin says close to nothing about the content of [No statement of Culm], although he recognises the importance of asking this question: “samo nemarkirovannoe značenie trebuet svoego opredelenija: kakovo ego soderžanie?” (Seljakin 1997, 214). We cannot content ourselves with claiming that factual Ipf is simply ‘non-aspectual’, or outside the aspectual opposition.

### 4.3.2 Factual Ipf as ‘Simple Denotation’

A subordinate analysis of factual Ipf crucially depends on the content accorded to the expression ‘No statement of A’. Unlike Seljakin and others who claim that it is impossible to define factual Ipf in aspectual terms, (Forsyth 1970) proposes
a more explicit account of the subordinate opposition. Forsyth refers to this
general imperfective meaning as ‘naming of the action’ or ‘simple denotation’,
which he even claims is the basic function of Ipf. He thereby reverses the tradi-
tional roles of the processual and factual readings in the asp ectual system. This
seemingly surprising idea is motivated by the claim that the simple identification
of the event in question, “is all that the imperfect past can ever explicitly
mean” (Forsyth 1970, 82). More specific meanings, such as progressivity or
habituality, are necessarily dependent on a particular context.

Forsyth (1970, 82) sees this simple denotative use as grammatically mo-
tivated by “avoidance of the precise meaning of the perfective”, and thereby
assumes a subordinate interpretation of the asp ectual category. Ipf does not
necessarily contradict the meaning of Pf, but it is by nature less explicit w.r.t.
the asp ectual configuration.

With this in mind, Forsyth discusses in some detail different cases of factual
Ipf, and concludes that the common factor is “[an] approach to the action as
a matter of general information: was the action named performed or not?”
(Forsyth 1970, 83), whence the proposed descriptive labels ‘naming of the action’
or ‘simple denotation’. However, once again the question is whether this is able
to capture the presuppositional reading, cf. the following example discussed by
Forsyth:

(147) Kakie u vas neudobne mesta! Kto pokupal? ich?
What bad seats we’ve got! Who bought the tickets? (Forsyth 1970, 84)

While one may agree to call this a ‘simple denotation’ use of Ipf, it is not
correct that factual Ipf in this case focuses on whether “the action named [was]
performed or not”, as Forsyth puts it in his more general characteristic of factual
Ipf. The presuppositional Ipf in (147) presupposes that the event of buying tick-
ets was previously instantiated, and focuses instead on the Agent of this event.
We therefore question whether both these factual readings can be subsumed
under ‘simple denotation’ given Forsyth’s understanding of this term.

Forsyth’s views on factual Ipf have been adopted by several authors, such as
for instance (Comrie 1976). Comrie’s Forsythian interpretation of factual
Ipf is noteworthy since his own analysis of the asp ectual opposition has been
very influential in asp ectual studies. Then how does Comrie distinguish the
interpretation of factual Ipf from Pf? In his famous words, Pf “indicates the
view of a situation as a single whole” (Comrie 1976, 16) and “involves lack of
explicit reference to the internal temporal constituency of a situation” (Comrie
1976, 21). The term ‘situation’ is here to be understood in the sense of ‘event’
or ‘eventuality’. Transposed into a framework making use of reference time
parameters, this definition of Pf amounts to saying that the ‘complete’ event is
included in the assertion time (\(e \subseteq t\)). The speaker’s focus is not on the internal
constituency of the event, hence the event is seen as a complete whole within a
broader assertion time.

Given a subordinate view of the asp ectual opposition, we would expect some-
th ing like the following from a traditional feature approach: Pf [+Totality] vs.
Ipf [+Totality]. Hence, Ipf should not be accorded a positive definition. Comrie, however, is not explicit on the precise nature of this subordinate opposition. He restricts himself to more general remarks, such as the following:

“In general, however, even where, on other grounds, one might expect the Perfective to be used, it is possible in Russian to use the Imperfective, when there is no specific reference to completeness of the event [ . . . ] Here the speaker is simply interested in expressing the bare fact that such and such event did take place without any further implications [ . . . ]” (Comrie 1976, 113)

Dahl (1985, 76) objects to this way of dealing with factual Ipf, since Comrie seems to suggest that both Pf and (factual) Ipf are used to instantiate the ‘bare fact’ that an event took place. Comrie defines Pf as presenting the event without paying attention to the internal constituency of the event, but how does this differ from factual Ipf? Indeed, both Pf and factual Ipf seem to trigger the aspectual configuration \( c \subseteq t \).

Comrie’s account is problematic, according to Dahl, since it can be interpreted as providing a *positive* definition of (factual) Ipf overlapping with the definition of the marked member Pf. Accordingly, we get the following aspectual opposition: Pf [+Totality] vs. Ipf [+Process or +Totality]. This actually looks more like an equipollent than subordinate opposition. And, furthermore, if the same positive feature is part of the definition of both members, one may ask, at least from a pragmatic point of view, what is the motivation for using one or the other member. This system seemingly violates global communicative principles of economy and is not what one expects to find in a grammatical category containing two members.

However, Hedin (2000, 234), who refers to Dahl’s criticism of Comrie, points out that the latter’s characterisation of Ipf may also be given a slightly different interpretation, which is more compatible with a coherent subordinate aspectual opposition. According to Hedin, Comrie’s claim that Ipf expresses “the bare fact that such and such event did take place without any further implications”, could be interpreted as Ipf being *neutral* w.r.t. totality.

In our view, the above confusion is inevitable as long as aspectual distinctions are formulated in academic English. Indeed, Dahl is right that Comrie can reasonably be interpreted to the effect that both Pf and factual Ipf instantiate – in our terminology – the configuration \( c \subseteq t \). However, while this configuration is directly encoded by the perfective operator, the same configuration requires a particular ‘factual Ipf context’ (big frame adverbial etc.) in order to arise with imperfective morphology. In this respect, we depart from Forsyth’s suggestion that factual Ipf represents the inherent imperfective meaning. Imperfective morphology alone is not enough to license this inclusion relation. We therefore argue, notably in chapters 2 and 5, that Ipf can – in a zero context – only be analysed as a general *overlap* relation: \( e \cap t \). In practice, however, this is to say that Ipf expresses [+Totality] or the disjunction \( e \subseteq t \lor t \subseteq e \). This means that Ipf should not be reduced to [No statement of ‘Totality’]. Ipf is either [+Totality]
or [–Totality]. We will see in chapter 7 that this view has repercussions for our conception of the role of markedness in the aspectual category.

4.3.3 From Unmarkedness to Pragmatics

It is certainly not straightforward to incorporate ideas from markedness theory in an explicit semantic framework. In fact, the influence of markedness theory is partly responsible for the widespread idea that aspect in Russian, and (factual) Ipf in particular, does not lend itself to a semantic, truth conditional analysis (Smith 1997, 8). A similar scepticism is also recurrent in Slavic linguistics, where truth-conditional semantics has never been fashionable.

When it comes to factual Ipf, there is some sense in rejecting truth conditional semantics. It is doubtful whether static semantics (at the sentence level), can capture the relevant distinctions between Ipf and Pf in aspectual competition. An essential part of our solution to this methodological problem is a dynamic framework (DRT), but there may be other more or less promising ways of uncovering the pragmatic differences observed in aspectual competition.

In most contemporary treatments of factual Ipf, it is argued that the imperfective in this case represents a different way of encoding the message than Pf. Researchers like Paduèeva and Israeli have stressed the importance of a pragmatic approach to this phenomenon. In this section, we will concentrate on Smith’s (1997) pragmatic account of factual Ipf, since she explicitly relates her analysis to markedness theory. Smith’s overall question in this respect can be formulated thus: What is the Gricean motivation for choosing the unmarked Ipf in referring to complete events?

The idea of linking the usage of factual Ipf to pragmatic implicatures pops up from time to time, cf. also (Sokolovskaja 1993). The problem is to know which Gricean maxims to invoke in the analysis, since they often point in different directions. The Maxim of Quantity (“Say as much as you can”, i.e. “Make your contribution as informative as possible” (Grice 1989)) does not provide any solution to our cases of aspectual competition. From the fact that the speaker avoids the allegedly more specific marked form Pf in favour of Ipf, the hearer is expected to conclude that a complete event reading is unavailable. However, in our cases of factual Ipf this implicature must be cancelled inasmuch as factual Ipf indeed has a complete event reading. If this maxim were to have priority in human communication, we would expect factual Ipf to always lose in competition with Pf.

The competing maxim known as the Maxim of Quality (“Say only that for which you have adequate evidence” (Grice 1989)) is more promising w.r.t. factual Ipf. In order to use this maxim in an analysis of factual Ipf, we would need an explicit and specific analysis of Pf. Assuming that Pf encodes, say, [+Temporal anchoring] or [+Sequencing] (cf. chapter 7), one can argue that Ipf is triggered by the Maxim of Quality, when the speaker possesses no information pertaining to these features.

The most elaborate attempt at analysing Russian aspect in terms of Gricean implicatures, is carried out in (Smith 1997), where the chapter on Russian re-
ports joint work with Rappaport. In their framework, Ipf in Russian is analysed as inducing the ‘viewpoint’ (Smith 1997, 234) depicted in figure 4.2.

Figure 4.2: Schema for the Russian imperfective viewpoint according to (Smith 1997)

...... F
/////  

This is to say that the viewpoint (marked with slashes in figure 4.2) includes the beginning of the event, but precedes the endpoint (F), thereby excluding focus on the culmination or consequent state. This schema roughly corresponds to the conditions ‘t ⊂ e ∧ f_{begin}(t) = f_{begin}(e)’, where ‘f_{begin}’ is a function mapping temporal intervals (linearly ordered time points) to their left boundary.

How can this schema be made compatible with factual Ipf, where F (the culmination of the event) is actually reached? The solution in (Smith 1997) is based on distinguishing between so-called direct and augmented interpretations. This corresponds to a semantic and pragmatic level, respectively. Additional pragmatic inferences are further divided into positive pragmatic emphasis and negative pragmatic emphasis (Smith 1997, 235). Let us see how pragmatic information and the resulting augmented interpretation deals with bidirectional Ipf:

(148)  K vam kto-to prichodil’a.  
Someone has come for you (and is no longer here). (Smith 1997, 238)

Smith refers to the inference arising from (148) that the visitor is no longer present as ‘the convention of Annulled Result’. The distinction between Pf and bidirectional Ipf calls for a semantico-pragmatic explanation, but the way pragmatic reasoning is invoked in (Smith 1997) is surprising.

In order to explain such examples as (148), the authors refer to a positive pragmatic inference which allegedly draws on information made visible (!) by the viewpoint (Smith 1997, 240). Bidirectional Ipf accordingly emphasises the event of someone’s coming (say, by foot). No message is encoded as to the question of whether this person is currently present as a result of the coming event. Alas, it is not clear why this focus on the process licenses the inference in (148) that visitor has left after arriving. From the account in (Smith 1997), it does not even follow that the coming event actually is completed. Hence, ‘positive’ pragmatic inferences along these lines cannot be the whole story.

From the perspective of markedness theory, it seems that the ‘convention of Annulled Result’ arises in contrast to the interpretation of target state validity associated with Pf, which would arise in (148) from a substitution of ‘prisel’ for ‘prichodil’. Therefore one would rather expect that Smith, who explicitly adheres to the Prague school’s markedness theory, would relate the bidirectional interpretation to some kind of negative pragmatic inference arising from the non-use of Pf. But this is for some reason not the strategy adopted.

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The main problem with the analysis of aspectual competition and Russian aspect presented in (Smith 1997) is that the motivation behind a choice between positive and negative inferences seems arbitrary, and it remains unclear when augmented (pragmatic) interpretations are called for.\(^{13}\)

It has so far proven difficult to give a completely satisfactory analysis of factual Ipfs solely along the lines of markedness theory, despite the efforts of the authors referred to above. We therefore assume that the idea that Ipfs is 'unmarked' historically and/or in the aspectual system as a whole does not fully explain the behaviour of factual Ipfs. There is also a methodological problem as to how markedness theory could be incorporated in a semantico-pragmatic account of aspect. For some aspectologists, markedness theory is rejected also on more principled grounds, as witnessed by the following quote:

“[E]xplanations based on markedness and neutralization are dangerously circular: the concept of neutralization is invoked in just those instances which would otherwise contradict the general rule posited.” (Lindstedt 1985, 217)

Nevertheless, we will return to markedness theory in chapter 7.3, but then our focus will be quite different: In an optimality theoretic setting we will argue that factual Ipfs is the marked choice in the domain of reference to complete events.

### 4.4 Factual Ipfs and Pragmatic Explanations

Since both Pf and factual Ipfs denote complete events, two questions naturally arise: First, what are the possible differences between the aspects in the aspectual competition, and, second, what would be the motivation for choosing Ipfs?

Padučeva and Israeli, among others, turn to pragmatic explanations in order to give a positive answer (i.e. not in terms of (un)markedness) to the second question above. For Israeli, Russian aspect is a so-called 'lexico-pragmatic category' (Israeli 1996, 46), and she takes particular care to stress the discourse functions of the two aspects. It is easy to provide minimal pairs showing that Pf may, in sentences denoting complete events, be substituted for factual Ipfs and vice versa, however, as pointed out by Israeli, “the fact that a sentence can be said means very little, unless we know in what circumstances it can be said, what preceded it and what followed it” (Israeli 1998, 73). This is also the position adopted by dynamic semantics.

This section is divided in two parts. We first have a look at some examples of what we believe are erroneous, though widespread, ‘pragmatic’ strategies. Next, we turn to a systematic case study of the relevance of pragmatic contracts

\(^{13}\)For instance, the authors invoke an augmented interpretation in the case of conative readings of Ipfs (cf. chapter 3.4.2). But this appears unmotivated as the conative (incomplete event reading) complies with the semantic definition (schema) given for Ipfs.
for the aspectual competition, as this idea is developed in the discourse-oriented work of Israeli (1996).

4.4.1 Pragmatic Epiphenomena

Many of the generalisations proposed in pragmatic studies of aspectual competition lack any linguistic relevance. What is at best a pragmatic epiphenomenon is often given a pivotal role in the explanation of the aspectual choice, while the presence of the ‘pragmatics’ in question really ought to follow more indirectly from a general definition of the two aspects. Examples of such misconceptions are numerous in this field, and we give some illustrations below.

Sokolovskaja (1993, 60) and Israeli (1996, 14) stress the need to turn to pragmatic factors such as “knowledge of the speaker and the addressee about the outside world and each other”. However, the use of world-knowledge in linguistic explanations can easily lead astray, as in Swan’s analysis of (149):

(149) Zvonila vaša žena.
    Your wife called. (Swan 1977, 520)

Swan notes the rather obvious fact that (149) can be used by the speaker talking to a person who was absent at the time of the telephone call. But going from this observation to claiming that (149) has two meanings, one being the literal meaning and the second one being paraphrasable as a conative “your wife tried to get hold of you” (Swan 1977, 520), seems a bit far fetched. This should certainly not be considered a case of ambiguity, as actually suggested by Swan.

In some pragmatic studies of aspect, there is a tendency to relate aspectual competition to the illocutionary force of speech acts observed in specific contexts. The following example illustrates this point:

(150) Mat’: Nina, schodiš v magazin.
    Nina: Ja ubirala svoju komnatu. (based on (Sokolovskaja 1993, 60))
    Mother: Nina, go shopping (for me).
    Nina: I tidied my room.

Sokolovskaja argues that the pragmatic function of factual Ipf ‘ubirala’ – tidied’ in example (150) is to express some kind of refusal. The idea is that in an appropriate context for (150) there must be some implicit contract between mother and daughter, which says for instance that “if Nina tidies her room, she doesn’t have to do anything else that day” (Sokolovskaja 1993, 62). The implicature of refusal (or some similar notion) arises because the mother assumes that Nina is a cooperative interlocutor, and that her answer accordingly must have some relevance to the request. This is, presumably, only possible if the answer invokes the implicit contract referred to above. The intended meaning of Nina’s utterance can therefore be paraphrased as “No, I will not go shopping, since I’ve already tidied my room today, and according to our contract, I don’t have to submit to any further requests.”
Besides the speaker’s ‘refusal’, factual Ipf allegedly encodes ‘agreement’ (Sokolovskaja 1993, 64) and ‘justification’ (Sokolovskaja 1993, 65) etc. To give an example of the illocutionary force of ‘justification’, consider factual Ipf in B’s reply in (151):

(151) A: Podumajte! Vy ni razu ne pobivali u Sasi v bol’nice!
    B: No my emu frukty . . . cvety posylali (Sokolovskaja 1993, 64).
    A: I can’t believe it! You haven’t visited Sasa at the hospital yet!
    B: But we sent him some fruits . . . and flowers.

A criticises B, who then justifies himself by referring to a past event of sending fruits and flowers.

The above characteristics of factual Ipf are contrasted with Pf which is supposed to express the subject’s ‘reproach’, ‘warning’, ‘approval’, ‘confirmation’ etc. (Sokolovskaja 1993, 64). But how is it conceivable that a fine-grained contrast between, say, ‘agreement’ (‘soglasie’; Ipf) on the one hand and ‘approval/confirmation’ (‘odobrenie/podtverdenie’; Pf) on the other is manifested in a grammatical category such as aspect? As far as we can judge, her analysis is based on particular utterances in specific contexts (‘la parole’), and should therefore not give rise to such ambitious generalisations.

If this kind of pragmatic reasoning is supposed to tell us anything about factual Ipf, it should be possible to derive functions like for instance ‘refusal’ in a systematic way from a semantic-pragmatic analysis of aspectual competition. However, the function of ‘refusal’ is far too context-sensitive to be related to Ipf as such.

In this respect, the existing pragmatic analyses of aspectual phenomena in Russian are, not surprisingly, often contradictory in their attempts to make linguistically valid generalisations. Sokolovskaja claims that Ipf is contractual, and that Pf (‘ubrala – tidied’) would be infelicitous in example (150) above. However, as we will see below in section 4.4.2, Israeli (1996) arrives at quite the opposite conclusion, viz. that Pf is contractual in nature.

There are many kinds of fanciful explanations in the literature on factual Ipf. An illustration of this can be found in Rassudova’s otherwise excellent work. She introduces the rather surprising idea that the use of factual Ipf is triggered in certain contexts by the fact that only the Agent of the event can answer a particular question. Her example is the following:

(152) [Scenario: a woman is skiing in the park. Somebody asks her:]
    A: Sko’ko stoja’t lyzi s botinkami?
    B: Ne znaju, eto muž brai. (Rassudova 1982, 56)
    A: How much is it for skies and shoes?
    B: I don’t know, it was my husband who bought them.

According to Rassudova, factual Ipf is used in B’s reply since only her husband (the Agent of the buying event) could possible know the answer to A’s question. The same kind of explanation is also adopted by Chaput (1990, 303) for similar examples.

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In our opinion, (152) is a prototypical case of presuppositional Ip (note the ‘eto’-cleft construction), and there should be no need to seek additional (and unmotivated) explanations for factual Ip in such cases. As pointed out by Israeli, the alleged correlation referred to above “makes an assumption that all one-participant events with no witnesses must be described in [the imperfective]” (Israeli 1998, 56). This is obviously not correct, thus the feature “only the Agent can answer the question” can hardly be a relevant factor in a linguistic analysis of factual Ip.

Finally, let us end this subsection with yet another curious explanation of the aspectual competition, this time from (Fielder 1990). Fielder’s article is devoted to an analysis of the aspectual choice in the pair ‘[po]-prosi – to ask’ in larger discourses. Such an in-depth study of minimal pairs seems to represent a very promising approach. However, some of her explanations appear to be rather ad hoc, cf. her discussion of the following example:


The assignment had been formulated precisely and clearly. Stalin requested that I not divulge the content of our conversation. This was, perhaps, an unjust warning. After all, I am a military man . . . (Fielder 1990, 280)

Fielder makes the remarkable claim that Ip is preferred in formal and official settings in order to express the speaker’s reverence. This is supposed to explain why ‘prosi1’ is used in the discourse above. Fielder (1990, 280) reports that most informants confronted with the context of (153) initially chose Pf (‘poprosi’), but then changed their mind due to the authority of Stalin. It seems, though, a bit far fetched to blame factual Ip on Stalin.

In our opinion, what is lacking in Fielder’s account of (153) is a consideration of discourse factors such as the preference for Pf in cases of narrative progression. The informants initially preferred Pf, but when it turned out that there was no second event following the event of Stalin’s request, they instead selected factual Ip to express the temporal indefiniteness of the situation.

4.4.2 A Discourse Analysis of Factual Ip and Pragmatic Contracts

We give here a rather detailed account of the theory outlined in (Israeli 1996) related to the interaction between aspectual competition and so-called pragmatic contracts. This analysis contains the most principled pragmatic approach to factual Ip in the literature. There are good reasons for having a closer look at Israeli’s work, qualified as ‘superb’ by Dickey (2000, 123), another prominent researcher on factual Ip. Nevertheless, we will eventually have to conclude that Israeli’s analysis is inadequate in some respects, and also fails to account for all
the relevant data.\footnote{\textsuperscript{14}}

The basic idea of her analysis is that the use of Pf in contexts of aspectual competition is characterised by the \textit{presence} of a certain pragmatic contract between the discourse participants, while factual Ip\textsubscript{f} either encodes \textit{violation} or \textit{absence} of such a contract. The two pragmatic factors triggering factual Ip\textsubscript{f} should not be conflated at this level. Violation of a contract differs from absence of contract in presupposing the presence of a contract.

Israeli provides the following characteristic examples of factual Ip\textsubscript{f} being used when a contract is violated:

\begin{quote}
\begin{enumerate}
\item (154) \textit{Ja ved’ govoril\textsuperscript{4}.}
\begin{quote}
I did \textit{tell} you. (Israeli 1996, 21)
\end{quote}
\item (155) \textit{Ja že pokazival\textsuperscript{4}.}
\begin{quote}
I did \textit{show} you. (Israeli 1996, 21)
\end{quote}
\item (156) Pomnite\textsuperscript{5}, ja \textit{rasskazyval\textsuperscript{4} vam \ldots}
\begin{quote}
Remember, I \textit{told} you? \ldots (Israeli 1996, 21)
\end{quote}
\end{enumerate}
\end{quote}

We note that factual Ip\textsubscript{f}, when expressing violation of a contract, is typically accompanied by discourse particles like ‘ved’, ‘že’, or other kinds of discourse reminders like ‘pomnite’ – remember. The speaker thereby indirectly points to the broken contract, reminding his interlocutor of the previous discussion (Israeli 1996, 21); (Sokolovskaja 1993, 63).

We will in the following rather focus on the alleged difference between \textit{presence of contract} (Pf) vs. \textit{absence of contract} (Ip\textsubscript{f}), as in (157):

\begin{quote}
\begin{enumerate}
\item (157) \textit{Ja uže }\begin{cases}
\text{čital\textsuperscript{4}} \\
\text{procital\textsuperscript{p}}
\end{cases}\end{enumerate}
\begin{quote}
\text{‘Vojnu i mir’}.
\end{quote}
\end{quote}

I have already \textit{read} ‘War and Peace’. (Israeli 1996, 19)

To grasp the distinction, imagine a classroom-situation where the teacher has previously given the students an assignment to read ‘War and Peace’. On the teacher’s request concerning the current status of the assignment, the answer can only be ‘procital\textsuperscript{p}’. Pf here indicates the existence of a contract between the teacher and the student. We can look at this contract as being part of the \textit{shared beliefs} among the discourse participants. Both the student and the teacher know that the former has been given the assignment to read ‘War and Peace’, and the teacher furthermore \textit{expects} this event to have taken place.\footnote{\textsuperscript{15}}

\footnote{\textsuperscript{14}}\textsuperscript{14}Israeli explicitly restricts her analysis to the behaviour of certain subsets of factual Ip\textsubscript{f}. Notably, she does not consider the presence of a so-called pragmatic contract to be a relevant parameter for the aspectual choice in utterances containing creation verbs. It appears, however, that her theory cannot account for the full range of factual Ip\textsubscript{f} with non-creation verbs either.

\footnote{\textsuperscript{15}}\textsuperscript{15}This kind of contractual relationship is considered an ‘expectedness presupposition’ in (Leinson 1982, 190). (1996, 16) rejects this notion of ‘expectedness’; since one may argue – at least in a Russian-speaking community – that also ‘čital’ in (157) refers to an event which in a sense is expected to have taken place (every Russian normally reads ‘War
According to Israeli's theory, factual Ipf would only be possible without there being such a contract between the discourse participants.

Similar ideas are found in other works, such as (Rassudova 1982), and (Chaput 1990). However, Israeli (1996, 18) goes a step further and tries to pinpoint the difference between Pf and Ipf in these cases by means of a simplified representational set-up using Venn diagrams to display the *attitudinal states* (or 'knowledge sets' in Israeli's terminology) of the discourse participants. An attitudinal state can in her formalism be updated in light of new information as the discourse evolves (Israeli 1996, 25).

For ease of comparison with the framework adopted in this thesis, we propose to transpose this analysis to a DRT format. We believe nothing is lost in this process, since recent versions of DRT are apt at representing both mental representations, such as different attitudinal states, and the update function characteristic of dynamic semantics. In this respect, DRT is not only a theory of formal semantics, but also address linguistic phenomena “whose analysis requires systematic reference to psychological aspects of communication” (Bende-Farkas and Kamp 2001, 19). One of the underlying aims of this semantico-pragmatic framework is precisely to incorporate intuitions such as the ones expressed by Israeli. We will basically adopt the apparatus and terminology developed in (Bende-Farkas and Kamp 2001), and we refer the reader to this and similar works in DRT for a more comprehensive explanation of the formalism.

We assume that the attitudes in question can be analysed as *beliefs* and *expectations*. Following (Bende-Farkas and Kamp 2001, 21), we represent these attitudes as pairs consisting of a DRS identifying the content of the attitude, and the mode indicator. The latter (*BEL* ['belief'] or *EXP* ['expectation']) determines the nature of the attitude:

\[
< \text{BEL} \begin{array}{c}
\text{content of the belief}
\end{array} >
\]

It will often be the case that different attitudes (e.g., beliefs of different discourse participants) will share some discourse referents. For instance, in our case, it is reasonable to assume that the speaker and hearer share some beliefs (and Peace' at some period in his life). The expectedness effect in this latter case, which is the domain of factual Ipf, is more indirect and is due to *shared cultural understanding* (Israeli 1996, 19f.) or 'scripting' in Leinen's terminology (Leinen 1982, 195). Israeli's account thereby presupposes that it be possible to distinguish between notions like 'shared belief', giving rise to pragmatic contracts, and 'shared cultural understanding'.

Chaput provides an interesting example of 'absence of contract': In the courtroom, the defendants are questioned by an impartial judge who is not concerned with the beliefs or expectations of the defendant, but only focuses on the facts of the events, i.e. whether or not the events in question were performed. In this case, factual Ipf is appropriate:

1. *Vy *vozvrášal*si* domoj pošle teatra?*

   *Did you return home after the theater?* (Chaput 1990, 295)

Chaput (1990, 300) motivates this 'simple denotation' usage of Ipf in terms of "avoidance of the perfective presuppositions of expectation and obligation", 

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about the same novel (‘War and Peace’). In order to capture this, DRT makes use of a special anchoring mechanism.

The anchoring can take place at different levels. In the case of (157) above one can assume – as Israeli tacitly does in her analysis – that the existence of the novel ‘War and Peace’ is taken for granted even if the shared beliefs of the speaker and hearer concerning the instantiation of a particular event of reading ‘War and Peace’ eventually turn out to be erroneous. This implies that the discourse referent for the novel is not merely anchored to the attitudinal state, but has a de re interpretation. We can relate anchored individuals occurring in attitudinal states to their reference in ‘the world’ via the universe of the main DRS. This is done by distinguishing between internal and external anchors. Once more we adopt the notation from (Bende-Farkas and Kamp 2001, 23), where $<x', x>$ says that $x$ is the external anchor for $x'$:

\[
\begin{align*}
&<[\text{ANCH}, x']> \quad \text{information about } x' \quad > \\
&<\text{ATTITUDE} \quad \text{content of the attitude} \quad > \\
&\quad \text{which relates to } x'
\end{align*}
\]

Finally, we use a predicate $AT$ in order to attribute a certain attitudinal state to a particular discourse participant. There are both two-place and three-place versions of this predicate, the latter having a third component consisting of a set of external anchors (Bende-Farkas and Kamp 2001, 24).

Given these modifications required by the DRT-format, Israeli’s analysis of the contractual Pf could, in the case of (157), be represented by the DRS in figure 4.3.

The version of (157) containing a perfective verb asserts the existence of an object $x$ (the novel ‘War and Peace’), and further asserts that this book was read by the speaker (‘read(f, x)’).\footnote{For simplicity, we follow Israeli and ignore tense and reference to events.} The speaker (f) and hearer (h) are indexicals and are therefore accessible in any normal discourse situation, without appearing in a particular universe.

Note that the mental state represented in figure 4.3 as part of the state $s$ is attributed to the speaker. The speaker has certain beliefs some of which are beliefs about the expectations of the hearer. What is important for the pragmatic contract underlying the utterance in (157), is what the speaker believes about the hearer’s beliefs/expectations. We could in principle also represent the hearer’s beliefs about the speaker’s beliefs etc. A ‘back-and-forth’ iteration of this process, would eventually yield a representation of the shared beliefs in the discourse (Bende-Farkas and Kamp 2001, 25), which is what Israeli is after.

We should now compare the DRS in figure 4.3, representing the utterance containing Pf, with Israeli’s analysis of factual IpF in (157). In our DRT-format, the latter can be represented as in figure 4.4.
The discourse in which (157) is uttered with the imperfective verb form contains no mutual beliefs of the speaker’s having been given an assignment to read ‘War and Peace’. Hence, factual IpF, according to Israeli’s theory, encodes absence of a pragmatic contract.

So far so good. Alas, the prediction that factual IpF should be the preferred choice in absence of a pragmatic contract is not always borne out, as Israeli herself is fully aware of. The hardest nut to crack is therefore to extend this picture to cases where factual IpF is ruled out despite there being no contract between the discourse participants:

(158) Pozže ja \{ \text{pročitala} \#	ext{čitali} \} korrespondenciju n’jujorkskogo žurnalista Vuda Kleina, kotorýj po poručeniyu gazety [ ... ] prožil mesjac v trušćobach i posle napisal o nich tak: [ ... ]

Later in Moscow I \textbf{read} the article by New York correspondent Wood Klein, who lived for a month in slums on assignment from his paper. Afterwards he wrote about them as follows: [ ... ] (Israeli 1996, 23)

Such examples make Israeli introduce an additional so-called \textit{new object constraint} (novelty constraint) on ‘non-contractual’ factual IpF. The idea is that factual IpF is only licensed when the discourse referent of the object NP is familiar in the input context. Hence, the presence of a new (rhetorical) object in (158) requires Pf despite the non-contractual context (Israeli 1996, 15). The utterance in (158) is straightforwardly represented as introducing a new discourse referent \( x \) in the main universe, and asserting that \( x \) is a newspaper article which was read by the speaker.
Figure 4.4: DRS for (157) with ‘čitali’

\[
\begin{array}{|c|}
\hline
x, s \\
\hline
\text{War and Peace}(x) \\
\text{read}(I, x) \\
< [ANCH, x'] \\
< \text{War and Peace}(x') \\
\{ < x', x > \} \\
\hline
\end{array}
\]

It follows from this reasoning that factual IpF in (157) is acceptable (in certain contexts) merely because ‘War and Peace’ is a familiar object in the Russian-speaking world. Accordingly, in Israeli’s Venn diagrams (Israeli 1996, 18), ‘War and Peace’ is anchored to the context also in the absence of a pragmatic contract. The preference for Pf in (158) can also be contrasted with (159) containing factual IpF and a given (thematic) object:

(159) Ja čitali⁣ ran’še o takoj nedobrosovestnoj reklame [ … ]

I have read before about such unscrupulous advertising [ … ] (Israeli 1996, 24)

The idea is therefore that information structure at the NP-level has repercussions for the choice of aspect. This can be modelled in DRT for instance by letting the definite determiner ‘takoj – such’ in (159) introduce an existential presupposition which has to be resolved anaphorically in the input context (cf. chapter 6 and 7 for more details).

It still remains to see whether this analysis is empirically correct. The following authentic example seems to question the idea that factual IpF requires familiarity of the object NP in absence of a pragmatic contract:

(160) A. Pervobytnye ljudi eli⁣ vse syro, potomu čto u nich ognja i znanij ne bylo. A sejčas ěto, jakoby, delikates.
B. Vse dvizietsja⁣ po spirali. Ja tekstik odin čitali⁣, zabavnijyj, tam pro krozovot lekarstv v medicine govorilos⁣ (Internet).
A: The early men ate their food raw because they hadn’t discovered fire. But now it’s considered a delicacy.
B: We’ve come full circle. I read a funny little text about the circulation of drugs in the medical community …

In (160), factual IpF is used to introduce a new ‘digression’ (cf. chapter 7.3.4). The speaker refers to a text which clearly represents new information in the context and therefore violates the familiarity condition on the NP. It should
not be difficult to enlarge the list of data showing that factual Ipf can be used with a 'new object'. It therefore appears that Israeli’s constraint on factual Ipf fails to apply in general.

4.5 Reducing Factual Ipf to Other Imperfective Readings

In this thesis, we informally refer to three major readings of Ipf in past tense: the processual, the habitual-iterative, and the factual. At the same time, we are inclined to treat Ipf as genuinely vague. As noted in chapter 1.7, most semanticists would, as a first approach, reject the ambiguity hypothesis on principled grounds and seek unity of form and function. This position is also reflected in works on factual Ipf by Slavic scholars, cf. the following remark from Boguslawski:

“The claim to the effect that our class of uses [i.e. factual Ipf] corresponds to a separate meaning is a very strong thesis indeed. Like any statement presenting an expression as genuinely ambiguous, this thesis calls for a careful justification.” (Boguslawski 1981, 34)

However, in our opinion, Boguslawski’s own arguments for eventually not according factual Ipf the status of a separate meaning of Ipf, are not conclusive. Padučeva (1996) is also concerned with the place of factual Ipf in the larger picture of imperfectivity, and she proposes a more principled way of reducing the ambiguity of Ipf. Her original idea is to reduce a possible three-way-ambiguity of Ipf to a two-way-ambiguity by subsuming factual Ipf under the processual/habitual-iterative dichotomy. The way she achieves this is basically by treating existential Ipf as relating to the habitual-iterative domain, while our presuppositional Ipf (≈ her ‘actional Ipf’) is analysed as an instance of the processual reading. Padučeva’s analysis has contributed in establishing a principled dichotomy between existential and presuppositional Ipf, which originally goes back to Forsyth (1970), and which is strongly argued for in this thesis. As to the question of whether Padučeva succeeds in reducing the perceived ambiguity of Ipf, we will need to have a closer look at the data and details of this kind of analysis.

---

18Boguslawski (1981, 35) claims that the existence of lexical restrictions on factual Ipf indicates that this cannot be a proper imperfective meaning. There are two remarks to be made in this respect. First, there are lexical restrictions even on the processual reading. It is well-known from the literature that ‘prichodit’ — to come by foot; ‘nachodit’ — to find’ etc. do not occur with a processual interpretation, but this has never been taken as evidence for not considering processual Ipf a particular meaning of the imperfective. Second, a more careful inspection of the data (cf. chapter 3), reveals that many of the alleged restrictions on factual Ipf can be circumvented in the right context, at least if we take into consideration both the existential and presuppositional type.
4.5.1 Factual Ipfs and Habitual-Iterative Readings

The idea of linking factual Ipfs and the habitual-iterative reading is supported by data like the following:

\[(161)\quad \text{Ja } \begin{cases} \text{celoval}^i \\ \text{poceloval}^p \end{cases} \text { ee tri raza. (Padučeva 1996, 30)}

I kissed her three times.

The imperfective version of (161) can be interpreted as referring to the speaker’s ‘experience’ of having kissed the girl in question three times in his lifetime. This temporal indefiniteness w.r.t. the location of the events is to be contrasted with the use of Pf (‘poceloval^p’ – kissed’), which refers to some specific, contextually given interval at which three consecutive kisses took place.

However, we are still not committed to the view that examples like (161) instantiate both the factual and habitual-iterative readings of Ipfs. Recall that in chapter 3.4.3 we made the ‘practical decision’ to distinguish between the so-called repetitive reading, where the VP remains telic in presence of a quantificational adverb, and the habitual-iterative. Examples like (161) belong to the former group, and can reasonably be treated as a kind of factual Ipfs, cf. also (Leinonen 1982) and (Pupynin 2002). The speaker’s choice between Ipfs and Pfs in repetitive constructions is at the heart of the aspectual competition because the VP remains telic irrespective of viewpoint aspect.

We are much more reluctant to accept the idea that factual Ipfs patterns with the habitual-iterative variant *tout court*, i.e. in cases where the ‘extended VP’ (incorporating adverbs like ‘mnogo raz – many times’ or ‘často – often’) is atelic. We will now look at some accounts of factual Ipfs along these lines.

Subsuming Habitual-Iterative Readings Under Factual Ipfs

There are several ways of approaching the parallel between factual Ipfs and ‘plural events’. Let us first briefly comment on the position advocated in Glovinskaja’s work. Her analysis of Ipfs completely reverses the traditional picture in this respect, as she proposes to subsume the habitual-iterative reading under factual Ipfs. Her main focus is on the distinction processual Ipfs (‘aktual’no-dlitel’noe značenie’) vs. factual Ipfs (‘obsčefaktičeskoe značenie’), which displays a difference in the speaker’s perspective. Glovinskaja further relates factual Ipfs to the feature ‘diskretnost’, which is claimed to be characteristic of all telic predicates. The idea is that factual Ipfs refers to both the beginning, process and culmination of an event, and these phases can be distinguished – due to the property of ‘diskretnost’ – for instance along the lines of the Event Nucleus from chapter 1.6.3, cf. (Glovinskaja 1982, 133) and (Glovinskaja 2001).

The habitual-iterative reading is argued to be an instance of factual Ipfs inasmuch as it locates complete event(s) – including their beginning and endpoint – in the past w.r.t. to a certain perspective (evaluation time) of the speaker:

“[S]emantičeskoj osnovoj obsčefaktičeskogo značenija javljaetsja ideja diskretnosti dejstviia (t.e. dejstviia s ukazannym načalom ili koncom)
libo, v častnom slučaju, kratnosti dejstvija (tak kak kratnym možet byť
tol'ko diskretnoe dejstvie). [. . . ] Značenie diskretnosti, bolej obsće,
čem značenie kratnosti, vyražajú ljubye predel'nye glagoly.” (Glovinskaja 1982, 134; 136).

In Padučeva and Apresjan’s terms, both factual Ip and iterative Ip give rise to a ‘retrospective’ configuration (cf. section 4.2.1 above). For Glovinskaja, distinguishing between reference to singular or plural events is thus of secondary importance. What is important for her classification is the common temporal perspective.

We reject this way of classifying the semantic subgroups of Ip, since there are important differences – for instance at an ontological level – between denoting individuals (i.e. events/event tokens) vs. sets of individuals (‘plural events’). We will come back to this point in section 4.6.2 below.

Furthermore, from a typological perspective, the habitual-iterative reading stands out as one of the core meanings of imperfectivity, and one may therefore argue that this reading should not be subsumed under the more idiosyncratic factual Ip (see, however, the review of Dahl and Hedin’s approach in section 4.6.2).

And, finally, there is also a third, more principled semantic motivation for rejecting Glovinskaja’s classification and stick to the traditional analysis of the processual and habitual-iterative as the two core meanings of Ip, inasmuch as both these readings are arguably atelic and, to some extent, share the subinterval property. These properties are the hallmark of imperfectivity in typologically and formally oriented semantic theories of aspect such as (Herweg 1991), cf. also the discussion in chapter 3.4.3. This semantic parallel between the processual and habitual-iterative readings has, of course, also been noted in Russian aspectology. Pupynin (2002, 180), for instance, characterises this common feature of the processual and habitual-iterative in terms of ‘delimost’ (‘divisibility’).

**Subsuming Factual (Existential) Readings Under Habitual-Iterative Ip**

It seems perhaps more promising to explore the idea that factual Ip could somehow be *subsumed* under the habitual-iterative reading (and not the other way round as argued by Glovinskaja). Among the authors who assume such a link, we find different ways of invoking the habitual-iterative reading in the analysis of factual Ip. The point of departure for most such analyses is related to the question of whether the feature ‘at least once’, characteristic of existential Ip, can eventually be treated as a special case of plural reference. It is often claimed in the typologically oriented literature that experiencial constructions seem to “obey a ‘repeatability’ constraint, that is, it is unnatural to use them to express that a unique, non-repeatable event occurred, such as the death of a specific person” (Dahl and Hedin 2000, 388).

In Russian aspectology, the semantic feature or condition linking factual Ip to ‘repeatability’ is commonly referred to as [+‘kratnost’] (Glovinskaja 1982)
and (Padučeva 1996), but the exact interpretation of this feature is not uniform in the literature. Glovinskaia (1982, 137) discusses several examples involving “kratnost’ v aktantnych gruppach”, i.e. plurality of nominal arguments. However, her examples like (162) below do not pertain to aspectual competition as this phenomenon is perceived in the present work:

(162) Bol’nye odin za drugim umirali4 ot istoščenija. (Glovinskaia 1982, 137)

The patients died of emaciation one after another.

The use of IpF in (162) receives a straightforward atelic habitual-iterative interpretation. Plurality of Agents here results in plurality of events, since there is no such thing as ‘collective events’ of dying.

Padučeva, on the contrary, explicitly links ‘kratnost’ to factual IpF: “Kon-tekst kratnosti, t.e. potencial’naja vozmožnost’ mnogokratnogo osuščestvenija situacii, okazyvaetsja suščestvennym usloviem dopustimosti rezultativnogo osmyšlenija NSV [ . . . ]” (Padučeva 1996, 40). The feature ‘kratnost’ is here perceived as ‘repeatability’, in line with the quote from Dahl and Hedin above. Mehlig (2002, 145) points out that this restriction on factual IpF ‘explains’ why the use of IpF in examples like the one below only gives rise to a conative reading:

(163) Bol’noj umiral5. (Glovinskaia 1982, 137)

The patient was dying.

The event of a patient’s dying cannot possibly be repeated, hence factual IpF is ruled out according to the feature analysis of Padučeva. If the speaker wants to report the fact that the patient actually died, she would have to use Pf (“umerP”).

In this respect, the view held by Padučeva and Mehlig is similar to the one advocated by Vogeleer (1993), whose data are much the same as those discussed in (Mehlig 2002), viz. constituent questions mostly involving predicates of the accomplishment type. Vogeleer observes a similar constraint on the occurrence of factual IpF in her question-sentences: “Dans le cas des [accomplissements] la condition de multiplicité des occurrences hypothétiques est respectée si le VP décrit une action susceptible de se reproduire plusieurs fois, bien que la question porte sur une seule (n’importe laquelle) des occurrences hypothétiques” (Vogeleer 1993, 230).

Vogeleer, like Padučeva, thereby acknowledges that factual IpF may refer to a single event token in the actual world, but she maintains that IpF in these contexts can only be used felicitously if the event-type denoted by the predicate could possibly be repeated. In this respect, Padučeva claims that singularity is only a special case of plurality. Accordingly, factual IpF (singularity/plurality of events) should be contrasted with Pf (uniqueness of events), or in Padučeva’s own words: “mnogokratnost’ protivopostavlena ne odnokratnosti, a edinčnosti” (Padučeva 1996, 40). One would like to see what this actually means in a more explicit framework.
Vogeleer’s work, though more modest concerning the range of data being
analysed, is slightly more explicit on this point. Contrary to Paduèeva,
Vogeleer, focuses exclusively on factual Ipfs in questions. This is not an innocuous
choice on her part, since she treats the question operator as a case of modality
(Vogeleer 1993, 230), hence relegating the ‘iterative component’ (‘occurrences
hypothétiques’) of factual Ipfs to an intensional context. This captures the fact
that the events in question need not occur in our world. It is hard to see, though,
how this kind of analysis could be transferred to factual Ipfs in simple declaratives.
In this latter case, we cannot simply assume factual Ipfs to be embedded
under a covert modal operator, since existential Ipfs in declaratives asserts the
existence in our world of at least one event in the denotation of the predicate,
and it seems rather ad hoc and unjustified to split up the semantics of factual
Ipfs in an extensional and intensional part.

A Note on Factual Ipfs, Iterativity and Achievements

Some aspectologists argue for a link between factual Ipfs and iterativity on the
basis of some quite intricate reasoning related to the inherent semantic properties
different predicates occurring in these contexts. The basic idea is that
Vendlerian ‘achievements’ get an iterative interpretation in ‘factual contexts’,
while ‘accomplishments’ have a processual reading in similar environments.

Chaput (1990) proposes a surprisingly straightforward correlation along these
ties between factual Ipfs and iterativity. In order to understand the motivation
behind her analysis, we should contrast her familiar example (164) with a case
of factual Ipfs being used with an achievement predicate, as in (165):

(164) Vy kogda-nibud’ čitali ‘Anna Kareninu’?

Have you ever read ‘Anna Karenina’? (Chaput 1990, 294)

(165) No kto kogda-nibud’ vyigryval’ vojnu vremennu? (Internet)

But who has ever won a war temporarily?

Questions in examples like (164) and (165) display the ‘iterative variant’
according to Chaput (1990, 294). This claim is derived from a rather peculiar
application of the famous Vendlerian classification. Chaput (1990, 296) assumes
that factual Ipfs “is possible only with predicates capable of denoting an activity”
(perhaps to be understood as the activity-phase of accomplishments). However,
since ‘kogda-nibud’ – ever’ combines with Vendlerian achievements as in
examples like (165), which inherently lack an activity part, she argues that the
presence of ‘kogda-nibud’ induces some kind of coercion from a factual to an
iterative reading: “That [(164)] is iterative [. . .] is supported by the fact that
the ‘ever’ variant is possible with imperfective True Achievements” (Chaput
1990, 294).

One may ask why achievements, when referring to singular events, are
believed not to have a factual Ipfs reading. A principled explanation for this alleged
prohibition against a factual reading of achievements is given in (Brecht 1985),
cf. Brecht’s comments on the following examples:

126
(166) Ty ego uznaval’?

Did you use to recognize him? (Brecht 1985, 29)

(167) Ty ego uznal’?

Did you recognize him? (Brecht 1985, 29)

According to Brecht (1985, 29), the minimal pair above “indicate[s] very clearly that atelicized Achievements [i.e. secondary imperfectives of the achievement type] can never be compatible with the Statement-of-Fact interpretation.” From Brecht’s own translation of (166), it follows that, just like Chaput above, he accords an habitual-iterative interpretation to the use of Ipf with these predicates. Brecht therefore suggests that only accomplishments are compatible with factual Ipf.

These correlations between the inventory of imperfective readings and situation type are explained through a quite attractive mapping between form and function, couched in an aspectual network such that aspectual form is linked to Vendlerian situation types with the possibility of coercing the interpretation of a predicate from one situation type to another according to certain rules.10

Brecht’s main idea is rather simple: Prefixation of an activity results in an accomplishment, while prefixation of a state gives rise to an achievement.20 Conversely, (secondary) suffixation of an accomplishment results in an activity, while suffixation of an achievement produces a state. We can picture these correlations as in table 4.5.

<table>
<thead>
<tr>
<th>Ipf</th>
<th>Pf</th>
</tr>
</thead>
</table>
| Activities | prefixation  
|           | suffixation        |
|          | Accomplishments     |
| States   | prefixation  
|           | suffixation        |
|          | Achievements        |

Table 4.5: Basic form-function interactions of Russian aspect according to (Brecht 1985, 20).

The resulting picture is that Ipf relates to atelic predicates, either in virtue of imperfective simplex verbs (lexical activities and states) or through an imperfective suffix which atelicises the telic (perfective) predicate. The claim that imperfectivisation of an achievement results in a ‘state’ is justified by treating iterativity/habituality as a stative (homogeneous) property. Since achievements do not involve a preparatory process, but consist solely of a culmination point, Ipf cannot denote an activity in this case. This is different from inherently perfective accomplishments, where secondary imperfectivisation naturally focuses the activity part (processual reading). The system allows for a variety of types of coercions, represented by arrows in the aspectual network. In table 4.5, we

10 Similar ideas were independently developed for English in Moens and Steedman (1988).
20 These kinds of achievements are known as ‘shosoby dejstvija’ in Slavic aspectology.
have only given the most basic ones, those which are mirrored in the morphological make-up of the predicate. The main constraint on coercion is that Ipfs must remain atelic (simplex verbs) or atelicised (secondary imperfectivisation), while Pf invariably should conform with telicity.

It is clear why the ‘telicity effect’ of factual Ipfs represents certain problems for this aspectual network. Factual Ipfs refer to single events, but in order to comply with the atelic/atelicised character of Ipfs, a factual reading supposedly coerces accomplishment predicates to their activity part. We provide some arguments against this view in the next section. However, the main problem with Brecht’s system is the prediction that factual Ipfs is sortally restricted to accomplishments. This prediction is not empirically borne out, cf. (165) above and similar examples in chapter 3.

We therefore do not believe that Vendler’s original quadripartite classification of situation types represents the most precise tool for making the relevant distinctions in an analysis of factual Ipfs. Indeed, by restricting our attention mainly to the aspectual competition, we do acknowledge the importance of (a)telicity for the aspectual system in Russian, but a rigorous subclassification of telic predicates is apparently not called for in the discussion of factual Ipfs. As argued by Dickey (2000, 103), Vendler’s distinction between accomplishments and achievements is, in general, not relevant for factual Ipfs in East Slavic languages, such as Russian, inasmuch as both these telic situation types occur with this imperfective reading: “[A]chievement verbs in [factual Ipfs] can and do refer to single events” (Dickey 2000, 104).21 This is confirmed by the survey of the data in chapter 3.

4.5.2 Factual Ipfs and Processual Readings

There are several attempts in the literature to reduce (a subset of) factual Ipfs to the processual reading, e.g. (Mazon 1914), (Swan 1977), (Boguslawski 1981), (Rassudova 1982, first edition 1968), (Chaput 1990), (Padučeva 1996), (Mehlig 1997b, and 2002), (Israeli 1998). We comment below on different aspects of theses analyses. Since we will argue in chapter 6 that the very same data related to a processual reading by the above mentioned authors could be dealt with in a presuppositional analysis combining information structure and thematic roles, it is equally important in this review to trace the history of ‘presuppositional Ipfs’.

Shift of Focus from Culmination to Process

A traditional view in the literature on factual Ipfs consists of simply assuming that factual Ipfs shifts the focus from the culmination of the Event Nucleus to the process. This idea goes back to Mazon (1914, 202f.) who claims that factual Ipfs focuses on the development of the process: “loin de viser le résultat de l’acte [pareilles usages imperfectifs] concentrent toute notre attention sur le

21Dickey claims that the situation is different for factual Ipfs in West Slavic languages, where achievements are less likely to occur, cf. also section 4.6.1 below.
développement indéterminé de celui-ci dans le passé’. A similar view is prevalent in contemporary studies as well: “NSV akcional’noe [i.e. ‘presuppositional Ip’] upotrebljajetsja v tom slučae, esli govorjačičij pri opisanii situacji, dostigšej predela, po toj ili inoj pričine stavit v centru vnimaniûane rezultat, a sam process osuščestvenja dejstvija” (Padučeva 1996, 49). Chaput (1990, 293) merges this idea with a link to situation types, when characterising factual Ip as “a shift in focus from the terminus of the event to a preceding phase, a kind of backtracking to reconstruct the event. The phase-shift is possible only of predicates which can express a preceding phase [i.e. accomplishments]”.

A recent example of this kind of approach is represented by Mehlig’s analysis of factual Ip in constituent questions like the following.22

(168) Kto brał⁴ knigi v biblioteke? Slovari zabyli⁴ vzjat⁵, (Mehlig 2002, 137)  
Who checked out the books from the library? They forgot to check out dictionaries.

(169) Kto zapirali⁴ dver’? Zamok sloman. (Mehlig 2002, 137)  
Who locked the door? The lock is broken.

Mehlig distinguishes the interpretation of these ‘kto-questions’ from formally similar questions with an existential Ip reading. Concerning (168) and (169), Mehlig claims that this kind of factual Ip presents the situation from within, without focus on the beginning or culmination. This is reminiscent of traditional characteristics of the processual reading. And, indeed, Mehlig (2002, 137) argues that the use of Ip in (168) and (169) pertains not to aspeccual competition, but to aspeccual opposition, since Pf in such contexts would represent the situation from an ‘external viewpoint’. He therefore considers both this particular subset of factual Ip and the processual reading to instantiate the ‘internal viewpoint’, characteristic of Ip in general (Mehlig 2002, 138).23

What appears to be problematic for this analysis is the fact that Mehlig at the same time explicitly adheres to Padučeva’s characterisation of factual Ip as requiring a retrospective perspective:

“Situcija, lokalizovanaja v prošledom, t.e. retrospektivno k momentu reči, predstavljaetsja v perspektive iznutri, v svoem protekani, bez ak-

22 These data were originally introduced and discussed by Rassudova (1982, first edition 1998).
23 Cf. also (Mehlig 1997b, 168), where a similar analysis is argued for w.r.t. other cases of presuppositional Ip beyond the domain of wh-questions. Mehlig thus claims that this variant of factual Ip refers to the process also in ordinary declaratives.

A corollary of this analysis in terms of processuality is the widespread and much abused idea that Venetian achievements are ruled out in ‘factual contexts’ (cf. also section 4.5.1 above). True, in some works, such as (Mehlig 1997b, 171) and (Isræli 1998, 66), the restriction on achievements applies only to the presuppositional variant, and it is then not without empirical support. Still, the crucial distinction is not along the accomplishment/achievement dichotomy, but rather related to parameters like [±Control]. As we argue in chapter 6, there is no Agent role to focus on if the verb lacks ‘volitionality’ (Agents are always volitional). In this respect, it is correct that many achievement predicates do not easily have a presuppositional Ip reading with focus on the subject, but it should be possible to focus on other arguments which are linked to thematic roles for which the control-parameter is irrelevant.
cènta na vnešnich predelách, t.e. na načale ili konce.” (Mehlig 2002, 136)

Unfortunately, Mehlig does not explain how the speaker can combine a retrospective and internal (‘synchronic’ in Padučeva’s terminology) view. The conflict can perhaps be resolved by adopting a distinction between evaluation time and assertion time, as we do in this thesis. However, Mehlig does not distinguish between the different nature of the assertion times associated with factual Ipf on the one hand and processual Ipf on the other. His analysis therefore undermines the crucial difference between factual Ipf and the processual reading, viz. that only the former allows an inference to the existence of a ‘complete event’.

Padučeva, who advocates similar views as we recall from section 4.2.1, is careful in her use of terminology not to conflate the ‘retrospective’ perspective with its opposite, the ‘synchronic’ perspective. For this reason, the presence of an adverbial focusing on the process – e.g., a non-temporal adverbial of manner as in (170) below – automatically provides a synchronic view and excludes a factual (retrospective) reading:

(170) Rasskazì², kak rešal¹. (Padučeva 1996, 49)
Tell me how you solved [the problem].

Thus, (170) is treated as an instance of the processual reading, unrelated to factual Ipf. But Padučeva’s reasoning in this case is not quite coherent with the quote from her work above, where she characterises the ‘actional variant’ of factual Ipf as “drawing attention to the process”. If this is so, then why don’t we get a synchronic reference time in the case of ‘actional Ipf”? Unfortunately, Padučeva is not explicit on this point. As we have argued earlier, a more fine-grained notion of reference time is needed to draw these distinctions properly.

We still keep returning to Padučeva’s analysis because it provides, in our view, the best classification of the data, whose complexity has rarely been captured. However, some of her hypotheses can be challenged. Recall from section 4.5.1 that Padučeva links existential Ipf to the habitual-iterative reading. One of her main arguments is that certain imperfective verbs lack a processual reading, and factual Ipf in these cases accordingly cannot be subsumed under processual Ipf.²⁴ If we adopt this line of thought, we would expect such ‘defect’ imperfectives not to have an ‘actional reading’, since there is no process to focus on. This prediction is not borne out, as witnessed by the following data, which clearly belong to the group of presuppositional Ipf:

(171) Ėto ty poseščal¹ gostevuju knižku na svoem sajte pod imenem [NN]?
(Internet)
Was it you who visited the guest book on your web site under the name [NN]?

²⁴Padučeva (1996, 21) gives a list including verbs of communication, such as ‘preduprezdat⁴ – to warn’, ‘priglashat⁴ – to invite’, ‘prosit⁴ – to ask, solicit’, ‘trebovat⁴ – to demand’, but also more idiosyncratic cases like ‘poseščat⁴ – to visit’ etc.
(172) I vot staliniskij vopros: Ėto ty prosili̇ vraga naroda v zamestiteli? Timošenko vстал, ulybnuilsja i otvetil kak otrubil. “A ja, tovarišč Stalin, i sejčas prošu’ naznacit’ tovarišča Podlasa moim pervym zamestitelem.” (Internet)

And then Stalin’s question: “Was it you who asked an enemy of the people to be appointed your deputy?” Timoshenko got up, smiled and answered firmly. “Comrade Stalin, I ask you once more to appoint comrade Podlas as my deputy”.

**From ‘Focusing’ to ‘Thematisation’**

The strategy consisting of seeking affinities between ‘presuppositional IpF’ and processual IpF was strongly contested already by Forsyth:

“In *ad hoc* explanations there is often a tendency in such cases to explain the use of the imperfective past by the expression of duration of time. [T]his ‘common-sense’ explanation is obviously inappropriate [ . . . ] and some more satisfactory general motivation must be sought.” (Forsyth 1970, 87)

Nevertheless, there is a link to the process reading, although we will claim that this link has often been misinterpreted in the literature, especially by those authors who relate factual IpF to the speaker’s ‘focusing on the process’. Consider examples like the following, which will be discussed in chapter 7:

(173) Kto \begin{align*} & \{ \text{ubil}\} \\
& \{ \text{#ubival}\} \end{align*} Linkol’na? (Padučeva 1996, 50)

Who *killed* Lincoln?

(174) Kto \begin{align*} & \{ \text{izobrel}\} \\
& \{ \text{#izobretal}\} \end{align*} televidenie? (Padučeva 1996, 50)

Who *invented* television?

As pointed out by Padučeva (1996, 50f.), “these questions are about result and not about process: the pragmatic context of the annihilation, creation, discovery makes ‘switching of attention’ from result to process, that is the thematization of the process, unwarranted” (translation from (Israël 1996, 11)). The important point here is not to mix up ‘thematisation of the process’, which is indeed characteristic of presuppositional IpF, with ‘focusing on the process’, which is rather the opposite of ‘thematisation’. A case of factual IpF cooccurring with ‘thematisation of the process’ is the following:

(175) Anna otkrovenno brosila emu v lico obvinienie: Ėto ty ubival’ ich, a ispol’zoval’ dlja ētogo menja! (Internet)

Anna openly accused him: It was you who *killed* them, and you used me to achieve your goal!
The focus is not on the process itself, but on one of the participants of the event, viz. the Agent. This is precisely where presuppositional Ipfs enters the scene, i.e. “when the speaker is interested in where, when, why and who of a performed action”, as Rassudova puts, cf. (Israeli 1998, 59).

If we carefully disentangle the terminological confusion prevalent in this area, the correct picture, as we see it, emerges in individual statements like the following, which relates the use of factual Ipfs with a definite temporal location to a certain information structure pattern: “glagol, oboznačajući uže izvestnoe, dannoe (i.e. opredelennoe), popadaet v tematiceskuyu poziciju; v reme že [v dannom primere] okazivaetsja sub"ekt” (Glovinskaja 2001, 183). Glovinskaja, working in the Slavic tradition, suggests a theme-rheme interpretation, where the verb on a presuppositional reading is thematic, while the subject is rhematic. She concludes her short remark on factual Ipfs and information structure by urging aspectologists to study this issue in more depth (Glovinskaja 2001, 183), cf. also (Glovinskaja 1982).

This is not to say that the observed phenomenon of the “thematic position of the verb” in certain factual Ipfs contexts was first discovered by Glovinskaja (1982). Both Rassudova and Forsyth demonstrated an awareness of the relevant data, including the important insight that factual Ipfs can refer to a situation which has previously been introduced in the context.

One of the first authors to emphasise the relevance of the theme-rheme distinction in aspectual competition was Birkenmaier, who applied these notions to some examples originally provided by Rassudova:

(176) A: Mne ob"jasnili," kak k vam prochat’ i ja ochal’ snačala na metro, a potom na tramvaj.
   B: Kto že vam ob"jasnial’? Eto sovsem neudačnyj put’. (Birkenmaier 1977, 217) from Rassudova).

   A: Somebody explained to me how to get to your place and I took the subway and then the tramway.
   B: Who (was it that) explained [it] to you? That is by far the best way.

Birkenmaier (1977, 209) observed that “two consecutive sentences with the same verbal predicate show in Russian often an aspectual shift”. The first occurrence of the predicate presents new information and appears with perfective aspect (‘ob"jasnili’ = explained’), while factual Ipfs (‘ob"jasniali’ = explained’) is used in the reprise of the predicate. Interestingly, Mehlig referred to this usage of Ipfs as ‘anaphoric’ already in a paper going back to 1976, cited in (Mehlig 2002, 129). For some reasons, however, the impact of Birkenmaier’s and Mehlig’s observations on the anaphoric usage of Ipfs was (and remains) rather modest in the literature on factual Ipfs. Boguslawski, for instance, finds Birkenmaier’s ideas “interesting”, but adds that “I [i.e. Boguslawski] consider this claim [i.e. the relevance of information structure for aspectual competition] refutable, but for lack of space I have to refrain from the relevant discussion here” (Boguslawski 1981, 39).
Some exceptions in this respect are (Leinonen 1982, 190), (Hedin 2000) and Mehlig’s own more recent contributions to the field. Mehlig (2002) also refers to (Hamburger 1986) for similar ideas. Let us also mention that (Kreisberg 1997) contains some discussion, though at a very rudimentary level, of the role of information structure in regard to factual IpF in Polish. From the references cited in this article, it seems that the anaphoric usage of (presuppositional) IpF has perhaps been more appreciated by Polish aspectologists than in Russian aspectology.

The above-mentioned works seem to represent an extension w.r.t. Birkenmaier’s account in (tacitly) suggesting that information structure could be relevant also for less clear-cut cases where the ‘thematic’ verb with a factual reading is not immediately preceded by a ‘rhematic’ occurrence of a perfective verb. Nevertheless, the analyses in question are still quite rudimentary, except for Mehlig’s work. Mehlig, however, focuses in particular on the issue of definiteness vs. indefiniteness of the referential (eventive) argument of the verb, which is an issue more indirectly related to information structure, cf. (Mehlig 1997b, 162). Although we agree on the information structure patterns accorded to the examples discussed in Mehlig’s works, e.g., in (Mehlig 1997b, 167), we contest, as mentioned above, the explanation of the phenomena ultimately given in (Mehlig 1997b) and (Mehlig 2002), where presuppositional IpF is treated as a variant of the process reading.

The History of Presuppositional IpF

There is obviously a link from the theme-rheme distinction in aspectual competition to a presuppositional analysis of a subset of factual IpF. The important point is, of course, not our choice of terminology which is admittedly influenced by DRT’s parallel treatment of presuppositions and anaphora, cf. chapter 6. However, we believe the data can be more elegantly accounted for in this framework, and the idea of relating this factual reading to an existential presupposition w.r.t. the event argument has to our knowledge not been explored in the literature. Let us still have a look at some more direct predecessors of the ‘presuppositional approach’.

It appears that the key concept of presuppositions in our characterisation of this subset of factual IpF is first invoked in an informal discussion by Seljakín (1979), who considers these factual IpF contexts to reflect “predvaritel’naja osvođomlennost’ govorjačih o predsituativnych dejstvijach sovershennogo vida” (Seljakín 1979, cited in (Leinonen 1982, 190)). According to Leinonen (1982, 190), Seljakín considers the usage of factual IpF in such contexts to represent a kind of aspectual neutralisation, which enables the speaker to shift the focus from the aspectual configuration to different subjective “attitudes” towards the content, attributing to the utterance a certain “expressivity”.

We find Leinonen’s own analysis in this respect more illuminating, although she seems a bit reluctant to apply the notion of ‘presupposition’, and, with a few exceptions, prefers to talk about ‘thematisation’, ‘backgrouding’ or a so-called ‘operative schema’ (Leinonen 1982, 190ff.). Leinonen’s ‘operative schema’
clearly anticipates parts of the analysis proposed here, as she compares, “from the point of view of temporal reference”, the so-called ‘operative schema’ of factual Ipf with “anaphoric pronouns, which receive their referential interpretation from the context” (Leinonen 1982, 195).

An insightful, though very general, discussion of similar data is recently found in (Hedin 2000, 235). Hedin relates the possibly presuppositional behaviour of factual Ipf to her analysis of factual Ipf as type-referring (cf. section 4.6.2 below). She therefore concludes her discussion of some prototypical cases of presuppositional Ipf thus: “If non-focusing, old information, givenness and presupposition are connected to the Imperfective, it may thus be in this indirect way via type reference” (Hedin 2000, 238).

The term ‘presupposition’ also pops up in (Schoolemmer 1997, 234), where factual Ipf (in general) is dubbed the ‘telic presupposition’ reading, without presenting any analysis as such of factual Ipf. This label is reprinted in (Paslawska and von Stechow 2003, 335), but again without any further analysis of the phenomenon.

In fact, as we recall from chapter 2.4, the more traditional view is to consider the perfective aspect as being presuppositional. There seems to be two different conceptions of ‘presuppositions’ underlying the application of this notion to the behaviour of Pf. First, there is a pattern according to which the preparatory process (recall the Event Nucleus) belongs to the contextually given information while the culmination of the event is asserted (new information). Second, the idea of a presuppositional Pf is typically based on the observation that Pf is used in contexts where the event is expected to have taken place, cf. the following example:25

(177) Igor’ prinjal lekarstvo? (Mehlig 1997b, 161, from Rassudova)

Haš Igor taken his medicine?

Mehlig (1997b, 161) cites Rassudova (1968) who writes: “upotrebljava svo-šennyj vid, govorjačij predpolagaet, čto dejstvie dolžno bylo sovremja”. According to Mehlig, the use of Pf in (177) depends on some definiteness/familiarity condition of the eventive discourse referent in question. This is allegedly to be contrasted with (existential) factual Ipf (‘prinimal – took’), which in this environment would correspond to indefiniteness (novelty condition).

In light of this distribution of the aspectual competitors, some authors argue that factual Ipf is characterised by “absence of presuppositions” (Chaput 1990, 301). Consider also the following quote from Dickey:

“[Factual Ipf] signals the lack of [. . .] presuppositions in the shared knowledge of the discourse participants; it merely asserts the occurrence

25 The idea of an ‘expectedness presupposition’ associated with Pf is, however, cast in doubt by Leinonen. She notes that this kind of presupposition seems to be restricted to particular speech acts and is therefore not a characteristic of Pf as such: “With simple assertions, if there is any sense of expectedness, it is incidental and certainly not regular, as is the case with questions and negation” (Leinonen 1982, 184).
of the situation in question in general, without reference to any contextualizing background information.” (Dickey 2000, 95)

However, it is important to emphasise that the alleged “absence of presuppositions” should only be related to the existential variant of factual IfP. And, furthermore, the so-called ‘presuppositional’ effect of Pf in referring to a situation which is ‘expected’ to have taken place should not be conflated with true anaphoric reference to an actual event, i.e. what we refer to as an ‘existential presupposition’. Some kind of distinction between an extensional and intensional level seems to be called for in this respect.

**Information Structure and Aspectual Competition**

The reason why information structure – be that ‘theme vs. rheme’, ‘background vs. focus’ or ‘presupposition vs. assertion’ – has not been properly addressed in the literature on factual IfP is probably that it often appears to be possible to substitute Pf for IfP even when the situation referred to is ‘given’ in the context. Hedin (2000, 235), following (Rassudova 1982), writes that “there is nothing that prevents the use of the Perfective in contexts where the verb phrase is out of focus”. This is perhaps also why Mehlig, who correctly identifies the theme-rheme patterns in question, ends up treating our ‘presuppositional IfP’ as an instance of the processual reading. Mehlig is certainly influenced by his topic of investigation – constituent questions – which are generally assumed to focus on the wh-word leaving the rest of the sentence backgrounded:

“Esli my ischodim iz togo, čto v voprosach s voprošitel’nym mestoim- niem poslednee vsegda predstawljaet soboj fokus ili remu, iz etogo es- testvenno sleduet, čto funkciju kategorii vida v voprosach s voproši- tel’nym mestoimieniem nel’zja opisat’ posredstvom členeniya na temu i remu.” (Mehlig 2002, 131)

Thus, according to Mehlig, there is no difference in information structure between Pf and IfP in wh-questions with a definite temporal interpretation. The two viewpoint aspects are interchangeable, as witnessed below:

(178) A: Nikto, krome menja, ego ne pojmait\(^p\), kljanus\(^n\).
   B: A počemu imenno vy?
   A: Potomu, čto vy p’janstvuteć, a ja izučal\(^f\) gorod i znaju\(^f\) ego kak svoi p’jat’ pal’cev. Kto podavjal\(^f\) vosstanje? Vy? Ja!
   A: Nobody else is going to catch him but me, I swear it.
   B: And why exactly must it be you?
   A: Because all you do is get drunk, while I have been studying the town and know it like the back of my hand. Who crushed the rebellion? You? It was me! (Forsyth 1970, 85)

(179) A: Naši pojmajut\(^p\) ... Kto-nibud’ da pojmait\(^p\).
   B: A esli ne pojmajut\(^p\)? A esli Peklevanov snova podnimet\(^p\) vosstanje?

A: Our chaps will catch him... Somebody is sure to catch him.
B: And what if they don't catch him? What if Peklevanov raises another rebellion? I repeat: who (has) crushed all the workers' risings? Me!
My armoured train. (Forsyth 1970, 88)

One may then ask what information structure has to do with the aspectual choice, whose fine-grained distinctions aspectologists ultimately want to capture. Mehlig (2002, 131) claims that what is needed in an account of aspectual usage in wh-questions, is a type-token distinction (cf. also section 4.6.2 below), combined with a theory of referential properties on the two scales of (in)definiteness and (un)specificity. Mehlig thereby succeeds in distinguishing between the two factual readings (existential vs. presuppositional), and, to a certain extent, we will adopt a similar approach in chapter 7.2.3. However, these parameters cannot serve to separate Pf and presuppositional IpF which are both token-related and involve ‘definite reference’. In (Mehlig 2002, 136), the competition between Pf and presuppositional IpF is therefore ultimately reduced to a difference in the speaker’s ‘perspective’ (retrospective vs. synchronic), cf. our criticism above of this strategy.

To our knowledge, nobody has seriously explored the possibility of relating the two aspectual competitors to a more fine-grained distinction between different kinds of background information. We agree with Mehlig that both Pf and presuppositional IpF focus on the subject-slot in ‘kto-questions’, but we will claim that only factual IpF relates the background information to an existential presupposition (cf. in particular our discussion in chapters 6.2 and 7.1.2).

One may, as noticed above, object to this view that Pf can be used even if the existence of the event in question is ‘given’ in the input context. Still, this does not necessarily imply that Pf introduces an existential presupposition. In our opinion, part of the answer to this conundrum was provided already in the informal discussion in (Rassudova 1982, first edition 1968) and (Forsyth 1970) of the different communicative functions of factual IpF and Pf on the basis of examples like the contrastive pair (178) – (179) above. Presuppositional IpF (‘podavil–crushed’) is the natural and expected choice, as in (178). However, in a particular discourse, like (179), the speaker may choose to “reintroduce the topic [...] as a complete restatement of [the] facts” (Forsyth 1970, 88). Mehlig (2002, 128) comments that Pf (‘podavil–crushed’) has a function of ‘reidentification’ of the event in question. We believe this can be compared to the use of proper nouns vs. pronouns. The latter is the default choice if its referent is anaphorically/contextually given. But this is not to say that it is impossible to use a proper noun to refer to an individual which has previously been introduced in the conversation.

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4.6 Factual Ipf in a Unified Account of Ipf

As we recall from chapter 2.3, there is no ‘morphological solution’ to the puzzling semantics of (factual) Ipf. It is not empirically justified to consider factual Ipf as limited to either imperfective simplex verbs or secondary imperfectives. The availability of a factual reading cross-cuts these two morphological sources of imperfectivity. The 1 billion rubles question is then: Is it possible to give a unified semantics for Ipf which captures factual Ipf?

Some of the existing ‘unification proposals’ in the general literature on imperfectivity in Russian are in fact often circumventing the issue of unification, presenting the semantics of Ipf on the form of a disjunction. One such suggestion is to define the invariant of Ipf as progressivity (episodicity + internal structure [‘mnogofazovost’]) or non-episodicity (iterativity, the factual reading, staticity) (Lehmann 2002, 123). Another attempt along similar lines is presented in (Pupynin 2002), where the so-called invariant of Ipf amounts to a four-way ambiguity (‘mnogopriznakovost’ invariante’). One may indeed question whether it is appropriate to talk about invariance in these cases, at least as long as the different components of imperfectivity are not shown to be semantically related in some way or another. In this respect, the proposals above are not sufficiently developed to be convincing, or intuitively appealing.26

A more ambitious version of the unification strategy is to seek a single invariant meaning for Ipf. This is generally not thought to be possible, as the factual reading seems to constitute an insurmountable obstacle for such a strategy. Nevertheless, there are different proposals in this direction which are worth a closer look.

The most natural path to unification is through what we in chapter 3.3.1 dubbed ‘the weak reading’ of factual Ipf. Given this interpretation of factual Ipf, one can treat Ipf in Russian as genuinely atelic, for instance in terms of a ‘partitive analysis’. The idea of considering the Pf/Ipf opposition in Russian as an instantiation of [±Telicity] is explored and advocated in (Bertinetto and Delfitto 2000). However, in view of the intractable factual Ipf, the authors ultimately have to admit, despite their initial hypothesis, that there is no strict correspondence between Ipf and atelicity (Bertinetto and Delfitto 2000, 216).

This is in line with our own discussion in chapter 3, where we argued extensively against the ‘weak reading hypothesis’, which amounts to considering factual Ipf as complying with atelicity in some sense. Our claim, on the contrary, is that factual Ipf with a telic predicate denotes a ‘singular, complete event’, and not merely some arbitrary part of this event.

Our focus in the next two sections is on two separate, though perhaps ultimately related theories of imperfectivity, viz. the analysis of factual Ipf in terms of (temporal) indefiniteness or as an instance of reference to event types. The proponents of these theories do not deny that factual Ipf refers to complete

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26 Indeed, in the present work we claim that for ‘all practical purposes’ Ipf gives rise to the disjunction $c \subseteq t \lor t \subseteq c$, but unlike the analyses mentioned above, our framework allows us to show how these more specific readings (disjuncts) are derived from the general overlap relation $c \cap t$, cf. chapters 2.3.3 and 5.3.3.
events. Hence, the unified account of Ipfs is here not centred on atelicity.

4.6.1 Factual Ipfs and Temporal Indefiniteness

In accordance with one of the most basic and commonly shared intuitions about the aspectual system of Russian, factual Ipfs is often related to *indefiniteness* of the temporal and non-temporal aspects of the event. This characteristic is reflected in all scholarship on factual Ipfs, cf. quotes like the following:

“Fakt, oboznachennyj glagol’nym predikatom konstatiruet’sja (ili otricает-
sja) v obshoj forme [ . . . ] bez učeta ego individual’nogo mestopoloženija na linii vremeni i drugich obstojatel’stv ego konkretnogo osusčestvlenija” (Maslov 1984, 76).

“[T]he speaker, by choosing Ipfs, avoids placing the situation in a determined point in the past and makes it ‘float’, in a somewhat indetermined fashion.” (Gasparov 1990, 198f.)

There are different facets of this indefiniteness or indeterminacy associated with factual Ipfs. Like most work in this field, our main focus will be on temporal indefiniteness, e.g. w.r.t. the temporal location of the event argument associated with the verbal predicate. All the same, as we know from the literature on aspectual composition, this issue is not unrelated to the referential properties of nominal arguments. Let us therefore first take a detour to make a few comments on the question of nominal reference. In what way is the indefiniteness of factual Ipfs related to [±Definiteness] in the nominal domain?

Factual Ipfs in Combination with Indefinite and Non-Specific NPs

Hopper and Thompson (1980) proposed to explore a universal hypothesis, according to which Ipfs cross-linguistically patterns with *indefinite* NPs. Applied to our data of aspectual composition, the idea would be that the distribution of factual Ipfs vs. Pf is reflected in the referential properties of nominal arguments, especially direct objects. Studies like (Schwenk 1991), (Vogeleer 1993) and (Mehlig 1997b) largely confirm the general picture that the use of factual Ipfs is correlated with indefinite NPs in object position.

This correlation is demonstrated by the data below, where factual Ipfs is ruled out in combination with a definite NP:

\[
\begin{align*}
(180) & \quad \text{Ty} \begin{cases} s^{\text{el}^p} \\ \# \text{ el}' \end{cases} \quad \text{dve konfety, kotorye ležali na stole?} & \text{(Vogeleer 1993, 225)} \smallskip \\
\quad \text{Did you eat} \quad \text{the two candies, which were lying on the table?} \\
(181) & \quad \text{On tebe} \begin{cases} \text{podaril}^p \\ \# \text{ daril}' \end{cases} \quad \text{èti busy?} & \text{(Vogeleer 1993, 227)} \smallskip \\
\quad \text{Did he offer} \quad \text{you this necklace?}
\end{align*}
\]
Ipf would be felicitous in (181) if the overt determiner ‘èti’ were removed. However, as also noted by the above cited authors, such examples do not prove that a definite NP in object position is necessarily incompatible with factual Ipf, cf. the following fine-grained nuances discussed by Vogeleer:

(182) Ty segodnja pokupali gazetu? (Vogeleer 1993, 226)

   **Have you bought** the newspaper today?

(183) Ty { kupil 
          #pokupali 
   } ètu gazetu? (Vogeleer 1993, 231)

   **Have you bought** this newspaper?

(184) Ty uže pokupali ètu gazetu? (Vogeleer 1993, 232)

   **Have you already bought** this newspaper (before)?

In all these cases, the NP ‘gazeta – newspaper’ – with or without the determiner ‘èta’ – receives a definite interpretation, but Ipf is only barred in (183), in a context where the NP denotes a *specific* newspaper (token). Vogeleer notes that factual Ipf is compatible with an interpretation of the definite NP as referring to a copy of a certain newspaper which the hearer usually reads, e.g. the brand ‘le Monde’. Vogeleer dubs this ‘un défini habituel’ (Vogeleer 1993, 226), whose referential properties make it possible to use the VP without referring to a specific localisation of the event in time and space. In this respect, there seems to be a ‘bidirectional transfer’, in the sense of Krifka (1992), of properties from the NP to the verb (and vice versa), such that ‘non-specific’ reference of the NP correlates with an imperfective verb in contexts of aspectual competition.

In Russian aspectology, issues of temporal (in)definiteness is usually discussed w.r.t. the verbal predicate. The phenomenon of aspectual competition is treated using different notions, such as ‘aktual’/n’aktual’, ‘vremennaja lokalizovannost’/n’oktet’/vremennoj lokalizacji’, cf. Paduèeva (1996, 28). The first term in each pair is associated with Pf, while the second is related to (factual) Ipf. Our main focus in the following will be on the theory of temporal (in)definiteness presented in Leinonen (1982), which was further developed in (Dickey 1995) and (Dickey 2000). We will start by considering the range of data which the indefiniteness analysis is intended to capture.

**Temporal Indefiniteness and Gapping**

The manifestation of temporal indefiniteness is most salient through negative data, i.e. the non-availability of factual Ipf in contexts of temporal definiteness. In general, factual Ipf is felicitous in the presence of punctual adverbials (‘v 14.05 – at five past two’; ‘v étoj míg – at that moment’; ‘tilda že – at that time’ etc.). What counts as a ‘punctual adverbial’ in contexts of aspectual competition is a rather tricky question which, presumably, does not have any absolute and final answer. For instance, an adverbial such as ‘v dva casa – at two o’clock’ may in some contexts be sufficiently vague to license factual Ipf,
depending on the verbal predicate in question. We will return to this issue in subsequent chapters.

One of the best illustrations of the privative character of the aspectual competition is the distribution of Pf and factual Ipф with so-called ‘reversible target state predicates’ (cf. chapter 7.2.3). In this environment factual Ipф gets its notorious bidirectional reading:

(185) Magnitоfon стоял в своем месте, кто-то взял его.

The tape-recorder is not in its proper place. Someone has taken (and moved) it. (Leinonen (1982; 201), from Rassudova)

The inference that the tape recorder has been returned prior to the utterance time can be argued to arise as a consequence of the indefinite temporal relation holding between the event’s target state (cf. chapter 7.2.2) and the utterance time (evaluation time). Leinonen (1982) refers to this phenomenon as ‘gapping’. She notes that Ipф is used in (185) in order to avoid the entailment that the event’s target state, i.e. the tape-recorder being missing, holds at the utterance time. This interpretation would indeed follow from substituting Pf for Ipф in (185). Leinonen (1982, 201) then adds that “if an event is inferred from the present situation [e.g. an event of returning the tape-recorder], the speaker cannot even be expected to have in mind a definite point in time”. However, this generalisation – which is repeated in (Dickey 2000, 113f.) – is perhaps slightly inaccurate, since the indefiniteness property should here apply primarily to the event’s target state, not to the event itself. The actual event may, on a bidirectional reading, be located at a “definite point in time”, as witnessed by the following example:

(186) Поштальон пришёл в 8 утра. (Paduœeva 1996, 41)

The postman came at 8 a.m.

This example is a hard nut to crack for any theory of aspectual competition in Russian. We will return to it in chapter 7.3.1.

This being said, we still get a certain effect of temporal indefiniteness with bidirectional Ipф, since the time for which the target state is true is left unspecified, i.e. ‘indefinite’. Due to the competition with the temporal definiteness of Pf, factual Ipф gives rise to the pragmatic inference that the target state has been cancelled. We will look at this issue in more detail in chapter 7.

A similar, though less tangible, effect is witnessed in cases like (187):

(187) On они позвали пёзвал me na svoj koncert. (Paduœeva 1996, 38)

He invited me to his concert.

Paduœeva argues that gapping plays a role for the interpretation of existential Ipф in cases like (187) as well, even though the predicate does not invite a bidirectional reading. In the example above, we have a kind of ‘natural deadline predicate’. As argued in (Chaput 1990, 289ff.) and (Paduœeva 1996, 38, 55),
factual Ipf is not felicitous in a situation where the speaker is in the state of being invited, i.e. currently considering the proposal to go to the concert. Every invitation to a concert has a ‘natural deadline’ inasmuch as the invitation can only be accepted prior to the actual performing of the concert. The aspectual candidates in (187) are therefore associated with different pragmatic inferences:

- Pf: “And I am considering going.”
- Ipf: “But the concert is over, and I turned down the invitation.” (the last part of this inference is weaker than the first part.)

The picture emerging from these data is that Pf is associated with a certain ‘current relevance’ of the event (Dahl and Hedin 2000), whereas factual Ipf is linked to ‘gapping’ (of which annulment of the target state with the bidirectional reading is a special case). Note, however, that some scholars do not find pervasive evidence for the association of gapping with factual Ipf in general. Glovinskaja, for instance, adopts a weaker and less committing analysis of factual Ipf: “Neizvestno, sochranit' li rezul'tat ili effekt dejstviya do momenta reii” (Glovinskaja 1982, 118). Glovinskaja still emphasises the importance of contrasting factual Ipf with the ‘current relevance’ expressed by Pf, but in her view, factual Ipf does not license any inferences as to the state of affairs holding at the evaluation time.

**Temporal Indefiniteness in Discourse**

A nice piece of evidence for treating (factual) Ipf in terms of indefiniteness is the prohibition on Ipf in cases of narrative progression, where several ‘complete events’ are temporally ordered w.r.t. each other in a precedence relation. The importance of these data for factual Ipf has been emphasised for instance by Fielder (1990, 263), who claims that factual Ipf cannot be accounted for without reference to the narrative level, since this is where the restrictions on factual Ipf are most clearly felt.

Whether or not we adopt a markedness strategy in order to explain the blocking of Ipf in these cases, the behaviour of factual Ipf is once again best illustrated in comparison with the temporal definiteness of Pf. Events denoted by perfective verbs may provide temporal anchors for each other, reflecting the property of temporal definiteness. An analysis of the two aspectual competitors along these lines can be found in general theories of Russian aspect such as (Thelin 1984, 233) and (Thelin 1990), where Pf is accorded the feature [+Time] (‘time-relatedness’), whereas Ipf is partly defined negatively as [−Time] (‘non-time-relatedness’). The narrative sequencing characteristic of Pf is furthermore particularly emphasised in Barentsen’s work, where Pf is captured in terms of [+Sequencing], cf. (Barentsen 1998) and references therein.

A nice illustration of the different behaviour of Pf and factual Ipf in canonical narrative texts is provided by Clvany’s analysis of Lev Tolstoj’s version of ‘Tri medvedja’ (‘The Three Bears’):
(188) Bol′soj medvel′ vzjali svoju čašku, vzgljani i zarevel strašnym gošom: – KTO CHLEBAL V MOJ CAŠKE!

The big bear took his bowl, looked inside and roared in a terrible voice: – WHO HAS BEEN EATING FROM MY BOWL? (Chvany 1985, 260; 268)

Pf is used in order to build up a coherent text where the three actions performed by the big bear are related to each other. The interpretation of the relative temporal location of the three events denoted by perfective verbs correlates with the order of appearance in the text, such that the first event (′vzjali′ – took′) precedes the second (′vzgljani′ – looked′) which in turn precedes the third (′zarevel′ – roared′). This neat scheme is nicely contrasted with the occurrence of the imperfective ′chlebal′ – ate′, which does not refer to an event temporally following the last mentioned event (′zarevel′). Factual Ip in Russian is used to conceptualise as "temporally isolated", cf. (Leinonen 1984, 243).

From Grounding to Dynamic Semantics

There are a few recent works on the behaviour of the Russian imperfective in discourse (e.g. in narrative texts). Following Hopper and Thompson′s ′transitivity hypothesis′ and Hopper′s work on backgrounding and foregrounding – a distinction which goes back to groundbreaking work by Weinrich and Benveniste – there was some discussion in Slavic aspectology in the 1980-ies on the alleged backgrounding effect of Ip in Russian, cf. (Leinonen 1982), (Leinonen 1984), (Thelin 1984), (Chvany 1985), (Thelin 1990). There is obviously a strong correlation between grounding and aspect, but the claim put forward by Hopper (1979) that Russian aspect grammaticises grounding, may be untenable. One of several counterexamples provided by Chvany (1985, 257) to the strong versions of Hopper′s (and Thompson′s) universal hypotheses, is the pluperfect reading of Pf in Russian, which is arguably correlated with backgrounding.

Concerning factual Ip, the investigations referred to above are not unanimous. For Thelin, factual Ip always to be backgrounded in the sense that this usage is "abstracted from time" (Thelin 1984, 227). Thelin (1984, 232) thus defends Hopper′s idea that backgrounding is systematically rendered by Ip in Russian. Chvany, on the other hand, considers the presence of ′chlebal′ in the ′Tolstoj-story above (188) as a "counterexample to the claim that Ip necessarily signals background" (Chvany 1985, 260). Chvany argues that direct speech (here: the big bear′s utterance ′kto chlebal moju čašku′ containing a factual Ip) eclipses foregrounded, sequencing events in the perfective. She further writes that the factual reading of ′chlebal′ directs "focus on the factual evidence that the porridge has been tampered with" (Chvany 1985, 261).27

27We believe this interpretation of factual Ip in (188) can be questioned in some respects. The big bear′s utterance seems in fact to represent an instance of presuppositional Ip, where focus is not on the event itself (which is presupposed), but on the Agent (′kto – who′). In this sense, the event is indeed backgrounded and the Agent is focused, cf. chapter 6.

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The notions of foregrounding and backgrounding for the data discussed here come close to the opposition [±Sequencing] inasmuch as “foregrounded events succeed one another in the narrative in the same order as their succession in the real world”, whereas “backgrounded clauses may be located at any point along the time axis” (Hopper 1979, 214; 216). As Thelin notes, ‘backgrounding’ is thus not restricted to the prototypical imperfective ‘time-relation of simultaneity’ (Thelin 1984, 226), and may therefore apply to factual Ipfs as well.

This condensed review of the literature on grounding suggests that these notions should be made more precise. Simply adding new definitions will probably not help, instead we need a completely different framework for dealing with these phenomena. As pointed out by Timberlake, the main challenge for Slavic aspectology today is to account for the aspectual opposition and competition in a dynamic framework:

“Čtoby ujasnit’ pragmatičeskie i diskursivne svojstva vida, možno vospol’zovat’sja dinamičeskoj model’ju razvertyvaniāia, v ramkah kotoroj vid (i vremennaja konfiguracijja) kajdago sledujuščego predikata obuslov-livat priraščenie i peresmort informacij, obrabotannoj k predhestvujuš-sčemu momentu, i vneste s tem formiruet ožidanija, otnosjačesjeja k iduščemu dałeće tekstu.” (Timberlake 1997, 199) “Vyrabotka takoj dinamičeskoj modeli i dolžna byt’, vozmožno, osnovnoj problemoj slavian-skoj aspektologii.” (Timberlake 1997, 195)

The framework requested by Timberlake should be applicable to both narrative texts and dialogues (Timberlake 1997, 200), as well as other kinds of discourse. We believe DRT, and its extension SDRT, could fill this role, cf. chapter 6 and 7 for some concrete implementations.

**Defining (In)definiteness**

Leinonen suggests that there is a link between the different cases of indefiniteness with (factual) Ipfs. What is important for both the ‘non-sequencing’ of factual Ipfs in narrative discourse and the bidirectional variant, according to Leinonen (1984, 244), “is the consideration of the NEXT stage”. In both cases, factual Ipfs induce a gap or breach in the temporal structure of the discourse inasmuch as the consequent state of the event in question is not made salient as a temporal anchor for subsequent temporal relations.

Leinonen advocates a discourse-oriented view on aspect. Her parameter [±Definiteness] is not intended to replace the traditional [±Totality], which concerns the inner temporal constituency of the event, i.e. aspect proper. The two parameters pertain to two different levels. For Leinonen (1982, 291), it is not essential whether the notions of definiteness and indefiniteness are to be considered as “aspectual features”. They are, however, necessary for interpreting aspectual functions in discourse. Dickey adopts and extends Leinonen’s basic ideas, explicitly arguing that the two parameters referred to above are closely interrelated. According to Dickey (1995, 304), temporal definiteness entails totality (since Pf always has the feature [+Totality]), while the opposite does
hold, i.e. totality does not entail temporal definiteness (notably due to factual Ipf).

In short, both Leinonen and Dickey relate the aspectual opposition to (in)definiteness, arguing for the following straightforward correlations (which we will have to modify below):

- Pf ⇔ Definiteness
- Ipf ⇔ Indefiniteness

Dickey, in his own words, understands “temporal indefiniteness as an abstract concept that encompasses the four chief types of imperfectivity – stativity, procussuality, repetition and [the factual reading] – as contextual instantiations” (Dickey 2000, 107). As to factual Ipf proper, this particular reading “can be explained as an instantiation of the semantic prototype of the imperfective, temporal indefiniteness” (Dickey 2000, 96). Note that this view is intended as a positive analysis of temporal indefiniteness: “[A]scribing to the Ipf a meaning of temporal indefiniteness is completely different from saying that the Ipf is privately unmarked for temporal definiteness” (Dickey 2000, 106). This unified approach to Ipf and equipollent view on the aspectual category is also underlying Leinonen’s work, but she is less explicit on the role of factual Ipf in this global picture. She follows Forsyth in acknowledging the existence of “at least two types of general-factual meaning” (Leinonen 1982, 185), but it remains unclear how Leinonen’s temporal indefiniteness relates to ‘presuppositional Ipf’, whose interpretation may, in her own words, be associated with “a definite single event, mentioned in the discourse or inferred from the speech situation” (Leinonen 1982, 195).

To illustrate the property of temporal (in)definiteness, Leinonen (1982, 174ff.) turns to an analogy with the nominal domain and the use of the definite and indefinite articles in Germanic. Influenced by this parallel, she identifies the temporal indefiniteness of Ipf with an existential meaning (∃), while Pf and its temporal definiteness has a universal interpretation (∀) (Leinonen 1982, 295). In the case of Ipf, this is to be understood in the sense that “there is at least one time point [here: ≈ interval] to which the verbal notion can be assigned” (Leinonen 1982, 290).

According to this view, one could perhaps translate the imperfective operator as follows in a truth-conditional semantics:29

- Ipf ⇒ λP∃t[P(t)],
  i.e. P’s denotation is non-empty.
  (our translation/normalisation of Leinonen’s ‘imperfectivity as indefiniteness’)

28 A similar approach is found in (Mehlig 1997b) and (Mehlig 2002), which are discussed earlier in this chapter.

29 Leinonen’s ‘verbal notion’, P, can be considered an aspectless, possibly tensed, predicate, which denotes a set of times (i.e. the times at which P is true).
The alleged temporal indefiniteness follows indirectly from the fact that there is at least one time at which the predicate in question holds, but there may perfectly well be more times for which the predicate is true. In all cases where Ipf exhibits the subinterval property (leaving the imperfective paradox aside), the condition ‘P holds of at least one point in time’ can be strengthened to ‘P holds of more than one point in time’. However, factual Ipf, according to (Leinonen 1982, 291), is compatible with a situation where the truth of the predicate only holds of one particular, though unspecified (‘indefinite’), time.

This invariant analysis of Ipf, which is reduced to existential closure of the temporal argument, gets more interesting when compared to the semantics of Pf. Leinonen associates Pf with universal quantification on a par with traditional analyses of the definite article. She is not explicit on this point, but it seems reasonable to assume that her intention is to capture the intuition that there is a unique time in the context at which the predicate holds:

- Pf $\Rightarrow \lambda P\exists t [Cont(t) \land P(t) \land \forall t_i [Cont(t_i) \leftrightarrow t_i = t]],$
  i.e. there is only one contextually relevant time (cf. the predicate ‘Cont’) (our translation/formalisation of Leinonen’s ‘perfectivity as definiteness’)

A corollary of this analysis of the two aspectual operators is the following: If Ipf, as translated above, induces ‘indefiniteness’ merely in the sense that a formula becomes temporally anchored, then the semantic contribution of Pf must be considered a special case of indefiniteness. In other words, definiteness is, after all, the marked member of the (In)definiteness category. This means that we do not have an equipollent opposition between Ipf and Pf. Furthermore, we cannot represent the relation between Ipf and indefiniteness in the form of a biconditional definition, since indefiniteness itself does not require or entail the use of Ipf.

Another question is whether the more constrained property of definiteness can be expressed only by perfective predicates. In light of the presuppositional reading of Ipf, the answer seems to be no, since presuppositional Ipf apparently complies with the uniqueness condition associated with Pf. As noted above, Leinonen is not explicit on this point, restricting herself to informal observations.

Let us now look at how Dickey modifies this analysis. Dickey explicitly proposes a unified analysis of Ipf on the basis of Leinonen’s informal definiteness criterion. He discusses two possible definitions of Ipf in this respect, which are intended to capture the different behaviour of (factual) Ipf in West and East Slavic languages, respectively. In his framework of cognitive grammar, he gives the following definition of the indefinite Ipf in West Slavic: “the situation is construed as assignable to more than one point in time.” He adds that “the multiple points may be contiguous, approximating a single interval (processuality), or disjointedly distributed along the time line (habituality)” (Dickey 2000, 107).

The definition is supposed to capture Dickey’s claim that Ipf of achievement predicates is excluded from having a factual reading in West Slavic. The idea is the following: Since events denoted by achievement predicates do not have
any internal structure, they cannot be conceptualised as occupying more than one point in time, and are therefore incompatible with the definition of Ipf, cf. (Dickey 2000, 107).\(^3\)

Unfortunately, Dickey mistakenly attributes this ‘West Slavic style’ definition of the indefinite Ipf to Leinonen’s work on Russian. As we saw above, Leinonen defines the role of the indefinite Ipf as making a predicate true of at least one time. But this is not the same as saying that the predicate holds of more than one point in time, as Dickey puts it.\(^3\)

Leaving this confusion aside, let us for the sake of the argument examine whether the definition could be transferred into a truth-conditional semantics, as above. This move is certainly not warranted by the cognitive framework adopted by Dickey, but it will be useful for our purposes and cast some light on Dickey’s analysis.

Indefiniteness of Ipf in West Slavic presumably amounts to the following:

- Ipf (version 1) \(\Rightarrow \lambda P \exists t_i [P(t) \land P(t_i) \land t \neq t_i]\),
  i.e. \(P\) is true of at least two distinct times.
  (our interpretation of version 1 of ‘imperfectivity as indefiniteness’ in (Dickey 2000))

This analysis of Ipf may license a biconditional equivalence between imperfectivity and indefiniteness (the latter is here represented through a second-order predicate ‘INDEF’):

- \(\forall P[[\text{INDEF}(P)] \iff \exists t_i [P(t) \land P(t_i) \land t \neq t_i]]\),
  i.e. \(P\) is indefinite iff \(P\) is true of at least two distinct times.

For the East Slavic case, which interests us here, Dickey himself rejects this kind of definition, which he dubs ‘quantitative temporal indefiniteness’, since it excludes achievements from occurring with factual Ipf readings (achievement predicates are only true of a single time point). He proposes the following alternative definition (‘qualitative temporal indefiniteness’), which is supposed to capture the fact that factual Ipf in Russian does indeed occur with achievements: “[T]he situation is not assigned to a single point in time which is uniquely located relative to other situations” (Dickey 2000, 107). The intended meaning is...

\(^3\)It is not clear how Dickey’s use of the accomplishment/achievement distinction w.r.t. factual Ipf can be justified. Both these situation types are telic, or ‘atomic’, in the sense of (Krifa 1998), and therefore only true of a single time.

An attempt to restore the accomplishment/achievement distinction in terms of an ontological separation of time points and intervals, will not save the theory. Assume that an imperfective accomplishment sentence is true of an interval (without being true of any of its proper subintervals), while achievement sentences can only hold of a time point (an interval consisting of a singleton set). One problem with this view is related to the treatment of perfective accomplishment sentences. These are clearly true of an interval, but then we cannot maintain the initial distinction between Pt and Ipf which underlies the temporal (in)definiteness approaches discussed here.

\(^3\)Compare the interpretation of Leinonen’s work given in (Dickey 2000, 106ff.) with what is actually written by Leinonen at the pages referred to by Dickey. Dickey’s misinterpretation of (Leinonen 1982) is at this point quite substantial.
presumably equivalent to the following: “the situation is assigned to a point in time, but this is not a unique time relative to other situations”.

The idea is that whenever an imperfective predicate holds of a unique time, as in the case of factual Ipfs with achievements, the speaker’s choice of Ipfs communicates that the time point in question is not conceptualised relative to other situations in the actual discourse. This second version of the indefinite Ipf is a bit trickier to capture formally. It is convenient to treat Dickey’s reference to ‘other situations’ as events, and transpose the analysis into event semantics. The variable $P$ now ranges over properties of events, as we also assume elsewhere in this thesis. In this setting, indefiniteness of Ipfs in East Slavic (Russian) amounts to the following:

- Ipfs (second version) \( \Rightarrow \lambda P \exists e[P(e)] \\wedge \)
  \[ \forall e, [P(e_1) \leftrightarrow e = e_1] \rightarrow \neg \exists e_2 [e_2 \neq e \wedge Cont(e_2) \wedge Rel(e_2, e)]] \]
  i.e. $P$’s denotation either consists of at least two distinct events, or else the unique event satisfying $P$ is ‘contextually isolated’.
  (our interpretation of version 2 of ‘imperfectivity as indefiniteness’ in (Dickey 2000))

Indefiniteness thus corresponds to the predicate being true of at least one event (time), and if this is the only event (time) for which the predicate is true, then this event (time) is unrelated to the rest of the context. Details of this analysis depend on the spell-out of the relation $Rel$, and how we restrict the extension of the predicate $Cont$ (mnemonic for ‘contextually given’). From the informal discussion in Dickey’s work, it follows that the idea of Ipfs being ‘isolated from the context’, which is also emphasised in Levinson’s work and (Lindstedt 1985, 231f.), should naturally subsume non-sequentiality in narrative settings.

The main challenge for Dickey’s approach is not related to issues of formalisation, but to the question of how his unification strategy fares with the data, and in particular in regard to presuppositional Ipfs. His sparse comments in this respect are not convincing. Following Israeli, he invokes some very elusive pragmatic reasoning, cf. his comments on factual Ipfs in (189):

(189) Devuska, gde vy sapogi pokupali?

Miss, where did you buy the boots? (Israeli 1998, 72), (Dickey 2000, 122)

In a typical discourse situation for (189), one can naturally assume that the speaker intends to buy a similar pair of boots (why else would she ask this question?). However, this ‘inference’ has more to do with the nature of speech acts (questions) than aspect proper. Accordingly, Dickey’s suggestion that “the focus on the replicability of the action means that it is viewed as non-unique in a sense, and thus temporally indefinite” (Dickey 2000, 122), is in our opinion not justified.

If the indefiniteness approach to factual Ipfs is to cover data like (189), it has to take into account the specifics of the presuppositional reading. We do not
believe this endeavour to be very promising, but it would be in line with the following generalisation put forward by Thelin:

“The thematic [i.e. presuppositional] function is just one of the various functions fulfilled by temporally indefinite textual structures within the over-all concept of background” (Thelin 1990, 63).

### 4.6.2 Factual IpF and Type Reference

According to Mehlig (2002, 145), the parameter [±Definiteness] discussed above is just another facet of the type/token distinction. Mehlig’s own view seems to be that factual IpF cannot uniquely be identified with indefiniteness or type reference, due to the existence of the presuppositional reading. This corresponds to our own position in this work. Nevertheless, we review below a different approach, developed in (Hedin 2000), where all subgroups of factual IpF are in fact treated as referring to ‘event types’.

There is a clear parallel between type reference and Forsyth’s ‘simple denotation’ in the sense that the type-referring function amounts to evoking “the denotative content of some verbal expression” (Hedin 2000, 228). However, Hedin, unlike Forsyth, presents an equipollent analysis of the aspectual system, opposing reference to event types (IpF) and event tokens (Pf) as two independent aspectual functions.

As an illustration of event type reference in Russian, Hedin provides the following example:

(190) *(The waiter to the customer:)*

Vy uže zakazyvali’?

Have you ordered? (Hedin 2000, 227)

The idea is that the speaker by choosing IpF (‘zakazyvali’ ordered’) instead of Pf (‘zakazali’ ordered’) does not refer to a particular token or instantiation of the event in question. The situation is referred to as a type, considered in “a non-temporal perspective as an abstract situation type” (Hedin 2000, 228).

Another case illustrating Hedin’s analysis is represented by the frequent (and puzzling) use of IpF with verbs of communication. Consider the following authentic cases:

(191)  – Čego èto vy takoj grustnyj? – govorila Liza. – Vy ustali? (Dvènadcat’ stul’ev)

  – Why are you so sad? – Liza said. – Are you tired?

(192)  – Nu! – sprašival on. – Čto vy skazete? (Dvènadcat’ stul’ev)

  – Well! – he asked. – What do you say?

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12 Thelin (1990, 62) also quotes an idea of Birkenmaier (1981), according to which “actions which are part of the context and thus belong to the self-evidently given are not temporally localised any more.”

13 Hedin refers to similar examples from Modern Greek.
In these cases, Ipf is used with an almost ‘copular’ function, simply linking two items together (Forsyth 1970, 97). The speaker is not interested in the when and how of the speech act itself (i.e., the event token), but focuses on what is actually said or communicated and by whom. As Hedin (2000, 258) puts it, “type-focusing instead of token-focusing of the situation may be a way to underline this more ‘abstract’ meaning by shifting focus away from the ‘concrete’ token.”

How does Hedin’s theory succeed in presenting a unified account of Ipf? Hedin actually explores a very ambitious unification strategy at three different levels. First, at the fine-grained level of imperfective readings in Russian, she proposes a unified account of factual Ipf in Russian (level 1), and points out that the type-referring function as such is independent of other core meanings of Ipf. This view is supported by cross-linguistic data indicating that ‘type-reference’ is a common universal characteristic of Ipf (level 2). In this respect, Hedin (2000, 228) shows that the imperfective may be used ‘pro Perf ective’ to refer to ‘complete events’ in modern Greek. Similar patterns are attested in quite different languages, such as ‘Imparfait pittoresque’ in French, ‘Imperfetto’ in Italian, or the imperfective ‘te i ru’-construction in Japanese. Nevertheless, despite her identifying the type-referring function as an independent core meaning of the imperfective, Hedin simultaneously suggests that the idea can be generalised such that ‘all’ imperfective usages can eventually be reinterpreted under this view (level 3). We will not discuss the merits of this last point.

Concerning factual Ipf proper, one apparent problem for this account is represented by the use of factual Ipf with a definite time reference, notably in the case of presuppositional Ipf. A solution could be to invoke the type/token distinction only in the case of existential Ipf, as suggested in (Mehlig 2002). However, this move would not be in conformity with the quest for (cross-linguistic) unification underlying Hedin’s approach. Furthermore, it would not be sufficient to explain tricky cases like (186), repeated below:

(193) Počtačon prichodit' v 8 utra. (Padučeva 1996, 41)

The postman came at 8 a.m.

Addressing the fact that factual Ipf may cooccur with explicit temporal localisation of the event, Hedin simply writes that even if the sentence “may contain reference to an identifiable situation (occurring at some specific time) [ . . . ] the situation must not necessarily be considered specifically” (Hedin 2000, 231). Such statements do not, however, have any explanatory power. If this proposal is viable, there should be some way of implementing the type/token distinction in the framework of event semantics. Let us therefore briefly consider some possibilities in this direction.

**Event Types, Quantification and Ontology**

Dahl and Hedin (2000, 387) note that the phenomena of type-focusing and token-focusing are conflated in theories like DRT, since the verbal predicate
in both cases introduces an eventive discourse referent. This is problematic according to the authors who suggest that the basic function of the grammatical (and, by analogy, we may add factual Ipf in Russian) is “to state that a certain event-type is instantiated during a period of time, rather than introducing an event as a new discourse referent” (Dahl and Hedin 2000, 388). Inasmuch as ‘introduction of a new discourse referent’ in DRT amounts to existential quantification in predicate logic, this quote echoes a view sometimes expressed informally in Slavic aspectology, viz. that (factual) Ipfs, contrary to Pf, may refer to any instantiation of the event type, and therefore does not contribute to the *quantification* of the event (Vogeleer 1993, 224).\(^{34}\)

But the question remains: What are event types? There seems to be at least two quite different answers to this question. As pointed out by Piñón (1995, 5), event types may be identified with *sets* of occurrences. This is also an option which can be read out of the informal discussion in (Dahl and Hedin 2000). However, as we recall from chapter 2, an aspectless predicate is in our framework treated as denoting precisely a *set of events*, e.g. the verbal stem ‘*čit*’ is of type `<sc>` and translates as ‘*λe[read(e)]*’. Given this understanding of aspectless predicates, the imperfective ‘type-focusing’ operator does not, unlike Pf, existentially close the event-argument. This has the rather unwelcome consequence that we get a type-logical distinction between Ipfs and Pfs, for instance such that the former has the type `<sc,<i,sc>>`, while the latter is of type `<sc,i>`. And, furthermore, it is not clear how the interaction with tense (of type `<i>`) proceeds in the case of a type-focusing Ipf. What does it mean for a set of events to be true of a time?\(^{35}\)

There may also be ways of *reifying* event types, i.e. introducing event types as abstract entities in the ontology, but such moves raise intriguing and thorny philosophical questions. In this case, the domain of events, say \(EV\), would be sortally partitioned: \(EV = E_{token} \cup E_{type}\). In order to distinguish between ordinary events (‘tokens’) and the more abstract events, it seems natural to de-emphasise the temporal contours of the latter. However, from the point of view of natural language semantics, events are basically perceived as times, and it is therefore unclear what these reified event types would be like. It should be noted, though, that this endeavour may be worth pursuing in the kind of event semantics explored by Link (1998), but it would take us too far to discuss the complexities of this proposal. It is not clear to us whether Link’s ideas could be

\(^{34}\) Cf. also the position hold by Merrill (1990, 307f.), who claims that “[Pf] quantifies the event of a predication such that the event is defined as reaching its lexically defined conclusion (that is, it predicates realized telicity), while the imperfective is ‘unmarked and contributes no such quantification’.

\(^{35}\) Dahl and Hedin (2000, 380) suggest that the truth-conditions of sentences referring to event types and first-order event tokens should conflate, since, according to the authors, for the truth of a ‘type-focusing proposition’, the cardinality of the set of discourse referents satisfying the proposition is irrelevant, as long as the set is non-empty.

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applied to the study of factual Ipfs, or aspect for that matter.

Despite these reservations concerning 'event types', we would still like to mention an interesting side-effect of letting (factual) Ipfs denote event types: In this case, we could possibly maintain the view of Ipfs as being inherently atelic in some sense. If an imperfective sentence $\phi$ is true of a set $E'$ of events, it is reasonable to assume that $\phi$ also holds of proper subsets of $E'$. In other words, a version of the 'subinterval property' is restored. Interestingly, Krifka (1992, 46) makes some observations which seem to go in the same direction.

Our approach in this thesis is, after all, more traditional than the scenario sketched above. In a sense, we emphasise the similarities existing between Ipfs and Pf at the syntax-semantics interface. Hence, we argue that bothaspectual operators existentially quantify over the verb's event argument: $\lambda P[e | P(e) \ldots]$, cf. chapter 2. As we recall from the previous review of the indefiniteness analysis of Ipfs, this straightforward way of formulating the semantics of Ipfs through existential quantification makes an imperfective sentence $\phi$ true in a model $M$ if at least one occurrence $e$ of the event type $P$ in question can be found in $M$. This automatically captures the repeatability constraint on the existential Ipfs, which is of some concern to the proponents of the type-referring analysis.

Concerning the type/token-distinction, it is therefore actually the token-focusing perfective verbs which require a special treatment in a semantico-logical framework, while type-reference in a sense can be considered as the 'default'. A common notation in predicate logic for event tokens is $\exists e[P(e)]$, which is short for $\exists e[P(e) \land \forall e_i[P(e_i) \leftrightarrow e_i = e]]$, i.e. there exists one and only one event of type $P$. In chapter 7.3.3, we will make use of this idea that the perfective operator is the one to be given the most complex and 'marked' analysis.

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(Todorova 2002) argues that non-telic predicates denote sets of sets (sums) of events ordered by the subset relation.
Chapter 5

Existential Ipf and Past Tense

If the speaker either presupposes (presuppositional Ipf) or asserts (existential Ipf) the existence of a complete event, the event is most likely to be located in the past. This is our point of departure, and in 5.1 we look a bit closer on the arguments for restricting factual Ipf to past tense. The most interesting interaction of factual Ipf and past tense occurs with the existential reading, and our focus in this chapter is therefore mainly on this reading (5.2 – 5.4).

In 5.2, we present a critical review of the analogy between existential Ipf and experiential perfect. We claim that for the theory of tense outlined in this chapter, there is no reason to distinguish formally between ‘simple past’ and ‘present perfect’ readings in Russian. We also make a case against the notion of an ‘experiential state’ in connection with existential Ipf.

In 5.3, we look at how temporal adverbials interact with tense and aspect, and how the various imperfective readings arise in the context, triggered by particular frame adverbials etc. In this respect, we also propose a temporal calculus in which the past tense morpheme in a Russian sentence is interpreted uniformly whether it happens to be translated with a simple past or a present perfect in Germanic.

This uniform picture is challenged by the presence of past perfect (relative past) interpretations, which can indeed cooccur with factual Ipf. This largely ignored fact raises some intricate questions for a compositional theory of tense and aspect, and requires certain revisions of the temporal calculus. We discuss this phenomenon in 5.4.

5.1 Restrictions to Past Tense

It is an empirical fact that aspectologists mostly focus on issues of aspectuality and temporality in past tense of indicative mood. This holds for the present dissertation as well. In this section, we try to justify our approach by arguing
that the prototypical factual IpF readings are quite naturally associated with past tense.

Furthermore, various pragmatic epiphenomena of factual IpF seem to arise precisely from this interaction with past tense contexts. This is true in particular of the so-called experiential and bidirectional readings of existential IpF.

5.1.1 Presuppositional IpF and Past Events

The restriction to past tense contexts for presuppositional IpF can be given a rather straightforward and intuitive explanation. Consider briefly the role of past tense in the following example (repeated from (22) above):

(194) A deti kričali: papa, papa! ... Za čto on umr? Tovaršič, no počemu že ko mne? Pri čem tu je? Ja, čto li, ubival? (Uppsala Corpus)

And the children cried out: Dad, dad ... Why did he die? Well, my friends, why do you ask me? I have nothing to do with it. Did I kill him?

The imperfective ‘ubival’ – killed’ is licensed in this context since a killing event is presupposed, or can reasonably be inferred from the dying event reported in the preceding utterance. We propose in chapter 6 that the past location of this presupposed killing is part of the presupposed material for this kind of factual IpF. Since the existence of a killing event is given (backgrounded/presupposed) in the input context, the killing itself is not the focus of attention. But, obviously, the fact that this event is located in the past is not focused either. In other words, the information pertaining to past tense is also typically presupposed in the case of presuppositional IpF. We can look at this correlation in the following way: Presupposing the existence of an event amounts to knowing of its existence. But how can one know that an event exists, if it has not been instantiated in the past?

This reasoning implies that our analysis of presuppositional IpF in terms of an existential presupposition may not transpose to cases like the following:

(195) A: Govorjet, sobor eto budet vosstanavlivat.
B: Kto ego budet vosstanavlivat? (Sokolovskaja 1993, 66)

A: People say that they will restore this cathedral.
B: Who will restore it?!

We refer the reader to (Leinonen 1982, 196f.; 250f.) for some discussion of similar ‘pseudo-anaphoric’ examples of IpF in future tense and infinitive constructions.1 This usage of IpF comes very close to what Forsyth refers to as the ‘simple denotation’ of IpF. We leave it open how these and other examples of ‘complete event’ readings in non-past contexts (notably in the infinitive, imperative and future tense) pattern with factual IpF.

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1Note, in this respect, that anaphoric tenses are always past in theories like classical DRT (Kamp and Reyle 1993), although other possibilities are perhaps conceivable.
5.1.2 Existential Ipfs and Past Tense

Facts are typically anchored in past events. The label ‘konstatacija fakta’ is therefore in the literature mainly associated with the complete event reading of Ipfs in past tense. For convenience, we follow this practice, cf. the restriction to past tense in our positive working definition of factual Ipfs.

While it is conceivable to assert the existence of a complete event (≈ existential Ipfs) in contexts outside the domain of indicative past tense, several more or less interesting epiphenomena of existential Ipfs arise only in past tense. Our interest in factual Ipfs is to some extent linked to these epiphenomenal effects of past tense contexts. In this respect, consider the following quote from Glovinskaja, who points to the particular status of the ‘general-factual’ reading in past tense:

Obyčno obščefaktičeskoe značenie usmatrivaetsja u četyrech form nesoversennogo vika: prosedšego vremen [ ... ], infinitiva [ ... ], budučego vremen [ ... ] i imperativa [...]. Odnakо est’ nekotorye osnovanija dušat’, čto v etih formach predstavleno ne sovsem odno i to že vidovoe značenie. V častnosti, v formah budučego vremen, infinitiva i imperativa protivopostavenie aktual’no-diliteľnogo i obščefaktičeskogo nesoversennogo vyraženo značitel’no menee očetlivо, čem v formah prosedšego vremen. (Glovinskaja 1982, 116)

More specifically, the two prominent subsets of existential Ipfs – the experiential and the bidirectional readings – are associated with certain conventionalised (pragmatic) inferences, which are unlikely to occur in other tense/mood constellations. Consider first the existential variant and its so-called ‘experiential’ reading:

(196) Konečno, ja poseščala Muzej voskových figur [v] Aleksandrovskom sadu [... ] (Internet)

Of course, I have visited the Wax museum in the Aleksandrovskij garden.

What is an experiential reading? Recall from our discussion in chapter 4 that we consider this simply to be a convenient label for certain pragmatic epiphenomena, which more or less correspond to the Agent being in a state where she ‘experiences’ some consequences of the event in question. For instance, as a result of the Agent’s visit to the Wax museum, she ‘knows’ this museum (cf. (196) above). In order for the ‘experiential inference’ to go through, it seems reasonable to require at least two different temporal layers to be contextually salient or linguistically given, such that the Agent has a certain experience at $t_1$ (e.g. the utterance time), whereas the event which gives rise to this experience occurs at $t_2$ ($t_2 \prec t_1$). In addition, we require that $t_1$ and $t_2$ belong to the same world, i.e. we keep the world parameter constant (indicative mood). This simply reflects the fact that when we infer that an Agent has experienced a certain event, the event must have occurred in the world of the Agent. Given these
general constraints, it is hard to see how an experiential reading could arise with ‘complete event’ readings of Ipf in the infinitive, conditional constructions or imperative.

It has been suggested that factual Ipf in future contexts should involve a prospective view (Paduèeva 1998, 56), mirroring the idea that existential Ipf in past tense is argued to be ‘retrospective’ (cf. chapter 4.2.1). However, the ‘prospective data’ are not attested; cf. Comrie on this point:

“If languages were completely symmetrical, one might equally well expect to find prospective forms, where a state is related to some subsequent situation, for instance where someone is in a state of being about to do something. [But] languages are not in fact symmetrical about the axis of present time, so that it should not be surprising that there is no direct correspondence between forms with perfect meaning and forms with prospective meaning.” (Comrie 1976, 64)

In any case, it is obvious that a prospective (future) existential Ipf could not relate the present state of the annulment of the result (bidirectional Ipf) or the Agent’s experience (experiential Ipf) to a future instantiation of the corresponding event. The result of an event cannot be reversed before the event has occurred, and the Agent cannot have an experience of having performed some particular action before the event has taken place (but see below on our reluctance towards the concept of ‘experiential state’).

Experiential Ipf and, in particular, bidirectional Ipf would require a retrospective configuration even in future tense, if we expect the characteristic inferences to go through. In searching for a possible experiential or bidirectional future reading, we must, since the future is branching and the event should be realised in our world, ‘go from right to left’, as in past tense, such that the evaluation time is located after the assertion time.

However, tests with informants show that these conceptually complicated readings are not available in future tense contexts. This confirms the conjecture in (Paslawska and von Stechow 2003, 339) that “[t]he only verbal morphology that doesn’t license PERFECT [i.e. a retrospective/perfect configuration] seems to be the infinitive imperfective, e.g. the būdu-future.” The question of why this is so, has not been addressed in the literature, where for instance the fact that the bidirectional reading is conventionalised only with past tense morphology is simply taken for granted (but see section 5.4 below for some discussion).

In a recent collection of her works on aspect, Glovinskaja (2001, 178) notes that the relationship between factual Ipf and past tense is still far from being properly understood in the literature. The discussion in this chapter can hopefully shed some light on this issue.

5.2 Simple Past vs. Present Perfect

Since tense and aspect are expressed by separate morphological means, one would like to see, at least from the point of view of compositionality, a principled
and systematic account of their apparent interaction in the case of factual Ipff. As we saw in chapter 4.2, a common strategy in the literature consists of invoking a ‘perfect-like’ interpretation of existential Ipff, e.g. that the Agent’s experience of some past event holds at the evaluation time. The analogy with the experiential ‘have-perfect’ in Germanic should be used with caution, though, since Russian does not exhibit an overt analytical perfect form.

In this respect, we argue against the necessity of positing a covert present perfect for Russian, at least for the data considered in this thesis (aspectual competition). As pointed out in the literature, the analytical present perfect in languages like English is truth-conditionally different from a simple past only w.r.t. its so-called ‘extended now’ reading, cf. (Portner 2000) and (Alexiadou et al. 2003). However, ‘extended now’ readings occur only with atelic VPs, and need not concern us here.

For the cases of aspectual competition, positing a covert present tense in Russian would not buy us anything in the semantics. The reason why the present perfect is truth-conditionally equivalent to a simple past is the following: The perfect expresses a relation between two times – for some researchers this is a precedence relation between two reference times, and for others this is a precedence relation between the event time and a reference time. In the case of present perfect, this amounts to \( t \prec s^* \) (alternatively: \( e \prec s^* \)).\(^2\) But this is precisely the standard configuration accorded to simple past. Present perfect effects are characterised by the presence of certain consequences of the event holding at the utterance time \( s^* \), but the indexical \( s^* \) is always available for the temporal interpretation, so we do not need a present perfect to give us access to this parameter. According to the Event Nucleus (cf. chapter 1.6.3), every complete event denoted by a telic predicate is followed by a more or less trivial consequent state. Of course, this consequent state of a past event holds at the utterance time, even when \( s^* \) is not specially designated by a present tense auxiliary as in the English present perfect.

The semantic equivalence between present perfect and simple past is also confirmed by the fact that many apparent cases of ‘present perfect effects’ in Russian, as in example (197) below with the adverbial ‘tol’ko čto – just’, can be translated with a present perfect or a simple past English:

\[ (197) \text{My tol'ko čto zvonili' emu i prosili' svjazat'sja s komandujuščim 58-j armii. (Nevazisimaja gazeta, 2002)} \]

We (have) just called him and asked to be put in contact with the commander of the 58th army.

If we abandon the present perfect analogy, we also escape some of the puzzles which haunt accounts of ‘have-perfect’ constructions. For instance, in the tradition going back to Reichenbach and Prior, present perfect is treated as an ‘indefinite past’. Portner (2000, 7) discusses some problems for the indefinite

\(^2\) Due to our view on the interaction of aspect and tense (cf. below), we adopt the version \( t \prec s^* \).
past theory of the English perfect, but these problems are not relevant for the Russian data.

To take one example: The indefinite past theory of present perfect is hard to reconcile with the restriction on frame adverbials observed in English, but this restriction does not apply to factual Ipfs in Russian, as we saw in chapter 3:

(198) Ja падалi s dereva v детстве.
    I \{ fell
        # have fallen \} from a tree in my childhood.

Of course, there is nothing extraordinary about the Russian data, since the tense form being used is a simple past, and not a complex perfect. The 'experiential imperfective' in Russian, unlike the prototypical experiential perfect in Germanic, therefore co-occurs happily with 'big' frame adverbials. Accounting for this interaction of frame adverbials and factual Ipfs is straightforward, as soon as we leave behind the illusion of a perfect tense. It follows from this discussion that we should not talk about the 'present perfect of the Russian imperfective', as for instance in the analysis of factual Ipfs outlined in (Borik 2002).

Existential Ipfs have a much wider range of usages than the experiential perfect in Germanic. In fact, for independent reasons, it also turns out that a Priorian indefinite past theory of simple past is insufficient to deal with the variety of temporal constellations presented by existential Ipfs in Russian. For instance, existential Ipfs can interact with a covert, contextually given frame time (see below). The temporal calculus to be proposed in 5.3 must therefore be flexible. However, by Ockham’s razor, it should not produce readings which are unnecessarily complex.

5.2.1 A Note on the ‘Experiential State’

A common intuition is that “the perfect is used to provide information about one time by citing what happened at another, earlier one” (Portner 2000, 53). The complete event on a factual Ipfs reading, as all complete events, gives rise to a consequent state, but the question is in what way this consequent state could be interesting enough to deserve the attention of the discourse participants. In accordance with the observation that the Agent is often topicalised in contexts of factual Ipfs (cf. chapter 4.2.3), a relevant result state included in the consequent state could be the state of the subject having some property following from the instantiation of the event. For languages with a composite have-perfect it makes sense to treat the auxiliary (“to have”) as denoting the experiential state, cf. the analysis of this auxiliary as state-attributing in (Parsons 1990), (Kamp and Reyle 1993) and others.

It must be stressed, though, that the so-called ‘experiential state’ is the least informative, almost trivial consequence of some past event. The inference to an ‘experiential state’ arises as a last resort, triggered perhaps by some maxim of relevance. In a context of aspectual competition, the hearer tries to make sense out of the speaker’s utterance \( \phi^{IPF} \). If \( \phi^{IPF} \) were chosen, the hearer could
easily have linked the content of \( \phi \) to the actual discourse, due to the temporal anchoring of Pf, cf. chapter 7.3. In the case of \( \phi^{\text{ex}} \), on the contrary, there is only the Agent's 'experience' left to make the utterance relevant for the discourse.

Then what constitutes an 'experience' in contrast to a 'non-experience'? It seems that the 'experiential state' of factual Ipf is just a reasonable default interpretation of the state obtaining at the evaluation time in absence of a specific 'physical' result state (or 'current relevance' of the event), which would require Pf. The link to the Agent arises because there is no focus on the result state associated with the Theme or Patient of the event.

However, it is clearly unjustified to make the role of the Agent a compulsory component in the make-up of factual Ipf. Existential Ipf can also relate to the Theme's (Patient's) experience, as witnessed by examples like the following:

(199) Sanja, tebja kogda-nibud' masina \textit{sbivala}\textsuperscript{7}? (Internet)

\textit{Sanja, have you ever been run over by a car?}

Furthermore, existential Ipf does not require the presence of an animate subject, nor object:

(200) Davlenie v kotle \textit{povy\textsuperscript{s}alos}\textsuperscript{6}? (Padu\v{c}eva 1996, 34)

\textit{Has the pressure in the boiler risen?}

(201) \'Et a pozicija uze \textit{vst\textsuperscript{r}e\textsuperscript{c}alas}\textsuperscript{7} v ego praktike. (Joebleck 2002)

\textit{This position has already occurred} in his earlier games.

Finally, if we return to the core examples with an animate Agent, there is yet another important difference between factual Ipf in Russian and the experiential perfect, which further undermines the membership of existentialIpf in the universal category 'Experience'. It has often been noted that so-called 'Einstein-sentences' in English exhibit a \textit{life time effect}\textsuperscript{3} and can only be felicitously uttered during Einstein's life time:

(202) \# Einstein has visited Princeton.

This can be captured in an analysis of the experiential perfect in English by saying that the experiential perfect \textit{asserts} the existence of a past event \( e \) of type \( P \) and further \textit{requires} (or presupposes) that it be possible to realise another event \( e' \) of type \( P \) at some time posterior to the evaluation time.\textsuperscript{4} An analysis along these lines would correctly predict (202) to be infelicitous, since Einstein is dead and no longer in a position to carry out another visit to Princeton.

In Russian, despite some claims in the literature to the contrary, existential Ipf does \textit{not} impose any requirements concerning possible future instantiations

\textsuperscript{3}See (Musan 1997) for a discussion of this notion.

\textsuperscript{4}Naeumann (1998) argues that this 'postcondition' for the experiential perfect is the most salient difference between this kind of perfect and the perfect of result.
of an event of the same type.\footnote{Indeed, Padsčeva argues that existential IpF requires a potential repetition of an event of the same type:}

Hence, the sentence (203) below is perfectly fine, even if uttered after Einstein’s death by a speaker knowing that Einstein only visited Princeton once.

(203) \v{E}jv\'stejn \textbf{pose\v{s}tal} \textbf{I} Prinston.
Einstein \textbf{visited} Princeton.

Let us add an authentic example as well:

(204) \textit{V etom domike Pu\text{"u}skin kogda-to \textit{\v{c}ital}}\textsuperscript{d} druz'jam ‘Borisa Godunova’. (Internet)

In this house, Pu\text{"u}skin once \textbf{read} ‘Boris Godunov’ for his friends.

This means that in Russian the ‘experience’ follows the person beyond his life time (be that Pu\text{"u}skin or Einstein), but then ‘experience’ is perhaps not a relevant parameter for Russian aspect. We are left with Comrie’s broad definition of the experiential perfect as indicating “that a given situation has held at least once during some time in the past leading up to the present” (Comrie 1976, 58).

Given this understanding of the label ‘experiential’, an analysis of existential IpF in terms of ‘experience’ is harmless, though perhaps unnecessary.

\section{5.3 Ingredients for a Temporal Calculus}

We present here some ingredients for a calculus which can deal with temporal information jointly expressed through tenses, adverbs and aspect. The calculus extends quite generally to various temporal constellations in Russian, but our focus is of course mainly on factual (existential) IpF and past tense. In this respect, the formalisation of the data must reflect the idea that the semantics of past tense (‘-l’) should remain invariant. It is only the context and interaction with temporal adverbials which eventually create the impression of a ‘simple past’ or ‘present perfect’ reading. Hence, we should not posit any semantic ambiguity of the morpheme ‘-l’ between a past and a ‘synthetic perfect’.

Furthermore, we strive to account for the intuition that tenses and adverbs together determine the value of the assertion time, that is, the temporal focus of the speaker, which enters the aspectual relation. ‘Tense and adverbs each

\footnote{"Kontekst kratnosti, t.e. potencial'na vozmoznost' mnogokratnogo sushchestvennja situacii, okazyvaetja sushchestvennym usloviem dopustimosti rezultativnogo ornaslenija NSV daje togda, kogda rec' idet o ediničnom dejstvii." (Padsčeva 1996, 40)}

A similar claim has also been made for the experiential marker ‘gou’ in Mandarin Chinese, cf. the DRT-analysis in (Yeh 1996). For the Russian data, however, we contest the relevance of this constraint (or ‘feature’ in Padsčeva’s analysis), cf. also the discussion in chapter 4.5.1 on factual IpF and iterativity.

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contribute a certain constraint on the assertion time. At the same time we want to preserve the traditional insight that tenses are relations between times.

The way we go about compositionally to achieve this is by letting tenses and temporal adverbials be part of the same ‘branch’ in the tree. This amounts to a kind of ‘semantic unification’ in the sense of (Kamp et al. to appear, 85). The branch ends in the assertion time node which is input to AspP, as we saw in chapter 2. Four different kinds of times are needed to bring this about. Besides the familiar assertion time, evaluation time and event time, we need a forth parameter which is often referred to as the ‘frame time’ (von Stechow 1995, 17). The frame time as perceived here, is typically denoted by frame adverbials and certain relational adverbials, but its value can also be contextually determined in absence of appropriate adverbials.

Following recent work by (Kratzer 1998), (Fabricius-Hansen and Sæbø to appear) and (Paslawska and von Stechow 2003), tense is treated as a function from a frame time $t_f$ to a function from an evaluation time $t_o$ to a time $t$. In other words, tense has the type $<i,<ii>>$. The resulting time $t$ is the assertion time which is input to AspP of type $<i,c>$.

The meaning we attribute to past tense is based on Kratzer’s ‘definite theory of tense’ developed in (von Stechow 1995, 17). In words, it can be stated as follows:

- Past$^*$($t_f$($t_o$) denotes the intersection between $t_f$ and the past of $t_o$; the maximal interval in $t_f$ prior to $t_o$. (Fabricius-Hansen and Sæbø to appear).

The interval in question is depicted in figure 5.1.

![Figure 5.1: The interval denoted by past tense](image)

In our compositional approach, we can spell out the denotation of past tense thus:

- ‘*I*’ $\Rightarrow \lambda t_f \lambda t_o \text{Past}^*(t_f)(t_o)$

When arguments are provided for the two lambda functions in the denotation of tense, we end up with a time interval, i.e. an expression of type $<i>$. The value of this assertion time is fixed once and for all after the two lambda functions have been given appropriate arguments representing the frame time and evaluation time, respectively. The constraints put on the assertion time by
the frame time and evaluation time therefore make it behave like a \textit{constant}, i.e. independent of assignment functions.

Although the frame time parameter has the basic type \textlangle i \rangle, we prefer to think of it as hiding a more complex derivational history, just as the assertion time 'higher up' in the tree. In line with our compositional conception of temporal phenomena, we consider the frame time to be the result of intersecting two time intervals: the interval denoted by the frame adverbial (or a contextually given time $t_c$) and a 'default' interval $t_\infty$ corresponding to 'all time'.\footnote{We can intersect intervals since they consist of linearly ordered time points. From a typological view, the intervals in question are still perceived as times of type \textlangle i \rangle, and \textit{not} sets of times. This is important for the compositionality later in the derivation.} This is illustrated in figure 5.2.

- Figure 5.2: The frame time parameter

\begin{center}
\begin{tikzpicture}
  \node {frame time} child {node {frame adverbial/$t_c$} child {node {} edge from parent[draw=none]}} child {node {$t_\infty$}};
\end{tikzpicture}
\end{center}

There seems to be a complementary distribution between temporal adverbials (in particular frame adverbials) and 'context times'. In absence of an overt temporal adverbial, a context time $t_c$ in the sense of (Partee 1973) \textit{may} show up and eventually modify the assertion time parameter in the aspectual configuration. Strictly speaking, this anaphoric element should perhaps appear only in a presuppositional DRS at the 'sentence level' of type \textlangle c \rangle (cf. example (206) below), but for perspicuity we have represented it explicitly in figure 5.2.

The variable $t_\infty$ is treated as a so-called \textit{distinguished variable}. It is by convention interpreted as a \textit{maximally indefinite time}, viz. 'all time'. It can occur free in assertoric or presuppositional DRSs without causing any problems for interpretation. There is only one interval corresponding to 'all time', hence the value of $t_\infty$ is given independently of assignment functions.

The principle of compositionality requires binary branching. In absence of frame adverbials (in a wide sense) and context times, the value of the frame time parameter is \textit{not} given through intersecting $t_\infty$ and 'the empty frame adverbial'. That would not make sense. Instead, we invoke a convention saying that $t_\infty$ automatically passes up to the frame time node when no other reference times are available. If we have an overt frame adverbial or a context time, this interval will always be smaller than $t_\infty$, and the latter will disappear from the derivation through the intersection operation. In the sample computations presented below we will simplify matters slightly and directly insert the frame adverbial, context time $t_c$, or $t_\infty$ as the value of the frame time parameter.
Figure 5.3: Temporal calculus (first version)

$$[e \mid VP(e), ASP(e)(\text{Tense}^*(\text{frame}^*)(t_0))]$$

Assertion Time: \text{Tense}^*(\text{frame}^*)(t_0)  
Asp: \lambda t[e \mid VP(e), ASP(e)(t)]

Tense: \lambda t, \text{Tense}^*(t)(t_0)  
Frame time* \lambda P \lambda t[e \mid P(e), ASP(e)(t)]  
\lambda e[[VP(e)]]

For perspicuity, we follow (von Stechow 1995) and treat also the evaluation time as a distinguished variable: \(t_0\). The convention thus adopted is that \(t_0\) denotes the local evaluation time, which equals the utterance time whenever \(t_0\) is free. Henceforth tense is therefore the function \(\lambda t, \text{Tense}^*(t)(t_0)\), i.e. of type \(<i,i>\), as in figure 5.3.

The only composition principles used in 5.3 are straightforward functional application and set intersection (within the VP). We assume in this preliminary version that the frame time is a constant function denoting a time interval, cf. figure 5.2 above. What is important is that the frame time must have the appropriate type \(<i>\) for being input to tense. After performing a lambda conversion, we end up with the constant ‘Past*(frame time*)(t_0)’ of type \(<i>\), i.e. the assertion time. This completes the calculation of the branch involving tense, temporal adverbials and contextually given times.

Using functional application as the main mode of combination w.r.t. temporal phenomena has the merits of highlighting the compositional, systematic interaction of tense, temporal adverbials and aspect. However, this implies a departure from the standard neo-Davidsonian approach, where a frame adverbial like ‘včera – yesterday’ would typically be represented as a two-place event predicate, e.g. on the form ‘In(e, yesterday*)’. We leave it open whether tense, aspect, and temporal adverbials ultimately could comply also with a conjunctivist mode of combination.

Let us now look at some concrete examples:

(205) 20 aprelja IV Mežunarodnjaj šachmatnyj turnir v Pojkovskij priežal\textsuperscript{f} otkryvat\textsuperscript{g} glavnij kurator meroprijatiya – 12-d\\ ćempion mira Karlov. (Chess Express 2003)

April 20, the main sponsor of the forth international chess tournament in Pojkovskij, the 12th world champion Karlov, came to inaugurate the tournament.

In (205), the frame adverbial ‘20 aprelja – April 20’ is a constant function
Figure 5.4: Derivation of (205)

\[ [e | \text{Karpov's visiting}(e), \ e \bigcirc (\text{Past}^*(\text{April }20^*)(t_o))] \]

\[
\begin{array}{ccc}
\lambda t_i \text{Past}^*(t_i)(t_o) & & \text{April }20^* \\
\text{AspP: } \lambda t[e | \text{Karpov's visiting}(e), \ e \bigcirc t] & & \text{VP: } \lambda e [\text{Karpov's visiting}(e)] \\
\text{Ipf: } \lambda P\lambda t[e \mid P(e), \ e \bigcirc t] & & \\
\end{array}
\]

(providing the frame time for the bidirectional Ipf (‘priežiš’ – came’). The relevant temporal information is presented in the sample computation in figure 5.4.

The final line of the derivation says that (205) reports an event \( e \) of Karpov’s visiting a chess tournament, and that this event \( e \) overlaps with the maximal subinterval of April 20 located before the utterance time. This subinterval is the interval of April 20 itself, hence the overlap relation actually holds between \( e \) and the time interval of April 20. We argue below in section 5.3.3 that one can infer the stronger inclusion relation ‘\( e \subseteq \text{April }20^* \)’ for these cases of factual Ipf.

Next, consider (206):


When I met him at a tournament in Holland, I asked him: – Viktor L’vovič, why didn’t you call me when you started losing to Timman? – I did call you, Korčnoj answered coldly – but they told me that you weren’t in your room.

The frame time for ‘zvonil̆’ in (206) is anaphorically given through the assertion time of the preceding utterance. If we treat anaphora as a kind of presuppositions (and vice versa, see chapter 6 for details), the temporal calculus should provide us with something like the following preliminary representation for ‘Ja zvonil̆’ in this discourse:

- \([e | \text{my calling}(e), e \bigcirc (\text{Past}^*(t_c)(t_o))]\) at \([t_c] \]

When the input context is updated with this representation for ‘Ja zvonil̆’, the presuppositional DRS (in subscript) of the latter will be resolved. That is,
$t_c$ will be unified with the time interval approximately corresponding to ‘kogda stali?’ proigyvat' Timmanu – when you started loosing to Timman’. This procedure captures the anaphoric readings in past tense contexts discovered by Partee (1973). However, technically speaking, we depart from Partee’s treatment inasmuch as tense itself is not anaphoric in our calculus. The anaphoricty effect is here formally taken care of by the frame time parameter.

Note also that (206) above is an instance of existential IpF, not presuppositional IpF. This particular constellation where the event argument is asserted, while some temporal information is presupposed/anaphoric, is alien to the experiential perfect in Germanic, and therefore provides a further argument against the experiential perfect approach to factual IpF.

5.3.1 On the Semantics of Temporal Adverbials

Although most temporal adverbials are not constant functions like the calendar predicate in (205) above, we want different kinds of temporal adverbials to comply with the calculus in a uniform way. This is not a trivial point since temporal adverbials form a very heterogeneous group: “Temporal adverbs display the full range of referential possibilities which we find with noun phrases in general – absolute, anaphoric, indexical, etc.” (Kamp et al. to appear, 81).

Adverbials like ‘včera – yesterday’ and ‘desjat’ let nazad – ten years ago’, which both easily combine with a factual IpF reading, are deictic in the sense that they make implicit reference to the utterance time. They still function as ordinary frame adverbials by providing a ‘frame’, as we can see from figure 5.5.

Figure 5.5: The interval denoted by ‘desjat’ let nazad – ten years ago’

\[
\begin{array}{cccc}
-12 & -11 & -10 & s^* \\
\hline
\end{array}
\]

‘10 years ago’

Although the main function of these adverbials is to provide the frame time, we would like to account also for their ‘relational character’ (Lepore and Ludwig 2003). This issue is even more acute for clearly relational adverbials like ‘prežde/ranše – before’ etc. But again, what appears to be a purely relational adverbial is in fact reinterpreted as providing a frame time, though a rather vague one: ‘all time before the evaluation time’.

To capture the behaviour of relational adverbials of various kind, we can make the frame time parameter dependent on the evaluation time. As usual, we treat the evaluation time as a distinguished variable $t_0$. This ensures a uniform treatment of the frame time which should always have the basic type $<i>$, i.e. it refers to a certain time interval relative to the evaluation time.\(^7\) The modified

\(^7\) In a sense, this uniform approach to temporal adverbials represents a ‘generalisation to the worst case’. If the frame time behaves like a constant, it will simply ignore the dependence on $t_0$. To enhance readability, we will sometimes gloss over the evaluation time parameter in the formal representations.
picture is presented in figure 5.6.

To take one example, consider (207) and its derivation in figure 5.7:

(207)  
\[ \text{Nedelju nazad ja slyšala} \text{ po radio peredaču o sčasti.} \]  
\[ \text{(Uppsala Corpus)} \]
\[ \text{A week ago, I listened to a radio program about happiness.} \]

The formal representation says that the temporal extension of an event of my listening to a radio program about happiness is overlapping with (in fact, included in) the interval corresponding to the week before the utterance time. The constant time \( \text{‘Past}^*(\text{one week before}*(t_0))(t_0) \)' refers to the maximal part of the interval of ‘one week before the utterance time’ which precedes the utterance time. This is just an unwieldy way – intrinsically related to our representational format – of characterising the interval of ‘last week’.

For the examples discussed so far, we have seen that the frame time actually tends to make the contribution of past tense redundant in our calculus, since the
most restricted element 'wins' in the operation of intersecting 'tense proper' and the frame time. The most restricted element is, of course, typically the frame time inasmuch as 'Past*' gives us the 'whole past' according to our definition of past tense. This aspect of the calculus is in fact a welcome result as it complies with the intuition that frame adverbials play a crucial role in constraining the speaker's focus (the assertion time). Furthermore, it confirms the well-known fact that tenses in Indo-European languages are often semantically redundant.

Of course, past tense is far from being redundant in absence of both overt and contextually given frame adverbials/times. In such cases, notably characteristic of factual IpF, the assertion time is indeed solely determined by past tense, since past tense narrows down the assertion time from \( t_{oc} \) ('all time') to 'all time prior to \( t_0 \).

The strength of this way of treating the interaction of tenses and temporal adverbials is best illustrated with examples like the following:

(208)  V Pitere 

degnja pokupali Marlboro(red) za 11 r. (Internet)

In St. Petersburg 

today I bought Marlboro(red) for 11 rubles.

The frame adverbial 'segodnja – today' denotes an interval of 24 (or, perhaps, 12) hours, but not the whole frame time is part of the assertion time in (208). The assertion time is here truly constrained by both the frame time and past tense, hence the event is located in the interval resulting from intersecting 'today' and 'all time preceding the utterance time'. Uttered at, say, 4 o'clock on July 1, the sentence would mean that the buying event took place some time on July 1 before 4 o'clock. The assertion time is therefore only the part of today which is located in the past. This shows that an overt frame adverbial cannot automatically be identified with the assertion time, and we therefore need to distinguish between the frame time parameter and the assertion time, although they are often identical.

### 5.3.2 Some Loose Ends

As confirmed recently in temporal semantics, "adverbs may become very complicated if we take the [tense-aspect architecture] seriously" (Alexiadou et al. 2003, xx1). The following example points to some complications for our analysis:


Bologan has already once, seven years ago, already won a big open tournament in Novgorod with a promise to be invited to the main closed tournament next year. But he didn't play. What will happen now with Dortmund?

---

8By this we have in mind the relation holding between \{Past*, Pres*, Fut*\} and \( t_0 \).
Let us focus on the role of ‘odnáždy – once’ in its interaction with frame adverbials like ‘sem’ let nazad – 7 years ago’. For simplicity, we ignore the occurrences above of ‘úze – already’, which is notorious for being a particularly hard nut to crack for tense semanticists.

It has been argued by von Stechow and others that frame adverbials like ‘sem’ let nazad – 7 years ago’ are not used to refer to an interval of an extension of 1 year (i.e. the time interval between ‘8 years ago’ and ‘7 years ago’), but actually refer to some time within the interval between ‘8 years ago’ and ‘7 years ago’. This is supposed to reflect the fact that sentences like (209) – even without an explicit ‘odnáždy – once’ – are not interpreted as Bological’s constantly winning some tournament throughout the whole interval associated with the frame adverbial.

The corollary of this reasoning is that frame adverbials in general are of type <i,c> and denote a set of times, e.g. the following power set: \{t | t \subseteq \text{the year between} (8 \text{ years before} t_0) \text{ and} (7 \text{ years before} t_0)\}. This further requires a default temporal specification (or an overt adverbial like ‘odnáždy’) to pick out an appropriate time interval from this set.

However, the driving intuition behind this argument is in fact already taken care of by our calculus, since the eventive framework and aspectual relations are modelled to capture cases where a complete event is included in the frame time. In other words, the temporal trace of a complete event indeed only occupies ‘some time’ (i.e. a subinterval) of the frame time. This is the contribution of the aspectual relation \(e \subseteq t\) in a nutshell. In our theory, the assertion time \(t\) should therefore (normally) be determined by the whole interval corresponding to the frame adverbial, and not just any arbitrary subinterval.

On the other hand, our theory is then faced with the question of how to deal with overt existential quantifiers like ‘odnáždy – once’, as in (209) above. The adverbial ‘odnáždy’ and related ones like ‘odin raz’, ‘kogda-to’ and ‘kogda-nibud’ convey indefiniteness and easily cooccur with factual Ipf, cf. chapter 3.2.2 for illustrations. But they also seem to function as existential quantifiers over times. This is most transparent with ‘odnáždy’ and ‘odin raz’; where the element ‘odin – one’ is overtly expressed.

To capture their function as temporal existential quantifiers, we apparently have to type shift both frame adverbials and tense in order to get the compositionality right. But this brings us back to the view of treating frame adverbials as being of type <i,c>, as suggested above. In this scenario, <i,c> is presumably also the type for tense, which can then be intersected with the frame adverbial. Given these modifications, ‘odnáždy – once’ is now best seen as a temporal generalised quantifier, i.e. of the complex type <i,c,<ic,c>>:

- \(\text{odnáždy} \Rightarrow \lambda T \lambda T_i [t | T(t), T_i(t)]\)

The first argument (\(T\)) is the outcome of the operation of intersecting tense<ic> and the frame adverbial<ic>, while the second argument (\(T_i\)) is provided by the familiar AspP<ic>. However, this analysis, combined with our treatment of aspect, results in a more or less pointless duplication of the inclu-
sion relation: \( e \subseteq t \wedge t \subseteq \text{‘the year’} \). The aspectual relation triggered by verbal morphology becomes redundant.

Furthermore, as mentioned above, since the result emerging from intersecting tense and the frame time in this scenario is of type \(<i,c>\), we need a covert (default) existential quantifier for the large majority of cases where we do not have any overtly expressed temporal quantifiers like ‘odnáždy’.

The intuition behind the aspectual configuration \( e \subseteq t \) for a complete event reading clearly becomes less transparent if we change the role of frame adverbials (and tense) in our calculus. In fact, the aspectual inclusion relation does the job which in the scenario above is taken care of by a (default) existential quantifier. We therefore conclude, given our current assumptions about the tense-aspect architecture, that the semantic contribution of ‘odnáždy’, ‘kogda-to’ etc. must be treated as vacuous or redundant. They can be considered as some sort of indefinite frame adverbials (\( \approx \text{‘all time’} \)), hence overruled by tense proper. They contribute no more to the assertion time parameter than the distinguished variable \( t_\infty \). It seems that this move is necessary in order to maintain the appealing picture of viewpoint aspects as relations between the event time and assertion time. The discussion shows that more research is needed into the nature of temporal modifiers in this kind of compositional temporal event semantics.

5.3.3 Resolving the Underspecified Semantics of Ipf

The way we have outlined the interaction between temporal phenomena above gives us a clearer picture of how Ipf receives its interpretation from the context. In chapter 2, we defended the view of Ipf as being vague and semantically merely licensing a general, underspecified overlap relation between the event and assertion time: \( e \bigcap t \). Note that this relation is close to being the least informative of all candidate topological relations. When the speaker reports a certain event, the least one can expect is that the focus of the speaker (assertion time) is on this event. But in that case, the overlap relation is uninformative from a pragmatic point of view. This triggers reinterpretation, which in the case of factual Ipf gives us the more specific inclusion relation \( e \subseteq t \). Factual Ipf thereby represents a prototypical case of what is known as pragmatic strengthening.\(^9\)

The factors governing the process of reinterpretation go back to universal principles for communication, and have been stated thus:

- **Non-Vacuity Principle (NVA)**
  “In any given context, try to interpret any predicate so that both its positive and negative extensions are non-empty” (Kamp and Partee 1995, 161)

Concerning the relation \( e \bigcap t \), one can argue that ‘its negative extension’ is practically empty (with the exception of marginal configurations where the

\(^9\)This phenomenon currently receives much attention in Optimality theory, which is briefly discussed in chapter 7.3.
speaker asserts the existence of some event while focusing on a temporally disjunct time interval). Our claim, following NVA, is that the size of the assertion time filling the argument slot of AspP favours a specific reinterpretation. Since AspP is always combined with an assertion time, pragmatic strengthening of Ipf will always occur in a non-ambiguous context. In this sense, the initial aspectual overlap relation licensed by the imperfective operator is a truly underspecified representation. At the same time, the calculus constitutes an argument against treating the variety of Ipf readings as instantiations of different operators (ambiguity). We capture instead the range of imperfective readings through interpretational restrictions induced by the nature of the assertion time.

We propose the following rule for disambiguation of Ipf in contexts which license a factual Ipf interpretation:

- **Axiom for (Factual) Ipf**
  
  Given an utterance \( \phi \),

  \[
  \begin{array}{c|c}
    t, e & e \subseteq t \\
    \hline
    t \text{ is the assertion time for } \phi \\
    e \text{ is the main event for } \phi \\
    e \subseteq t \\
    \text{POSS} & e \subseteq t \\
  \end{array}
  \]

  This principle guides the interpretation of Ipf along the lines suggested by NVA above. It says that if it is possible (‘POSS’) to let the event be included in the assertion time, then the interpreter should carry out this move, since the configuration \( e \subseteq t \) considerably reduces the range of admissible overlap relations.\(^{10}\)

  Now, the question is what makes the relation \( e \subseteq t \) possible or, perhaps, plausible and reasonable from the point of view of the interpreter? The answer must be a bit circular. The relation \( e \subseteq t \) can be considered a ‘possible’ configuration obtaining for a sentence \( \phi \) if and only if the hearer’s *world knowledge combined with information from the lexicon* make it possible [plausible] for the average temporal extension of an event of this type to be included in the actual assertion time. Again, we must look at the assertion time. It is clear that the bigger is the assertion time, the more probable is a factual reading.\(^{11}\) But note

\(^{10}\) As demonstrated in discourse-oriented theories like SDRT (Asher and Lascarides 2003), such axioms for discourse interpretation typically involve non-monotonic reasoning. This simply reflects the fact that pragmatic rules are seldom absolute. It may therefore be that the conditional in the axiom above should not have the form of a strict implication (\( \Rightarrow \)), but a defeasible implication (sometimes written: ‘\( > \)’).

An alternative approach would be to invoke a covert, default ‘event realisation’ operator in the case of telic predicates, cf. (Bohnemeyer and Swift to appear).

\(^{11}\) Similar observations have been made in various descriptive analyses, cf. the following quote:

“The past event may receive an ‘existential’ interpretation, as a result of the use of
that the size of the run time of the event also matters. Telic predicates whose event instantiations have a long duration need a bigger assertion time for the factual reading to arise. The opposite is, of course, also true, as witnessed by the following example:

(210) Včera soobščali⁴ po televízoru. Zavtra peredadut⁷ po radio. (Uppsala Corpus)

Yesterday, they announced [it] on TV. Tomorrow they will announce it on the radio.

The assertion time in (210) equals the frame time provided by ‘včera – yesterday’ (past tense is redundant). By some standards, an interval of 24 hours is not considered ‘big’. However, with respect to events of making an announcement on TV, the interval is more than big enough to invoke a factual reading. There are many non-overlapping possibilities of locating this event within the assertion time, as illustrated in figure 5.8.

In the case of factual Ipf, we are not informed about the exact location of the event, i.e. when it started or finished. All we know is that the event is ‘floating’ within a larger assertion time. For this reason, relational adverbials like ‘prežde/ran’se – before’ are particularly appropriate for a factual reading, as they produce a big assertion time. From this treatment of factual Ipf, the feature indefiniteness – which plays a prominent role in many previous accounts (cf. chapter 4.6.1) – follows indirectly.

It is therefore to be expected that adverbials which express temporal indefiniteness, like ‘kogda-to – some time’, ‘kogda-nibud’ – ever’ etc., typically trigger a factual Ipf interpretation. As argued above, these adverbials are best seen as redundant in our calculus, as they do not narrow down the assertion time, which then is solely determined by past tense.

Now, what happens if it is impossible [implausible] to locate the event within the confines of the assertion time? Our theory should predict a processual reading for these cases. Let us therefore invoke the following complementary axiom, which matches the one previously given:¹²

---

¹²Note that the two axioms are formulated independently of each other. We could have made an explicit link between them such that one imperfective reading appears as the ‘negation’ of
• **Axiom for (Processual) Ipf**

  Given an utterance $\phi$, 

  \[
  \begin{array}{c|c|c}
  t, e & \text{t is the assertion time for } \phi & \Rightarrow \text{t } \subseteq \text{e} \\
  e & \text{e is the main event for } \phi & \text{t } \subseteq \text{e} \\
  \text{POSS} & \text{t } \subseteq \text{e} & \\
  \end{array}
  \]

  If the interval of the assertion time is ‘small’ compared to what would constitute the normal length of the temporal trace of the event, we get a processual reading:

  (211) **Kogda pozvonił** Boris Georgiević, my s Iraj [ . . . ] **gotovili** dokumenty. (Internet)

  When Boris Georgiević called, Ira [ . . . ] and I **were preparing** the documents.

  The assertion time for ‘gotovili’ – were preparing, is here determined by the temporal clause ‘kogda pozvonił’ B.G. – when B.G. called’ (the past tense of ‘gotovili’ is again redundant). Obviously, the time interval of the telephone ringing is shorter than the duration of an event of ‘preparing the documents’, hence the imperfective condition $e \cap t$ is replaced by $t \subseteq e$, according to NVP and the axiom for (Processual) Ipf.

  It follows from the above considerations that examples like (212) below are slightly ‘problematic’ in a zero-context:

  (212) **Ja čitali** čtu knigu včera.

  I **read** this book **yesterday**. (Gasparov 1990, 199)

  The assertion time (through the adverbial) seems too short to include what would constitute the ‘normal’ interval required for a book-reading. This implies that a factual interpretation is excluded. Example (212) is therefore, provided the book in question is of a normal size, only felicitous if there is some contextually salient time which could help further restrict the assertion time. In that case a processual reading would be possible. A paraphrase of this scenario is the following: “At that particular time contained in yesterday, I was reading the book . . . ”.

---

the other. In that case, we would have to give priority to one of the readings, and processual Ipf as the *Hauptdeutung* of Ipf, would be the most natural candidate for such a role. Note also that the axioms represent an idealisation as we have left out habitual-iterative readings etc. Also, for perspicuity, we ignore here the modal component of the progressive (the so-called ‘imperfective paradox’).

13 Recall from chapter 3 that a ‘weak reading’ of factual Ipf, i.e. ‘I read in the book yesterday’, is not available.
Much attention so far has been given to constructions with temporal adverbials. Of course, the same principles also apply to the canonical example below:

(213) Ty čitali ‘Vojnu i mir’?

**Have you read** ‘War and Peace’?

Uttered ‘out of the blue’, in absence of any frame adverbials or contextually salient times, the assertion time of (213) is only constrained by past tense. Given our understanding of past tense, this means that the whole interval preceding the utterance time is available as the assertion time. Despite the fact that an event of reading ‘War and Peace’ is rather time consuming, it can easily be included in ‘the whole past’. Given the linguistic form of (213) – notably characterised by absence of a frame adverbial – and knowledge about events of reading ‘War and Peace’, the hearer will make the correct inference to a factual reading. This means that the relation $e \subseteq t$ is preferred over $e \cap t$.

The temporal calculus, combined with certain principles for resolving the underspecified semantic contribution of IpF, explains why we easily get a factual interpretation in absence of temporal adverbials. A processual reading is only possible in this case if we have a *covert* (anaphoric) frame time of a relatively small size.

To sum up, the theory outlined here reflects the widespread intuition that the range of imperfective readings is contextually determined.

### 5.4 Past Perfect Readings

We have argued against distinguishing between so-called ‘present perfect’ and ‘simple past’ interpretations of factual IpF in past tense. The difference shows up in translations of factual IpF sentences into English, but these cases should be modelled uniformly, reflecting the uniform tense morphology in Russian. This was implemented in 5.3. Now comes the tricky part. What happens if the evaluation time differs from the utterance time?

True, when the evaluation time itself *precedes* the utterance time, we do indeed get a *past perfect* reading, despite the fact that Russian lacks overt perfect morphology. Furthermore, it turns out that past perfect readings of IpF often have exactly what we are looking for, viz. a factual interpretation.\(^{14}\)

We consider the relevant data of factual IpF in past perfect contexts to fall into three groups, illustrated in (214) – (216) below:

(214) Pobeda v Vejk-an-Zee byla ochen’ vaznoy dlja Kasparova. **On stavili**

pered soboj cel’ pro demonstrirovat’, čto on po-preznemu javljaetsja

lučšim turnirnym šachmatistom v mire. (Kasparov Chess 2001)

\(^{14}\)This is not so surprising considering that telic predicates occurring in perfect tenses in languages with analytical perfect constructions, are by default considered to have ‘complete event’ interpretations (like factual IpF). Otherwise, the event in question would normally not have any interesting consequent states to focus on.
The victory in Wijk-an-Zee was very important for Kasparov. He had set the goal of showing that he was still the best tournament player in the world.

(215) Dolgo obedalić, [ ... ], potom privelić odnogo belen'kogo krasnoglazogo starička, utverždavšego, što on znal Sergeja Ivanovića po vologodskoj sylke i vstrečalsja s nim vo 2-j armii, v dvadcatom godu. (Uppsala Corpus)

We had a long lunch, [ ... ], then they brought up a white-skinned red-eyed old man who claimed that he knew Sergej Ivanović from his Vologda deportation and had met him in the 2. army, in 1930.

(216) Kitajskij grossmejster ne byl dlja tebya absoljutnoj zagadkoj, ved' ty uže vstrečalsja s nim v matčë Rossiya-Kitaj? (Kasparov Chess 2001)

The Chinese grandmaster was not completely unknown to you, as you had played him already in the Russia-China match?

In all three cases, complete events denoted by imperfective verbs (factual Ip) are located prior to some other event/time which itself precedes the utterance time, cf. the use of past perfect in the English translations. In (214), it follows from lexical information and world knowledge that the event of Kasparov’s setting a certain goal (’stavil’o) must have preceded his winning the tournament. In (215), a relative past occurs embedded under a verbum dicendi. The meeting event (’vstrečalsja’o) of the subordinate clause took place before the speech act, which itself is rendered by a past participle (’utverždavšego’ – who claimed’). Finally, in example (216), the relational adverbial ’uže – already’ points to a past time in the previous sentence (’ne byl dlja tebya ...’) which acts as a past evaluation time for the meeting event (’vstrečalsja’o).

The past perfect effect observed with these data simply amounts to anteriority, i.e. ’a past of the past’. Or, in other words, a relative past. As noted in the literature, past (and future) perfects are useful devices “because they allow us to set time boundaries other than the present for events” (Lepore and Ludwig 2003, 89). But in what way do the past perfect readings emerge in the examples above? Obviously, the past perfect interpretations are not reflected in the morphology. Still, the mere fact that existential Ip cannot be reduced to a deictic simple past must affect our present formalisation of tense and aspect at the syntax-semantics interface.

The issue of factual Ip in past perfect contexts has not been properly addressed in the literature. True, the existence of these often overlooked data was noted in (Forsyth 1970) and (Leinonen 1982), but the relevance of past perfect readings of factual Ip for the tense-aspect architecture in Russian has not been taken seriously. We discuss below different strategies – with their pros and cons – for implementing these data into our temporal calculus, reflecting the fact that the evaluation time may differ from the utterance time.

15True, occasionally, as in (216) above, the connotations of an ‘experiential perfect’ are restored. In (216), the Chinese grandmaster was not unknown to the Russian grandmaster due to the fact that the latter had ‘experienced’ an earlier encounter with the former.
5.4.1 The Contextual Approach

The easiest way to account for a vacillation between ‘simple past’ and ‘past perfect’ readings given identical surface structures as in Russian, is to treat the evaluation time parameter as being either deictic or anaphoric. In the former case, everything is as in figure 5.6 above (i.e. a ‘simple past’). In the latter case, the evaluation time is contextually given in the input context and can be treated as presupposed in our DRT framework (cf. chapter 6). For instance, in example (214) the assertion time of the previous utterance (‘Pobeda v Vejk-an-Zee byla očen važnoj dlja Kasparova’) is a suitable antecedent for the anaphoric evaluation time of ‘stavil’ = (had) set.’

DRT can tell us which temporal discourse referents in the input context are accessible as antecedents for evaluation time anaphora. This follows from the formal definition of accessibility relations in DRT (cf. chapter 6 for some illustrations). Some pragmatic reasoning, e.g. in the style of SDRT, is needed to decide the ranking of candidate antecedents. In the case of (214) above, the assertion time $t$ of the first sentence is accessible for subsequent anaphora in the second sentence. When processing ‘stavil’ in the second part of the discourse, the interpreter will find no better candidate than this $t$ for her anaphoric evaluation time. This gives us the correct interpretation where Kasparov had set his specific goal before winning the tournament.

The idea of a contextually given evaluation time works for many cases of past perfect readings with factual ifp in autonomous sentences – where the past perfect reading is simply the most likely contextual interpretation, cf. also (217) below:

\[ (217) \text{Lenin, konečno, citalo Solov’eva i znal, čto ničego, krome ‘ekonomi-} \]
\[ \text{českogo sojuza rabočích’, […] Marks predložit, ne mog, […] (Internet) } \]

Lenin had, of course, read Solov’ev and knew that nothing but ‘an economic union between workers’ […] could be proposed by Marx […]

However, the contextual approach is perhaps less appealing for examples such as (215) and (216) above. In (215), the evaluation time of the past perfect ‘vstrečalka’ – had met’ is ‘inherited’ from the assertion time of ‘utverždavšego’ (= kotoryj utverždal’) – who claimed; which occurs as a verbum dicendi in the same sentence. This illustrates the phenomenon of relative tense, characteristic of Russian. The question is whether this kind of a relative past can be subsumed under the ‘contextual approach’. The only way to maintain a uniform picture of the evaluation time as being deictic/anaphoric seems to be through intrasentential anaphora, e.g. in the style of (Fabricius-Hansen and Sabo to appear). This amounts to letting the sentence itself count as a relevant context for resolving anaphora, allowing for the ‘antecedent’ to occur in the same sentence as the ‘anaphoric’ evaluation time. The idea is rather unconventional, though, and we will not pursue this possibility any further.

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Another possible argument against the purely contextual strategy is represented in (216) with an overt ‘relational’ adverbial. In von Stechow’s prolific work on temporality at the syntax-semantics interface, ‘times’ are always expressed through ‘tenses’ at LF; cf. (Paslawska and von Stechow 2001, 17f.; 28).

In this view, ‘uže – already’ – which presumably expresses a relation between two times – must be directly anchored to a superordinate tense. The idea that the last sentence of (216) alone refers to two different past times, has intriguing consequences for our calculus since the sentence only exhibits one overt past tense form (‘vstrelalsja’ – had played’). If we follow the view recently argued for in (Paslawska and von Stechow 2003), we have to posit a covert past tense in the semantic representation of (216). In that case, the resolution of the evaluation time parameter cannot be reduced to an instance of anaphoricity.

To sum up so far, the contextual approach can deal with many cases of factual Ipfs satisfactorily, but some problems were noted with past perfects in embedded ‘etto-sentences’ like (215) and past perfects in sentences with certain temporal adverbials, exemplified in (216). We will look at these two cases in more detail. Let us first focus on past perfects in embedded clauses.

5.4.2 Bound Tense

It is a well-known fact described in traditional grammars that Russian makes abundant use of relative tense (‘otnositel’noe vrem’ja’) for instance in complement clauses of verba dicendi:

(218) Idi, a to Ivan skazal, cto ty zastavil ego zdati (Padučeva 1997, 150).

Go now, or else Ivan will say that you forced him to wait.

The past tense of the complement clause is sensitive to the superordinate tense, such that the event of ‘forcing him to wait’ is past relative to some future time associated with Ivan’s speech act.

Lepore and Ludwig (2003, 79) point out that “[f]rom a design standpoint, the simplest model is the Russian one, which reuses in the complement the tense used by the subject.” If we imagine Ivan’s future speech act in (218), he will actually utter the past verb form ‘zastavil’ – forced’, since this event will be located in the past from his perspective. Of course, from the speaker’s point of view (the speaker ≠ Ivan), the event of ‘zastavil’ belongs to a possible future. The whole point is that this need not be overtly expressed since the evaluation time of ‘zastavil’ is supplied through the future tense of the verbum dicendi ‘skazat’.

Examples like (218) demonstrate unequivocally that past tense in Russian is not always deictic.

A relative past combined with a factual Ipf interpretation of the embedded clause, occurs quite frequently. One such example is (215) above. Here is another one:

(219) No vy govoril, cto to ‘Chess Assistant’ predlagalvam neskolkich sotrudnikov, kotorye byli gotovy v voditi partii. (Chess Express 2003)
But you *said* that this very same company ‘Chess Assistant’ *had offered* you some assistants who could plot in the games.

The relationship between the two past tense forms ‘govorili’ – *said*’ and ‘predlagal’ – *had offered*’ is perhaps less transparent than the combination of future and past in (218). Still, a moment of thought will convince us that ‘predlagal’ must be a relative past. Consider the hypothetical possibility of the past tense in ‘predlagal’ being deictic, i.e. interpreted relative to the utterance time of the *speaker* of (219). The report made by the speaker would then be trivially *false* of the subject of the matrix, since the latter (≠ the speaker) couldn’t possibly have related his statement to the time when (219) itself was uttered, cf. (Lepore and Ludwig 2003, 80).

The relative past of factual Ifp above occurs in a complex sentence with two overtly expressed tenses. To accommodate the observed effects of this relative past in our temporal calculus, we let the evaluation time of the embedded tense get its value from the assertion time of the matrix. Technically, this can be modelled as a case of so-called *bound tense*, a notion which goes back to (von Stechow 1995). von Stechow’s claim is that “operators shifting the time always do that via lambda abstraction over $t_o$” (von Stechow 1995, 8).

For our purposes, we adopt the following version of this idea: By a convention introduced in (Fabricius-Hansen and Søbø to appear), $t_0$ is *bound by the closest time type lambda abstractor*. In the tree in figure 5.9, the binder is λ which binds the assertion time parameter of the verbum dicendi. The outcome is that the superordinate assertion time performs a two-fold mission as it replaces two lambda bound time arguments at once: It provides the temporal argument for the aspectual relation of the verbum dicendi itself, and it becomes the evaluation time of the embedded tense.\(^{16}\)

In the derivation presented in figure 5.9, we start for simplicity with a full representation of the embedded clause of type $<c>$, according to the rules prescribed by the temporal calculus in section 5.3. In the next step, we assume, in the style of (Fabricius-Hansen and Søbø to appear), that the function of ‘čto – that’ is to turn the DRS of the embedded clause into a proposition, that is a DRS in intension. The verbum dicendi (vd\(^*\)) and the subject of the speech act (which we for simplicity leave unexpressed in the derivation; consider it to be

\(^{16}\)To enhance readability of figure 5.9, we gloss over the dependency of frame times on the evaluation time.

In addition, the following abbreviations and symbols are used in this chapter:

- $<$ = Past
- ASP2 = aspectual relation of embedded clause
- ASP1 = aspectual relation of superordinate clause
- ft\(^2\)\(^*\) = frame time of embedded clause
- ft\(^1\)\(^*\) = frame time of superordinate clause
- vd\(^*\) = verbum dicendi (with incorporated subject)
- $K$ = variable ranging over propositions
Figure 5.9: Bound tense: Relative past in embedded constructions

\[K, e' \mid \text{vd}^* (e')(K), \ \text{ASP1}(e')(<^* (\text{ft}1^*)(t_o)), \]
\[K = \lbrack e \mid \text{VP}(e), \ \text{ASP2}(e)(<^* (\text{ft}2^*)(<^* (\text{ft}1^*)(t_o))) \rbrack \]

\[<^* (\text{ft}1^*)(t_o) \quad \lambda t[K, e' \mid \text{vd}^* (e')(K), \ \text{ASP1}(e')(t)], \]
\[K = \lbrack e \mid \text{VP}(e), \ \text{ASP2}(e)(<^* (\text{ft}2^*)(t_o)) \rbrack \]

\[\text{ASP1}: \quad \lambda e_i [\ [\ \text{vd}^* (e_i)(\lbrack e \mid \text{VP}(e), \ \text{ASP2}(e)(<^* (\text{ft}2^*)(t_o))) \rbrack] = \lambda P \lambda t[e' \mid P(e'), \ \text{ASP1}(e')(t)] \]
\[\lambda e_i [K \mid \text{vd}^* (e_i)(K), \ K = \lbrack e \mid \text{VP}(e), \ \text{ASP2}(e)(<^* (\text{ft}2^*)(t_o)) \rbrack] \]

\[\text{vd}^*: \quad \lambda K \lambda e_i [\ [\ \text{vd}^* (e_i)(K)] \quad \text{ASP2}(e)(<^* (\text{ft}2^*)(t_o))] \]
\[\check{\text{cto}}^*: \quad [e \mid \text{VP}(e), \]
\[\lambda \phi \check{\phi} \quad \text{ASP2}(e)(<^* (\text{ft}2^*)(t_o))] \]
incorporated in ‘vd*’) stand in a certain relation to the event argument \(e\), of ‘vd*’ and the proposition \(K\) expressed by the subordinate clause (e.g. ‘\(e\) is a ‘saying’ by the subject of the content in \(K\)’). When the \(\lambda\)-expression of ‘vd*’ applies to the DRS in intension, we choose to rename the latter as \(K\) to enhance readability.

At the next branching point, the asp\(t\)eural operator of the superordinate verb does its job as usual, i.e. ASP1 gives a set of times (\(\lambda t \ldots\) ) as output. At this stage, we invoke the convention above, saying that the distinguished variable \(t_{\theta}\) is bound by the first lambda abstractor in the tree. When the assertion time provided by the superordinate tense (here: \(ft*\) ) replaces the two time arguments now bound by \(\lambda t\), we end up with the final representation in the top node of this derivation.

Note that this bound tense analysis works also for cases of relative tense outside the sphere of verba dicendi. To verify that this procedure indeed results in the correct tense-aspect configurations, we will look at the calculation in figure 5.10 of a concrete example with a perfective superordinate verb and an embedded factual Ip:

(220) Petja ne popaž\(p\) na balet ‘Spartak’ – k sčasti\’ju, potomu čto, vernuyč\(s\)\(p\) v gostiniku, on uznaž\(p\), čto emu zvonili\(i\) iz Permi. [\ldots ] Petja ždal\(i\) [ \ldots ] zvonka, chotja i ne tak skoro. (Uppsala Corpus)

Petja didn’t get tickets to the ‘Spartak’ ballet, which was for the best since when he returned to the hotel, he learned that they had phoned him from Perm. [\ldots ] Petja expected [\ldots ] the call, but not so soon.

The evaluation time of ‘zvonili\(i\) – had phoned’, which functions indexically in autonomous sentences, is bound in figure 5.10 by the assertion time of ‘uznaž\(p\) – knew/learned’. The assertion time of the latter is partly determined by the temporal gerund clause ‘vernuyč\(s\)\(p\) v gostiniku – having returned to the hotel’, which functions as a frame time for ‘uznaž\(p\)’.\(^{17}\) The gerund clause depends on the evaluation time parameter as well, and we have accordingly included this argument in the representation. The perfective verb ‘uznaž\(p\)’ has an ingressive interpretation, which we gloss over for simplicity.

The final line in the tree 5.10 is admittedly awkward to read. The assertion time of the higher tense can be read as the ‘the maximal part of the time after his returning which is located in the past’. For the two asp\(t\)eural relations which interest us here, this means that the event \(e\) of getting to know \(K\) is temporally included in the interval located between the moment of his returning and \(t_{\theta}\). The imperfective relative past of the embedded ‘zvonili\(i\) gives rise, in the first round, to an overlap relation saying that the calling event \(e\) temporally overlaps with the maximal interval preceeding ‘the interval located between the moment of his returning and \(t_{\theta}\’’. This is equivalent to the relation of \(e\) overlapping with

\(^{17}\) One may find it surprising that the past gerund clause provides the ‘frame time’, as it intuitively expresses temporal succession. However, the interval following the event denoted by the VP in the gerund clause functions as a frame time, cf. similar observations in (Kamp et al. to appear, 83).
Figure 5.10: Derivation of (220)

\[
[K, e' ; \text{know}^*[e'](K), e' \subseteq \text{call}(e), e \circ (<^*(after returning^*(t_o))(t_o))],
\]

\[K = \neg[e \mid \text{call}(e), e \circ (<^*(after returning^*(t_o))(t_o))].\]
the time prior to his returning home, which is what we want. By invoking the Axiom for (factual) Ipf and NVP from section 5.3.3, we obtain a factual reading of ‘zvonil’.

The same kind of analysis applies straightforwardly also to the embedded past perfect in (221) below, which cooccurs with a relational adverbial:

(221) Ne bylo somnenij, čto ja *prežde vstrečal* ee. (Uppsala Corpus)

There was no doubt that I had met her before.

According to Lepore and Ludwig (2003, 100), “[s]imilar binding phenomena as in indirect discourse occur between the tenses of verbs generally in superordinate and subordinate clauses”. In this respect, we suggest that this bound tense analysis can be extended to cover cases like the following as well:

(222) Ego kniga, kotoruju on tol’ko čito *čital* òč, byla razorvana po stranicam. (Internet)

His book, which he had just read, had torn pages.

(223) On podnjal’ s polu obe knigi, potol’ko čito *čital*. (Internet)

He picked up both the books, which he had just read.

We will not go into a detailed analysis of these examples, since this would commit us to a comprehensive account of NPs and unduly shift focus away from factual Ipf. All the same, note a possible difference between restrictive and unrestrictive relative clauses. To the extent that a ‘simple past’ reading of a relative clause is possible, the latter must be of the unrestrictive kind. For instance, in (222) the relative clause is unrestrictive and we can (marginally) get a simple past interpretation with independent temporal parameters, such that the evaluation time is not bound by the superordinate assertion time. However, the default interpretation for the last two examples is a relative past reading.

To sum up, we have now encountered three kinds of evaluation times:

- implicitly deictic ‘simple past’, as in section 5.3]
- anaphoric [past perfect/ relative past]
- lambda bound [past perfect/ relative past]

The deictic and anaphoric evaluation times can reasonably be grouped together, since in both cases the evaluation time gets its value from the context, cf. (Heim and Kratzer 1998, 240). However, the role of to as a bound variable in embedded tenses is a quite different story. The lambda bound to can be compared to an intrasententially bound anaphor (cf. ‘himself’), which is to be contrasted with the two instances of anaphora (cf. ‘him’) represented by the contextually bound evaluation times, cf. (Fabricius-Hansen and Sæbø to appear).

We now have a more differentiated picture, and there is worse to come. In fact, there is yet another possibility to consider, viz. a configuration with factual Ipf and a covert semantic past.

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5.4.3 Interpolation of a Covert Past

The first authors to take the formalisation of past perfect readings in Russian seriously were Paslawska and von Stechow in partly unpublished works from 1999 and onwards. Their approach, however, was heavily biased towards Pf, and only in their most recent article (Paslawska and von Stechow 2003) do they take note of the role of factual Ipf.

The ignoring of factual Ipf goes back to the ‘conventional wisdom’ in Russian aspectology that past perfect readings only occur with perfective verbs, as in examples like the following:

(224) Kogda ja vernulas?P, bandity ubiliP Vanju (Paslawska and von Stechow (1999, 12), from Schoorlemmer)

When I came back, the gangsters \{ had killed \}

killed

Vanja.

The past perfect interpretation of ‘ubiliP – (had) killed’ is preferred without further context, although it is not the only possible reading, cf. the two translations given above. In fact, according to the theory defended in (Paslawska and von Stechow 1999) and subsequent work, the perfective operator present in ‘ubiliP’ is the source of an ambiguity between the configurations \( e \subseteq t \) (the perfective inclusion relation) and \( e \prec t \) (past perfect), where the value of \( t \) is provided by the temporal clause.\(^{18}\)

The important novelty of this proposal lies in the original idea that a perfective verb with simple tense morphology such as ‘ubiliP – killed’ is able to trigger two independent tense-like precedence relations in the semantic representation. In the case of a past perfect reading, Pf thus contributes the condition \( e \prec t \), while the overt past tense of ‘ubiliP’ serves to locate the temporal clause in the past of the evaluation time: \( t \prec t_o \). This system is compositional only if the relative past is consistently expressed by overt perfective morphology.

This raises a problem for our initial example (216), which contains imperfective morphology. In (Paslawska and von Stechow 2003), the authors argue that their analysis should be extended to Ipf as well. But where does the relative past come from in the case of factual Ipf? Unless we give up the familiar aspectual inclusion relations with past perfect readings, it does not seem possible to maintain a strictly compositional picture. The problem is that a single verb form is associated with two tenses in the semantics.

The idea of linking the phenomenon of relative past to viewpoint operators (in particular Pf) also runs into principled problems related to the interaction of tenses and temporal adverbials. In a system where a relative past \( (e \prec t) \) replaces the aspectual inclusion relations, it is unclear how a temporal adverbial can provide the frame/assertion time for \( e \). The condition \( e \prec t \) makes explicit

\(^{18}\)Note that in the first case \( (e \subseteq t) \), \( t \) does not equal the time of ‘the speaker’s coming back’, but refers to the interval after the speaker’s return. This has to do with the semantics of ‘kogda-classes’ and/or the phenomenon of narrative progression (cf. chapter 7.3.3), and is orthogonal to the issue of past perfect readings.

In the second case \( (e \prec t) \), however, we can think of \( t \) as the time of the speaker’s arrival.
only the evaluation time parameter for $e$. In fact, for similar reasons Paslawska and von Stechow (2003, 340) admit that “there might be something wrong with our system”.

We need both aspect proper and relative tense in the semantics. If it is correct that “[a] relative past without a superordinate tense is unreasonable” (Paslawska and von Stechow 2001, 7), we must accept the uncompositional flair of a free interpolation of a covert past. The temporal calculus outlined in the previous section can be extended to implement this idea, cf. the proposal in figure 5.11.

Two past tenses – Past1 and Past2 – occur in figure 5.11. But which is overtly expressed through tense morphology and which is covert? For the tense semantics proper this question is less crucial than it may appear. The extended calculus proposed here is compatible with both the following answers: a) The overt tense ('I') is located in Past2; or b) The overt tense ('I') is located in Past1. In both cases, the event argument and aspectual configuration originate in the lower branch. However, whether we choose a) or b) has implications for how we consider the interpretational process to work in practice.

In the first case, the overt past tense (e.g. of factual Ip) is processed ‘bottom-up’ as normal. Then, towards the end of the derivation some ‘temporal element’ appears (for instance a certain adverbial), which does not quite fit into the tense-aspect configurations. As a repair strategy, a covert deictic past (Past1) is invoked. This scenario has a nice parallel in the cases of bound tense considered in section 5.4.2. The covert past corresponds to the superordinate tense (e.g. of a verbum dicendi), while the overt past is located in the same branch as the tense of the embedded verb (e.g. of factual Ip).

This option is not considered in the works of Paslawska and von Stechow. Solution b) above is more in their spirit. In order to facilitate comparison with their work, we will mainly focus on this second strategy, where the semantics of the overt '1'-morpheme is part of the higher branch. This requires the interpolation of a covert relative past (Past2). In the following discussion we assume that the tree in 5.11 contains a covert relative past when applied to the Russian data.

In the schema proposed here, tenses occur recursively, independent of morphologic tense and/or viewpoint aspect. The one-to-one relationship between morphologic and semantic viewpoint aspect (one verb form gives rise to one aspect node in the tree) is not mirrored by tense. The procedure is uncompositional. Somehow we have to repair the mismatch between morphology and semantics, and ensure that the optional branch corresponding to the covert relative past be related to the higher tense. This is done by invoking the principle of predicate abstraction (Heim and Kratzer 1998), which here amounts to type-shifting of an expression of type $<c>$ to $<i,c>$. The operation provides a $\lambda$-abstractor over $t_0$. We thereby reuse the idea of bound tense from the previous section, where we encountered overt relative tense. In adopting the composition principle of predicate abstraction, we draw on what seems to be a
Figure 5.11: Temporal calculus with a *covert* past

\[ \lambda t \mid \text{VP}(e), \text{ASP}(e)(<^*(\text{ft}^2*)(<^*(\text{ft}^1*)(t_0))) \]

\[ <^*(\text{ft}^1*)(t_0) \]

Past1: \[ \lambda t_1 <^*(t_1)(t_0) \]

\[ \lambda_0 \mid \text{VP}(e), \text{ASP}(e)(<^*(\text{ft}^2*)(t_0)) \]

\[ <^*(\text{ft}^2*)(t_0) \]

Past2: \[ \lambda t_1 <^*(t_1)(t_0) \]

\[ \lambda t \mid \text{VP}(e), \text{ASP}(e)(t) \]

\[ \lambda P \lambda t \mid e \mid P(e), \text{ASP}(e)(t) \]

\[ \lambda e \mid \text{VP}(e) \]
reasonable analogy between relative tenses and relative clauses.\footnote{A semantic analysis of relative clauses involves a type-shift from context change potentials (or truth values) to properties of individuals, that is from type $<c>$ to type $<d,c>$, where ‘$d$’ is the basic type for ordinary individuals.}

How does this modified temporal calculus handle core examples of past perfect like (224) above? As the reader can verify, the procedure will result in the following representation for (224) in the top node:

- $[e \mid \text{killing}(e), e \subseteq (\text{Past}^*(t_\infty)(\text{Past}^*(\text{when I came home}^*)^*))(t_o))]$

This means that the killing event is included in the maximal interval preceding the speaker’s returning home, which in turn is located prior to the utterance time. The aspectual relation triggered by ‘ubili’ – had killed – combines at AspP through functional application with the assertion time produced by the covert relative past. The ‘kogda-clause’, on the other hand, fills the role of the frame time parameter (which eventually determines the assertion time) for the higher, overt past tense (‘-l’) of ‘ubili’\footnote{The classic example in Russian is the interpretation of present tense morphology of perfective verbs as expressing a semantic future.}. At the same time, the ‘kogda-clause’ also serves as the evaluation time for the relative past. This last point is the important clue to capture the relative past reading, and it is formally achieved through $\lambda$-abstraction over $t_o$. The same procedure is in principle available for factual IpF as well since tenses are not dependent on aspect (see below).

### 5.4.4 On the Generality of Covert Tenses and the Case of Factual IpF

Paslawska and von Stechow (2001, 15) argue that we should not conflate morphological and semantic tense. They claim that semantic tense without morphology is a frequent phenomenon in natural languages, provided the context triggers a particular interpretation.\footnote{We leave it open whether one eventually will need to incorporate the possibility of a covert ‘higher’ present tense for cases outside the sphere of aspectual competition.}

If we abandon the principle of strict compositionality at the syntax-semantics interface, i.e. the idea that each semantic tense is reflected in the morpho-syntax, we can generalise the calculus in figure 5.11 even further. For instance, we can account for present perfect readings by inserting a covert higher present tense, thus making LF in Russian similar to the surface structure in English. As we argued in section 5.2, however, this move is not necessitated by the data related to aspectual competition.\footnote{Paslawska and von Stechow (2003, 317) claim that this is necessary to account for ‘extended now’-readings of examples like the following, containing an atelic predicate:}

(1) Mao vsego $\text{i{\textbf{j}ubilf}}$ plavan’

Mao has always liked to swim. (Paslawska and von Stechow (2003, 317), from Schoorenlemmer)
Let us return to the issue of a covert relative past. If it is true that a relative past is independent of morphological aspect, it is also true that it is independent of morphological tense. As witnessed by the following example, a relative past can be inserted in the semantic representation of sentences without past tense morphology:

(225) V sem’ časov Maša užel vyjdet iz doma.

At seven, Maša will have left already. (Paslawska and von Stechow 2001, 6)

The future tense relates the temporal adverbial ‘v sem’ časov – at seven o’clock’ to the future of the utterance time, while a covert relative past seems necessary to account for the available reading where the event occurs before 7 o’clock. The contextual approach outlined in section 5.4.1 clearly hits trouble with this occurrence of relative past. Given a semantics for future tense which mirrors the past, e.g. \( \lambda t \text{ Fut}^* (t) (t_0) \); we cannot capture a relative past interpretation by letting the distinguished variable \( t_0 \) be anaphoric to the input context or anchored to 7 o’clock, or what have you. As pointed out by Paslawska and von Stechow (2001, 7), the contextual approach predicts the presence of an overt past tense ‘vyšla’ – had left’, but a sentence containing this verb form cannot express the intended ‘future perfect’ of (225).

The obvious solution is then to posit a covert relative past, a move which fits nicely into the schema in figure 5.11, except that the higher tense in (225) is ‘\( > \)’ (Fut1) instead of ‘\( < \)’ (Past1). The analogy with future perfect readings as in (225) is therefore an argument for treating Past2 as the covert tense in the calculus.

Once we admit the existence of an optional relative past, as in the perfective sentences (224) and (225), it is time to look at the role played by factual Ipfs in this story. Technically, there is no reason why the calculus in figure 5.11 should not apply equally well to Ipfs and Pfs. The question of whether we really need this complicated architecture for factual Ipfs, turns out to be a surprisingly hard nut to crack. The chief argument for a covert relative past is represented by the presence of certain temporal adverbials. In that respect, the initial example (216) containing ‘užel – already’ is our only argument so far, but it is not a totally convincing one. The semantics of ‘užel’ is complex and remains unclear, so we would like to have more clear-cut evidence.

On closer inspection, many of the Russian ‘past perfect’ examples discussed in the literature can in fact be captured with only one semantic tense (corresponding to the morphological tense). To take a trivial example:

(226) Chodila’ ona na snosjach, no zakonno: v proštom godu letom priežžal\(^f\)

Gavrilu iz polka, privet\(^p\) žene pol’skogo sitca, progoč̆il\(^p\) nedolgo ...

She was pregnant, but it was quite legitimate. Gavril had come on leave the previous [better: ‘last’] summer, bringing her some Polish calico, and had stayed for a short time... (Forsyth 1970, 80).
The interpretation of (226) which is given by Forsyth, and reproduced in (Pastawská and Von Stechow 2003), is wrong. The adverbial ‘v prošlém godu letom – last summer’ (≠ the previous summer) is deictic as the story is told from the narrator’s perspective. The occurrence of factual IpF (‘prijezlal – had come’) should therefore not be treated as a relative past.

If we modify example (226), replacing the temporal adverbial with ‘v predydušćem godu letom – the previous summer’, we do indeed get a past perfect reading, but then the question is whether this anaphoric adverbial should not rather be handled by the contextual approach. An authentic example can illustrate this point:

(227) *Kak raz pered ètim ja cítal knigu francuza [NN].* (Uppsala Corpus)

*Just before this I had read a* book by the French writer [NN].

The relational adverbial ‘kak raz pered ètim – just before this’ is clearly anaphoric. The pronoun ‘èto – this’ gets its value from an antecedent in the input context. The frame time provided by the temporal interval is therefore the ‘recent past of the anaphoric evaluation time $t_0$’. This configuration can be captured with only one tense, as in section 5.3. All we have to assume, is that $t_0$ is anaphoric. Note that the mere fact that a Russian sentence can be translated with a complex perfect construction does not prove that we actually need two semantic tenses to account for the Russian data. Even in languages having an analytical past [future] perfect, this perfect construction can often be used interchangeably with a simple past [future] without any semantic difference, cf. also (Lascarides and Asher 1993a).

Hard-core evidence for a covert relative past with factual IpF would be the Russian equivalent of, say, (228):

(228) *At 9 p.m., he had arrived one hour earlier.*

In this case, ‘one hour earlier’ is ‘anaphoric’ to ‘at 9 p.m.’, and, importantly, the two adverbial expressions occur in the same sentence. This precludes the possibility of a shift in perspective from the interpretation of one temporal adverbial to another. Our temporal calculus could capture the temporal configurations of a direct Russian translation of (228) by locating the equivalent of ‘at 9 p.m.’ in the higher tense, and ‘one hour earlier’ in the (covert) relative past. True, the frame time (‘one hour earlier’) of Past2 would then have to be indexed with the evaluation time parameter: ‘$R^2 (t_0)$’. Since $t_0$ by convention is bound by the closest $\lambda t$, $t_0$ would eventually get its value from the higher tense. This would result in the correct configuration ‘$e \subseteq 1 \text{ hour earlier}^* (9 \text{ p.m.}^*)$’, i.e. ‘$e \subseteq 8 \text{ p.m.}^*$’.

The scenario above is in the spirit of our discussion of relational adverbials in section 5.3.1. However, in the extended temporal calculus in figure 5.11 we did not include the evaluation time parameter for the frame adverbial. This was done partly to enhance readability, but also for empirical reasons. It turns out that Russian does not easily accept the presence in a single sentence of *two
such temporal adverbials as in the English construction in (228). The English sentence in question rather corresponds to the following Russian translation:

\[(229) \text{On (uże) } \left\{ \begin{array}{c} \text{přešel}^p \\ \text{přešel}^i \end{array} \right\} \text{ za čas do 9-i.} \]

He came (already) one hour before 9 p.m.

However, in (229) we are no longer dealing with a past perfect. The point is that the temporal adverbial ‘za čas do 9-i – one hour before 9 p.m.’ cannot be split up and located in two different tenses as in (228). Hence, the adverbial in (229) simply provides the frame/assertion time for the event, that is, the coming event is included in the interval corresponding to ‘8 p.m.’. Russian cannot explicitly designate ‘9 p.m.’ as the evaluation time for the event, as in (228). True, Russian can add elements like ‘uže – already’, which here behaves more like a discourse particle, to create similar pragmatic effects as in the English original. But that is another story.

So far, nothing suggests that relative past in Russian discriminates between Pf and Ipfl. We expect therefore to find equivalents of (224) above with factual Ipfl. Recall that (224) was interpreted as the event referred to by a perfective verb (‘ubili’ – had killed’) being located in the past relative to an explicit evaluation time. The evaluation time in that particular example was given through a ‘kogda – when’-clause.

However, interestingly – and surprisingly given our assumptions so far – past perfect readings of factual Ipfl do not seem to be attested in this environment:

\[(230) \text{Kogda Karpov stal}^p \text{ čempionom mira, on uže } \left\{ \begin{array}{c} \text{vyigral}^p \\ (#) \text{ vyigryval}^i \end{array} \right\} \text{ čempionat mira sredi junošej.} \]

When Karpov became world-champion, he had already won the junior world-championship.

A relative past reading is the only possibility in (230). The ‘kogda-clause’ provides a time interval \( t \) which cannot include both the winning event of the embedded clause and the one of the matrix. The latter must therefore be located prior to \( t \). However, we do not have a perfect explanation for why only Pf can be used to refer to a (possibly) single complete event in this environment. The imperfective ‘vyigryval’ – won’ can here only have an iterative reading, corresponding to Karpov’s having won the junior world-championships repeatedly.

Consider also the authentic example below:

\[(231) \text{Na 15-om godu ja uže čitali} ‘Osnovy chimii’ Mendeleeva, konečno, čerez pen’ kolodu, no čitali. (Internet) \]

At the age of 14, I already read ‘The Foundations of Chemistry’ by Mendeleev. Of course, it was difficult, but I read it.

This sentence does not seem to have a reading whereby the speaker had read ‘The Foundations of Chemistry’ before he turned 14, i.e. by the age of
14. The meaning of (231) can only be that the reading event took place at the interval corresponding to the speaker’s 15th year. Ipf is not ruled out in this case since the frame adverbial is rather big. It is worth noting that even the presence of ‘úže – already’ is not enough to license a past perfect reading with the imperfective verb in question.

To sum up, it seems that in cases of factual Ipf, frame adverbials – including ‘kogda-clauses’ – are automatically linked to the frame/assertion time which enters the aspectual relation. For some reason, we do not get a configuration where an overt frame adverbial or ‘kogda-clause’ serves as the evaluation time for a covert relative past.

This restriction is puzzling since it does not apply to Pf, as we saw in (224). One is tempted to seek an explanation in terms of notions like ‘aspectual competition’ and/or ‘(un)markedness’, but it is not quite clear how this should be done. More research is needed into this phenomenon and how it fits into the overall tense-aspect architecture of Russian.

5.4.5 Some Concluding Remarks

We started the overview of past perfect readings with three prototypical examples, (214) – (216), which gave rise to three different stories. As it turned out, example (216), which combined factual Ipf and ‘úže – already’, represented the ‘third group’ for lack of better candidates. Factual Ipf does not easily combine with temporal adverbials designating a ‘higher tense’.

Still, some examples with Pf discussed above show that we need an optional covert (relative) past in the tense-aspect system of Russian. One can then reason as follows: Since interpolation of a covert past is a possibility offered by the system, why not make use of it. This seems to be the approach adopted by Paslawskas and von Stechow. Recall that these authors argue on principled grounds that “[a] relative past without a superordinate tense is unreasonable” (Paslawskas and von Stechow 2001, 7). This implies a rejection of the contextual/anaphoric approach. Indeed, they also invoke a covert relative past for cases without overt temporal adverbials; that is, cases where the past perfect reading arises solely from contextual factors. Thus, (214) and (216) – and even (224) – would be treated on a par in their theory.

However, pace Paslawskas and von Stechow (2003), we feel that the data invite some more fine-grained distinctions. For instance, it seems unjustified to treat (232) as it is done in (Paslawskas and von Stechow 2003, 340), where this example is considered to represent a covert relative past:

(232) – Pomilujte², da vy razve venjusčij? – sprošita² ja, pamjatuja³, čto sovsem nedavno on sđava³ ékzamen po filosofiji.

– Excuse me, but are you a believer? – I asked, thinking of the fact that he had passed his exam in philosophy not long ago. (Paslawskas and von Stechow 2003, 340)

In fact, this case is reminiscent of (215). True, ‘sđava³ – had passed’ is a relative past, but it occurs embedded under an explicit higher tense. It seems
reasonable to say that the matrix gerund (‘pamjatuja’ – thinking’) inherits its assertion time from ‘sprosiš’ – asked’. This time ends up as the evaluation time for the overt relative past of ‘sdaval’. This is the phenomenon of ‘bound tense’ from section 5.4.2.

Furthermore, the important fact that factual Ipš does not cooccur with adverbials designating the evaluation time for the event, constitutes a serious challenge to the idea of a covert ‘fits all’ relative past. Since positing a covert relative past violates compositionality and requires reinterpretation (backtracking), we should perhaps try to limit its use to an absolute minimum. We are therefore not quite willing to abandon the contextual approach, despite the (syntactically oriented) arguments provided by Paslawska and von Stechow.

To round off, we propose a synthesis of the different strategies considered above. We make use of a so-called type-driven interpretation, cf. (Heim and Kratzer 1998), in a bottom-up fashion along the following lines:

The semantic representation should be kept as simple as possible for as long as possible, that is, in conformity with the second version of the temporal calculus represented in figure 5.6. We do not invoke any relative tense or lambda abstractions, if not necessary. The temporal calculus then results in an expression of type <c>. The evaluation time equals the utterance time by default (simple past), but it can be anaphorically linked to the input context, as in the contextual approach. Such an ‘ambiguity’ between deictic and anaphoric readings is quite harmless, since both cases represent a contextual interpretation of t₀.

So far so good. Now, if we do meet a higher tense – e.g. in the form of a verbum dicendi – we let t₀ be bound by the closest λt, and thereby type-shift a DRS of type <c> to <i,c>. If, instead, we meet an explicit temporal adverbial 22 – that is, after the frame/assertion time is calculated – there are two options, which both are compatible with the extended calculus in figure 5.11. 23

The first solution is to posit a covert relative past in the spirit of (Paslawska and von Stechow 2003). This move amounts to backtracking since the overt past tense processed earlier now becomes a ‘higher tense’. The assertion time of the covert relative past finds its place in the aspectual configuration, where the overt past used to play a role. As usual, we invoke the principle of predicate abstraction (type-shifting of an expression of type <c> to <i,c>) in order to accommodate the overt tense which has ‘moved’ to the highest tense branch.

Alternatively, one can posit a covert higher past, combined with the familiar predicate abstraction. This solution is conceptually more straightforward, and it patterns nicely with other cases of bound tense, as noted earlier. However, this strategy is not able to cover cases like future perfects’, where the covert past must be the lower tense.

22As we pointed out above, this only seems to happen with Pf.
23The exact location of the adverbial in the surface structure is not crucial. What matters is that the adverbial is not appropriate for filling the role of a frame/assertion time for the aspectual configuration in the utterance being processed. For instance, in the much discussed example of (224), the killing event (‘ubiliš’) cannot be included in the interval of the speaker’s coming home (the ‘kogda-clause’). This triggers a reinterpretation.
To settle these issues, we need more research into temporal semantics and the syntax-semantics interface in Russian. But we also need a better understanding of the division of labour between Pf and Ip. What created most problems for the present chapter was the question of a covert second past with factual Ip. The covert past with factual Ip is problematic since it violates compositionality, but it is equally puzzling that this phenomenon is not really attested by the data. This appears to be good news since it simplifies the picture, but alas, a covert past is still needed for Pf.

The bottom-line is, nevertheless, that factual Ip indeed cooccurs with different kinds of bound tense which can be accounted for in the temporal calculus presented in this chapter.
Chapter 6

Factual IpF and Information Structure

In this chapter we transgress the sentence boundary and the domain of ‘static’ semantics. An analysis of factual IpF w.r.t. information structure needs to take a broader context into account, and ultimately requires a dynamic framework, such as DRT.

The first part of this chapter (6.1) is solely devoted to an analysis of presuppositional IpF, which is licensed by a particular background-focus division and interacts closely with the input context. In 6.2, we look at the behaviour of factual IpF in questions. Overall, the aim of this chapter is to reach a better understanding of presuppositional IpF, but whenever necessary, as in 6.2, this will involve a comparison of existential IpF and presuppositional IpF.

6.1 A DRT Analysis of Presuppositional IpF

Current dynamic treatments of presuppositions have been rather successful, at least since (van der Sandt 1992), and we propose an analysis of presuppositional IpF along these lines. We start by looking at how the presupposition related to the eventive argument is triggered by a so-called background-focus partition at the VP-level (6.1.1). Next we look at how this presupposition interacts with the imperfective operator, and we propose a semantics for (factual) IpF which makes a compositional treatment of presuppositional IpF possible, while maintaining a unified analysis of IpF (6.1.2). We then show how the analysis of presuppositional IpF covers the relevant data, with elements of various kinds appearing in the focus part (6.1.3).

In the next three subsections we make properly use of the machinery provided by DRT for analysing the behaviour of presuppositions in context. The presupposition in question is treated as an anaphoric expression, which is straightforwardly bound to an antecedent (6.1.4) and/or justified (6.1.5) in the input context. We then finally invoke the important notion of accessibility in DRT
(6.1.6), which motivates why and when the anaphora on a presuppositional Ipf reading is allowed to pick up an antecedent in the input context.

In the final subsection (6.1.7), we suggest that the analysis adopted here can be extended to cover the use of (factual) Ipf in cases where the verb is almost void of lexical content. We refer to this particular phenomenon as a case of lexical presuppositions.

### 6.1.1 From Background-Focus Partitions to Presuppositional and Assertoric DRSs

In the case of existential Ipf the main stress of the utterance usually falls on the verb. With presuppositional Ipf the picture is typically the opposite, such that the verb is deaccentuated while focus is on some other constituent.

The reason for the lack of focus on the verb in this reading is quite natural given the analysis we are proposing here. The verbal predicate has an eventive argument, an instantiation of which is presupposed, i.e. given (more or less entailed) in the input context. This means that the relevant information is already present for the discourse participants, and there is no need to put additional intonational or emphatic stress on the verb as the focus for the main event argument.

To give a concrete example, consider the factual Ipf ‘pisal – wrote’ in (233) below, which occurs in a context where the instantiation of a complete event of ‘writing a letter’ (‘napisal pis’mo’) has been asserted in the preceding utterance. In this setting, the focus of the speaker uttering ‘pisal’ is not on the culmination of this event, but on the circumstantial factor that the writing was performed with a pencil:

(233) V ejo porternoj ja […] napisal pervoe ljubovnoe pis’mo k Vere. Pisal [karandašom].

In this tavern […], I wrote my first love letter to Vera. I wrote it in pencil. (Forsyth 1970, 86)

According to traditional Prague school accounts of information structure, the last sentence of this example can be divided into two parts: the theme (‘pisal – wrote’) and the rhyme (‘karandašom – in pencil’). The theme represents old, given or backgrounded information, while the rhyme contributes new information. In Russian, this partitioning of utterances depends primarily on word order and prosody. As a general rule, the rhyme appears clause-finally in non-emotive discourse, and is then typically marked by a falling tone on its right edge. The rhematic constituent may also occur elsewhere in the sentence, if highlighted by specific prosodic means, cf. (King 1995) for details. In our case above, we have marked the (neutral) focus on ‘karandašom’, which corresponds to its rhematic status, with the subscript F(ocus).

We propose to represent this basic partitioning of the sentence as an ordered pair in a so-called structured meaning format <Theme, Rheme>. Following the
terminology in (Kriška 2001), we refer to this pair as \(<B(\text{background}), F(\text{focus})>\)\(^1\).

Ignoring tense and aspect for a moment, we can represent the \(<B,F>\) structure in (233) as a pair of 'structured DRSs':\(^2\)

- \(<\lambda[e[\text{write(e)}], \lambda[e[\text{Instrument(e,x)}, \text{pencil(x)}]]>\)

In accordance with neo-Davidsonian event semantics, the main event is decomposed into several event predicates (thematic roles) such that the verb's internal and external arguments, and adjuncts as in our case above, are represented as two-place predicates of events and ordinary individuals.

Of particular interest to us is the fact that the background part is often considered to contain presupposed material. Here we will explore a stronger version of this idea discussed in (Geurts and van der Sandt 1997), viz. that we are always licensed to treat the background as a carrier of an existential presupposition, cf. the following formulation of this principle:

- **The Background/Presupposition Rule (BPR)**
  "Whenever \(\phi\) is backgrounded, the presupposition is triggered that \(\phi^*\) holds, where \(\phi^*\) is the existential instantiation of \(\phi\)" (Geurts and van der Sandt 1997, 37).

We will need something like this principle in the compositional setting below, where the speaker's choice of IpF is sensitive to this transition from a background to a presupposition. The quasi equation of backgrounds and presuppositions may be oversimplifying in some respects (cf. some data discussed in 6.2), but its explanatory potential will hopefully become clear in the analysis to be proposed of examples like (233), where the backgrounded writing event is indeed presupposed. In DRT-notation, we can represent this presupposition as follows:

- \(\lambda[e[\text{Instrument(e,x)}, \text{pencil(x)}]][\text{write(e)}]\)

This is not a structured meaning any longer, but a complex DRS, where the subscript DRS represents the presupposed material which originated as a 'background'. Note also that the assertoric part '\(\lambda[e[\text{Instrument(e,x)}, \text{pencil(x)}]]\)' corresponds to the focus part in \(<B,F>\) above.\(^3\)

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\(^1\)One often assumes a three-layered division of the sentence, where the theme/background is further split into topicalised and neutral information (King 1995). For our purposes, we need not be concerned with this more fine-grained division, since topics are always part of the background.

Nevertheless, as we will see below, we must be careful not to postulate a one-to-one relationship between prosodically marked constituents and the focus part, since a *contrastive topic*, marked CT, may carry intonational stress even though it belongs to the background (Büring 1999). While not all components of the background are necessarily deaccentuated, what matters here is that (contrastive) topics do not carry existential presuppositions, and hence do not influence the aspectual choice, which is our main concern.

\(^2\)This format is admittedly a bit unconventional. We are not aware of any DRT implementations of the structured meanings approach, which originated in (von Stechow 1984), nor have we seen this format being applied in event semantics. Still, we can think of no principled reasons why this could not be done along the lines proposed here.

\(^3\)A cosmetic difference from the \(<B,F>\) representation relates to the fact that the lambda
6.1.2 The Formal Interaction of Ipf and the Presupposed Event Argument

The aspectual system of Russian interacts with information structure in various ways, which are yet to be understood in full detail. In a ‘closed’ category such as viewpoint aspect, there may be several kinds of oppositions between the two members. We propose the following tentative (and perhaps oversimplifying) principle for a division of labour between Pf and Ipf w.r.t. information structure (understood in a broad sense):

- The Information Structure Principle of Russian Aspect
  Pf is drawn towards the assertoric content and prefers to see the event argument and aspectual configuration in the assertoric part, while Ipf is neutral w.r.t. the assertion/presupposition division.

We assume further that the background-focus partitioning is given at the VP-level. This assumption is necessary in order to maintain a compositional picture of aspect and tense, inasmuch as the hypothesis explored here is that aspect in Russian is sensitive to <B,F>. Thus, a structured meaning is input to the aspectual operator in the case of presuppositional Ipf. Since a <B,F> is formed already at the VP-level, we can maintain a uniformed treatment of different aspectual operators, which all (including ‘presuppositional Ipf’) have the type <<sc>,<ic>>, as previously established in chapter 2.

This strictly compositional approach has some non-trivial consequences. Consider for instance the following example:

(234) [Korčnoj] ne upominjal\textsuperscript{P} o tom, čto v svoj poslednij den’ na rodine v ijune on \textit{obedal}\textsuperscript{I} u menja doma. (“64” 2002)

[Korčnoj] did not even mention that on his last day in his mother country, in June, he \textit{had lunch} at my place.

It is generally held that factive verbs are presupposition inducers such that the content of their complements is presupposed. However, in a bottom-up derivation of (234), the imperfective operator taking a set of lunching events as input does not have access to the factive verb (‘ne upominjal\textsuperscript{P} – did not mention’) located ‘higher up in the tree’. If we consider the subordinate clause (‘v svoj poslednij den’ na rodine v ijune on obedal\textsuperscript{I} u menja doma’) in isolation, expression in the complex DRS also binds the event argument of the presupposition part. The structured meaning format, on the contrary, is an ordered pair of DRSs, where the first lambda expression ‘\textit{x}e’ cannot, for technical reasons, bind the event argument of the second member of this pair. Hence, we had to add a second lambda abstractor above.

\textsuperscript{P} Whether we can defend a stronger claim, viz. that Pf is incompatible with the kind of presuppositional readings discussed here, is a difficult question. The empirical evidence is not clear-cut, cf. some discussion of this issue in the next chapter devoted to aspectual competition proper.

\textsuperscript{I} Recall that a VP in our framework contains not only the verb and its internal argument, but also the external argument and possible adjuncts. A VP is therefore reminiscent of a tense-and aspectless ‘sentence-radical’, located below operators such as aspect, tense, wh-words etc.
there is nothing here which suggests a background/focus partition or otherwise requires presuppositional Ipf. In this respect, our analysis predicts that the factual Ipf in (234) must be of the existential kind. And indeed, the (neutral) focus of the subordinate clause seems to be on the verb (‘obedial – had lunch’) itself, favouring an existential Ipf reading.

In cases of presuppositional Ipf, factors like word order and intonational focusing will – in principle at least – trigger the appropriate <B,F> configuration at the VP-level. Above, we made the tacit assumption that intonation (and/or word order) licensed the subscript ‘F(ocus)’ in ‘[karandašom]F’, with the subsequent <B,F> partitioning.

According to this compositional analysis, the input to the aspectual operator in our initial example is thus the structured VP repeated below:

* [1] VP<e,c>: \( \lambda [ | write(e) | , \lambda [x | Instrument(e, x), pencil[x]) ] >

If the conjecture is correct that factual Ipf is the preferred aspeactual choice in the case of the event argument being presupposed, then, following BPR above, we expect this aspectual VP to be input to an *imperfective* operator.

There are two main concerns which will guide us in spelling out the meaning of this factual Ipf. First, as noted above, it must be able to take a <B,F> of type <s,c> as input and give an expression of type <i,c> as output, and in this very process it must transform the background part of the input expression into a presupposition.

Second, from a methodological point of view, we do not want to treat (factual) Ipf as plainly ambiguous, although it certainly has different ‘readings’ as we have stressed throughout this work. The obvious solution respecting these constraints is to represent the meaning of (factual) Ipf as underspecified. Ipf is thereby considered to be genuinely flexible since the verb and its event argument can either be part of the assertoric content (existential Ipf) or backgrounded/presupposed (presuppositional Ipf). Because of this dual role of factual Ipf, it is clearly unreasonable to consider factual Ipf as a presupposition inducer in itself, but we must still capture the fact that the imperfective operator interacts with the presupposition inherited from the background part of a structured VP. Taking all these factors into account, we propose the following rather simple underspecified meaning of Ipf:

* [2] Ipf<e,c>: \( \lambda P | P(e) | P(e) | t >

The novelty here lies in the introduction of so-called ‘bold face’ discourse referents and conditions, which only occur in the translation of the operator and ‘disappear’ in the further compositional process. The following principle guides the behaviour (and landing-sites) of these elements in the further semantic derivation:

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6We leave open the details of how <B,F> partitions are licensed by linguistic means. Hopefully, the general picture presented here can be independently motivated by (future) research on information structure in Russian. The important thing to retain at this stage, however, is that the phenomenon of ‘focusing’, whether it originates in prose or other sources, is given a *compositional* treatment, cf. (Rooth 1999).
• The bold face convention

Bold face discourse referents $x \in U_{\text{Fun}}$ and conditions $\text{Con} \in \text{Con}_{\text{Fun}}$ occurring in the translation of an operator $\text{Fun}_{\leq \phi, \leq >}$, are ‘rewritten’ in the process of applying $\text{Fun}$ to an argument $\text{Arg}_{\leq \phi}$. In the resulting DRS $K_{\leq >}$:

(i) if $K$’s presupposition part $P$ is empty, $x$ and $\text{Con}$ are rewritten as $x \in U_K$ and $\text{Con} \in \text{Con}_K$, respectively.

(ii) if $K$’s presupposition part $P$ is non-empty, $x$ and $\text{Con}$ are rewritten as $x \in U_P$ and $\text{Con} \in \text{Con}_P$, respectively.

The idea is that the bold face discourse referent ‘e’ and the bold face aspectual condition ‘e $\bigcirc$ t’ in the translation of Ip$^f$ will be drawn to the presuppositional DRS iff the latter is non-empty. This, of course, depends on the underlying VP being input to Ip$^f$.

In our cases of presuppositional Ip$^f$, the ‘bold face convention’ ensures that the eventive discourse referent is eventually declared in the presupposition part, and that the condition representing the aspectual configuration occurs in the set of conditions of the presupposition as well.

As Ip$^f$ applies to the VP in our example, we transform the structured meaning format into a ‘traditional’ complex DRS by intersecting the two sets of events $- \text{‘B'}_{\leq \phi, \leq >} \cap \text{‘F'}_{\leq \phi, \leq >} -$ following the standard procedure of ‘event conjunction’, cf. (Pietroski 2002). Importantly, in accordance with BPR, the background part is simultaneously transferred into the presuppositional DRS. We thus obtain the following modified input to Ip$^f$:

• [3] VP$^\text{BPR}_{\leq \phi, \leq >}$: $\lambda x [\text{Instrument}(e, x), \text{pencil}(x)][[\text{write}(e)]$

By functional application, that is, applying Ip$^f$ in [2] to VP$^\text{BPR}$ in [3], we get the function-argument structure in [4], which reduces to [5] by lambda reductions, bold face convention, and deletion of unnecessary brackets.

• [4] AspP$_{\leq \phi, \leq >}$: $\lambda P \lambda t[e \bigcirc t](\lambda e [\text{Instr}(e, x), p^* (x)][[\text{write}(e)]$

• [5] $\lambda t[x \bigcirc \text{Instrument}(e, x), \text{pencil}(x)][e \bigcirc \text{write}(e), e \bigcirc t]$

The ‘bold face convention’, which originated in the translation of the imperfective operator, thus plays a crucial role in the derivational process. The algorithm proposed here also respects the general constraint that presuppositional

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7In the general case, if the VP is not on the form $<\text{B}, \text{F}>$, it will only contain ‘assertoric’ material, i.e., $[U | \text{Con}][t | q]$, which is conventionally shortened to $[U | \text{Con}]$.

8We assume that this last reduction step can be carried out, respecting the division between assertoric and presuppositional DRs, by applying a straightforward principle from (Fabricius-Hansen and Sebeo to appear):

• Presupposition Composition

$\text{Fun}_{\leq \phi} + A_P$ (a complex DRS of type $<\leq >$) = $\text{Fun}(A)_P$.
DRSs should be proper, i.e. not containing free occurrences of discourse referents (Søren 1993, 161f.). The presuppositional material is in general processed in the input context before the assertoric DRS – remember that presuppositions are presupposed – and for this reason the discourse referent e in our example has to be declared in the presuppositional DRS, since otherwise the event argument would end up free in the condition ‘write(e)’.

The DRT-architecture does not itself force us to relegate the aspectual configuration to the presupposition part, as in our algorithm, where Ipf introduces a bold face condition ‘e ⊑ t’. Technically, it would be feasible to treat presuppositional Ipf as presupposing the existence of some event, and asserting an overlap relation to hold between this event and the assertion time. However, it seems reasonable to assume that all aspectual and temporal information is presupposed in these cases. That is, the speaker in our example above presupposes the existence of a past and complete writing event, and merely asserts that the writing was performed with a pencil. As we noted in chapter 5, to presuppose the existence of an event amounts to presupposing the instantiation of a past event, since, in general, we can only take for granted what is known to have occurred in the past.

We are now almost finished with the compositional build up of the DRS for our little two-words sentence. At the level labelled AsP [5], we have a function of type <i,c>, that is a function from times to context change potentials. This is just as in chapter 5, where the formalisation of past tense was discussed in detail. The assertion time from the ‘tense branch’, which is to replace the lambda abstracted t, contains the context time t_c. Since ‘e ⊑ t’ occurs in the presuppositional DRS, the variable t_c has to be declared in this environment to respect the requirement that the presupposition be proper. This gives us the following result of type <c>:

- [6] TP_<c>:
  [x | Instrument(e, x), pencil(x)] [e, t_c | write(e), e ⊑ (Past*(t_c)(t_o))]

Following (van der Sandt 1992), we ultimately view presuppositions as a kind of anaphora and require an explicit or implicit antecedent in the input context for the DRS in [6]. Suitable antecedents for the variables in our presupposition are straightforwardly found in the event and time referents provided by the perfective verb ‘napisał’ in the preceding utterance (see section 6.1.4 for further details).

### 6.1.3 Focusing on Thematic Roles

Before proceeding with the formal treatment of how the presupposition in [6] above interacts with the input context, let us broaden the range of data which the analysis is supposed to capture. It is time to show that the approach pursued here generalises beyond example (233), where an adverbial instantiating the thematic role of instrument (‘karandašom’) is focused.
In our event semantic framework, the picture is quite simple since each syntactic argument of the verb is, in the general case, linked at the syntax-semantics interface to a thematic role and as such projects its own two-place predicate of events and ordinary individuals. The question is therefore basically which thematic roles (event predicates) are able to figure in the focus part of \(<B,F>\), leaving the main event predicate (the verb) backgrounded. We will look at some different cases below.

**The Agent Role**

The focused constituent in utterances with a presuppositional Ipf reading is typically the individual bearing the role of *Agent*, cf. the example below:

(235) ‘Tam na stene visela bol’šaja gazetnaja vyrezka, obvedennaja traurnoj kajnjoj.
   A: \([V]_{Y}F\) **pisali** etot očerk v ‘Kapitanskom mostike’?
   B: \([Ja]_{F}\) **pisal**. (Dvenadcat’ stul’ev)

There on the wall hung a big newspaper clipping in a mourning frame.

A: Did you **write** this article in the ‘Captain’s bridge’?
B: I **wrote** it.

The predicate representing the Agent role has a ‘privileged’ status at the syntax-semantics interface in some theories of event semantics. What is important for our analysis, is that the Agent in cases like (235) must be represented in the focus part of some ‘extended’ VP on the form \(<B,F>\). In (235), both occurrences of ‘pisal(i)’ – wrote’ seem to be of the presuppositional kind. It follows from the context that someone has written a certain article in the local newspaper. A question is then asked about the identity of the Agent of this given (presupposed) writing event. The same writing event is accordingly also taken for granted in B’s answer to this question. We give the compositional derivation for B’s short answer in figure 6.1.

The analysis is completely parallel to the derivation discussed at length in the previous subsection, except that in (235) focus is on the set of events in which the Agent equals the speaker (denoted by the distinguished variable \(I^*\)). As Ipf applies, this set of events is intersected with the set of backgrounded writing events. We end up presupposing the existence of a past writing event, while asserting that the speaker was the Agent of this event. In section 6.2, we will look at similar data where a focused Agent surfaces as ‘kto’ in constituent questions, which seem to be the empirically predominant environment for presuppositional Ipf.

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9Cf. in particular Kratzer’s theory presented in (Kratzer 1994) and (Kratzer to appear), where the Agent is treated as an external argument giving rise to its own projection above VP, called ‘VoiceP’.

The question of whether the Agent argument is realised outside the VP as an argument of VoiceP does not have to concern us. We assume that VoiceP can have the semantic type \(<s,c>\) which can be input to the viewpoint operator. It doesn’t matter whether we call the argument of Ipf ‘VoiceP’ or ‘VP’.

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Figure 6.1: Derivation of (235 - [Ja]p pisal^i.)

TP
=\]
\[Ag(e, I^p)] \[e, t_c | write(e), e \land (Past^*(t_c)(t_o))]

\[\lambda t[\[Ag(e, I^p)] \[e | write(e), e \land t]]

\[\lambda P\lambda t[e | P(e), e \land t]]

\[\lambda e[\[Ag(e, I^p)]\[e | write(e)]\]

\[<\lambda e[\[ Ag(e, I^p)] >

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Restrictions on Focused Event Predicates

The focused constituent can in principle relate to different kinds of event predicates, but the data attested is clearly biased towards focus on the Agent and adjuncts such as Instrument, Place, Goal etc. It is noteworthy that the verb’s internal argument, which in linking theories typically is referred to as the Theme or Patient, does not easily figure in the focus part, as witnessed by the reluctance of native speakers to accept constructions like the following:

(236) (♯) Èto [‘Vojnu i mir’]F čital’ Vanja.

It was ‘War and Peace’ that Vanja read.

Following (Krater to appear), it is tempting to claim that the verb’s internal argument does not give rise to a separate projection of an event predicate. Krater argues that the Theme relation, unlike the Agent relation, does not have “any conceptual significance beyond [its] role in argument association.” Theme arguments are accordingly more tightly linked to their verbs. She further quotes Parsons (1990, 74), who observes that “the use of Theme (‘Patient’) is often called the ‘left-over’ case, since so little can be said about it in general”.

Given these considerations, the VP being input to the viewpoint operator in cases like (236) would be represented as in [1] below and not as in [2]:

• [1] √ λe[x, y | read(y, e), Vanja(x), ‘War and Peace’(y), Ag(e, x)]
• [2] λe[x, y | read(e), Vanja(x), ‘War and Peace’(y), Ag(e, x), Th(e, y)]

If we adopt this treatment of the internal object as truly ‘internal’; we do not expect, for theory-internal reasons, the Theme/Patient to be focused while the main event predicate is backgrounded. This is why (236) sounds bad. There is simply no separate Theme/Patient projection to focus on. In other words, the Theme is Davidsonian, while the Agent is neo-Davidsonian. Krater (to appear) presents various arguments for this mixed mode of association in the logical-conceptual structure.

However, Krater (to appear) points out that the evidence “against the existence of a general, all-purpose, thematic role like ‘theme’ or ‘object’ […]” does not by itself preclude the existence of “other, more specialized, thematic roles that introduce direct object arguments […] either at the logical-conceptual structure alone, or both at logical-conceptual structure and in the syntax.” We presumably get such a secondary neo-Davidsonian event predicate in (237):

(237) [Šći]F na obed varila. Dak teper’ už, čaj, ostyl. (Padučeva (1996, 49), from Rassudova)

For lunch, I’ve cooked cabbage-soup. It’s surely cold by now.

This marginal example from colloquial Russian involves ‘scrambling’ of the direct object into a focused position. Our theory can only account for this case if the direct object is neo-Davidsonian. For simplicity we will continue to use the all-purpose Theme-label when referring to cases like (237). The analysis is
straightforward, assuming focus on the set of events: \( \lambda e [Th(e, x), cabbage-soup(x)] \).

The neo-Davidsonian Theme relation may be convenient for a different kind of data as well. In fact, it turns out that intonational marking of the Theme/ Patient role is quite natural in connection with contrastive topics (CT):

(238) Nikto zdes’ ne čital’ ni ‘Brat’ev Karamazovych’ ni ‘Evgenija Onegina’.
A kto-nibud’ čital’ [Vojnu i mir] \(_{CT}\)

Nobody here has read ‘Brothers Karamazov’ or ‘Eugene Onegin’. But has anyone read ‘War and Peace’?

The contrastive topic in the last utterance presupposes that a set of Russian novels is under discussion, but it does not presuppose that any of the discourse participants has actually read any of these novels. We leave it open how a contrastive topic should be represented, and whether it requires a separate Theme/Patient-predicate. The important thing to note for our discussion is that factual Ipfs in (238) clearly has an existential interpretation since no reading event is presupposed. Hence, (238) does not induce the kind of \(<B,F>\) partitions we have been looking at above.

In this respect, cf. also another example provided by Padučeva, where the direct object is allegedly ‘focused’:

(239) Golova razlamyvaetsja\(^{t}\). Ja daže [aspirin] \(_F^{\prime} / CT\) prinimala\(^{t}\). (Padučeva 1996, 57)

My head is aching. I even took aspirin.

This example probably should not qualify as presuppositional Ipfs, despite the deaccentuated verb. The presence of the additive particle ‘daže – even’ suggests that the object NP could be analysed as a contrastive topic, cf. (Sæbø to appear). The utterance merely presupposes that different kinds of medicines are under discussion, and therefore does not induce an existential eventive presupposition. Alternatively, we could invoke the phenomenon of wide focus. This is to say that the focused constituent is considered to be the VP [‘ASPIRIN prinimala\(^{t}\)’] \(_F\). There is a cross-linguistic tendency to have underspecified focus when complements like direct objects are accentuated: “Even contentful lexical expressions such as verbs can be unaccentuated, despite F-marking, when adjacent to an accented argument” (Büring submitted, 10). In any case, ‘prinimala’ – took’ must be analysed as an instance of existential Ipfs.

An Exceptional Case

The general rule, as noted several times already, is that the focused constituent in a presuppositional reading of factual Ipfs is not the verb itself, since the event denoted by the verb is presupposed/backgrounded. With this in mind, consider the following intriguing example brought to attention by Padučeva:

(240) Ty [perestavljat\(^{t}\)]\(_F\) moi knigi? (Padučeva 1996, 38)

Have you rearranged my books?

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Padučeva notes that this sentence may be uttered in a context where the ‘physical result’ of the books’ being rearranged holds at the utterance time. In light of the analysis to be proposed in chapter 7, this scenario rules out an existential Ipff reading of (240), as the existential reading of factual Ipff is blocked in combination with what we call ‘target state validity’ (if the target state has relevance in the discourse context). But if so, (240) must presumably be classified as presuppositional Ipff. How is this compatible with focus on the verb?

The intended meaning of (240) can in fact be paraphrased as follows: “Did you rearrange the books or did you do something else to them?” In this case, what is presupposed is an event of the addressee having done something with the books which, say, has resulted in the books’ being lined up nicely on the shelf. This reading can in fact be straightforwardly captured by our <B,F> partitioning in combination with presuppositional Ipff. True, it is most reasonable here to separate the main event and the Theme (the books), such that the latter is part of the background jointly with the Agent predicate:

- \(< \lambda e[x \mid Ag(e, you*), Th(e, x), books(x)], \lambda e[\text{rearrange}(e)] >\)

Thus, the event argument e is part of the background through Agent and Theme predicates, even though the ‘main event predicate’ is focused. After aspect and tense operators have been applied, we end up with the following complex DRS (which in turn is input to the question operator):

- \(\text{TP} < >: [\text{rearrange}(e)], [x, e, t_e \mid Ag(e, you*), Th(e, x), b^*(x), e \odot (<^*(t_e)(t_o))]

Following the so-called ‘bold face convention’, the eventive argument is declared in the presuppositional DRS (to make sure that the presupposition be proper), which is also the place to be for the aspectual relation. It seems that the analysis proposed for presuppositional Ipff gives us the correct representation of (240), since nothing in the algorithm presented above actually requires the ‘main event predicate’ (i.e. the verb itself) to be backgrounded.

**Temporal Adverbials in Focus?**

In the framework adopted here, event predicates are composed by predicate conjunction. However, this is not the way we treat tense and aspect, which, according to the analysis presented in chapters 2 and 5, combine through functional application. This amalgam of different composition principles may cause us some problems in cases like the following:

(241) **Pokupal** ich otec [davno]_F. (Padučeva 1996, 49)
Dad **bought** them a long time ago.

(242) On **prichodil** k nam [na prosoj nedele]_F. (Padučeva 1996, 52)
He **came** to us last week.
According to Padučeva, her two examples given above should be characterised as ‘actional’ (≈ presuppositional Ipf), with the verb being deaccentuated and the temporal adverbial occurring in a focused position.

On the neo-Davidsonian account, temporal adverbials, say, ‘last week’, typically give rise to two-place event predicates on the form ‘In(e, last week)’. This kind of representation would easily fit into our <B,F>-partitions. However, this way of treating temporal adjuncts – without any explicit reference to times – clearly does not match with the rather elaborate theory of tense defended in the present work.

If focus on temporal adverbials, as in the examples above, induces an existential presupposition of the event argument, some modification of our analysis seems to be required. It should be noted, though, that the empirical importance of these data is rather limited. We have not been able to find any authentic cases where focus on the temporal adverbial clearly combines with presuppositional Ipf. Nevertheless, let us assume that the examples above have a presuppositional Ipf reading, despite the fact that Padučeva is sparse on details concerning the relevant input contexts.

If we stick to our unifying treatment of tense and temporal adverbials, but cannot maintain the intuitively appealing picture saying that all temporal information is always presupposed on a presuppositional reading of factual Ipf, we have to accept that the VP (<B,F>) being input to Ipf in cases like (242) is actually void of focused material:

- \( [1] \) \( \text{VP}_{<i,e>} : \lambda e[|Ag(e, he^*)\), come(e)] \), \( \lambda e[|e = e] \)

The empty focus part is represented as a tautology. As Ipf applies, the input VP takes on the following form, with a temporarily empty assertoric content:

- \( [2] \) \( \text{VP}_{BPR<, e>} : \lambda e[|I[|Ag(e, he^*)\), come(e)] \)

After Ipf with its bold face convention applies to this VP\(_{BPR}\), we get the complex DRS below:

- \( [3] \) \( \text{AspP}_{<, e>} : \lambda \mathcal{M}[|e | Ag(e, he^*), come(e), e \bigcirc t] \)

At this stage, we cannot simply reduce the lambda expression by inserting a temporal argument, since we would then discard the F-marking on the temporal adverbial. The frame adverbial should not be relegated to the presupposition part. A possible solution to this problem is to type-shift the assertion time and introduce an additional ‘bold face convention’ for these cases:

- \( [4] \) \( \text{Assertion Time}_{iQ_{<i,e>}} : \lambda Q_{<i,e>} [t | \text{last week}'(t), Q(t)] \)

The predicate ‘last week’” is here short for ‘Past*(last week*)(t_o)’, i.e. it refers to the interval obtained through intersecting the interval of ‘last week*’ and the ‘whole past preceding the evaluation time’, cf. chapter 5. Applying the generalised quantifier ‘Assertion Time\(_{iQ}’’ to the representation in \([3]\) – and
further complying with the prescribed rules for lambda reduction, the ‘bold face
convention’ and presupposition composition – we end up with what seems to be a
plausible representation for (242):

- [5] TP $\langle \langle t \rangle \rangle : \lfloor \lfloor \text{last week}(t) \rfloor | e, t | Ag(e, he*), \text{come}(e), e \circ t \rfloor$

This says that an event $e$ of ‘his coming’ is presupposed, and it is further
presupposed that $e$ overlaps with its assertion time $t$ (which is a very trivial
presupposition). What is asserted, on the contrary, is the predicative condition
associated with $t$, i.e. that $t$ is in the denotation of the interval ‘last week’.

Alternatively, if we insist that all temporal information is focused in these
marginal cases, the translation of Ipf must be slightly modified:

- Ipf$\langle \langle \langle t \rangle \rangle , \langle \langle t \rangle \rangle \rangle : \lambda P \lambda t[e \mid P(e), e \circ t]$

According to this procedure, the presupposition only concerns the eventive
argument, and not the aspectual relation, since the latter is not represented as a
bold face condition. This modified version of Ipf could apply to [2] above,
resulting in [3']:

- [3'] AspP$\langle \langle t \rangle \rangle : \lambda t[e \mid e \circ t | e | Ag(e, he*), \text{come}(e)]$

This expression combines with the assertion time ‘Past*(last week*)(t_o)’ of
type $\langle \langle t_o \rangle \rangle$ without further ado:

- [4'] TP$\langle \langle \langle t \rangle \rangle \rangle : \lfloor \lfloor \lfloor \text{Past*(last week*)(t_o)} \rfloor | e | Ag(e, he*), \text{come}(e) \rfloor \rfloor$

However, positing such additional translations of the aspectual operator is
not a welcome step, as it violates the underlying principle of a uniform treatment
of Ipf. We are therefore inclined to prefer the first solution, that is, a rather
benign type-shifting of the assertion time combined with a bold face discourse
referent, as in [4].

6.1.4 Presuppositions as Anaphora

We have so far been concerned with identifying our presupposition at the syntax-
semantics interface, and study its behaviour in the compositional semantics –
all the way up to the TP-level. However, the DRSs at this level (of type $\langle \langle t \rangle \rangle$)
are still only preliminary in the sense that complex DRSs consisting of an
assertion and presupposition part should be further confronted with the input
context. The presuppositions in question must somehow be justified in the
discourse situation, and it is natural to look for their raison d’être in the pre-
ceding utterances. This implies a second stage in the DRT-architecture, viz. the semantics-pragmatics interface (Kamp 2001, 5). Following (van der Sandt
1992), DRT treats presuppositions basically as anaphora enriched with descripti-

content. Verification of the presupposition thereby amounts to finding an
antecedent for the anaphora. Let us show how this mechanism works on our
simple initial example, repeated below:
Figure 6.2: The update of \( K_1 \) with \( K_2 \) in (243)

\[
(K_1 \text{ – input context for } K_2) \\
[e, \ t|e \subseteq t, \ Cont(t), \ Ag(e, I^*), \ Pl(e, \ tavern^*), \ write(e, \ letter^*)] \\

\[
[e_1, t_0|write(e_1), \ e_1 \bigcirc (Past^*(t_0)(t_0))] \\

[Instr(e_1, \ pencil^*)] \\

\text{(Presupposition of } K_2) \\
\text{(Assertion of } K_2) \\
\]

(243) V etoj porternoj ja [. . .] napisal\( P \) ljubovnoe pis’mo k Vere. Pisa\( t \) [karandašom] \( P \).

In this tavern [. . .], I wrote my first love letter to Vera. I wrote it in pencil. (Forysth 1970, 86)

The relevant information in the first sentence of this discourse is represented below in the DRS \( K_1 \), assuming a contextually given assertion time \( t \). The second sentence corresponds to \( K_2 \), as we established in the previous discussion:

- \( K_1: [e, \ t|write(e, \ letter^*), \ e \subseteq t, \ Cont(t), \ Ag(e, I^*), \ Pl(e, \ tavern^*)] \)
- \( K_2: [\text{Instr}(e_1, \ pencil^*)]|(e_1, t_0|write(e_1), \ e_1 \bigcirc (Past^*(t_0)(t_0))] \)

Now, the question is how \( K_1 \) is to be updated with \( K_2 \) capturing the incremental growth of the discourse. In the simplest cases, updating an input context represented by a DRS \( C \) with a DRS \( K \) is in dynamic semantics reduced to a merging operation (\( \oplus \)) on the sets of discourse referents and the sets of DRS conditions (cf. chapter 2). However, this straightforward operation does only apply when the presupposition of \( K \) is empty. In the case of (243), updating \( K_1 \) with \( K_2 \) is more involved, requiring the search for an antecedent in \( K_1 \) for the presuppositional material in \( K_2 \). The resolution of the presupposition can be pictured “graphically” as in figure 6.2.

The arrows in figure 6.2 illustrate the procedure of verifying the presupposition of \( K_2 \) in \( K_1 \).\(^{10}\)

The presupposition DRS of \( K_2 \) is here verified since there is a unique function \( f \) which maps the universe of the presupposition part into

\(^{10}\)The traditional notion of ‘presupposition verification’ can be formulated in more concise terms as follows:

- **Presupposition Verification**
  
  “Let \( C \) be a context DRS and let \( A_P \) be an assertion DRS \( A \) carrying a presupposition DRS \( P \). Update \( C, A_P \) if there is one and only one function \( f: U_P \to U_C \) such that \( C \models \langle f(P) \rangle \); then update \( C, A_P \) = update(C, \langle f(A) \rangle).” (Fabricius-Hansen and Sørbø to appear), cf. also (Sørbø 1993, 160).

The update function referred to here is more involved than a simple merging operation, since the former is defined for complex DRSs containing a presupposition. In case the presupposition part is empty, update \( C, K \) = \( C \oplus K \).

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the universe of $K_1$ (this mapping is indicated by the arrows in the figure, i.e. \(e_i \mapsto e'\) and \(t_e \mapsto t\)), complying with the requirement that the DRS conditions of the presupposition part under $f$ should be entailed by DRS conditions already present in the input context.\(^{11}\) Naturally, the substitution of discourse referents in the process of presupposition verification must also carry over to the relevant conditions of the assertoric DRS as indicated in figure 6.2 by the arrow going down from the input DRS $K_1$ to the assertoric DRS of $K_2$.

Given these considerations, an incremental update (which subsumes the algorithm for presupposition verification) results in the following representation of our mini-discourse, where the relevant variables have been unified:

- $Update(K_1, K_2) = [e, t \mid write(e, let^e), e \subseteq t, Cont(t), Ag(e, I^e), Pl(e, tav^e)$, $Instr(e, pen^e)]$

As should be clear by now, the so-called 'existential presupposition' of 'pisai'\(^{12}\) is anchored to a concrete event referred to by the verb 'napisal'. In this respect, our analysis of presuppositional IfP is effectively stronger than simply requiring the existence of some writing event $e'$ in the input context. In the binding theory adopted here, a presupposition is bound from outside. This means that presuppositional IfP does not merely presuppose the existence of some arbitrary event of writing, but is anaphorically linked to a definite anchor $e$, whose value is independent of assignment functions.

This basic picture of 'event anaphora'\(^{12}\) is also observed in the examples below. By some self-explanatory bracketing devices and subtitles we indicate how these examples can be analysed in parallel to the one above:\(^{12}\)

(244) Primećatel’no, čto ni Vanka ne mog' potom ob’jasnit', počemu on [pljum[1]p]_antecedent na Sürkinu balalajku [ . . . ] "[Začem][F] ty [pleval’-to]_anaphora.'" — dopytyval's' u Vanka v bol'nice mat', kogda on mal'en'ko opravil'ja i možno bylo uže ego porugat'. (Uppsala Corpus)

It is curious that Vanka also couldn’t explain why he spat on Sura’s balalajka [ . . . ] "Why did you spit?" — his mother tried to find out at the hospital, when he became somewhat better and she could finally confront him.

Interestingly, the presuppositional status of the verb in (244) is independently confirmed by the presence of an 'anaphoric' particle 'to'.

\(^{11}\)Note in this respect that the perfective inclusion relation \(e \subseteq t\) in $K_2$ is an instance of the more general overlap relation \(e \subseteq (Past^n (t))\).

\(^{12}\)There is a minor technical difference between (244)-(245) and the examples discussed earlier in this chapter, concerning the representation of the focused constituent. The formal partitioning of the VP in (244)-(245) requires some special care since certain two-place event predicates are not defined for ordinary individuals. This is not a major problem, however, as we can represent for instance the adverb \([začem][F]\) in (244) through a relation 'Goal($e$, $K$)', where $K$ is a variable for propositions. For simplicity, we will not explicitly implement this idea in a possible-worlds semantics.

Another point is that the focus marker associated with \([začem][F]\) is not an instance of intonational focus, cf. section 6.2 below on constituent questions.
Having played this move [26 - Rxc3], I offered a draw. [... ] Black can probably hold on, for instance in the line 27 Ba3 Bf8 28 Nf5 d5 29 Bb2 [...], but I didn’t want to get involved in heavy calculations, and [for this reason] $p$, I offered a draw.

In the examples considered so far, there has been a perfect match between the anaphoric event argument of the imperfective verb and its antecedent. In these cases, the presupposition corroborated by factual Ipf does not make any independent semantic contribution to the final DRS, since the event in question is in fact already entailed by the input context. Below, we will look at some cases where the presupposition is not, strictly speaking, entailed by the input context.

### 6.1.5 Presupposition Justification

The existential presupposition of factual Ipf wants to be bound, but if its not possible to find a suitable antecedent, the discourse participants will make use of some kind of repair strategy, what is traditionally known as *accommodation*.

Accommodation basically amounts to adding the required information to the context such that the new, enlarged context entails the presuppositions in question. However, accommodation enters the resolution process only as a last resort and is pragmatically restricted in a number of ways (van der Sandt 1992). In our cases, ‘whole-sale accommodation’ (Kamp 2001) is hardly an option. There have to be some elements in the input context which provide some kind of anchoring for the presupposition.

Kamp and Rossdeutscher (1994a) coined the term *presupposition justification* for the frequently occurring type of resolution process, which involves ‘binding’ of the presupposition partly through verification and partly through accommodation. The discourse participants try to exploit information available in the input context when resolving the presupposition, but, if necessary, they are ready to add bits of the missing link. This mixed strategy is very characteristic of the authentic examples detected in our corpora. We give some typical examples below, where the process of finding an appropriate antecedent combines different kinds of lexical information in the previous discourse.

In (246), there is almost a perfect match between the two anaphoric expressions and their joint antecedent:

(246) A: Dlia bol’sinstva znakomyh vas [ot’ezd]$(p_{pseudo-})$antecedent stapol polnoj neozidannost’ju... Vy $[unezžali]$anaphora v Ameriku [ot čego-to, k čemu-to ili že prosto voznamerilis$^p$ spokojno provesti$^p$ tam buduščuju starost$^p$] $p$?
B: [...]  
A: For most of your friends your departure to America came as a total surprise... Did you leave for America for a particular reason or with a certain goal, or did you simply decide to spend your retirement calmly over there?
B: […]
A: So you left with bitterness?

Both occurrences of ‘uzjázli’ – left’ in (246) obviously refer back to the departure which is introduced by the nominal expression ‘ot’ezd – departure’. One could possibly argue that ‘verbal’ NPs like ‘ot’ezd’ are equipped with an eventive argument, in which case binding the anaphora to an antecedent is formally rather straightforward here as well. In any case, the justification of the presupposition does not pose any problems.

In the next two examples, there is no single lexical item which could serve as antecedent for the anaphora. However, the appropriate antecedent is still indirectly provided by linguistic information in the input context:

(247) Na čempionate faktičeski otsuststvovali glava apelljacionnogo komiteta i zamestitel’ glavnogo sud’! Otvetstvenye činovniki, nazačenyye na eti roli, [probyli] dva dni i uchali [priezžali] anaphora, celi bol’suju čast’ vremen ne mogli ispolnitat’ svoi objawannosti? (Kasparov Chess 2002)

The head of the appeal committee and the deputy arbiter were in fact absent during the championships! The responsible persons appointed to these positions stayed two days and then left. Why did they come in the first place, if most of the time they were unable to perform their duties?


– A moment ago my rook was on this square! – the one-eyed guy cried out, having looked around, – and now it’s gone! […] – Where then did it end up? Did you take it?

In (247), the arrival of some chess arbiters is presupposed by the presuppositional Ipf ‘priezžali’ – came’. Since a departure, in general, is only possible after a previous arrival, it follows from the input context ‘probyli’ dva dni i uchali – stayed two days and then left’ that the arbiters in question must have arrived at the tournament, although there is no explicit mention of this arrival. In view of the presence of lexical items like ‘probyli’ and ‘uchali’, the presupposition induced by ‘priezžali’ can therefore be justified by the reader with minimal efforts. A similar explanation can be given for the licensing of presuppositional Ipf in (248).

In light of these examples, one can reasonably ask whether justification of this kind of eventive presupposition always involves some part of verification
through linguistic material in the input context. This is not so, as witnessed by examples like the following:

\[(249)\]

- Jürgen, čto [tyj] otkrival\(^{1}\) dver’ gržnyami rukami\(^{2}\), sprasivae\(^{3}\) mat’.
- Net, mamoečka, čto byl ne ja! Ja vsegda dveri nogoj otkryva\(jl\)!
  \((\text{Internet})\)
- Jürgen, was it you who opened the door with dirty hands?, mother asks.
- No, mom, it wasn’t me! I always open doors with my feet!

In (249), the antecedent is not overtly expressed by linguistic means. All the same, an appropriate antecedent can be reconstructed in this discourse situation, where the door is either visibly open or Jürgen can easily imagine the door having been opened. Obviously, there is more accommodation involved in this case of presupposition justification than in our previous examples. The information conveyed by factual IpP is therefore not totally redundant here, inasmuch as the lexical content of the verb in question (‘otkryvat’\(^{4}\) – to open’) makes a certain contribution to the final representation of the discourse.

Still, in general, as noted above, there must be some linguistic or contextual information in the input context that facilitates the resolution of the presupposition. The information to be accommodated, if necessary, must be plausible in the discourse situation (as in (249)), and should not require too much effort on behalf of the hearer. These general constraints on accommodation explain, for instance, why presuppositional IpPs rarely occurs discourse-initially, cf. (Israeli 1996). In the analysis proposed here, where presuppositional IpPs is literally taken to involve presupposed material, the reluctance of this reading to occur in a ‘zero-context’ can be given a principled explanation.

### 6.1.6 Accessibility in DRT

A crucial component of the binding theory of presuppositions is the notion of accessibility, which constrains the availability of prior discourse referents as antecedents for anaphoric expressions. In DRT, accessibility is defined as a syntactic relation between DRSs (Kamp and Reyle 1993), but we will here merely sketch the semantic motivation behind the concept as it is used in our examples.

Let us return once more to our transparent initial example (233), whose preliminary representations were established to be as in (250):

\[(250)\]

\[K_{t}: [e, t, \text{write} (e, \text{letter}^{*}), e \subseteq t, \text{Cont}(t), \text{Ag}(e, \text{I}^{*}), \text{Pl}(e, \text{tavern}^{*})] \]

\[K_{2}: [\text{Instr}(e, \text{pencil}^{*})] [e, t_{c}, \text{write}(e, t), e_{I} \cap (\text{Past}(t_{c})(t_{0}))] \]

What makes the discourse referents of \(K_{t}\) accessible from \(K_{2}\), such that the presupposition of \(K_{2}\) becomes bound by \(e\) and \(t\) in \(K_{t}\)? A semantic explanation for this accessibility relation follows from how the meaning of DRSs is perceived as context change potentials in dynamic semantics. In light of the dynamic interpretation of DRSs from chapter 2.1.2, let us consider the DRS \(K_{2}\) in (250).
The clue here is that each embedding \( g \) satisfying \( K_2 \) is an extension of some embedding \( f \) satisfying the input context \( K_1 \), that is \( g \supseteq f \). But this means that the discourse referents declared in the main universe of \( K_1 \) are defined in \( K_2 \) (via the embedding function \( f \) whose variable assignments are inherited by \( g \)), and therefore accessible for anaphoric expressions in \( K_2 \). In fact, all the cases of binding we have been looking at so far make use of this accessibility relation which encodes the linearity of accumulating information in natural language.

This notion of accessibility further enables us to test the alleged presupposition of a presuppositional IpP reading w.r.t. the classic projection behaviour of presuppositions. The interpretation of the examples below indeed confirms the presuppositional status of the event argument, as presuppositional IpP here behaves like more traditional presupposition triggers.\(^{13}\)

\[ (251) \] Ešli už on [kupí\textsuperscript{P}]\textit{antecedent} ětò pal’to, on ego [na tolkučke]\textsubscript{P}, navernoe, [pokupal\textsuperscript{I}]

If he actually bought this coat, then, I guess, he \textit{bought} it at the flea market.

\[ (252) \] Ešli už on propil\textsuperscript{P} vsjú zarplatu, to ětò pal’to, navernoe, pokupal\textsuperscript{I} [na tolkučke]\textsubscript{P}.

If he really spent all his salary on booze, then, I guess, he \textit{bought} the coat at the flea market.

The DRS\textsubscript{s} representing these conditionals both consist of complex conditions on the form ‘\( K_1 \Rightarrow K_2 \)’, where the presupposition in question is triggered in the consequent \( K_2 \). The binding theory predicts that this presupposition wants to be bound in the antecedent \( K_1 \) of the conditional, since there is a general preference for binding locally (van der Sandt 1992).

However, in the two examples above, only the \( K_1 \)-part of (251) contains a suitable antecedent (‘kupí\textsuperscript{P} – bought’) for the anaphora (‘pokupal\textsuperscript{I} – bought’):

- Preliminary (greatly simplified) DRS for (251):

\[ \left[ \left[ e \right| \text{buy-coat}(e) \right] \Rightarrow \left[ \left[ PI(\text{at the flea market}^*, e_i) \right] | e_i \text{buy-coat}(e_i) \right] \right] \]

The presupposition in \( K_2 \) is here absorbed by its anchor in \( K_1 \), and the sentence is not perceived as presupposing any buying event. In (252), on the contrary, the presupposition cannot be bound locally, and will have to be bound (or otherwise justified) in the input context of the conditional as a whole. This is to say that the presupposition \textit{projects} out of the conditional, which thus presupposes the existence of a buying event.

The DRT-architecture is ideally suited for dealing with such phenomena as the projection behaviour of presuppositions in conditionals. A key element here is again accessibility. It is actually not trivial that the event argument of ‘kupí\textsuperscript{P}’ is accessible for the anaphoric expression ‘pokupal\textsuperscript{I}’ in (251). This

\(^{13}\)Unfortunately, examples like (251) sound a bit strange and unnatural. However, this is a problem for the test in question also w.r.t. to data (presupposition triggers) outside the domain of viewpoint aspect and from other languages than Russian.
relation cannot be guaranteed by traditional static theories of meaning. But unlike classical predicate logic, DRT ensures that discourse referents declared in the antecedent of a conditional are accessible for anaphoric expressions in the consequent. Conditionals in DRT are 'internally dynamic': ‘The (possibly updated) output assignments of the antecedent of implicative conditions are passed on as input assignments to the consequent DRS’ (Kamp et al. to appear, 29).

This means that the conditional in (251) is verified in a model $M$ iff every embedding $f$ satisfying the antecedent $K_I$ can be extended to an embedding $g$ satisfying the consequent $K_E$. Accordingly, the familiar accessibility relation, where the ‘left-most’ DRS is accessible from a subsequent DRS, also holds between sub-DRSs in a conditional. In all cases considered so far, the discourse referents declared in $K_I$ are properly defined in $K_E$ due to the relation $g \supset f$ holding between the relevant embeddings.

When is the accessibility relation between DRSs blocked? Of particular interest here is the constraint on binding which applies when a candidate for the antecedent role occurs embedded under a negation operator or modal operators. Consider the following example, discussed by Mehlig:

(253) A: Nado vyključit\(^7\) svet.
B: # Ja ego už\(e\) vyključil\(^i\). (Mehlig 1997b, 169)
A: You must turn off the light.
B: # I have already turned it off.

Mehlig does not provide any satisfactory explanation for why factual Ifp is ruled out and cannot have an anaphoric reading in this example. Why is it impossible for ‘vyključil’ – turned off to refer back to the event of ‘vyključit’ – turn off’ in the previous utterance? The intuitive explanation is simply that the event of turning off the light cannot possibly be presupposed by the discourse participants in this context. The speech act of speaker A urges B to turn off the light, and A is therefore certainly unaware of the fact that B actually has performed the action in question. In this setting, it would be unreasonable of B to presuppose his having turned off the light. The existence of the event in question can accordingly only be asserted, in which case If has to be used.\(^{14}\)

The restriction on presuppositional Ifp in (253) can be elegantly accounted for in the DRT framework. The point is that the eventive discourse referent of ‘vyključit’ is embedded under a modal operator ‘nado – must’, and is therefore not accessible as an antecedent for cross-sentential anaphora. Without going into the semantics of modal expressions (here for convenience simply represented as ‘□’), we can capture the essence of the intended presuppositional reading of (253) as follows:

- Preliminary (greatly simplified) DRSs for (253):

\(^{14}\)The reason why ‘vyključil’ in (253) cannot have an existential Ifp reading either, is linked to the fact that the target state of the light being off holds at the evaluation time, cf. chapter 7.
K1: [\[ [\square : [e | turn-off-the-light(e)]]
K2: [\[ R(?, e)] [e_1 | turn-off-the-light(e_1)]

The presupposition in \( K_2 \) cannot be bound in the input context \( K_1 \), since the universe of the latter DRS is empty. The discourse referent \( e \), which occurs inside a subordinated DRS, is not defined globally in \( K_1 \). Hence, \( e \) is also undefined for the set of embeddings satisfying \( K_2 \), which 'inherit' the discourse referents of the main universe of \( K_1 \) and their valuations. There is simply no antecedent available for \( e_1 \).

Whole-sale, global accommodation of the presupposition of \( K_2 \) is excluded on pragmatic grounds (inconsistency w.r.t. the content of \( K_1 \)), and the discourse in (253) accordingly becomes uninterpretable in DRT. Note also that it remains unclear which thematic relation \( R \) is focused in this scenario. This analysis reflects the status of (253) as semantically/pragmatically infelicitous.

In light of these constraints on accessibility, consider also another example from Mehlig’s work:

(254) A: Ty dolžen byl perevestí³ rasskaz ‘Znamenie vremen’ na nemeckij jazyk?
B: Da, i čto? Jâ ego perevodi³. (Mehlig 1997b, 167)
A: You ought to translate the story ‘Banner of time’ into German.
B: And so what? I have translated it.

Factual Ipf is indeed licensed in this discourse, but we argue, contrary to Mehlig, that this is not an anaphoric usage. Due to the presence of the modal operator ‘dolžen byl – ought to’, the event introduced by the perfective ‘perevestí³ – to translate’ is not available as an antecedent for the event argument of ‘perevodi³ – translated’. Hence, the existence of the event in B’s reply is asserted, not presupposed. That this is a case of existential Ipf, is also confirmed by the fact that sentential stress falls on the verb.

A similar story can be told concerning the following authentic example:

(255) A: Strašno [ . . . ] predstavit’⁴ na sekundu kakich by tol’ko sobak ne povesili⁵ na Kasperova, esli by on pokazyval⁶ v range cempiona rezultaty podobnye provalam Kramnika.
A: It is frightening to imagine what accusations would have been directed towards Kasparov, if he as a world champion had performed as badly as Kramnik.
B: You have a short memory. Kasparov has performed as badly as Kramnik, and one has directed accusations towards him.

\(^{15}\)Cf. the discussion of a similar example, (318), in chapter 7.2.5.

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Just as in (254), the two occurrences of factual Ipf are of the existential type despite the presence of identical verbforms (save for aspect) in the preceding utterance. Again, what is crucial here is the fact that ‘povesili’ – (here:) accused’ and ‘pokazival’ – (here:) performed’ in A’s utterance are embedded under various operators (modality, negation), hence not available for anaphoric expressions in B’s comment.

Finally, let us indicate how some apparent counter-examples to this analysis could be dealt with. Sokolovskaja discusses a couple of examples which more or less follow the pattern in (256):

(256) A: Dzhek uje popravil’sja. Ne vypustit’ li ego v sad?
       B: Ja i v’era ego vypuskala’. (Sokolovskaja 1993, 65).

A: Jack is already better. Shouldn’t we let him out in the garden?
B: I let him out yesterday (as well).

The perfective verb ‘vypustit’ – to let out’ is embedded under negation (or rather a ‘rhetoric question operator’), and is therefore not accessible as an antecedent for ‘vypuskala’ – let out’, according to our analysis. If ‘vypuskala’ cannot be analysed as a case of anaphora, we predict that we are facing the existential reading of factual Ipf. So far so good. But how can this be reconciled with an apparent deaccentuated verb and a prosodically marked adverb (‘v’era – yesterday’)?

In fact, we have warned against such cases at some occasions already. The point here is that the stressed constituent ‘v’era’ is not a presupposition inducing focus-expression, but a so-called contrastive topic. The role of the additive particle ‘i – also’ is precisely to mark the contrast between ‘v’era’ and other contextually salient times, such as ‘segodnya – today’. In other words, since the event in question is not presupposed in the input context, the factual Ipf ‘vypuskala’ is indeed also in this case of the existential type.

6.1.7 Lexical Presuppositions

We will here suggest a possible extension of the range of data to be covered by the presuppositional analysis. Forsyth (1970) emphasises the fact that factual Ipf quite often interacts with verbs which more or less become void of lexical content in this reading. Such empty, pro forma verbs include for instance ‘prochodi’ – to take place’ in the example below:

(257) Čempionat mira prochodi v Moskve. (“64” 2002)

The World Championships took place in Moscow.

What is it that licenses factual Ipf and a presuppositional reading in this case? Our suggestion is that the NP ‘Čempionat mira – the World Championships’ actually contains some reference to an event of the world championships taking place. The point is that this ‘event-argument’ made salient by the NP is a suitable antecedent for the anaphoric event induced by ‘prochodi’. The lexical content of ‘prochodi’ is thus entailed/given in the input context through
the NP ‘Čampionat mira’, hence the term *lexical presupposition*. Binding of the presupposition would in this case be intra-sentential. We refrain from implementing this idea formally since it requires a lot of investigation into lexical semantics, but the general picture should be clear.

A more complicated case is given below:

(258) Pervoe mesto i samyj puchyj konvertik poluchil Michail Kobalija, nabra-

vsij 8 iz 9! Stol’ jarkoj i bezuprečnoj pobedy na memoriale *dobivalsja* 

liš’ Aleksej Dreev. V 1993 godu on opredelil vtorogo i tret’ego prizera 

na 1,5 očka. (Kasparov Chess 2001)

First place and the biggest cash prize went to Michail Kobalija who 

scored 8 out of 9! Only Aleksej Dreev has achieved such a clear and 

incontestable victory at this tournament. In 1993, he finished 1,5 points 

ahead of the second and third prize winners.

We suggest that the equative phrase ‘stol’ jarkoj i bezuprečnoj pobedy – such 

a clear and incontestable victory’, which appears sentence-initially, somehow 

makes salient a winning event. This event is then linked by the redundant 

presuppositional Ipf ‘*dobivalsja*’ – has achieved’ to its Agent.

The idea of treating ‘lexical presuppositions’ as a subset of presuppositional 

Ipf can straightforwardly be transferred to the puzzling and frequent use of 

factual Ipf with *verba dicendi*. Consider the following examples:

(259) "No ja že ne vinovat, – *opравдывался* Jan na sledujuščij den’. – V 

konce koncov, my byli v ravných uslovijach!". (Joeblack 2001)

“But it’s not my fault, – Jan *justified himself* on the next day. – After 

all, we were on equal footing!”

(260) – Nu! – *спрашивал* on. – Čto vy skazete? (Dvenadcat’ stulev)

– Well! – he *asked*. – What do you say?

Forsyth (1970, 97) noted that factual Ipf in such cases functions as a ‘copula’, 

which merely serves to link different items of information together (the quotation 

is linked to the person who performed the speech act). The lexical content of 

the imperfective verbs in question is thus redundant.16

In (259), it is stated that ‘Jan justified himself’ (‘*opравдывался*’), but this 

fact already follows from the *content* of the preceding quote. In this sense, 

presuppositional Ipf refers anaphorically back to the speech act itself.

In examples like (260), repeated from (192) above, the anchor for the pre-

supposition of ‘*спрашивал* – asked’ appears to be located in both the left and 

right context. In this respect, consider also (261):

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16It goes without saying that we consider only this characteristic ‘copular’ usage of *verba 

dicendi*. A case like (1) cannot, of course, be analysed as presuppositional:

(1) Vy govorili? s nej? Ona pridel’?

*Did you speak* with her? *Will she come*? (Chaput 1990, 302)
(261) V partii [Kasparov–Karpov] Kasparov zdes’ igra\[20 d5\], poluchil nebol’soj pereves v okončanii i postepenno zamucil [sopernika]. (Kasparov Chess 2001)

In the game [Kasparov–Karpov] Kasparov in this position played [20 d5], got a small advantage in the endgame, and gradually tortured [his opponent].

In chess annotations, the imperfective ‘igra’ – to play’ is usually preferred over the perfective ‘sygra’ when referring to complete events (i.e. chess moves) in the past. Chess moves (‘20 d5’ in (261)) behave much like quotations, and the verb ‘igra’ is here reminiscent of a verbum dicendi. In any case, it is clearly lexically redundant, since it follows from the nature of chess moves that they are ‘played’. The possibly presuppositional nature of ‘igra’ is to be contrasted with the other events denoted by verbal predicates in (261). For both ‘poluchil’ nebol’soj pereves – got a small advantage’ and ‘zamucil’ [sopernika] – tortured [his opponent’], the verbal content is part of the assertoric level, and Pf is therefore the preferred choice.

The lexical presupposition of ‘igra’ in (261), in a similar way as the verbum dicendi in (260), seems to be cataphorically linked to its anchor. This adds another complication to any attempt of formalising these ideas. Thus, a complete analysis of factual Ipf and lexical presuppositions requires some serious and non-trivial extensions of the framework adopted here. Still, we find this idea intuitively appealing and worthy of future research.

6.2 Factual Ipf in Questions

Many of the examples discussed in the literature on factual Ipf occur in questions, both polar (yes-no) questions and constituent (wh-) questions. Already Mazon (1914, 220) pointed out that questions represent a particularly propitious environment for factual Ipf. In fact, some studies in this field focus exclusively on factual Ipf in questions, notably (Chaput 1990), (Vogeleer 1993), (Israeli 1998) and (Mehlig 2002).

What then is the correlation between question operators and factual Ipf? First, there is the obvious observation that both polar and constituent questions are fundamentally characteristic of dialogue. This can be contrasted with for instance narrative texts, where Pf is predominant, cf. chapter 7.3.3. However, there is not one single factor which explains the frequent use of factual Ipf in questions. In fact, we propose to maintain the opposition between existential Ipf and presuppositional Ipf in questions as well. This can be done straightforwardly in polar questions (6.2.1), but the use of factual Ipf in constituent questions (6.2.2) is more challenging in this respect. The problem is that the existential and presuppositional variants are indistinguishable at the surface level when occurring in constituent questions. Still, even for this case we argue that the underlying information structure speaks in favour of maintaining the factual dichotomy (6.2.3).
6.2.1 Polar Questions

In chapter 3 we encountered many examples with existential Ipf in polar (yes-no) questions. Recall for instance the importance accorded to the "kogda-ni?b-“-test”. Existential Ipf is identifiable in this environment through intonational focus on the verb. Different variants of existential Ipf are represented, such as ‘experiential Ipf’ in (262) and (263), or ‘cyclic Ipf’ as in (264).

A dog came running towards them, and the father said: − Have you noticed that all animals run sideways? − I have noticed, Sergej said ...

A long queue, right? − Have you ever seen a small one? − a cheerful chap asked.

(264) − ?ital® novosti? V Indii pr?livnye livni. (Uppsala Corpus)
− Have you read the newspaper [today]? In India it’s pouring rain.

These cases are typically rendered with the experiential perfect in English. The link between existential Ipf and questions is part of a more universal phenomenon observed by Dahl (1985, 142f.) and others, viz. that the cross-linguistic gram type ‘Experiential’ typically occurs in non-affirmative contexts such as questions and negated sentences. The maximally indefinite past, which triggers experiential Ipf, ‘actualises’ the evaluation time parameter in lack of other intervals to relate to. This converges with the dialogue mode (including questions), which also makes the utterance time particularly salient. This combination (big, indefinite past + salient utterance time) gives rise to the notorious ‘present perfect effects’ of existential Ipf, i.e. ‘experiential Ipf’.

There is a different story to be told about presuppositional Ipf in polar questions:

(265) A ?to ty F velela® mne pri?iti®? (Uppsala Corpus)
So it was you who ordered me to come?

Presuppositional Ipf, contrary to existential Ipf, refers back to a very definite temporal location for the presupposed event in question. The reason why presuppositional Ipf occurs frequently in questions (especially wh-questions, see below) has a very simple common-sense explanation related to the nature of the speech act of asking questions: Speakers ask questions when they seek more information on a certain topic. In the case of presuppositional Ipf, the discourse topic is the presupposed event, and the follow-up question focuses on some circumstantial factor concerning this event.

Presuppositional Ipf is identifiable in (265) above through an appropriate background-focus partition at the VP-level, just as in section 6.1. The Agent
of the VP is focused (cf. the ‘eto-left’), and this has the effect of inducing a <B,F>-partitioning which is input to Ipf. The important thing here is that the question operator comes in at a later stage. Hence, the analysis is completely parallel to the way we treated ordinary declaratives in 6.1. Note that the question operator, which of course does not contain any kind of event antecedent, is unable to bind the anaphoric event of presuppositional Ipf. The presupposition therefore projects out of the question, seeking an antecedent in the input context.

6.2.2 Constituent Questions

While existential Ipf is dominant in polar questions, the picture is reversed in constituent questions as these often have an existential presupposition. Still, we do find existential Ipf in pure wh-questions, as in (266), and in the rhetoric question in (267):

(266) A: Ty komu govorila, čto já zdes’?
B: Nikomu. Ja sama ne znala. (Uppsala Corpus)
A: Who have you told, that I’m here?
B: Nobody. I didn’t know it myself.

(267) A gde ty videla sčastlivých na vše sto procentov? (Uppsala Corpus)
But where have you seen people who were 100 per cent happy?

The question in example (266) is perhaps ambiguous between an existential reading (≈ ‘who have you told that . . . ?’) and a presuppositional interpretation (≈ ‘who did you tell that . . . ?’). To get an unambiguous existential reading, ‘komu-nibud’ – anyone’ could have been used, but that would have resulted in a polar question.

Next, consider presuppositional Ipf in constituent questions, where this factual reading is very frequent:

(268) S jarostnoj siloj nad nim [zaklokoťažený zemný pulemet]pseud antecei. Kto [strejš]anaphora? Byt’ mőet, on sam? (Uppsala Corpus)
An anti-aircraft machine gun fired with a furious power above him. Who fired? Maybe he did it himself?

At 6.30 p.m. we had a telephone call. I don’t remember who called, but the voice was uplifted.

In (269), presuppositional Ipf occurs in an embedded interrogative. Otherwise (268) and (269) are quite similar. In both cases, the speaker’s focus (in a weak sense) is on the Agent role ‘kto – who’, and the previous sentence contains a ‘pseudo-antecedent’ to the anaphoric event. Binding and justification of these presuppositions follow the same patterns as in section 6.1.
The wh-element in these constructions needs not, of course, relate to the Agent role. In the next example, the thematic role of Place (‘gde – where’) is focused (note the particle ‘a – and/but’), while the verb is backgrounded/presupposed:

(270) A: Včera perešel a zimnjaju rezinu. [ . . . ] Rekomenduju.ĩ
B: A gde pokupal? (Internet)
A: Yesterday, I changed to winter tyres. [ . . . ] I recomend it.
B: And where did you buy them?

6.2.3 Some Criteria for Identifying Presuppositional IpF in Constituent Questions

There is no straightforward battery of tests for detecting presuppositional IpF in constituent questions. The difference from polar questions is illustrated in (271) which contains cases of presuppositional IpF both in a polar question and in a constituent question.

(271) Veduščij: Ja znajúš, k vam vo vremia etogu uraganu privozjat roženicu. Eto vo skol’ko bylo, ne pomnite? Vrač roddoma: Ee predostavili v 1.15 noći. 

Journalist: I know that during this hurricane they were bringing a woman in childbirth to you. When was it, do you remember?
Doctor: They delivered her at 1.15 a.m.
Journalist: 1.15. Oh, my God, in the middle of the hurricane. 1.15, right. Did you receive her?
Doctor: Yes . . . our crew. We knew that the ambulance had arrived. We went down . . . The woman was in a wheelchair. I asked the crew, how they managed the trip. They said that it had been difficult . . . Journalist: And who brought her to you?

We have two occurrences of IpF which anaphorically refer back to more or less salient lexical items. When the journalist in the final line asks ‘A kto ce podvozili?’ he refers anaphorically to the event of bringing reported in the first line (‘privozjat ’). The bringing event has thus already been introduced and is accessible in the input context when ‘podvozili’ is uttered.

The polar question [Vy]pr priminali? with intonational focus on the Agent role is also a case of presuppositional IpF. Since the doctor in the previous utterance refers to a ‘delivering event’ (predostavili), the discourse participants
automatically infer that there must have been some ‘receiving event’. World-
knowledge tells us that a delivery is normally followed by a reception. For this
reason, an antecedent can easily be accommodated for the eventive presupposi-
tion of ‘primimal – received’.

However, the first case is more puzzling since there is no formal feature
(like intonational focus) allowing us to straightforwardly identify ‘podvozil’ as
an instance of presuppositional IpF. Constituent questions raise some tricky
questions for our theory. It will not do to explain the use of presuppositional
IpF by simply saying that the question word (‘kto – who’) represents the focus
of the sentence. In a sense, a certain focus on the wh-word is given for free in this
syntactic environment, and Russian does not make use of special intonational
factors to pass through the intended focused meaning. The problem is that this
kind of ‘focus’ does not always pattern with presuppositional IpF.

Then on what grounds are we able to distinguish the two major factual
readings in questions? How can we tell that ‘podvozil’ in (271) is a case of pre-
suppositional IpF? The answer must be a bit circular. We have a presupposition
if the event argument can be bound and justified in the input context.

For these cases, only the discourse context can tell whether or not we are
dealing with presuppositional IpF. A way to approach this issue is by looking
at the set of possible congruent answers to the question. Most semantic theo-
ries of questions assume that the denotation of a question can be captured
on the basis of its potential (good) answers. A ‘congruent answer’ is restricted
by certain Gricean maxims. For instance, it should be informative, but not
over-informative etc., cf. (Křížka 2001) for a definition. In light of these consid-
erations, consider the question-answer pairs below:

(272) A: Kto čital’ ‘Vojnu i mir’?
B: (#) Èto [Ivan Petrović]P čital’ ‘Vojnu i mir’.
A: Who has read ‘War and Peace’?
B: (#) It was Ivan Petrović who read ‘War and Peace’.

(273) A: Kto otkryval’ ètu butylku šampanskogo?
B: Èto [Ivan Petrović]P otkryval’ butylku šampanskogo.
A: Who opened the bottle of Champagne?
B: It was Ivan Petrović who opened the bottle of Champagne.

Since the semantics of questions patterns with the set of congruent answers,
the difference in acceptability of the answers in (272) and (273) is quite sug-
vective. Only B’s answer in (273) represents a felicitous instance of presuppositional
IpF. This suggests that the corresponding question of A in (273) is of the pre-
suppositional kind, since it is reasonable to assume that the speakers A and B
presuppose the same opening event. In this respect, a noteworthy feature of the
focus construction is that it makes salient a set of alternatives to the assertoric
content (Rooth 1992). The union of this set of alternatives and the focused
constituent forms the basis for the set of congruent answers. Hence, there is a
close relationship between constituent questions and the kind of focus displayed
in B’s answer in (273).
Still, the diagnostic related to the focused answer in (273) is not without certain problems. First, ‘éto-clefts’ do not represent a reliable test for our purposes, since this construction does not only interact with focused constituents, but also with (contrastive) topics. Furthermore, the kind of \(<B,F>\)-partitioning assumed here is not triggered by all types of focus. The problem is that international focus on the subject NP is felicitous also in answers to the subset of ‘kto-questions’ which should be interpreted as existential Ip:

(274) A: Kto čital’ ‘Vojnu i mir’?
    B: ‘Vojnu i mir’ čital’ [Vanja],
    A: Who has read ‘War and Peace’?
    B: Vanja has read ‘War and Peace’.

Following (King 1995), we assume that there are at least two different kinds of foci in Russian. In (274), we have a ‘weak’ new-information focus, which is not associated with an existential presupposition. Note that B’s utterance in (274) is only felicitous as an answer to a question (or in similar contexts). The thematic position of the subject ‘Vanja’ follows from the information seeking nature of the constituent question. The subject (Agent) in existential Ip sentences is typically not focused, but topicalised, cf. chapter 4.2.3.

In regard to question-answer pairs, the idea of an existential presupposition associated with presuppositional Ip gives rise to the prediction that answers like ‘nikto – nobody’ should only be felicitous in reply to a question having an existential Ip interpretation. This prediction is borne out, as witnessed by the difference in acceptability of the answer in (275) vs. (276).

(275) A: Kto čital’ ‘Vojnu i mir’?
    B: Nikto.
    A: Who has read ‘War and Peace’?
    B: Nobody.

(276) A: Kto otkryval’i etu butylku šampanskogo?
    B: (#) Nikto.
    A: Who opened the bottle of Champagne?
    B: (#) Nobody.

Let us illustrate this point on a model containing the three individuals Anja, Leša and Volodja as the only potential candidates for filling the Agent role (the subject slot ‘kto – who’). Given this model and a context where an open bottle is on the table, the set of possible answers to the question in (273) corresponds to the partition in table 6.1.

Following semantic theories of questions (see (Krifka 2001) for a discussion), we can think of these cells as mutually exclusive propositions (sets of possible worlds). The first cell refers to all the possible worlds where Anja opened the bottle in question, while the second cell refers to all the possible worlds where

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17This may explain why Pf is sometimes acceptable with ‘éto-clefts’, despite our claim that Pf does not give rise to event anaphora, cf. some discussion of this point in chapter 7.
Leša was the opener, and, finally, the third cell corresponds to the possibility of Volodja being the Agent of the opening event. The possible worlds within a single cell may differ in many respects, save they all contain the same Agent for the event of opening the specific bottle which stands on the table.

The partition in table 6.1 gives rise to an existential presupposition. This follows as a corollary of the fact that none of the cells allow for the possibility that the event in question did not take place. It is a logical necessity that some Agent or other did perform the action referred to by the verbal predicate. Hence, the use of presuppositional Ip in the question.

This sketchy analysis of (273) is to be contrasted with the denotation of the question in (272). The normal interpretation of this particular question licenses $2^3 = 8$ congruent answers, represented by the partition in table 6.2.

<table>
<thead>
<tr>
<th>Read_WP(Anja)</th>
<th>Read_WP(Lesa)</th>
<th>Read_WP(Volodja)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read_WP(Anja) $\land$ Read_WP(Lesa)</td>
<td>Read_WP(Anja) $\land$ Read_WP(Volodja)</td>
<td>Read_WP(Lesa) $\land$ Read_WP(Volodja)</td>
</tr>
<tr>
<td>Read_WP(Anja) $\land$ Read_WP(Lesa) $\land$ Read_WP(Volodja)</td>
<td>$\emptyset$</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2: Partition for (272)

Each of the three individuals in the model has either read or not read ‘War and Peace’, and it is perfectly conceivable that none of them has read the novel in question. This possibility corresponds to the last cell in the partition, and excludes an existential presupposition. For this reason, the question in (272) is interpreted as an instance of existential Ip.

Let us finally say a word about how this analysis could be made formally precise. The structured meaning framework adopted in section 6.1 is suited to handle questions. Krifka (2001) argues that constituent questions induce a $\langle \text{Background}_{\text{quis}}, \text{Restriction} \rangle$-partitioning, where the restriction can be seen as the set of individuals in the model which could fill the wh-slot. For our purposes, however, it is important to stress that the $\langle \text{Background}_{\text{quis}} \rangle$-part of this structured meaning does not comply with the principle of BPR from section 6.1. In other words, the background of a question does not necessarily trigger an existential presupposition.
It is well-known in the literature that presuppositions can embed other presuppositions, cf. for instance (Kadmon 2001). In a similar vein, we propose that structured meanings can occur recursively. The difference between the questions in (272) and (273) is therefore that only the latter gives rise to a \(<B,F>\)-partitioning within the ‘Background\text{_{quiz}}\text{’-part of the constituent question. Working bottom-up, we assume that the question operator outscopes the rest of the sentence. The question word ‘leaves a trace’ which becomes bound from outside. For presuppositional Ipf, as in (273), the input to the viewpoint operator is the following structured meaning:

- **VP:** \(< \lambda e[ | \text{open-Ch}(e)], \lambda e[ | \text{Ag}(e, x)] >
the variable x is bound from outside (≈ ‘wh-raising’)

Leaving the technical issues aside, we end up with the following \(<\text{Background}\text{_{quiz}}, \text{Restriction}>\) after the question operator applies at the last stage of the derivation:

- **QP:**
\(< \lambda x[ | \text{Ag}(e, x)] | \lambda e[ | \text{open-Ch}(e), e \cap (\text{Past}^* (t, c) (t_0))], \{A^*, L^*, V^*\} >

It follows from this representation that presuppositional Ipf is associated with an existential eventive presupposition as usual. Only this time, both the assertoric and presuppositional DRSs are part of ‘Background\text{_{quiz}}’. This is to be contrasted with the following (simplified) representation for the question in (272):

- **< \lambda x | \text{read-WP}(e), \text{Ag}(e, x), e \cap (\text{Past}^* (t, c) (t_0))], \{A^*, L^*, V^* \ldots \} >

In this case, all the relevant information belongs to the assertoric level, and we get an existential Ipf reading. In the restriction part, we would like to represent all the 8 congruent answers to this question, but this has not been done here since it would involve a rather complicated representation of generalised quantifiers (‘nikto - nobody’).

What is important for our analysis is to show that the environment of constituent questions is not actually a relevant parameter for the aspectual choice. This is according to our intuition, which says that the same set of factual Ipf readings is found in constituent questions as in declaratives or polar questions.
Chapter 7

Towards an Account of Aspectual Competition

We presented some clues to the understanding of existential Ipf and presuppositional Ipf in the two previous chapters. In chapter 5, the main focus was on the interaction of existential Ipf with past tense, while in chapter 6 we discussed presuppositional Ipf in light of information structure. Now, the test is whether these ingredients are sufficient in order to explain concrete cases of aspectual competition between factual Ipf and Pf.

Inasmuch as the underspecified semantic contribution of Ipf amounts to a general overlap relation $e \cap t$, we seem to make the prediction that Ipf could be used in any context. Of course, this is not the case, but what exactly are the restrictions put on (factual) Ipf? In other words, why is a factual reading ruled out or dispreferred in certain contexts in favour of Pf?

The big picture tells us that factual Ipf is motivated either by event anaphora or a 'big and floating' past assertion time. While these factors triggering presuppositional Ipf on the one hand and existential Ipf on the other are independent of each other, they both compete with Pf. The latter is the preferred choice when the existence of the event is simultaneously asserted and related to a definite, more restricted and narrow assertion time.

In 7.1 we examine the competition between presuppositional Ipf and Pf in some more detail. Next, in 7.2 we look at contexts where both factual Ipf and Pf occur at the assertoric level. In this case, we propose to include an additional (pragmatic) parameter in the analysis which notably captures the bidirectional reading of Ipf. We explore the idea that the class of telic predicates can be divided into distinct subgroups such as predicates with 'permanent target states' (only Pf is possible) and 'reversible target states' (bidirectional Ipf is possible).

Finally, in 7.3 we address some directions for future research. We briefly consider aspectual competition in light of Optimality theory, and we also sketch an alternative analysis of Pf in terms of temporal anchoring. Finally, we look at how the analysis of factual Ipf could be developed further, including a broader
7.1 Presuppositional Ipf vs. Pf

7.1.1 The Basic Story

We have shown in chapter 6 that factual Ipf has a presuppositional reading in certain cases of event anaphora. If the presupposition cannot be satisfied or accommodated in the input context, the presuppositional reading is blocked in favour of Pf. We suggested in chapter 6 that Pf does not interact directly with the presuppositional level, cf. ‘the information structure principle’ and the idea of ‘division of labour’ between Ipf and Pf. Recall also from chapter 2 our critical assessment of the traditional view of Pf as presupposing the preparatory process.¹

Let us look at some concrete data which illustrate the different behaviour of presuppositional Ipf and ‘assertoric’ Pf:

(277) Vnezapno ej stalo³ plocho, skazala²: “Èto konec.” Vyzval³ neotložnju, otvezl³ v bol’nicu, no pozdo — umerla³ na drugoj den’... Tut v vospominanijach probel [...] Kto zvonil¹, rasporjažalšja¹, zakazyval² mašinu? Kto ego samogo otvez³ v gorod? Polnaja nejasnost’, pamjat’êerna. (Uppsala Corpus)

Suddenly she fell ill, and said: “It’s the end”. Somebody called for an ambulance, they took her to the hospital, but it was too late – she died the next day,... Here there was a hole in his memory [...] Who phoned, gave orders, ordered the ambulance? Who actually brought him to town? Everything was fuzzy, his memory was muddled.

The division of labour between the two aspects is very transparent in this example. Pf is used at the assertoric level to introduce ‘new events’ in the story: ‘stalo³ plocho – fell ill’, ‘skazala² – said’, ‘vyzval³ neotložnju – called the ambulance’, ‘otvezl³ v bol’nicu – brought to the hospital’, ‘umerla³ – died’. Then follow three verbs marked with imperfective aspect. At the stage in the interpretation when ‘zvonil¹ – called’ is processed, the hearer has built an updated context containing all the previous events denoted by perfective verbs. The three subsequent uses of presuppositional Ipf are readily justified in this evolving context. Take for example the case of ‘zakazyval² mašinu – ordered a car’. In the input context for this utterance, the interpreter knows that an ambulance has been solicited due to the preceding ‘vyzval³ neotložnju – called the ambulance’. Hence, he can straightforwardly resolve the anaphora of ‘zakazyval²’.

Then, finally, after three occurrences of Ipf, Pf is used: ‘otvez³ [ego] v gorod – brought [him] to town’. The reason for this shift in aspect is that ‘otvez³” in

¹Pf. like simple past in English, may interact with an anaphoric assertion time (Partee 1973). But this is different from the phenomenon of event anaphora. It seems that the possibility of anaphoric reference times cross-cuts the aspectual system.
fact reports new information. There is nothing in the input context which can act as antecedent for the event of bringing *him* (the speaker) to town.

### 7.1.2 Predicting the Aspectual Choice

Interestingly, our analysis makes the correct predictions for some tricky key examples discussed in the literature:

\[(278)\] A: Krasivo ukrasili₂₂ elku.
B: Kto \{ \textit{ukrašal} \}
\{ #ukrasil \} ?

A: They decorated the [Christmas] tree beautifully.
B: Who decorated it? (Israeli (1998, 67), from Rassudova)

Israeli (1998, 67) reports that the use of Pf is dispreferred in (278). Our theory can explain this observation. Since Pf relates to the assertoric level, Ipf should be used in (278), where the existence of the event is given information in the input context for speaker B. This goes back to a well-known principle for all natural languages, which is to seek anaphoric possibilities and maximise coherence. The example in question thus confirms our claim that Pf is not presuppositional/anaphoric in the sense of presuppositional Ipf.

Another phenomenon for which our analysis makes the right predictions is the higher acceptability of presuppositional Ipf in (279) compared to (280):

\[(279)\] Kto \textit{daril} tufl?
Who \textit{gave} shoes [as a gift]? (Israeli 1998, 56)

\[(280)\] Kto \{ \textit{podaril} \}
\{ (#)\textit{daril} \} tebe eti tufl?
(Israeli 1998, 65)

Who gave you these shoes (as a gift)?

Assuming some kind of Gricean pragmatics, we can account for these data reported by Israeli quite straightforwardly. Presuppositional Ipf can be used when the event is given in the context, as we have to assume is the case in (279). However, if the speaker presupposes that a certain pair of shoes was offered as a gift, he would certainly in most contexts know the identity of the receiver and the object offered, hence the complement ‘tebe eti’ becomes redundant. The presence of ‘tebe eti’ in (280) therefore suggests that the existence of the event here belongs to the assertoric level, and Pf is accordingly preferred.

Many of the puzzling examples of aspectual competition discussed in the literature can be explained along these lines, that is, w.r.t. the dichotomy assertoric vs. presuppositional level. However, “the mere fact that the conditions

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\(\text{Example (278) is very transparent because of the proximity of the antecedent and anaphoric expression. As the distance increases between the two verb occurrences, the first verb is less likely to act as an antecedent. Consequently, Pf becomes increasingly acceptable. Fixing the borderlines for these cases (through psychological experiments etc.) is an extremely complex and perhaps impossible endeavor.}\)
hold which would allow a presupposition to be satisfied does not require that
it be marked; there is communicative value to marking, or not marking, a pre-
supposition” Portner (2000, 47). This is part of the explanation for the large
number of borderline cases where both aspects are felicitous.

The two aspects are thus often interchangeable without being fully synony-
mous at the communicative level. We therefore do not quite agree with Šeljakin
and others who claim that the following pair is functionally equivalent:

\[(281) \text{Kto } \begin{cases} \text{kupil}^p \\ \text{pokupai}^i \end{cases} \text{ eti bilety? (Šeljakin 1997, 214)} \]

Who bought these tickets?

Irrespective of aspectual choice, focus is on the subject slot (wh-word), and
the rest of the sentence accordingly belongs to the background (in a weak sense).
The point, however, is that only Ipf gives rise to an existential presupposition w.r.t.
the buying event. This is confirmed by the fact that informants more readily accept an answer like (282) below when ‘kupil’ is used in the preceding
question:

\[(282) \text{Q: Kto kupil\textsuperscript{p} eti bilety?} \]
\[\text{A: Nikto. Ich nam podarili\textsuperscript{p}.} \]
\[\text{Q: Who bought these tickets?} \]
\[\text{A: Nobody. They gave them to us.} \]

7.1.3 Constraints on Ipf in Light of Thematic Roles

In a discussion of information structure in Russian, King (1995, 91f) provides
the following dialogue, where the grammatical subject is thematic in both the
question and the answer:

\[(283) \text{Q: [Kto][F] } \begin{cases} \text{napisał}^p \\ \#pisał^i \end{cases} \text{ ‘Evgenija Onegina’?} \]
\[\text{A: ‘Evgenija Onegina’ } \begin{cases} \text{napisał}^p \\ \#pisał^i \end{cases} \text{ [Puskin][F].} \]

Q: Who wrote ‘Eugene Onegin’?
A: Puskin wrote ‘Eugene Onegin’.

Aspect is not the topic of King’s work, but for us the interesting question is why Pf must be used in (283).\(^3\) The unacceptability of factual Ipf would be
unexpected given the following <B,F>-partitioning:

\[(1) \text{A: (#) Kto pisał\textsuperscript{t} ‘Vojnu i mir’? (better: napisał\textsuperscript{p})} \]
\[\text{B: (#) Tolstoj pisał\textsuperscript{t} ‘Vojnu i mir’, (better: napisał\textsuperscript{p}) (Forsyth 1970, 84)} \]
\[\text{A: Who wrote ‘War and Peace’?} \]

---

\(^3\) Unfortunately, much of the literature on this subject has engendered a certain confusion by making reference to what turns out to be quite dubious data, rejected by native speakers. The most famous case is (1) below, mistakenly presented as correct Russian in Forsyth's otherwise excellent work.

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• VP: \(<\lambda e[\text{write-E.O.}(e)], \lambda e[\text{Ag}(e, \text{Pushkin})]>

This configuration would be the ideal input to (presuppositional) Ipf. However, we argue that the discourse context for (283) cannot presuppose the writing event, while focusing on the Agent role. The utterances in (283), although focusing on the grammatical subject, are not actually about the Agent role of the writing event. Following (Israeli 1996), we argue that the speaker’s focus is rather on authorship. In conversations about historical facts such as the writing of ‘Eugene Onegin’, focus is typically not on the process of writing the novel. For the historian’s frame of mind, the point of interest is first and foremost who should be credited for the result produced by this event.

With the tools made available in Kratzer’s work we can capture this difference between bearing the Agent role and being the author. The idea is that focus on ‘authorship’ does not induce a particular partitioning of the sentence, since the grammatical subject correlated with ‘authorship’ does not project its own event predicate. The VP being input to viewpoint aspect can then be represented as follows:

• \(<\lambda e[\text{write-E.O.}(e), \text{Pushkin}]>

The blocking of presuppositional Ipf follows from the fact that the event is not backgrounded/presupposed, since the verb and the subject cannot be separated. In the particular case of (283), one can argue that the existence of the famous work ‘Eugene Onegin’ represents given information in the input context, but the verb still belongs to the rheumatic/assertoric part of the sentence. This is further confirmed by the fact that only the word order in answer A3 below (where the verb and subject are separated) is felicitous:

A1: ‘Evgenija Onegina’ napisal\(^p\) [Pushkin]\(_r\).
A2: ‘Evgenija Onegina’ [Pushkin]\(_r\) napisal\(^p\).
\#A3: Napisal\(^p\) ‘Evgenija Onegina’ [Pushkin]\(_r\).

In some cases, however, we do find presuppositional Ipf with creation verbs:

(284) Kto pисал\(^i\) otреčenie Michaila Gordačeva? (Internet)
Who \textit{wrote} Michail Gordačev’s act of resignation?

Note also the curious fact that (285), due to world-knowledge shared by the Russian speaking community, is more acceptable for our informants than (283) above:

\begin{itemize}
  \item B: Tolstoj \textit{wrote} ‘War and Peace’.
\end{itemize}

The same lapsus was later reiterated by various authors such as (Švedova 1984, 17) and (Smith 1997, 89). A reliable overview of these data can be found in (Padučeva 1996) and (Israeli 1996).
Kto pisal ‘Tichij Don’?
Who wrote ‘Quiet Don’?

Examples like (284) and (285) are only felicitous inasmuch as the speaker actually focuses on the Agent role. In (284), focus is on the physical act of writing the text of resignation, not simply on the issue of authorship. The speaker is interested in the role of the Agent in this event, e.g. how the text came about. Similarly, (285) is acceptable only because world-knowledge tells us that the authorship of ‘Quiet Don’ remains somewhat unclear (although most experts on the topic agree on Solochov). Given this uncertainty, the speaker can choose to focus on the Agent role: Who took part in the writing process? Did Solochov collaborate with ghost writers? etc.

7.1.4 The Agent Role and Volitionality

The fact that factual Ipf frequently gets a presuppositional reading in cases where focus is on the Agent role, has led to some confusion in the literature.

As pointed out by Leinonen (1982, 191) true agentivity implies that the Agent controls the action, or, in the words of (Dowty 1991), a prototypical Agent is ‘volitional’. Padučeva (1996) therefore makes her ‘actional Ipf’ (≈ presuppositional Ipf) dependent on the parameter [±Control]. However, she does not explicitly link the constraint on ‘control’ to the thematic role of the Agent, and this creates some problems for her analysis, as witnessed by examples like the following:

(286) [Gde]_{x} eto ja vas vstrečal? (Padučeva 1996, 52)

Where was it that I met you?

The adverbial ‘gde – where’ is foregrounded, and, accordingly, the verb is backgrounded (note also the role of the ‘eto-cleft’). For our theory, this is completely unproblematic. Given the right input context, (286) can be analysed as a typical case of presuppositional Ipf. Padučeva, on the other hand, is puzzled by this example, since the grammatical subject of the verb ‘vstrečat’ lacks control. A presuppositional reading is therefore blocked according to her analysis (Padučeva 1996, 52).

The point, which has been missed in the literature, is that ‘control’ or ‘volitionality’ is only relevant when we discuss whether a certain syntactic argument of the verb can bear the Agent role. Hence, the control parameter should only be invoked to explain why examples like (287) below sound bad, given that ‘vstrečat’ – to meet (run into accidentally) – does not project an Agent predicate:

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4That is, the focused adverb ‘gde’ in (286) can be represented as a two-place predicate ‘Place(e, x)’, which locates an event e in space x. Assuming wh-raising (cf. chapter 6.2), the set of events e∈[[P](e, x)] is focused at the VP-level, and the rest of the sentence is backgrounded.

5One can accidentally run into some person on the street, and thereby having met this person without ever wanting this meeting to take place.
(287) (#) [Ja]ř eto vas vstrečal⁷?
Was it I who met you?

Padučevá’s analysis implies that only verbs with a prototypical Agent role can occur with a presuppositional Ipf reading. This position is not justified by the data. However, in absence of an Agent role, some other event predicate must be focused in order to license a presuppositional Ipf reading, as we just saw in (286) above.

This reasoning also explains why presuppositional Ipf is infelicitous in (288), an example discussed at length in the works of Padučevá and Israeli.

(288) Kto \{ uronil⁶ \#ronjal⁶ \} košelek?
Who dropped the wallet? (Israeli 1998, 58)

The authors mentioned above do not have the tools available to explain these data. Our theory predicts the correct aspectual choice in (288), since the subject lacks volitionality and therefore does not bear the thematic role of Agent. The grammatical subject, accordingly, cannot be focused as an autonomous event predicate.⁶ This means that both the verb and the subject end up in the assertoric level, and Pf must be used. This is parallel to what we observed above with focus on ‘authorship’ triggering Pf, as ‘authorship’ does not project its own event predicate.

The control parameter is also useful in order to explain why presuppositional Ipf is, after all, possible in cases like (289):

(289) Kto \{ pisal⁵ napisal⁶ \} ětu stat’ju?
Who wrote this article? (Israeli 1996, 12)

While Puškin cannot control whether or not he figures as the author of a masterpiece like ‘Eugene Onegin’ (the reception of this artistic work is, in a sense, beyond the writer’s control), one can normally control the activity of writing an article. If Ipf is used in (289), the question is not merely about ‘authorship’, but typically has the illocutionary force of approval or disapproval of the Agent’s work.

Finally, in view of the reader’s possible counter-arguments against the theory presented so far, we must stress the following important point: The above discussion on agency does not concern existential Ipf, where there is no need for a <B,F>-partitioning of event predicates. Therefore, a non-volitional VP like ‘razbival⁷ cennuju vazu’ can be perfectly fine with an existential Ipf reading:

(290) Ty kogda-nibud’ razbival⁷ cennuju vazu? (Padučevá 1996, 51)
Have you ever broken a valuable vase?

⁷Some theories of event semantics would presumably consider the subject in cases like (288) to bear the role of a Theme and further posit that the Theme is not separated from the main event predicate. A possibility is also to treat the subject as an Agent for the whole event, but merely for the causing event in the underlying decomposition.
This is the topic of the next section.\footnote{For a discussion of (200), see in particular section 7.2.5.}

### 7.2 Existential Ipfv. Pf

#### 7.2.1 The Basic Story

Existential Ipfv relates to the assertoric level, just like Pf. What governs the aspectual competition in this case, can to a certain extent be subsumed under the parameter $\pm$Temporal anchoring. Pf is more likely to win the competition, the more narrow and specific is the assertion time. Given this general characterisation of Pf, existential Ipfv can be defined in negative terms.

The following minimal pair indicates that the acceptability of Pf increases with a temporal adverbial restricting the assertion time, while Ipfv is preferred in the absence of an adverbial:

(291) Tamoženniki zastavili$^p$ menja togda sdat$^p$ v bagaž paket s lekarstvom, kotorij rabotniki sovetskogo posol'stva v Berline nakonune moego ot$^p$-

coda \{ poprosili$^p$ \{ (?) prosili$^i$ \} menja dostavit$^p$ v Moskvu.

The customs officers then forced me to check the package with the medicine which the workers at the Soviet consulate had asked me on the eve of my departure to deliver to Moscow. (Fielder 1990, 268)

(292) Tamoženniki zastavili$^p$ menja togda sdat$^p$ v bagaž paket s lekarstvom, kotorij rabotniki sovetskogo posol'stva v Berline \{ prosili$^i$ \{ (?) poprosili$^p$ \} menja dostavit$^p$ v Moskvu.

The customs officers then forced me to check the package with the medicine which the workers at the Soviet consulate had asked me to deliver to Moscow. (Fielder 1990, 268)

Frame adverbials narrow down the assertion time. As a first approach, it is natural to consider aspectual competition in light of the size of the assertion time, cf. the scale represented in figure 7.1.

**Figure 7.1: Temporal (In)definiteness Scale**

&quad & Indefiniteness & Definiteness &quad &

Ipfv & 'fuzzy area' & Pf &

'last year' & 'yesterday' & 'at a specific moment' &

'whole past'
Of course, this scale is an idealisation. The distribution of temporal adver-
bials, and corresponding choice of aspect, is far from being fixed once and for
all, cf. the data presented in chapter 3 and 5. We should also keep in mind that
(in)definiteness is not only a question of the temporal extension of the assertion
time in minutes, hours or days. For instance, a waiter may ask the customer
the following question using either Ipf or Pf:

\[(293) \text{ Vy užete } \{ \text{ zakazývali}^i, \text{ zakázali}^p \}? \]

**Have you ordered?** (Hedin 2000, 227) (and others)

Irrespective of aspectual choice, the waiter certainly has a rather specific
interval in mind, viz. the interval stretching backwards from \(s^*\) to the moment
when the customer entered the restaurant. The assertion time is thereby
**pragmatically** restricted. However, there is still enough ‘indefiniteness’ w.r.t. the
temporal location of the event to license factual Ipf. After entering the restaur-
ant, the guest may have been presented with a lot of opportunities to make his
order. It may even be the case that the customer has already made his order
on several occasions, when approached by different waiters.

It is sometimes noted that Ipfs sounds more polite in these situations (Forsyth
1970, 82). This is partly because Pf receives a more definite temporal inter-
pretation, e.g.: “Did you order *at the time* when you were supposed to order?”.
Another factor is that Pf in (293) more directly focuses on the **current relevance**
of the event from the point of view of the speaker. The relevance of events
denoted by imperfective predicates is more indirect – hence more ‘sophisticated
and polite’ – since current relevance is not encoded in the semantics of the Ipf
as such.

These last considerations point to the fact that the assertion time parameter
cannot be considered in isolation. We also have to take into account the rele-
ance of the completion of the event for the evaluation time or other subsequent
reference times, cf. in particular section 7.3.3.

### 7.2.2 Target State Predicates

The story so far does not enable us to fully explain the difference in acceptability
of Ipf in (294) and (295):

\[(294) \text{ Olja } \{ \text{ pročitala}^p, \text{ čitala}^i \} \text{ ětu knigu.} \]

Olja **has read** this book.

\[(295) \text{ Olja } \{ \text{ začitala}^p, \text{ #začityvala}^i \} \text{ ětu knigu do dýr.} \]

Olja **has read** this book to shreds.

The contrast between (294) and (295) suggests that the class of telic VPs
is not uniform. We must have a closer look at the lexical semantics of the
predicates, in order to make sense of the non-availability of a factual reading in (295).

It turns out that certain telic VPs have a semantically visible target state as part of their inherent lexical meaning. The state of the book’s having been read to shreds is both physically, conceptually and linguistically salient in a different way than the more trivial state of the book’s having been read. We refer to the latter as the consequent state (cf. the Event Nucleus), that is, simply the post time of the event, and the former as a special kind of consequent state, viz. the target state.\(^8\)

A further distinction is called for within the group of target state predicates: permanent vs. reversible target states. The target state of the book’s being in shreds is here called a permanent target state. It is irreversible. Once the book has been read to shreds it will remain in shreds. The property of having a well-defined permanent target is characteristic of so-called creation and destruction predicates, which normally only occur with Pf in a complete event reading.

Creation verbs, such as transitive usages of ‘[na]pisat’ – to write’, ‘[po]stroit’ – to build’, ‘[na]risovat’ – to draw’ etc., denote events which bring about the existence of a unique novel object (denoted by the object NP). The object may be a rather abstract entity, e.g. some artistic work of Tolstoj. In the sense of being the result of intellectual or artistic work, the object will never cease to exist. Although Tolstoj’s hand-written copy of ‘War and Peace’ may be destroyed, the book will still exist as a piece of art at all times posterior to the culminated writing event.

Other verbs which behave similarly to creation verbs in aspeсtual competition, include aspeсtual pairs such as: ‘otkryt’/otkryvat’ Ameriku – to discover America’, ‘dokazat’/dokazyvat’ teoremu Fermata – to prove Fermat’s theorem’ etc., see (Israeli 1996, 30) and (Padućeva 1996, 50) for more examples of this kind. The inverse of creation verbs is represented by destruction verbs like: ‘est’/es’ jabłko – to eat an apple’, ‘razrusiť’/razrusť’ Atlantis – to destroy Atlantis’, ‘ubít’/ubivat’ Kirov – to kill Kirov’. Destruction verbs do not make salient the beginning of the object’s existence, but the end of its life span.

For all the different predicates listed above, the intrinsic target state is permanently valid. That is, for all future worlds and times there will be no way of undoing the results of these events. Note also that an event of writing ‘War and Peace’ presupposes the non-existence of this novel, while the destruction of Atlantis presupposes the existence of Atlantis. But since ‘War and Peace’ exists for all eternity, and Atlantis will always remain destroyed, the events in question cannot be iterated.\(^9\) Hence, the VPs above satisfy the property of uniqueness:

\[ \forall P \forall e_1 \forall e_2 [\text{Unique}(P) \land P(e_1) \land P(e_2) \Rightarrow e_1 = e_2] \]

\(^8\)There is a lot of terminological confusion in this area. Our use of the notion of ‘target state’ goes back to (Parsons 1990).

\(^9\)‘War and Peace’ and ‘Atlantis’ are treated as designated proper names, i.e. they refer invariably to the same individual in all possible worlds.
That is, two events $e_1$ and $e_2$ of writing ‘War and Peace’, must necessarily be the same ($e_1 = e_2$) in all reasonable models.

In previous approaches to aspectual competition, the preference for Pf with these predicates is often linked to a uniqueness criterion (Israël 1996), (Dickey 2000) etc. We propose instead to account for the same data through the property of permanent target state, from which uniqueness follows indirectly.

Now, consider another case where factual Ipf is equally ruled out:

$$\text{(296) Vanja} \begin{cases} \text{priečahl}^p \\ \#\text{priežžal}^i \end{cases} v \text{ Moskvu i ostanetsja}^p \text{ do zavtra.}$$

Vanja \text{ has come} to Moscow and will stay until tomorrow.

Pf is preferred in (296) due to the state of affairs holding at the evaluation time. The target state of Vanja’s being in Moscow is part of the meaning conveyed by this utterance. With the predicate in (296), the incompatibility with existential Ipf is not absolute, though. It is well-known that Ipf can here have a bidirectional reading in the right context:

$$\text{(297) Vanja} \begin{cases} \text{priečahl}^p \\ \text{priežžal}^i \end{cases} v \text{ Moskvu.}$$

Vanja \text{ (has) arrived} in Moscow.

With bidirectional Ipf the issue of target state validity is \textit{relevant} (in the Gricean sense) for the discourse participants. This is to be contrasted with predicates having permanent target states, which are never used with an existential Ipf reading if the question of target state validity is pragmatically relevant, cf. section 7.2.5 below. We therefore propose to make a distinction between \textit{permanent target states} and \textit{reversible target states}, echoing the contrast between (295) and (297).

Since target states are encoded in the lexicon and are not simply a matter of world-knowledge, they are sometimes accessible for adverbial modification. This is notably true of reversible target states. One interesting diagnostic is the ‘for-adverbial-test’, discussed in (Piñón 1999) w.r.t. English data. This temporal adverbial, and the corresponding Russian PP ‘na $x$ time’, measures the temporal extension of the target state. For Russian, this test gives the expected results in most cases.\footnote{The test does not apply to permanent target state predicates. But this may be explained on purely pragmatic grounds. Modification through a ‘na-adverbial’ fails because one cannot specify the duration of a target state which is permanent and supposed to last eternally. The only candidate would be ‘navsegda – for ever’, but adding this adverbial modifier would in most cases discussed here be pragmatically ruled out due to uninformativeness, cf. (Piñón 1999).}

$$\text{(298) Kupec otkryl}^p \text{ magazyn na dva časa, [target state]}$$

The shopkeeper \textit{opened} the store for two hours.

$$\text{(299) Muž zašel}^p \text{ domoj na 10 minut. [target state]}$$

The husband came home for 10 minutes.
(300) Deputaty poličili včera na dva časa přijalo efir RTV i vospol’zovalis’ im spolna. (Internet) [target state]

The deputies got access to the live studios of RTV for two hours yesterday and fully exploited this opportunity.

(301) # Ivan Petrović posmrtole fil’m na dva časa. [no target state]

Ivan Petrovich watched the movie for two hours.

This diagnostic demonstrates the linguistic relevance of the notion of target state, but how can we capture this property formally? We will follow (Kratzer 2000) and make use of a so-called ‘target function’ ($f_{target}$), which is a partial function from the domain of events to target states. The function thus takes an event as its argument and gives us the target state of this event. Note that the function is merely partial, hence not defined for all events, which reflects the fact that not all predicates have a target state.\(^{11}\)

In order to capture some core cases of aspectual competition we propose to incorporate a DRS-condition associated with the function $f_{target}$ into the semantics of Pr. To be concrete, consider (297) above, which reports an event of Vanja’s arriving in Moscow with the target state of Vanja’s being in Moscow.

In combination with Pr the target function gives a state which is valid at the right boundary of the assertion time. In other words, when a target state is defined for an event denoted by a perfective predicate, the target state characteristically includes the endpoint of the assertion time. This idea applied to ‘priechal’ – arrived’ in (297), can be illustrated graphically as in figure 7.2.\(^{12}\)

**Figure 7.2: Reversible Target States and Pf (297)**

e: arrive in Moscow       target state: be in Moscow

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Assuming a non-anaphoric tense, the assertion time $t$ is the whole past stretching backwards from the evaluation time. Perfective morphology instructs us to invoke the inclusion relation $e \subseteq t$, while the presence of a well-defined target state actualises an additional condition: $f_{end}(t) \subseteq f_{target}(e)$. This can be spelled out as in the following (simplified) DRS for the perfective sentence in (297):

- $[e \mid \forall^* \text{come-to-M}(e), e \subseteq \langle^*(t_\infty)(t_0) \rangle, f_{end}(\langle^*(t_\infty)(t_0) \rangle) \subseteq f_{target}(e)]$

Given our interpretation of past tense (chapter 5), it follows from the representation above that Vanja is in Moscow at the evaluation time $t_0$. This is

\(^{11}\)There may be ontological reasons for relating target states to predicates rather than to individual event tokens. We ignore this point here.

\(^{12}\)The actual end point of the target state is not encoded linguistically in (297). In figure 7.2, this end point is merely stipulated.
a corollary of the fact that the assertion time ends where the evaluation time begins. And the target state is asserted to hold at this point in time.

A semantics for Pf which captures this effect – and also applies to permanent target state validity – is formulated below:\footnote{Unfortunately, given our assumptions so far, the semantics proposed here for Pf cannot properly handle example (300) above. In this particular case, the assertion time is apparently given through the frame adverbial ‘včera – yesterday’. But the end point of yesterday is obviously not included in the target state of the event, which here is explicitly set to an interval of two hours. It seems that the explicit mention of the duration of the target state through a ‘na-adverbial’ makes additional conditions on the target state irrelevant. There is no need to specify the relationship between the assertion time and the target state when the latter is accurately located in time.

To our knowledge, this peculiar interaction between viewpoint aspect, frame adverbials (via the assertion time parameter) and measure adverbials has never been addressed in Slavic aspectology. The status of measure adverbials remains unclear in our formalisation. This being said, we do not feel obliged in this work on factual Pf to answer all kinds of hypothetical questions about Pf and (measure) adverbials which nobody has ever bothered to ask. The issue is hereby raised and calls for future research.

In section 7.3.3 below we will briefly consider the need for a revised semantics for Pf, but we will ignore the problem represented by (300) in what follows.}

- Pf \( \Rightarrow \lambda P \forall t [P(e), e \subseteq t, f_{end}(t) \subseteq f_{target}(e)/\text{if defined}] \)

The difference between predicates having a permanent target state and predicates with a reversible target state is that the former group satisfies the following axiom:

- \( \forall P \forall \forall t\{ \text{Permanent Target State Property}(P) \land P(e) \land e \subseteq t \land t \prec t_1 \Rightarrow f_{target}(e) \bigcap t_1 \} \)

We will now turn to the role played by existential Ipf with target state predicates, starting with the intriguing case of reversible target state predicates.

### 7.2.3 From Reversible Target States to Bidirectional Ipf

How does (factual) Ipf in general, and existential Ipf in particular, relate to the picture emerging from this analysis?

Existential Ipf is compatible with reversible target state predicates provided that the target state has indeed been reversed. This is a strong pragmatic implicature arising from the competition with Pf.

The interaction between existential Ipf and permanent target states is somewhat trickier to capture. Since permanent target states are irreversible, we cannot expect Ipf to ‘cancel’ the target state in this case. The use of existential Ipf is therefore only licensed with permanent target state predicates if the issue of target state validity is irrelevant in the discourse context (cf. section 7.2.5).

From a pragmatic point of view, reversible target state predicates give rise to a purely private option between Pf and Ipf. Ipf then characteristically represents the mirror image of Pf.
• Ipf: $\ell_{end}(t) \not\subseteq \ell_{around}(c)$
  [pragmatic implicature from the non-use of Pf with reversible target state predicates]

When it matters for the discourse situation whether or not the target state is valid, Ipf is felicitous only if the endpoint of the assertion time is not included in the target state. This is just the opposite requirement of what was explicitly stated in the *semantics* for Pf above.

Not surprisingly, the class of reversible target state predicates subsumes the group of verbs which are known in the literature to have a *bidirectional* reading with imperfective morphology. It is therefore expected that bidirectional Ipf combines with ‘na-adverbials’, which measure the temporal extension of the target state (cf. also the examples with Pf above):

(302) **Prezident kompanii priežžal** na tri dňa v Moskvu [... ] (Internet)  
  The president of the company **came** to Moscow for three days [... ]

(303) **On zakryval** magazin segodňa na neskôľko časov i početno ja ničego ne smog* kupit** [... ] (Hulanicki 1973, 178)  
  He **closed** the store today for some hours so I couldn’t buy anything [... ]

(304) **Minut na 5 prosypalsja** [... ]  
  He **woke up** for five minutes or so [... ] (Forsyth 1970, 79)

Figure 7.3 illustrates the effects obtaining with a bidirectional Ipf, as in (302).

![Diagram of reversible target states and Ipf in (302)](image)

- **c:** arrive in Moscow  
- **target state:** be in Moscow  
- **$t_0$ (e.g. $s^*$)**

The strong pragmatic implicature requiring that the target state in case of existential Ipf and reversible target state predicates must be cancelled within the limits of the assertion time is traditionally analysed in terms of *razobščennost*,¹⁴  

An equivalent notion in English is Leinonen’s term *gapping*, covering the same phenomena (Leinonen 1982; 207). The prevailing intuition is that the ‘physical result’ of the event has been annulled at the evaluation time, thus creating a ‘gap’. Indeed, the evaluation time often corresponds to the right boundary of the assertion time, as in figure 7.3, but this need not be the case.

Notably, when bidirectional Ipf combines with frame adverbials, the state of affairs obtaining at the evaluation time becomes irrelevant:

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¹⁴Paduševa (1996, 37f.) traces this concept back to Isačenko.
(305) V imenii deda žili tri starika [ . . . ] Vsech troich v 1912 godu vyvozili v Moskву na prazdnovanie stoletija Oтеčestvennoj vojn, nagradili ich bronzovymi medaljami [ . . . ] (Uppsala Corpus)

Three old men lived on grandfather’s property [ . . . ] All three of them were brought to Moscow in 1912 to celebrate the war of 1812; they were given bronze medals [ . . . ]

This fact has often been overlooked, but was pointed out in (Dahl and Hedin 2000, 398). Examples like (305) pose no problems for our analysis, since the frame adverbial ‘v 1912 – in 1912’ plays the role of the assertion time (cf. chapter 5), and we do not make explicit mention of the evaluation time parameter in the semantic (Pf) or pragmatic (Ip) conditions relating aspect to target state validity.

Dahl and Hedin (2000) argue that bidirectional Ipf is compatible with the target state holding at the evaluation time as long as it has been cancelled at some interval between the initial event and the evaluation time. Despite the strong pragmatic implicature induced by bidirectional Ipf, it is still conceivable that the state s of ‘the president of the company being in Moscow’ holds at the evaluation time of (302), but s cannot be the target state of $\theta_{target}(e)$, since the latter function gives a unique output. In order for the sentence to be pragmatically felicitous given this scenario, s must be the target state of some ‘linguistically non-realised’ event $e_1 \prec e$. Of course, the target states of $e$ and $e_1$ may share many of the same properties.

The event responsible for cancelling the target state usually has the same Agent as the initial event, but when and how this reversal comes about is not explicitly stated. According to Forsyth (1970, 80), “Ipf implies a return to the position occupied before the whole event took place”. Indeed, the default interpretation is, for instance in (302), that the business man visiting Moscow returned to Omsk if that is where he came from. This requires the existence of a second event completely undoing the result of the first event. Such an event is called a ‘complete converse’ in (Naumann 1998), and can be captured in dynamic semantics by equating the output context of the second event with the input context for the first event.

However, as noted already in (Rassudova 1982, 50), bidirectional Ipf does not necessarily trigger an inference to a complete converse, although for some predicates a complete converse may be the only way of cancelling the target state. In the case of (302), then, it is conceivable that the president of the company left Moscow with a one-way ticket to Tomsk (≠ Omsk). The pragmatic implicature triggered by bidirectional Ipf is therefore neutral as to how the target state is cancelled.

Although we do not encode the condition ‘$f_{mid}(t) \not\subseteq f_{target}(e)$’ in the semantic representation of Ipf, the annulment of the target state with bidirectional Ipf is a rather stable pragmatic implicature. Weaker kind of implicatures, like for instance so-called ‘scalar implicatures’ (e.g. ‘many’ > not all), can quite freely cooccur with pleonastic expressions (e.g. ‘many, but not all’). Similar constructions involving bidirectional Ipf and Pf sound bad to native speakers of
Russian:

(306) On \{ \textit{prosnulsja}^p \} , a potom opjat’ \textit{zasnuł}.

He \textit{awoke} and then fell asleep again. (Smith 1997, 238)

Contrary to the account given in (Smith 1997), we predict bidirectional Ipfs to be \textit{infelicitous} in (306). The annulment of the target state induced by the imperfective morphology of ‘\textit{prosypalsja}’ – \textit{awoke}’ makes the explicit reference to the reversed action in the second clause (‘\textit{zasnuł} – fell asleep’) redundant.

7.2.4 The Range of Bidirectional Ipfs

While bidirectional Ipfs are indeed restricted to predicates with reversible target states, this reading still complies with the general characteristics of existential Ipfs. Most importantly, the aspectual configuration remains the same ($e \subseteq t$). The issue of bidirectional Ipfs can therefore be reduced to lexical semantics. This gives us a unified analysis of existential Ipfs, in contrast to what we find in parts of the literature on the subject.\footnote{Padučeva (1996: 46) correctly observes that bidirectional Ipfs relate to single event tokens (‘\textit{oběčenstvěcké konkrétní znázornění’). But then she is forced to separate the bidirectional and existential variants given her assumption that the latter comes with the feature [+Iterativity] (‘kratnost’), cf. chapter 4.5.1. If we want to maintain a unified analysis of the interaction of factal Ipfs with the assertoric level, the simplest solution is to abandon the feature [+Iterativity] in the analysis of existential Ipfs.}

Inasmuch as the availability of a bidirectional reading is determined by the lexicon, one may ask which VPs occur with this factual reading. The group, which is not fixed once and for all, includes the following predicates:

- prefixed verbs of movement (‘\textit{prichodit}’ – to come (by foot), ‘\textit{priezzat}’ – to come’, ‘\textit{prinosit}’ – to bring’ etc.)
- verbs expressing physical motion of the subject (‘\textit{podnimat’sja}’ – to rise’, ‘\textit{vstavat’} – to get up’ etc.)
- verbs expressing a clear transition between two states (‘\textit{prosypat’sja}’ – to wake up’, ‘\textit{peresychat’} – to dry out’ etc.)
- transitive verbs expressing physical motion of the object (‘\textit{otkryvat’} okno – to open the window’, ‘\textit{snimat’} šlapu – to take one’s hat off’, ‘\textit{brat’} knigu v biblioteke – to borrow a book in the library’ etc.)

The question of whether a VP has an inherent reversible target state is of course not only dependent on the verb itself, but also on the nature of nominal arguments. For instance, ‘\textit{otkryt’}^p/\textit{otkryvat’}^x okno – to open the window’ has a well-defined reversible target state (the window’s being open), and therefore occurs with a bidirectional reading. On the contrary, ‘\textit{otkryt’}^p/\textit{otkryvat’}^x šampanskoe – to open a bottle of Champagne’ (Israeli 1996, 10) has a \textit{permanent target state} (the bottle’s being opened), which cannot be reversed.
Furthermore, an erroneous assumption often tacitly made in the literature is that if a VP can be used with a bidirectional reading, it will necessarily have a bidirectional interpretation when referring to a complete event. However, the issue of ‘bidirectionality’ only arises when the main event predicate (the verb) is part of the assertoric level and the question of target state validity is relevant for the discourse. In a presuppositional IfP reading of a reversible target state predicate, the existence of the event (and possibly its target state) is presupposed. The speaker’s focus is directed elsewhere, and it is immaterial whether the target state has been reversed or not, cf. the example below repeated from (249):

    – Net, mamöcka, éto byl ne ja! Ja vsegda dveri nogoj otkryvaju4! (Internet)
    – Jurgen, was it you who opened the door with dirty hands?, his mother asks.
    No, mom, it wasn’t me! I always open the door with my feet!

The use of ‘otkryval’ is felicitous in this context with focus on the Agent ‘ty – you’, irrespective of whether or not the door has been closed again. Hence, presuppositional IfP does not put any pragmatic restrictions on the validity of the target state.

In a similar vein, when target state validity is clearly irrelevant, reversible target state predicates can occur in assertoric contexts without the bidirectional implication. However, these cases are not frequent in our corpora. Possible candidates would be examples like (308) below in an ‘experiential’ context:

(308)  Deneg vasich ja nikogda u vas ne bral5, a ezeli bral6 kogda-nibud’, to po
    nadobnosti. (Internet)
    I never took (borrowed) any money from you, and if I ever did (take
    (borrow) any money from you), it was of necessity.

The verb ‘bral’ – to take’ can be interpreted as ‘to borrow’ in bidirectional contexts. However, due to the experiential reading triggered by ‘kogda-nibud’ – ever’ in (308), the question of whether the speaker actually paid back the money is not actualised in the discourse. World-knowledge will in some cases suggest that the reversible target state has been reversed in view of the big assertion time, but this does not follow from (308), presumably because the VP in question is ‘ambiguous’ between having a reversible or permanent target state.

It must be stressed that the range of bidirectional IfP remains underspecified to a certain degree, despite the claim that reversible target state predicates are ‘listed in the lexicon’. For example, the predicate ‘posylat’ kogo-libo za čem-libo – to send someone for something can in some cases have a reversible target state. It is then used with a bidirectional reading which implies “a messenger’s going to deliver his message and then returning to his base” (Forsyth 1970, 81), cf. the following example:
(309) Djadja tak i ne vyšel iz komnaty, chotja tetka tajkom **posylala** za nim. (Uppsala Corpus)

Uncle didn’t come out of his room, even though my auntie sent for him on the sly.

It is possible through some kind of coercion to enlarge the group of what are traditionally considered two-ways verbs. Vogeleer suggests to include cases like the following, given the right context:

(310) Ty **nachodili** moj ocči? (Vogeleer 1993, 231)

*Did you find* my glasses? (here: find and then lose again)

(311) Ty **sažal** etu roczu? (Vogeleer 1993, 231)

*Did you plant* that rosebush? (here: plant and then dig it up again)

The examples sound admittedly a bit strange, which shows that the process of coercion indeed requires some effort on the part of the interpreter. These considerations indicate that bidirectional IpF represents a particular species of existential IpF, which has acquired a certain conceptual independence in Russian.

Consider also the following example of existential IpF, where the predicate lacks an inherent target state:

(312) My **priglašali** takže i Adianto [...], no on, k sožaleniju, ne smog** pričihat**. (Kasparov Chess 2002)

We also **invited** Adianto, but, unfortunately, he could not come.

Coercion does not seem to play any role here. Still, as noted in (Chaput 1990) and (Padučeva 1996), imperfective verbs like ‘priglašat’ – to invite’ are typically used when the invitee has already turned down the invitation (cf. also chapter 4.6.1). On the contrary, a perfective past (‘priglasili’) would imply that the invitation still has ‘current relevance’.

These distinctions are not reflected in the formal analysis (DRS-conditions) presented so far. In general, the pragmatic implicatures following from aspectual competition in cases like (312) are somewhat weaker than with bidirectional IpF. This is confirmed by the fact that the second part of (312) – containing an explicit mention of the invitee’s refusal – is not perceived as pleonastic. In order to ‘formally’ capture the fine-grained nuances in the speaker’s aspectual choice in contexts like (312), we should encode the effect of ‘temporal anchoring’ (current relevance) in the semantics of Pf, for instance along the lines suggested in section 7.3.3 below. The use of IpF can then be motivated by a ‘negative’ pragmatic implicature following from aspectual competition.

### 7.2.5 Target States and their Relevance

We have still not made sufficiently explicit why existential IpF is licensed in contexts like (313), but ruled out in (314):

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(313) Ty kogda-nibud’ razbival’ cennuju vazu? (Padućeova 1996, 51)
Have you ever **shattered** a valuable vase?

(314) Lučše soznavajte’i, ozornoj narod, što v čulane moju golubuju časku razbili’! (Internet)
You mischief-makers had better confess that you **broke** my blue cup in the store-room.

In both cases we are dealing with events of physically breaking a fragile item. We can reasonably assume that the broken object in question – be that a valuable vase or a blue cup – cannot be fully restored, hence the function \(f_{target}\) is defined and provides a permanent target state. The crucial difference between the two cases relates to whether or not this target state is **relevant** (in a Gricean sense) for the speaker and discourse participants.

In (314), the speaker is clearly concerned about her blue cup being broken. Otherwise she wouldn’t be that upset. On the contrary, the question in (313) is not about the fragments of a shattered vase. The current condition of the vase or vases being broken is completely irrelevant for the speaker, although world-knowledge tells us that once a vase is broken it remains shattered. We claim that this lack of relevance of the target state licenses the use of existential Ifp in (313).

The clue to understanding the contrast above lies in the interpretation of the direct object. The speaker in (314) has a **specific** cup in mind which is asserted to have been broken. The possessive NP ‘moja golubaja časka – my blue cup’ induces a presupposition that the speaker has a (unique) blue cup. In our dynamic framework, the input to the aspectual operator is then the following VP:\(^\text{16}\)

\[ \lambda e [x \mid break(e)(x)(y), mischief-makers(x)][y \mid cup(y)] \]

This representation makes clear that the internal argument \(y\) of the verb is **bound from outside**. The value of \(y\) in the assertoric DRS is thereby **independent** of assignment functions. The variable \(y\) accordingly behaves like a constant at this stage in the derivation, and the set of breaking-events with \(y\) as the broken object can be reduced to the **unique** event in which \(y\) is broken. Hence, the assertoric DRS \(\lambda e [x \mid break(e)(x)(y), mischief-makers(x)]\) denotes a **singleton set**, i.e. a single event for which the target state function is properly defined.

After aspect and tense apply in the derivation, we end up with the following representation for (314), where the presupposition remains to be resolved in the input context:

\[(314') \quad [e, x \mid break(e)(x)(y), mischief-makers(x),
\]

\[ e \subseteq \langle ^* t_\infty (t_0) \rangle, f_{end}(\langle ^* t_\infty (t_0) \rangle) \subseteq f_{target}(e)[y \mid cup(y)] \]

\(^{16}\)We do not specify thematic roles in the representations below.
This case is to be contrasted with (313) which exhibits an existential Ipf interpretation made possible through the NP ‘cennaja vaza – valuable vase’ having a non-specific interpretation. The VP being input to Ipf denotes a set of possibly distinct breaking-events:

\[ \lambda e [y \text{break}(e)(\text{you}^*) (y), \text{vase}(y)] \]

The variable \( y \) will here be assigned a value by the assignment function, which is also dependent on the value being assigned to \( e \). A model satisfying the DRS above may contain different triples \( \langle e', \text{vase1}, \text{hearer}^* \rangle, \langle e'', \text{vase2}, \text{hearer}^* \rangle \) etc., such that the first member of the triple is an event of the hearer’s breaking the vase referred to by the second member. The target state function is indeed defined for each of these events, inasmuch as an event of breaking a vase implies that the concrete vase in question gets broken. However, since the speaker does not refer to a specific vase and event token, there is no focus on a particular target state. The non-specificity of \( y \) implies a non-specificity of \( e \) as well, which in turn makes target state validity irrelevant.

To sum up so far, we have seen that a crucial factor for aspectual competition in these cases is linked to the property of (non)-specificity of the internal nominal argument. This property is closely related to the category of (in)definiteness in languages with a richer system of determiners than Russian. But there is not a one-to-one correspondence between \([\pm \text{Specificity}]\) and \([\pm \text{Definiteness}]\).\(^{17}\) Russian sentences which are translated with a so-called specific indefinite in English pattern with \([+\text{Specificity}]\) when it comes to the aspectual choice. The rule of thumb with permanent target state predicates is that the presence of a specific object triggers Pf:

\[ (315) \quad \text{[U] nas sgorel}^p \text{ dom, my ne vzjali}^p \text{ot gosudarstva ni kopejki, vse vosstanovili}^p \text{ sami. Ja poz}^p \text{stroila}^p \text{ dacu, soderzhu}^2 \text{ dom, pomogaju}^2 \text{ rastit}^2 \text{ vnutcu. (Internet)} \]

[Our] house burnt down, we did not get a kopek from the state, we restored everything ourselves. I have built a dacha, I keep a house and help raise my grand-daughter.

The speaker in (315) clearly has a specific dacha in mind, whose existence (viz. the target state of the event) has current relevance at the utterance time, cf. the present tense of the verbs ‘soderžu’ dom – keep a house’ and ‘pomogaju’ rastit’ – help raise’. This discourse context requires the use of Pf for the creation verb (‘postroila’ – built’).

The specific reading of the object NP ‘dača – dacha’ in (315) can be captured in our DRT-framework through a particular anchoring mechanism. The dacha is anchored to the context through a DRS representing the mental state of the speaker.\(^{18}\)

\(^{17}\)In this respect, we also refer to Mehlig’s work reviewed in chapter 4.

\(^{18}\) See (Bende-Farkas and Kamp 2001) and (Bende-Farkas and Kamp 2003) for a concrete proposal as to how this can be modelled. Recall also our use of this anchoring mechanism in chapter 4.4.2.
The specific indefinite reading in (315) can be contrasted with an overt determiner like ‘takoj – such a’ in (316), which makes the object non-specific/indefinite. This scenario licenses existential Ipf.

(316) Ja uže stroili$^\dagger$ \{ takuju \\ #etu \} daču.

I have already built \{ such a \\ this \} dacha.

Target state validity, that is, the current condition of the dacha, must be irrelevant if Ipf is to be used. The determiner ‘takoj – such a’ draws the attention of the discourse participants to the fact that some Agent has the ‘experience’ of having built a dacha. Since no particular dacha is in the speaker’s focus, neither is the target state of a specific dacha’s existence.

Note also that the target state of a building event can be conceptualised either as permanent or reversible, notably depending on the nature of the object being built. A dacha represents an intermediate case and can presumably be thought of as either a perennial or a temporary construction. For existential Ipf in (316) this distinction is of secondary importance inasmuch as target state validity becomes irrelevant in such ‘experiential’ contexts. Pancheva (2003, 279) discusses similar examples for English and Bulgarian and remarks that the experiential perfect is felicitous regardless of whether the built dacha still exists, “but if it does not, the sentence cannot be a Resultative perfect.” As we have seen in this section, the distinction between experiential and resultative perfect in languages like English is partly grammaticalised in Russian through viewpoint aspect.

Let us also look at an authentic example which illustrates the points made above:

(317) Na poltora časa pozhe načalsja$^\dagger$ matć meždu Armeniéj i Islandiéj. Ne naslas$^\dagger$ zajavka armjanskoj komandy na tur, i soperniki potrebovali$^\dagger$, čtoby armjane igrali$^\dagger$ osnovnym sostavom. Armjanskešchmatistry s ėtim ne soglasilis$^\dagger$, poskol’ku zajavku oni vse-taki pisali$^\dagger$. (WCR 2002)

The match between Armenia and Iceland started one and a half hour later. One couldn’t find the written request from the Armenian team for making use of substitutes, and their opponents demanded that the Armenians played with their original composition. The Armenian chess-players did not agree since they had indeed written a formal request.

The verb ‘pisali’ – wrote’ clearly has an existential Ipf reading (cooccurring with a relative past). How does this fit into the picture that creation verbs create unique objects, and therefore have permanent target states? The reason for Ipf being used in (317) is again that in this particular case the object NP ‘zajavka – request’ is not that unique after all. The physical document is actually missing, so the NP does not have any specific reference. The speaker – through his choice of Ipf – makes clear that the act of writing a request could be reiterated.
if necessary. This scenario provides a non-specific interpretation of the NP, and the VP becomes compatible with existential Ipf.

Consider also the ‘unexpected’ use of existential Ipf in answer A₁ below:

(318) Q: Perevedite² tekst doma.
   A₁: Veď my ego uže perevodili!  
   A₂: Ètot tekst my uže perevel'i. Možno perevodit'² sledujúcij?  
      (Sokolovskaja 1993, 61)

Q: Translate the text at home.
   A₁: But we have already translated it!
   A₂: We have already translated this text. Can we do the next one?

The second answer (with Pf) is more readily acceptable for our informants, but the possibility of Ipf, as in A₁, is not completely ruled out. The reason seems to be that the predicate ‘perevodili² tekst – translated the text’ in this particular context receives an interpretation where target state validity becomes irrelevant.

True, there is a specific text to be translated, but the VP does not behave like a genuine creation verb in this context. Ipf implies that the text can be translated repeatedly, which is quite conceivable in the setting of home work assignment. The students can always practise by ‘retranslating’ the text. Given this scenario, the speaker of A₁ does not refer to a specific event of translating the text, with a unique, salient target state. Thus, again, target state validity is irrelevant and the use of Ipf is licensed.

### 7.2.6 Concluding Remarks

To sum up, if factual Ipf is used when the target function is defined for an event e, and the occurrence of e is part of the assertoric content, then one out of two pragmatic implicatures arises:

- \( f_{end}(t) \not\subseteq f_{target}(e) \)
- target state validity is irrelevant

With reversible target state predicates we get, in general, a purely privative opposition between Pf and Ipf. This results in the notorious bidirectional reading. The strong implicature to the cancellation of the reversible target state is practically never cancelled (sic!), except perhaps in ‘experiential contexts’ such as (308) above.

What we call experiential Ipf occurs with a particularly big and indefinite assertion time, where focus is simply on the existence of a an event within the assertion time. Whether the predicate in question is associated with a reversible or permanent target state is less important, since the topic of target state validity is not present in the discourse. These observations are summed up in table 7.1.¹⁹

¹⁹For sake of completeness we have added a trivial inference (entailment) arising from the processual reading. In this case, since the event time includes the assertion time, the target

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<table>
<thead>
<tr>
<th>Morphology/Interpretation</th>
<th>Condition on Target State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pf</td>
<td>$f_{\text{end}}(t) \subseteq \mathcal{f}_{\text{target}}(e)$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Morphology/Interpretation</th>
<th>Implication on Target State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processual Ipf</td>
<td>$\neg t \in \mathcal{f}_{\text{target}}(e)$</td>
</tr>
<tr>
<td>Factual:Existential:Bidirectional Ipf</td>
<td>$f_{\text{end}}(t) \nsubseteq \mathcal{f}_{\text{target}}(e)$</td>
</tr>
<tr>
<td>Factual:Existential:Experiential Ipf</td>
<td>[irrelevant]</td>
</tr>
<tr>
<td>Factual:Presuppositional Ipf</td>
<td>[irrelevant]</td>
</tr>
</tbody>
</table>

Table 7.1: Aspect and target state predicates

While bidirectional Ipf represents the mirror image of Pf, experiential Ipf patterns with presuppositional Ipf which are both neutral w.r.t. the validity of the target state at right edge of the assertion time. Thus, with factual Ipf the following holds: When a target state function is defined for some event, the target state is either brought to an end or irrelevant.

### 7.3 The Dynamics of Aspectual Competition

In this final section we sketch some directions in which the analysis developed in this thesis can be extended further. First we briefly discuss how aspectual competition can be accounted for through Optimality theoretic reasoning. Next we propose to elaborate on the semantics accorded to Pf by adding a temporal parameter. This further highlights the differences between Pf and factual Ipf, especially when it comes to their functions in discourse.

#### 7.3.1 Bidirectional Ipf as the Sub-optimal Choice

The phenomenon of ‘competition’ in natural language has recently received much attention in the fast-growing framework of Optimality theory (OT). Although we have not made explicit use of the tools provided by OT, our approach to aspectual competition is compatible with important aspects of optimality theoretic reasoning. In this thesis, we have discussed – both descriptively and formally – various constraints on the use of factual Ipf. We have thereby provided some parts of the preliminary work which is necessary before the OT machinery can get properly started.

What can OT tell us about aspectual competition in Russian? To our knowledge, this issue has never been addressed in the literature, but it will certainly catch the attention of future research in this field. All the same, the application of OT to our data is not so straightforward as one may expect. The existence of various versions of OT presents us with a methodological choice. In our opinion,
some kind of bidirectional OT (Blutner 2000) seems to have the most explanatory power for the cases we discuss in this chapter. Bidirectional OT, unlike unidirectional OT, takes into account the perspective of both the hearer and speaker.

Bidirectional OT is designed to produce the optimal <form, meaning>-pairs. Given a coarse-grained system where two forms (Pf and Ip) are correlated with two meanings (complete/incomplete events), we get the tableau in table 7.2.

<table>
<thead>
<tr>
<th></th>
<th>complete event</th>
<th>incomplete event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ip</td>
<td>2</td>
<td>⇒ 1</td>
</tr>
<tr>
<td>Pf</td>
<td>⇒ 1</td>
<td>!*</td>
</tr>
</tbody>
</table>

Table 7.2: A bidirectional OT-tableau for Russian aspect (first round)

In our notation ‘0’ is the best possible value, signaling a perfect match (one-to-one) between form and meaning. For the purposes of the present discussion we make use of a simplified algorithm, where ‘penalty points’ are added to a <form, meaning>-pair in the following way: One (‘1’) 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 competition from both sides.

Of the four candidates in table 7.2 only the pair <Pf, incomplete event> is barred (‘!*’) in Russian. This implies that from the production side, if the speaker refers to an incomplete event, Ip is obviously the winner. In other words, Ip is the optimal choice (‘⇒’). However, the pair <Ip, incomplete event> does not receive the value ‘0’ by the system, since the interpretation side of Ip is not uniform. The presence of factual Ip in the system adds a ‘penalty point’ to the pair <Ip, incomplete event>.

Similarly, from the interpretation side, a complete event interpretation is the hearer’s optimal choice when encountering Pf. But again, the pair <Pf, complete event> is not set to ‘0’ – this time because the production side is not one-to-one.

Clearly, factual Ip, that is the pair <Ip, complete event>, loses the competition both from the point of view of production and interpretation. There is a better candidate in both cases. This results in two ‘penalty points’. It is hard to see how factual Ip could emerge in this system, and straightforward OT-reasoning would indeed predict that the pair <Ip, complete event> be blocked. Factual Ip loses the first round of optimisation. Still, as this thesis has amply demonstrated, blocking does not leave this problematic reading unemployed in actual Russian. We get what is known as partial blocking in the OT literature:

“[T]he unemployed form may soon find a new job, generally expressing something closely related to but subtly different from the canonical

\footnote{Note that the label ‘bidirectional Ip’ (as in the title of this subsection) has nothing to do with ‘bidirectional OT’. We apologise to the reader for the terminological confusion.}
interpretation that one might have expected.” (Beaver and Lee 2003, 140)

In the terminology of bidirectional OT, factual Ipf corresponds to the sub-optimal choice. It is used under special contextual conditions when the blocking effects are cancelled (Blutner 2000). What happens is that the existence of the sub-optimal factual Ipf triggers a reinterpretation of the system, and factual Ipf gets a more specific interpretation in a second round of optimisation. 21 This idea is compatible with our work. One can argue that factual Ipf in this thesis has been accorded a specific anaphoric role (presuppositional Ipf) or a specific pragmatic constraint: \( \text{Ipf} \subseteq t \cap \text{f}_{\text{end}}(t) \subseteq \text{f}_{\text{target}}(e) \) (existential bidirectional Ipf).

Let us first consider the case of bidirectional Ipf. While the complete event reading of Ipf loses to Pf in the first round of optimisation, it becomes the winner in the second round when a specific constraint on target state validity is taken into account, cf. table 7.3.

<table>
<thead>
<tr>
<th></th>
<th>( t \leq t [ \wedge \text{f}<em>{\text{end}}(t) \subseteq \text{f}</em>{\text{target}}(e) ] )</th>
<th>( t \leq t [ \wedge \text{f}<em>{\text{end}}(t) \not\subseteq \text{f}</em>{\text{target}}(e) ] )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ipf</td>
<td>2</td>
<td>\Rightarrow 1</td>
</tr>
<tr>
<td>Pf</td>
<td>\Rightarrow 1</td>
<td>!#</td>
</tr>
</tbody>
</table>

Table 7.3: A bidirectional OT-tableau for complete events with reversible target state predicates (second round)

In table 7.3, adding the condition ‘\( \text{f}_{\text{end}}(t) \not\subseteq \text{f}_{\text{target}}(e) \)’ makes Ipf the winner. Factual Ipf is deblocked, and the pair <Ipf, complete event> reappears on the scene.

The second round optimisation above should not be considered as a specification of Pf in the same way as with Ipf. What is at stake here is the search for a new domain for Ipf, not for Pf. Pf was the winner already in the first round when we considered complete event readings of telic predicates irrespective of target state properties. The main point of table 7.3 is therefore the deblocking of factual Ipf in light of a more specific constraint. For this reason we de-emphasise the condition on Pf by putting it in surrounding brackets.

In a sense, this implies that the constraint on Pf, i.e. \( \text{f}_{\text{end}}(t) \subseteq \text{f}_{\text{target}}(e) \), is the default in the aspectual competition. Target state predicates are lexically specified for target states independent of aspect, and it therefore seems reasonable to view target state cancellation (Ipf) as more marked than target state validity (Pf).

---

21 The classical example in OT is that of causatives and the competition between the lexical item ‘kill’ and the periphrastic construction ‘cause to die’. The latter loses the competition to the optimal candidate ‘kill’. As a compensatory strategy, the construction ‘cause to die’ finds its proper domain and is used in a more specific, technical jargon to denote a non-canonical killing.

Russian aspect is, of course, more challenging than this simple example. Note that Ipf, unlike ‘cause to die’, retains an optimal meaning as well, that is processual Ipf.

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Note finally that Ipfs are not ‘barred’, but ‘merely blocked’ with target state validity, hence the value ‘2’ in the tableau in 7.3. This is in accordance with the data discussed earlier in this chapter, where we suggested that factual Ipfs can be used with target state predicates if the issue of target state validity is irrelevant. We do not get a third round of optimisation in this particular case since ‘Relevance’ is a pragmatic factor which is orthogonal to the form-function (a)symmetries we consider here.

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. The phenomenon is known as **pragmatic strengthening**. At every level of optimisation, we get a **polarisation** of the interpretations accorded to the two aspectual competitors. This kind of approach can be useful in accounting for cases like (319) below:

(319) Počtal’ on prichodil’ v 8 utra. (Padučeva 1996, 41)

The postman came at 8 a.m.

Padučeva notes that relatively punctual adverbials more readily occur with a bidirectional reading than with other variants of existential Ipfs: “[T]ol’ko dlja dvunapravnennykh glagolov moment nastuplenija itogovogo sostojanija možet byt’ zadan s dostatočnoj opredelennosti’ju” (Padučeva 1996, 41). Our theory as it stands cannot explain this observation (neither can any other analysis we know of). OT may provide a solution. If bidirectional Ipfs arise as the specification of a ‘non-perfective’ complete event reading, all that is required for a felicitous occurrence of bidirectional Ipfs is that the following two conditions hold:

\[ e \subseteq t \land f_{end}(t) \not\subseteq f_{target}(e) \]

Additional constraints on factual Ipfs, such as a big and indefinite assertion time, may be irrelevant given this tight competition between the two aspects w.r.t. target state validity. If this argument is correct, it is not surprising that bidirectional Ipfs can occur with a small assertion time as we find in (319).

### 7.3.2 Presuppositional Ipfs as the Sub-optimal Choice

As a sub-optimal choice, factual Ipfs get various specifications, one of them is in this thesis referred to as presuppositional Ipfs.

To give an illustration, we return to example (281), repeated below as (320), where the two aspects were claimed to be ‘synonymous’:

(320) Kto \[ \begin{array}{l}
\text{kupili} \\
\text{pokupali}
\end{array} \] ěti bilety? (Šeljak 1997, 214)

Who bought these tickets?

Ipfs (‘pokupali – bought’) is preferred with event anaphora, i.e. when the existence of a complete buying event is known in the input context. On the
<table>
<thead>
<tr>
<th>$e \subseteq t$ [in assertion]</th>
<th>$e \subseteq t$ in presupposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ipf</td>
<td>2</td>
</tr>
<tr>
<td>Pf</td>
<td>$\Rightarrow 1$</td>
</tr>
</tbody>
</table>

Table 7.4: A bidirectional OT-tableau for complete events w.r.t. information structure (second round)

contrary, Pf ('kupil' – bought') is used when the verb represents new information and belongs to the assertoric content. The aspectual choice for these two scenarios follows from the bidirectional OT-tableau in 7.4.

The de-blocking of factual Ipf takes place in a second round of optimisation. In the case of (320), the relevant factor is not target state validity, but information structure. The mechanism is the same, though, for both bidirectional Ipf and presuppositional Ipf. Pragmatic strengthening turns factual Ipf into the opposite of the default role assumed by Pf.

The tableau in 7.4 may appear too coarse-grained to fully capture reality. It is a difficult task, as we have pointed out earlier, to find out whether Pf interacts with event anaphora. According to the OT-tableau above, the answer is an absolute ‘no’. The fact that Pf may occur in cases where there exists a candidate antecedent for the event argument in the input context does not refute this strong claim, since the speaker can choose to reintroduce known information in the assertion. Be that as it may, the simplified system of ‘penalty points’ actually forces us to treat Pf as ‘barred’ (!*) in this environment. Otherwise, we wouldn’t have been able to pick out the winners. However, the fundamental idea of de-blocking with factual Ipf does not hinge on this point, since the algorithm used here can easily be improved on by various existing tools for calculating information value. Still, it remains that the OT-argument above can only go through if Pf to a greater or lesser extent leans towards the assertoric content, which, undoubtedly, is the case.

Optimality theory is more than what we have been able to show here. Blutner, following Horn (1984), notes that the division of pragmatic labour is such “that unmarked forms tend to be used for unmarked situations and marked forms for marked situations” (Blutner 2000, 202). OT is considered an ideal framework for dealing with phenomena pertaining to markedness, but what does OT actually tell us about markedness w.r.t. aspectual competition in Russian?

From the discussion of bidirectional Ipf and presuppositional Ipf it follows that the complete event reading of Ipf is pragmatically strengthened to a specific or ‘marked’ interpretation in competition with Pf. In fact, we have not accorded Ipf any ‘unmarked’ role in the aspectual system. The OT-perspective on factual Ipf as the sub-optimal choice clearly departs from for instance Forsyth’s characterisation of factual Ipf in terms of ‘simple denotation’. In this view, markedness theory, as we know it from the Prague school, does not seem to have any explanatory power for aspect in Russian.

Perhaps Ipf can still be considered as ‘unmarked’ in the sense that it is
underspecified for a complete event reading. However, this kind of underspecification, which we encode through the general aspectual configuration $e \cap t$, does not play any role in the OT-reasoning above. Moreover, when it comes to presuppositional Ipfs, the configuration $e \cap t$ is not really involved at all. When a complete event, i.e. the inclusion relation $e \subseteq t$, is already given in the input context, there is no reason for event anaphora to take a detour through $e \cap t$.

There is yet another important aspect of OT which has not been touched upon in this brief discussion, that is the idea of a ranking of the different constraints. What constraints are involved in aspectual competition and how do they relate to each other? We expect that OT can significantly improve on the traditional approaches to Russian aspect, where the features accorded to the two viewpoint aspects are left unordered. The nature of the constraints can partly be modelled in dynamic semantics, as we have done in this work. However, we must leave the question of their internal ranking to future research.

Nevertheless, let us mention one constraint known as DOAP (‘don’t overlook anaphoric possibilities’), which at first sight appears to be particularly relevant for our data. This pragmatic principle in unidirectional OT says that the interpreter, given a certain form (text), should maximise coherence by seeking anaphoric dependencies. However, the role of DOAP in the system of aspectual competition raises several questions.

Of course, we expect presuppositional Ipfs to be compatible with DOAP. But then the question is how the effect of temporal anchoring, characteristic of Pf, relates to this constraint. As we will see in the next section, Pf patterns with a certain kind of temporal anaphoricity. Hence, DOAP seems to trigger Ipfs in some contexts and Pfs in others. We must leave it open how this apparent conflict should be resolved in OT.

Below, we will sketch a strategy which partly restores some commonly shared intuitions on markedness by giving an explicit account of Pf along the lines of temporal anchoring. The idea is simply that Pf, as the marked member (from the traditional point of view), should be accorded a more specific interpretation. Irrespective of whether a theory of aspectual competition should ultimately be couched in an OT-framework, there is more to be said about the semantics and pragmatics of Pf. This will indirectly also elucidate further the role of (factual) Ipfs.

### 7.3.3 Modelling the Temporal Anchoring of Pf

The notion of aspectual competition comprises two quite different phenomena: a) contexts where both Ipfs and Pfs can be used to refer to complete events, and b) contexts where only one of the members can felicitously refer to complete events.

A more specific analysis of either (factual) Ipfs or Pfs indirectly reduces the number of contexts in a). Through a more fine-grained semantico-pragmatic account, we suggest that the two viewpoint aspects need not be fully synonymous and functionally equivalent even when they appear to be interchangeable. Substitution of one viewpoint aspect for the other is rarely meaning preserving.
w.r.t. all residual aspectual information. Our claim is further that the more fine-grained distinctions between Pf and Ipф in aspectual competition can be fully captured only by adopting a discourse semantic view. We believe that DRT, possibly extended with OT and/or SDRT, offers the best framework in this respect.

Obviously, in contexts where a factual Ipф reading is blocked, Pf is used to denote complete events. But which properties make Pf the winner in these cases of aspectual competition? Drawing on insightful descriptive analyses of Pf, such as (Leinonen 1982) and (Barentsen 1998), we propose that the various functions of Pf in Russian can be subsumed under the notion of temporal anchoring. We then get a privative opposition between Pf and factual Ipф, as demonstrated in table 7.5.

<table>
<thead>
<tr>
<th></th>
<th>complete event</th>
<th>temporal anchoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pf</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Factual Ipф</td>
<td>✓</td>
<td>*</td>
</tr>
</tbody>
</table>

Table 7.5: Aspectual competition in light of [±Temporal Anchoring]

The temporal anchoring of Pf takes different forms. Our focus so far has been mostly on target state validity. Another very important piece of evidence for temporal anchoring is represented by the phenomenon of narrative progression. This and other discourse related phenomena will be our main focus in the rest of this chapter.

It is well-known that events denoted by perfective verbs in narrative discourse by default are temporally ordered in a way that mirrors textual order. In other words, the chronological appearance of the predicates reflects the temporal ordering of the events in ‘the world’. An illustration is given in (321):

(321) 28 maja ja vernul'sjaP iz San-Francisko, gde otmečal'P 80-letie otca, zagljanulP v Internet i s udivlением obnaruzilP svoju familiju sredi učastnikov moskovskogo etapa Gran-pri. (“64” 2000)

May 28th, I returned from San Francisco, where I had celebrated my father’s 80th birthday, I checked the internet, and discovered to my surprise that my name was listed among the participants of Moscow Grand Prix.

The three perfective predicates (‘vernul'sjaP – returned’, ‘zagljanulP v internet – checked the internet’, ‘obnaruzilP – discovered’) refer to events which occur precisely in this order. The discourse oriented view of DRT is suitable for modelling this phenomenon, cf. pioneer studies such as (Partee 1984) and (Hinrichs 1986). The general idea is to let each occurrence of Pf move the reference time forward. Formally, this can be achieved in different ways.

Consider for instance the event referred to by ‘zagljanulP’ in (321). This event $e_2$ occurs after $e_1$ (‘vernul'sjaP’) and before $e_3$ (‘obnaruzilP’). We could
let the perfective operator in ‘zagljanuP’ introduce an additional anaphoric temporal parameter $t'$, which would stand in a precedence relation with the assertion time $t_2$ of the currently processed utterance. The anaphoric $t'$ would be treated as a presupposition to be resolved in the input context. In this scenario, $t'$ could be unified with the assertion time $t_1$ for the event $e_i$ denoted by ‘vernulsjaP’. This would indirectly result in the correct interpretation that the event of ‘vernulsjaP’ is temporally located prior to the event of ‘zagljanuP’.

A semantics for Pf corresponding to this analysis could be formulated as follows:

- **(preliminary version)**
  \[
  Pf \Rightarrow \lambda P \lambda t[e \mid P(e), e \subseteq t, \ell_{end}(t) \subseteq \ell_{target}(e) / \text{if defined} \mid \forall t, t' \mid t' \prec t]
  \]

  This preliminary proposal is similar to an account of simple past in English recently argued for in (Kamp et al. to appear), but we will not pursue it further. There are mainly two reasons for this. The first is merely technical, but the second relates to the nature of Pf in Russian.

  To avoid ending up with an improper presupposition, it seems necessary to declare the assertion time variable $t$ in the universe of the presuppositional DRS. While the intuition is that $t'$ is indeed anaphoric, $t$ belongs mainly to the assertoric content. We are not sure of how this conflict can be resolved, maintaining a consistent picture of compositionality.

  A quite different reason for seeking another strategy is that the temporal anchoring effect of Pf should not be reduced to temporal anaphora along the lines above. We would like to make precise the widespread intuition that Pf in Russian is characterised by final emphasis (Smith 1997, 235).22 A perfective verb makes salient the time interval following the culmination of the event. It is at this interval that the target state is valid, and it is this interval which acts as a temporal anchor for a subsequent event in case of narrative progression.

  We therefore propose to come to grips with narrative progression not by equipping Pf with a backwards-looking anaphoric temporal parameter, but rather by focusing on what is to come next. The fact that the event of ‘zagljanuP’ follows the event of ‘vernulsjaP’ will partly be captured already by the dynamic representation of ‘vernulsjaP’. Instead of saying that Pf is anaphoric to a previous event/time, we claim that Pf introduces an additional temporal parameter which may participate in various relations with subsequent eventsetimes to be processed later. This solution, which is in the spirit of for instance (Hinrichs 1986), gives us the following semantics for Pf:

  - **(final version)**
    \[
    Pf \Rightarrow \lambda P \lambda t[e, t' \mid P(e), e \subseteq t, e \succ t', \ell_{end}(t) \subseteq \ell_{target}(e) / \text{if defined}]
    \]

  The additional temporal parameter $t'$ denotes an interval which starts where the temporal extension of the event ends (in our notation represented through

---

22 Many aspectologists incorporate this idea in their analysis, cf. for instance (Padtščeva 1996, 54). Recall also the discussion in chapter 2.4 concerning the interaction of Pf with negation.
the relation of abutment: ‘\(\succ\)’). The interval of \(t'\) will act as the default assertion time for the next event to be processed in the discourse. Returning to our initial example (321), we get the following representation for the first part of the utterance (“28 maja ja vernulšja”):

- \(K_1 = [c, t_1 \mid returning(c), Ag(c, I^*)], e \subseteq (\text{Past}^*(t_1))(t_0)), e \succ t_1, f_{\text{nd}}(\text{Past}^*(t_0)) \subseteq f_{\text{target}}(e)\)

Next, we try to build a representation \(K_2\) for the part of (321) containing “zagljanul”. In absence of frame adverbials, past tense by default gets an indefinite interpretation (“the whole past”). However, when “zagljanul” is processed in (321), we have a context time available instead of a frame adverbial. The context time is the declared variable \(t_1\) in the input context \(K_1\). This scenario gives us a definite interpretation of the assertion time parameter of “zagljanul”, which in turn triggers Pf. A definite (≈ anaphoric) assertion time in combination with a complete event favours Pf unless the event argument is also anaphoric. The derivation of \(K_2\) is represented in figure 7.4 (leaving out unnecessary information).

Let us for perspicuity represent the update of \(K_1\) with \(K_2\) in a simplified and shortened box notation:

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23 There are different ways of letting \(K_2\) inherit the value of \(t_1\) as its assertion time. An alternative to the derivation presented here is to let \(K_2\) contain an anaphoric context time \(t_e\), which either originates with the frame time parameter or only appears at the top level of the derivation. This time \(t_e\) would have to be declared in the presupposition part of \(K_2\), and would ultimately be unified with \(t_1\) in the input context. cf. chapter 5.3.

24 Recall that event anaphora in the sense of chapter 6 triggers presuppositional Pf.
\[
\text{Update}(K_1, K_2) = \\
\begin{array}{l}
e_1, e_2, t_1, t_2 \\
\text{my returning}(e_1) \\
\text{my checking the net}(e_2) \\
e_1 \subseteq \text{May 28} \\
e_2 \prec \prec t_1 \\
e_3 \subseteq t_1 \\
e_3 \prec \prec t_2 
\end{array}
\]

This analysis is able to capture the effect of narrative progression with Pf. The procedure is recursive, such that the next occurrence of Pf in (321) will make use of \(t_2\) in the above representation as its context time. The interval \(t_2\) thereby ends up playing the role of assertion time for the event referred to by ‘obmarufip’.

Note that the updated DRS above is compatible with the speaker checking the internet on May 28th. The assertion time for the second event needs not strictly follow the assertion time for the first event \(e_1\), but it must follow \(e_1\) itself. However, the DRS-conditions are perhaps too weak as they stand. The problem is that the DRS above allows for the speaker checking the internet after May 28th. This reading is marginal (at best), which tells us that the assertion time \(t_1\) for \(e_2\) should be further restricted. It should not extend all the way up to, say, the evaluation time.

In general, what seems to be the case is that the additional temporal parameter \(t'\) of Pf produces a relatively small interval whose size is just appropriate for the temporal extension of the next event in the discourse. This is reminiscent of von Wright’s ‘and next’-operator (Wright 1965), or the relation ‘just after’ in (Partee 1984, 261): “[I]n the simple linear case an event-clause moves the narrative forward by bringing in a new reference time that is ‘just after’ the given event [...]”. Partee writes further: “In narrative discourse of the sort considered by Hinrichs, reference intervals are typically quite small, since the focus is on the succession of individual events” (Partee 1984, 276). We will not try to spell out this additional constraint on the size of \(t'\), but we assume with the authors mentioned above that a restriction of this kind is needed.

Note, however, that this ‘and next’-component involves uncompositional backtracking. We do not know the size of \(t'\) before the next perfective verb is processed, since the right boundary of \(t'\) presumably coincides with the end point of the next event. This uncompositional flair is unfortunate, but the alternative ‘anaphoric approach’ has its problems as well, as we saw above (cf. the preliminary version of Pf).

The revised semantics for Pf proposed here should be further substantiated by looking at more data, including data beyond the phenomenon of narrative progression. This raises several questions. For instance, it may be that our familiar condition on target state validity should now be spelled out differently, taking into account this new available reference time \(t'\).\footnote{If we eventually maintain our previous treatment of target state validity, the updated DRS above should in addition contain the condition \(t_{\text{mark}}(\text{May 28}) \subseteq t_{\text{arg}=\ell(e_1)}\).} The analysis also invites a closer look at the interaction with temporal adverbials. Note, finally,
that the notorious ‘present perfect effects’ of Pf are partly orthogonal to the role of \( t' \) (except perhaps with target state validity). If an event denoted by a perfective verb is not followed by subsequent events, the reference time \( t' \) will remain unemployed.

We leave these issues to future research since our main interest in this thesis is factual Ipf. How does (factual) Ipf relate to this revised analysis of Pf?

Note first that the new version of Pf is not type-theoretically different from the imperfective operator. Both Ipf and Pf continue to take the same kind of arguments (a set of events) and give the same kind of output (a set of ‘assertion times’). The more or less compositional analysis in chapter 5 of the interaction of aspect and tense is therefore still valid.

What has changed is that the privative character of the aspectual competition emerges more clearly. Since Ipf lacks the additional temporal parameter of Pf, we can possibly make formally more precise the observation that factual Ipf is used in cases where we do not have narrative progression, or when the target state is not valid/relevant etc. In a sense, we transpose the intuition that the competition between existential Ipf vs. Pf amounts to \([-\text{Temporal anchoring}]\) into a dynamic framework.

However, it must be stressed that the feature \([-\text{Temporal anchoring}]\), characteristic of factual Ipf, does not literally mean that the event in question is not located in time. We are still assuming that factual Ipf refers to event tokens (individual events in the model), and factual Ipf continues to interact with the assertion time parameter. Recall also that with presuppositional Ipf the assertion time is typically anaphoric and definite. Indeed, \([-\text{Temporal anchoring}]\) is intuitively most transparent with existential Ipf. Still, in our analysis, Ipf \textit{tout court} is opposed to the temporal definiteness of Pf inasmuch as only the latter is equipped with an extra temporal argument.

### 7.3.4 Rhetorical Relations of Factual Ipf

Through the additional temporal parameter in the semantics for Pf, we opt for a privative opposition between the two aspects. Pf and factual Ipf are not considered to be synonymous or equivalent in this \textit{dynamic} sense. But what is there to say about factual Ipf in discourse, except that it does not instantiate narrative progression?

Unlike Pf, the discourse functions of Ipf should not be directly reflected in the \textit{semantics} of the operator. Informally speaking, Ipf encodes ‘non-sequencing’, but this is merely because Pf is associated with \([+\text{Sequencing}]\). In the search for some \textit{positive} characteristics of the discourse functions of factual Ipf, we are moving away from interpretations based solely on the contribution made by linguistic form.

Temporal relations in discourse – often subsumed under the notion of ‘taxis’ in Slavic linguistics (Maslov 1984) – are not derivable merely from compositional

\[^{26}\text{We refer the reader to chapter 4.6.1 for a review of previous feature analyses along these lines, notably (Leinonen 1982), (Thelin 1990) and (Dickey 2000).}\]
semantics. They rely heavily on lexical semantics, but also on factors such as world knowledge and cognitive states. Taking these phenomena into account requires an extension of classical DRT, for instance along the lines of *Segmented Discourse Representation Theory* (SDRT), developed in the works of Asher and Lascarides. Through a formalisation of *rhetorical relations*, SDRT is able to capture “how the content of the discourse augments the compositional semantics of its clauses” (Lascarides and Asher to appear). We will here limit ourselves to sketching how some of the rhetorical relations associated with factual IpF could be analysed in SDRT. We refer the reader to (Asher and Lascarides 2003) for a proper introduction to the framework.

**Factual IpF as Non-Sequencing**

IpF in past tense is *non-sequencing* in the sense that it does *not* ‘move the reference time forward’. This is a well-known, but still non-trivial fact of contemporary Russian. It does not hold cross-linguistically w.r.t. imperfectivity, as for instance *l'imparfait narratif* in French encodes narrative progression.27

While neither processual IpF nor factual IpF instantiates narrative progression, the ways in which these imperfective readings relate to narrative discourse are quite different. In temporal semantics, focus has almost exclusively been on the opposition between Pf (or rather: ‘simple past’ in English; ‘passé simple’ in French etc.) and the *backgrounder* function of progressive and/or stative readings of the imperfective.28

Factual IpF is different since it typically does not imply any temporal overlap with events denoted by perfective verbs in the same discourse. This is illustrated for instance in our initial example (321), where the existential IpF ‘otmečal’ – had celebrated’ receives a *past perfect* interpretation. The event in question is temporally distinct from the three events referred to by surrounding perfective verbs.

The phenomenon of narrative progression is rendered in SDRT through a two-place relation *Narration(α, β)*, which holds between the two main events

27Also in obsolete/vernacular Russian, there is an ‘exception’ to this rule. Glovinskaja reports some stylistically marked data, a kind of ‘folkloric IpF’:

(1) Bylo tak, na voschode krasnogo solnyska,
Vstavaj otlya Muromeč ran'še vseh,
Vychodili on na Safat-reku,
Umystsja studenoy vodoj,
Útiralsja' tonkim polotnom
etc. (‘Ilja v Kieve’) (Glovinskaja 2001, 187).

This happened in the red sunrise,
Ilja Muromeč *got up* before all the others,
he *went* to the Safrat river,
he *washed* *himself* in cold water,
he *dried* *himself* with a tiny linen . . .

28We refer to the DRT literature for extensive analyses of this phenomenon.
reported by the *speech acts* $\alpha$ and $\beta$.\footnote{SDRT is built on the kind of DRS-language which is also used in this thesis. In addition, SDRT comes with a set of *speech act discourse referents* ($\pi_1, \pi_2$ etc.).} If *Narration* holds in a discourse, we are entitled to infer that the descriptive order of the events matches their temporal order (Lascarides and Asher 1993a, 3). This can be formulated as an axiom:

- **Axiom on Narration**

  \[
  \text{Narration}(\alpha, \beta) \rightarrow e_\alpha \prec e_\beta
  \]

  For languages like English, there is some discussion in the literature as to which linguistic and non-linguistic factors trigger this relation. In the present work, we assume that the semantics of Pf – from the perspective of SDRT – is tightly connected to *Narration*($\alpha, \beta$).

  From the descriptive analyses in the literature (cf. chapter 4.6.1), we know that factual IpF is unlikely to occur in this discourse relation, in particular as part of the second argument $\beta$. But how can this restriction on factual IpF be motivated? Assuming that $\alpha$ contains a perfective verb with its additional reference time $t'$, we expect the verb in $\beta$ to relate to this $t'$. Recall from the last section that $t'$ implicitly carries a ‘just after’-component, which means that ‘just after’ $e_\alpha$ follows $e_\beta$ (and ‘just after’ $e_\beta$ may follow yet another event in the chain). This in turn implies that the assertion time for $\beta$, that is the interval $t'$ provided by $\alpha$, must be small. The event in $e_\beta$ practically fills the whole interval $t'$.

  We propose to make use of the idea that this relation between $e_\beta$ and $t'$ is incompatible with the general preference of factual IpF for a big and indefinite assertion time. Accordingly, Pf is preferred (from the production side) when the speaker refers to $e_\beta$ in the *Narration* relation. This has an analogy on the interpretation side, where a processual reading of IpF is triggered in the presence of a small reference time.

  The same reasoning is not applicable when it comes to the candidacy of factual IpF as the first argument $\alpha$ of the relation *Narration*($\alpha, \beta$). We propose to explore the hypothesis that factual IpF also does not occur as part of the speech act $\alpha$. The following example supports this idea:

  \[(322)\] Etap čempionata mira po gol'fu sredi professionalov *zaversilsja* na-
  tojaščej sensacije [$\pi_1$]. Pobiditelem s rezultatom 277 udarov *stal*\(^{P}\) Mike
  Veir [$\pi_2$]. Štot 30-letnjih kanadskih gol'fist vsego odnaždy *vyigryval*\(^{V}\) v
  PGA Tour [$\pi_3$]. Pervoe mesto *prineslo*\(^{O}\) emu rovno odin million dol-
  larov [$\pi_4$]. (Internet)

  The world-championship round in professional golf ended sensitio-
  nally. Mike Weir became the winner with a result of 277 strokes. This 30-year
  old Canadian golfer *had/has* only once before won a PGA-tour. The
  first place brought him one million dollars.

\footnote{\textit{We will in the following be sparse on the formal details, and the notation used here should be self-explanatory. Note, however, that the accessibility relations for anaphora are slightly altered in SDRT compared to DRT, due to the introduction of speech act discourse referents, cf. (Asher and Lascarides 2003).}}
This discourse is not likely to be interpreted as Mike Weir receiving a million dollar as a result of his winning a PGA tour (PGA tour ≠ world championship round). There is no linguistically encoded relation of temporal progression between π₁ and π₂. We therefore do not get a relation Result(π₁, π₂). In other words, factual Ipfs ‘vyigryval’ – won’ does not act as a temporal anchor for the subsequent event referred to by Pf. SDRT can help explaining why this interpretation is strongly dispreferred in the discourse above.

Before we can make this point more explicit, we have to provide a representation of the context which acts as input context for π₄. This in turn involves the question of how factual Ipfs ‘vyigryval’ – won’ in π₁ relates to elements in its own input context. Let us take π₁ as the point of departure in the following discussion.

One basic assumption in SDRT is the following: The interpretation of rhetorical relations which maximises discourse coherence will be preferred. The first task in this respect consists of finding the optimal attachment sites for π₃. There are basically two possible solutions in the discourse above. One is depicted in diagram 7.5.

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**Figure 7.5: Rhetorical relations in (322) (first version)**

π₁ [the speaker’s deictic centre]

π₂ [zaversilsja⁰/ended]

Evidence

π₃ [pobeditelem styl⁰/the winner was]

Digression

π₄ [vyigryval⁰ PGA/won PGA]

---

Assuming that π₃ attaches to the preceding speech act, we next have to

---

30 We gloss over distinctions between Narration and Result in this work, since the latter entails the former:
- Axiom on Result
  \[ \text{Result}(\alpha, \beta) \rightarrow \text{Narration}(\alpha, \beta) \]

31 We could have represented these diagrams in SDRS-notation, making use of familiar subDRSs for representing the content of the individual speech acts. However, for the points made here, this would involve unnecessary complications.
decide on the nature of the relation $R(\pi_2, \pi_3)$. As one can read out of the diagram, we label this relation *Digression*. The relation *Digression*$(\pi_2, \pi_3)$ seems to represent a case of the DRS for $\pi_3$ being *subordinated* (in the sense of SDRT) to the DRS of $\pi_2$. We illustrate this by using downward arrows in the figures.

The relation *Digression*$(\pi_2, \pi_3)$ results in a *past perfect* interpretation, that is, the event of Weir winning the PGA-tour is located prior to the past event of his winning the world-championship. This is the only possible temporal relation between $\pi_2$ and $\pi_3$, since the winning-event of $\pi_3$ cannot follow the event of $\pi_3$ due to the pragmatic restriction on narrative progression imposed by Ipf (cf. the discussion above).

The default in human communication is that a speech act (here: $\pi_3$) attaches through some rhetorical relation to the previous utterance in the discourse (here: $\pi_2$). However, this is not the only option. The speaker’s deictic centre, referred to by the ‘distinguished variable’ $\pi_0$, is always accessible. It is therefore conceivable that $\pi_3$ ‘pops up’ and enters a rhetorical relation with $\pi_0$. In this scenario, $\pi_3$ would function as a digression not interacting temporally with the rest of the discourse.

This alternative interpretation of the discourse would create a ‘present perfect’ reading of factual Ipf in $\pi_3$. World-knowledge tells us that the event in $\pi_2$ is located prior to the event in $\pi_3$, but if the hearer prefers to link $\pi_3$ to $\pi_0$, the past tense of ‘vigorously’ is interpreted as being deictic. The presence of these two possible interpretations illustrates the importance of the speaker’s or interpreter’s *perspective* when it comes to pragmatic encoding of temporal relations. In the following, we adopt the interpretation depicted in diagram 7.5 (‘first version’).

The next question is how the final utterance $\pi_4$ relates to its input context depicted in 7.5. In this particular case, the SDRT-algorithm allows $\pi_4$ to enter rhetorical relations with any of the previously declared speech act markers. It is always possible for a speech act to relate to the last declared $\pi_1$, which in this case is the utterance containing the occurrence of factual Ipf. Following the traditional accessibility constraints in DRT, a speech act referent can pick up discourse referents at higher levels unless these occur deeply embedded.\(^{32}\)

In our case, $\pi_3$ is directly subordinated to $\pi_2$, which in turn is governed by $\pi_1$. Hence, not only $\pi_3$ is a candidate attachment site for $\pi_4$, but so are $\pi_2$ and $\pi_1$ (transitive closure of subordination). In addition, $\pi_0$ is accessible as a distinguished variable.

The system allows for $\pi_4$ to stand in discourse relations with several of these attachment sites simultaneously. However, there is one candidate which here simply cannot be ignored, that is *Result*$(\pi_2, \pi_4)$. In other words, Mike Weir was awarded 1 million dollars as a result of, i.e. *after*, winning the world championship, cf. diagram 7.6.

The arrows in the figure show that *Result*, like all relations involving *Narration*, is treated as a *coordinating* rhetorical relation as opposed to the sub-

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\(^{32}\)In studies of discourse semantics this is known as the ‘right frontier constraint’.
ordinating ones \( \text{(Evidence and Digression)} \). Note also that \( \pi_5 \) is a complex proposition which itself is an argument to a discourse relation.

Why do we claim that diagram 7.6 represents the preferred interpretation of the discourse, and in particular of \( \pi_4 \)? Because it maximises coherence. Recall that Pf in \( \pi_3 \), according to the analysis presented in section 7.3.3 above, introduces an additional temporal argument \( t' \) which ‘moves the reference time forward’. This time \( t' \) is not picked up by factual IpF in \( \pi_3 \), since the event in \( \pi_3 \) gets a past perfect interpretation w.r.t. the assertion time \( t \) of \( \pi_3 \) (NB! \( t \neq t' \)). As a result of this, \( t' \) is still ‘hanging around’ when \( \pi_4 \) is processed. Given the relation \( \text{Result}(\pi_2, \pi_4) \), the interval \( t' \) present in the DRS of \( \pi_3 \) indeed becomes accessible for the discourse referents declared in \( \pi_4 \).

This lengthy discussion of \( (322) \) has supported our claim that factual IpF is not only characterised by the feature \([-\text{Sequencing}] \), but does not occur as either the first, or the second argument of discourse relations encoding narrative progression.

Below we give a few more illustrations of the discourse relations in which factual IpF actually participates.
Digression

The relation of Digression, which holds between $\pi_3$ and $\pi_4$ in (322) above, is not part of the standard SDRS-language. Why is it necessary to introduce this new discourse relation?

It is far from trivial to justify an ontology of rhetorical relations. Asher and Lascarides (2003) include a discourse relation $R$ only if the presence of $R$ affects truth-conditions in ways which could not have been captured through the existing inventory of rhetorical relations. This is a reasonable choice – since we are primarily interested in discourse semantics – but it may be too restrictive for our needs.

The pragmatics of factual Ipfs does not seem to have truth-conditional impact. We believe this in itself is an interesting – though perhaps obvious – observation, and propose to make it precise by introducing the relation Digression. Indeed, when the relation Digression holds in a discourse, we need additional information (lexical semantics, world-knowledge etc.) in order to make logically valid inferences on temporal relations. Digression gives rise merely to a defeasible entailment ($>$) w.r.t. temporal structure:

- Axiom on Digression

\[ \text{Digression}(\alpha, \beta) > e_\beta \prec e_\alpha \]

This common-sense entailment is still important since it makes clear why factual Ipfs is in general associated with a backwards movement of time. Given the meaning postulate above, the (past) perfect interpretation in (322) follows by default.

Thus, augmenting the representation of a discourse with an SDRS-formula of the form Digression($\alpha, \beta$) does not alter truth-conditions. This reflects the nature of digressions: a digression is simply a digression. It does not add anything substantial as a relation.\(^{33}\) Still, despite its ‘truth-conditional poverty’, it is important to encode something like this relation in order to reflect the discourse functions of factual Ipfs. We should also point out that Digression may interact with other discourse relations in non-trivial ways, cf. the examples given below.

Would it have been possible to make use of some of the existing SDRS-relations instead of Digression?

In our initial example (322), we could perhaps have invoked the relation Elaboration($\pi_2, \pi_4$) in accordance with the definition of this relation in earlier versions of SDRT. Elaboration($\alpha, \beta$) was originally claimed to entail temporal mismatch between $e_\beta$ and $e_\alpha$ (Lascarides and Asher 1993a, 3). This would be compatible with factual Ipfs being associated with $e_\beta$.

However, in more recent SDRT work, Elaboration($\alpha, \beta$) is used quite differently. The events in question are not temporally disjunct, since the discourse relation now comes with the following axiom:

\(^{33}\)The content of the digression will of course cause an update of the input context and thereby reduce the set of verifying embeddings.
• Axiom on Elaboration (Asher and Lascarides 2003)

\[ Elaboration(\alpha, \beta) \rightarrow \text{Part of } (e_{\beta}, e_{\alpha}) \]

We will see an example of this relation in (326) below.

Furthermore, we cannot capture the typical cases of factual Ip" through the relation Background as this relation is perceived in SDRT:

• Axiom on Background (Asher and Lascarides 2003)

\[ Background(\alpha, \beta) \rightarrow \text{Overlap } (e_{\alpha}, e_{\beta}) \]

The relation Background requires temporal overlap between the two arguments, and therefore mainly patterns with stative predicates or processual Ip" (see (328) below for a possible exception). Note that both Elaboration and Background affect truth-conditions (cf. the strict implicature: ‘→’). By distinguishing between Elaboration, Background and other relations, SDRT provides a more fine-grained picture of the phenomenon of grounding than what we find in the traditional literature (cf. chapter 4.6.1). But this is still not sufficient for a complete characterisation of the discourse functions of Ip" in Russian. We therefore propose to add Digression, which, true, is associated with a weaker inference w.r.t. temporal relations.

Let us round off this discussion with a couple of examples of Digression(\alpha, \beta_{\text{factual-Ip"}}). The second element in this relation is characteristically a remark introduced by the speaker for instance in a parenthesis or a subordinate relative clause. When the parenthesis or relative clause is closed, the discourse continues w.r.t the temporal anchoring of \alpha, cf. example (323):

(323) Blestjačaja ka`era Karpova, ob okončanii kotoroj s delannym sožaleniem soobšča\'e v dekbre 2001 goda Kasparov, prodolžaetsja\'! Obigrav\p [NN], eks-čempion vyšel\p v final. (Joeblack 2002)

Karpov’s brilliant career, which Kasparov with forced regret declared to be over in December 2001, continues! After winning against [NN], the ex-champion made it to the final.

Factual Ip" in the next example is also naturally perceived as a kind of ‘digression’:

(324) Adams to\v e imeet\` opyt v \v toм variante, on igr\l\` ego protiv Bareeva v Dortmunde 2000. (Kasparov Chess 2001).

Adams also has some experience with this line, he played it against Bareev in Dortmund 2000.

The text (chess annotations) is written in present tense, and the sentence containing factual Ip" (‘igr\l\` – played’) digresses by providing a kind of explanation for what was reported in the previous sentence.

Digressions can also occur recursively, as in (325) below, where the second occurrence of factual Ip" (‘rasskazyval\l\` . . . – told’) can be analysed as a digression w.r.t. the first digression (‘govoril\l\` . . . – said’).

Some animals cannot stand drunkards. [ . . . ] This is not so with Fedja’s dog Valdaj. I have already said that this dog has a particular character and sensibility. Fedja told me one episode. Once, in the winter, Fedja came [ . . . ] home in a very bad condition. [ . . . ]

In a sense, one can consider the relation Digression to subsume a whole range of more basic discourse relations. For instance, example (323) seems to involve a kind of Contrast, while (324) can somehow be associated with Explanation. However, a relation like for instance Explanation comes with axioms which are too strong to apply to factual Ipfs as such. Instead, we let these more specific discourse relations follow from Digression in combination with lexical semantics and world-knowledge.

Parallel

Interestingly, factual Ipfs can occur deeply embedded in the second argument of a subordinating relation of Elaboration. This is what happens in the following example according to the interpretation given in diagram 7.7:

(326) Svidler ispytal’ uže ne odin spad i pod"em: igral’ v Linares, i Kasp- 
parova obygryval’, vypadal’ iz obojmy superturnirov, snova tuda voz-
vrashchalsja’, i v roli odnogo iz favoritov vychodil’ v čempionat mira 
FIDE. (Joeblack 2001)

Svidler has experienced several ups and downs: he played in Linares, and he beat Kasparov, he fell out of the circuit of super tournaments, he made it back into the circuit, and he qualified for the FIDE world championship as one of the favourites.

The mother node (π7) of the 5 occurrences of Ipfs is subordinated to the perfective ‘ispytal’ – experienced’ in the relation Elaboration(π1, π7). But how do the consecutive occurrences of factual Ipfs relate to each other? As expected, they do not give rise to Narration, but instantiate a temporally underspecified SDRS labelled Parallel. This is to say that the individual occurrences of factual Ipfs are not temporally related to each other, but they are still coordinated, as depicted in the diagram.

By choosing Ipfs instead of Pfs to report these complete events the speaker does not commit himself to any particular temporal ordering of the events in question. However, since the occurrences of factual Ipfs are part of an elaboration w.r.t. the overall event in π7 (‘ispytal’ – experienced’), we capture the fact that they all temporally overlap with the experiencing-event. Factual Ipfs is used to report different aspects of the main event, e.g. beating Kasparov was one of the ingredients making up Svidler’s experience.

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Figure 7.7: Rhetorical relations in (326)

\[ \pi_0 \] [the speaker’s deictic centre]
\[ \pi_1 \] [ispytalP/experienced]

\[ Elaboration \]
\[ \pi_7 \]

\[ \pi_2 \] Parallel \[ \pi_3 \] Parallel \[ \pi_4 \] Parallel \[ \pi_5 \] Parallel \[ \pi_6 \]

\[ [igral'] \] \[ [obygrval'] \] \[ [vypadal'] \] \[ [vozvrasčalsja'] \] \[ [vychodil'] \]

The next example has a similar structure from the point of view of rhetorical relations:

(327) Nekotoroe oživlenie v èto somnoèo carstvo, kak vseslo, vnesliP odni i te že ljudi — van Velí demonstriroval' Shirov učedsa smelosti, Kramnik pokazyval' Anandu svoe uporstvo v dostizhenii celi, a Morozov priznawsalsja' Kasparovu v svoej neobuzdannoy chitosti. (Kasparov Chess 2001)

Some excitement into this peaceful world was, as always, provided for by the same people — van Wely demonstrated some incredible courage against Shirow, Kramnik showed Anand all his firmness in reaching his goal, while Morozovich confessed all his unbridled slynness to Kasparov.

The three events denoted by imperfective verbs in (327) form a unit which is rhetorically subordinated to the ‘global’ event introduced in the beginning of the discourse through the perfective predicate ‘vnesli’ . . . oživlenie — provided for . . . excitement’. In this case, world-knowledge suggests that an overlap relation probably holds between the three imperfectives, since they refer to subevents of different chess games which were played simultaneously. For this reason, replacing IpF with Pf in (327) could give rise to incorrect predictions w.r.t. the temporal ordering of the events. The three instances of IpF do not invoke narrative progression, but, on the contrary, induce the relation of Parallel.
Background

It is sometimes claimed that factual Ifp cannot be used discourse initially (Israeli 1996, 11). We believe this to be wrong, but we suspect that these authors would not consider (328) below to be an instance of factual Ifp:

(328)  Cempionat Moskvy [ . . . ] zakryvala v klube imeni Petrosjana [ . . . ]. Glavnyj sud’ja, mimochodom upomjanzuv p o trudnostjach [turnira], perešel k zdravicam v adres organizatorov i učastnikov turnira. (Kas-parov Chess 2002)

The closing of the Championship of Moscow took place in the Petrosjan club. The main arbiter, after having touched upon some problems [ . . . ], went on to congratulate the organisers and participants.

However, our analysis of factual Ifp (and presumably most other theories available) is not able to exclude ‘zakryvalsja’ – closed’ from qualifying as factual Ifp. When the first sentence is processed in the zero-context of (328), no frame adverbial or context time is available, hence the assertion time amounts to the whole past preceding the evaluation time. Ifp invokes the configuration $e \bigcirc t$, which is pragmatically strengthened to a complete event reading $e \subseteq t$ due to the big indefinite assertion time. Where is the problem?

The puzzle is that factual Ifp in (328) is not backwards looking in the sense of Digression. In fact, we get a Background relation in this case, since the subsequent perfective verbs refer to subevents of the overall closing-event. It is in the nature of subevents that they are temporally included in the main event (‘zakryvalsja”). The axiom on Background, which requires temporal overlap, therefore holds in (328). Accordingly, we get the relations depicted in diagram 7.8.

The conclusion we draw from this is that factual Ifp is, after all, compatible with the relation Background$(\alpha, \beta)$ provided that factual Ifp occurs as part of the first argument $\alpha$:

- $\text{Background}(\alpha, \beta_{Ifp}) \rightarrow$ a factual reading is not possible.
- $\text{Background}(\alpha_{Ifp}, \beta) \rightarrow$ a factual reading is possible.

These correlations are interesting, and they are predictable from the analysis developed in earlier chapters. When Ifp is part of the second argument $\beta$, the presumably ‘narrow’ assertion time of $\alpha$ (containing for instance a perfective verb) is available for the aspectual configuration in $\beta$. However, this inheritance of the assertion time triggers a processual reading of Ifp in $\beta$. On the contrary, when Ifp occurs in a zero-context, a factual reading comes as no surprise. These observations confirm that the value of the assertion time parameter is to an important extent dependent on the incremental update of the context. In this respect, it is not immaterial for the interpretation of Ifp whether the verb in question occurs as the first or second argument of a given discourse relation.
Scene-Setting Usage

It may be that the inventory of rhetorical relations in SDRT (notably Parallel and Background), enriched with Digression, is still not enough to capture the behaviour of factual Ipfs in discourse. Consider (329) below, and its interpretation in figure 7.9.

(329) A: Nu, choros'o, vy nedovol'ny novym kontrolem. Ešće million čelovek nedovol'ny. Nu i čto?
B: Ne znaju'. Ko mne podchodil' i kluki. Vysokopostavlennyj činovnik FIDE. On mne skazal', čto provoditsja' opros sakhmatistov i sprosił' moe otnošenie. Ja ocjen' podrobnno raszkazal', čto ja gluboko i veštoronne protiv. (Joeblass 2001)
A: OK, fine, so you're unhappy with the new time control. Another million people are unhappy. And so what?
B: I don't know. I'dicki, a highly placed ofıcial in FIDE, came up to me. He said to me that an opinion poll among chess players was being conducted, and he asked my opinion. I told him in great detail that I was wholeheartedly and totally against (the new time control).

How should these configurations, and in particular the role of the bidirectional Ipfs 'podchodil' – came up', be rendered in SDRT? In our view, there are two possible strategies.

One possibility would be to let factual Ipfs, after all, occur in the relation Narration, along the lines depicted in diagram 7.10.

The representation in 7.10 is a counter-example to the earlier made generalisations. However, it could be justified by pointing at the privative opposition
between (bidirectional) IpP and Pf. Recall in this respect the OT-argument that if the target state has been cancelled, IpP emerges as the winner irrespective of other phenomena which would otherwise be sensitive to the aspectual choice. One would then expect that the kind of narrative progression we encounter in (329) should be restricted to the bidirectional reading. This seems to be the case.

Alternatively, one could argue that there is no true relation of \textit{Narration} holding between \(\pi_2\) and \(\pi_3\). While it is true that the coming-event of \(\pi_2\) temporally precedes the saying-event in \(\pi_3\), the precedence relation only holds w.r.t. the event arguments proper. We could require that \textit{Narration}(\(\alpha, \beta\)) also should involve temporal progression of the \textit{assertion times} associated with \(\alpha\) and \(\beta\).

When 'podchodiť' – came up' is processed in (329), there is no established past reference time in the input context. The assertion time \(t\) therefore equals 'the whole past' prior to the utterance time, and IpP is pragmatically strengthened to a complete event reading: \(e \subseteq t\). However, since \(t\) abuts the utterance time, the assertion time of 'skазать P', say \('t', cannot possibly follow \(t\), as one might expect from a relation \textit{Narration}(\(\pi_2, \pi_3\)). The idea is therefore to let the axioms related to \textit{Narration} include restrictions not only on the events in-
volved, but also on other temporal parameters. We refrain from spelling out these axioms in the present work.

But then, what are the rhetorical relations obtaining in (329)? If we look at figure 7.9, it is clear that the target state of 'podchodil' is still valid when the events denoted by the subsequent perfective predicates take place. And we have also established that the assertion of 'podchodil' is the 'whole past'. These two factors create a kind of frame for the subsequent events in \( \pi_3 \sim \pi_5 \). The discourse following 'podchodil' consists of perfective predicates which move the reference time forward within this global frame.

This scene-setting usage of Ipf is reminiscent of 'backgroundering'. However, in SDRT, \( \pi_2 \) cannot figure in a Background relation since the latter requires temporal overlap between the events in question. Instead of relaxing the axioms associated with Background, we can instead maybe introduce a relation like Scene-setting as in diagram 7.11.

![Figure 7.11: Interpretation of (329) (second version)](image)

The speech act \( \pi_2 \) containing an occurrence of factual Ipf is here the second argument of a two-place relation Evidence and the first argument of a two-place relation Scene-setting. In the latter case, the second argument of the relation is the complex proposition marker \( \pi_6 \) which embeds a chain of events. These events are all denoted by perfective predicates due to narrative progression.

The relation Scene-setting(\( \alpha, \beta \)), which is not part of the original SDRS-language, does not require – unlike Background – overlap between the event ar-

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guments. Instead, the discussion above suggests that \( \textit{Scene-setting}(\alpha, \beta) \) should come with axioms which require overlap between the assertion time parameter of the two utterances \( \alpha \) and \( \beta \), and, importantly, that the events in \( \beta \) be temporally included in the target state of \( e_\alpha \). The exact nature of relations like \( \textit{Scene-setting} \) is an empirical question which we must leave to future research.

Hopefully, this discussion has shown the usefulness of the tools provided by SDRT, although many important issues are still unexplored when it comes to the dynamics of the aspectual competition in Russian.
Chapter 8

Conclusion

Every textbook of Russian grammar tries to give clear-cut rules for aspectual usage. This aim is also what motivates studies like the present work. However, the history of aspectology has shown us that this ambitious goal cannot be achieved by way of the most straightforward approaches. The aspectologist has to proceed more carefully, in a stepwise fashion.

We have in this thesis given a detailed analysis of one of the aspects in one of its readings, viz. factual Ipf (in past tense contexts). This is the kind of preliminary investigation into the different variants of viewpoint aspect which is necessary before a complete theory of aspectuality can be envisaged. Still, our views on factual Ipf have several implications for the overall aspectual system, as well.

There are two main issues which underlie our study of factual Ipf in Russian:

- What is the nature of factual Ipf?
- How does factual Ipf relate to Pf?

Most attention has been given to the first issue, which also subsumes the question of how factual Ipf relates to other readings of Ipf. We argue, in particular in chapter 3, that factual Ipf refers to complete, singular events (in our world) when used with telic predicates. This is in accordance with the widespread intuition that factual Ipf is ‘resultative’, but it is still necessary to take the question seriously since our position blurs the attractive correlation between Ipf and atelicity. This is where the second issue listed above comes in. The fact that both factual Ipf and Pf refer to complete events gives rise to aspectual competition. Our interest in this phenomenon motivated a practical decision to focus only on telic predicates in this study.

The complete event reading is what unites the different variants of factual Ipf. In the framework adopted here (cf. chapter 2), viewpoint operators induce temporal relations between the event time e and assertion time t. We can therefore represent the interpretation of factual Ipf in form of the DRS-condition: \( e \subseteq t \). However, this simplified representation does not explain the role of factual
Ipf in the aspectual system. One of the main hypotheses underlying this work is that factual Ipf can either assert or presuppose the existence of an event in the denotation of the verbal predicate. Our claim is that this distinction between existential Ipf and presuppositional Ipf is crucial in order to understand and explain the range of data which are usually treated as factual Ipf in Russian aspectology.

The main challenge in this respect is to account for presuppositional Ipf, which is associated with an existential presupposition relative to the verb’s event argument. As demonstrated in chapter 6, Discourse Representation Theory is suitable for analysing presuppositions, which are treated as anaphora. This is to say that presuppositional Ipf (event anaphora) is felicitous if an antecedent (event) is accessible in the input context. This kind of interaction with the evolving context is at the heart of theories of dynamic semantics, such as DRT.

Just like most other presuppositions described in the literature, the existential presupposition of presuppositional Ipf is not always straightforwardly verified in the input context. However, we show that it can always be justified through partial accommodation. In cases where accommodation would be too costly or violate the coherence of the discourse, we predict that presuppositional Ipf is blocked. This prediction seems to be borne out and therefore confirms our analysis. We also suggest that the treatment of presuppositional Ipf can be extended to account for what we call ‘lexical presuppositions’. In these cases, the antecedent is an eventive argument introduced for example through an NP. This can possibly explain why factual Ipf is frequently used with a ‘copular’ function.

The reason why presuppositional Ipf has largely passed unnoticed in the literature is that (factual) Ipf as such is not a presupposition trigger in the traditional sense. The presupposition is already there when factual Ipf enters the scene. We make this formally precise by requiring the presence of a certain <Background, Focus>-partition at the VP-level which is input to the aspectual operator. Typically, some event predicate (e.g. the Agent) is focused, while the main event predicate associated with the verb is backgrounded. This scenario licenses Ipf, and gives rise to the presuppositional Ipf reading, where the backgrounded event is declared in a presuppositional DRS. We show a way of maintaining a compositional analysis of the imperfective operator in this setting, without-posting ambiguity. We further argue that this analysis should also apply to a subset of constituent questions (chapter 6.2), where we find a similar information structure despite the lack of overt intonational focusing.

When the main event predicate is focused and part of the assertion, we get a completely different story: existential Ipf. This reading is analysed from the perspective of temporal semantics. In chapter 5, this allows us to propose a general calculus for temporal phenomena in Russian. The idea behind the calculus is to explore the interaction of (past) tense, temporal adverbials and viewpoint aspect in a compositional setting. To achieve this goal we argue that it is necessary to split up the Reichenbachian notion of reference time into three different parameters: the assertion time, the evaluation time and the frame time. The assertion time (Klein 1995) is particularly important in our analysis.
since it enters the aspectual configuration.

What then is the role of existential Ip in the temporal calculus? First, we argue that the so-called ‘experiential’ reading does not require a perfect-like tense configuration. Past tense in Russian is expressed by the ‘-l’-morpheme alone, and we need not invoke a covert present tense for the cases of aspectual competition. Existential Ip interacts with temporal frame adverbials in ways which are alien to the experiential perfect in English. We therefore de-emphasise the importance of this widespread analogy. What is important for an existential Ip reading is the size of the assertion time. It should be ‘big and floating’. Typically, existential Ip co-occurs with (big) frame adverbials, or with past tense alone. In the latter case, the assertion time equals ‘the whole past’.

In the final part of chapter 5, we discuss a tricky issue, viz. the possibility of past perfect readings in Russian. It is an empirical fact that the evaluation time may differ from the utterance time, in which case we get a relative past interpretation. This has ramifications for our temporal calculus, and we propose a way of dealing with this phenomenon making use of the concept of ‘bound tense’ (von Stechow 1995). We show that this gives us the correct results, including the correct aspectual configurations, in cases where factual Ip (or any other aspectual reading) occurs embedded under a superordinate tense (e.g. expressed through a verbum dicendi). These data demonstrate unequivocally that factual Ip may co-occur with a past perfect reading in Russian.

However, following (Paszlawsk and von Stechow 2003), we go a step further and discuss the possibility of past perfect readings for autonomous sentences. The most straightforward analysis of this phenomenon consists of treating relative past as a case of the evaluation time being anaphoric. However, this contextual approach is problematic for constructions where the evaluation time is provided by a temporal adverbial in the same sentence. In the latter case, we get two different pairs of evaluation and assertion times with only one overt tense. We consider various theoretical implications following from these data involving two semantic tenses in sentences with one morphological tense. We show that our temporal calculus is compatible with the idea of a covert past tense, whether this covert past is a relative past (lower tense) or a deictic past (higher tense). The calculus provides the correct aspectual configurations for all the cases considered and accounts for the interaction with various kinds of adverbials. Along these lines, we can also let factual Ip trigger the interpolation of a covert past when we have a contextually given evaluation time. However, an empirical question is still left unanswered by our analysis. While factual Ip indeed has relative past readings of the ‘contextual kind’, it remains to explain why only Pf seems to occur with two explicit, non-anaphoric evaluation times in a single sentence.

This brings us to the issue of aspectual competition. We do not have an answer to all the questions raised by this phenomenon. However, we believe some progress has been made in certain areas. The basic idea is that factual Ip and Pf are truth-conditionally equivalent at the sentence level, but differ in their dynamic semantics. This has several interesting repercussions.

It is argued in the present work that Pf is drawn towards the assertoric
content, and is therefore functionally different from presuppositional Ipff. The borderlines are admittedly fuzzy since Pf can be used to reintroduce the event in the assertoric content, despite the presence of the event argument in the input context. More research is needed into the role of Pf w.r.t. information structure.

When it comes to the competition with existential Ipff, the relevant parameter is temporal anchoring. To capture this kind of competition we must turn to pragmatic reasoning, which in some respects also extends the DRT-architecture. A particularly interesting case is the competition between Pf and bidirectional Ipff. The latter is a variant of existential Ipff which only occurs with so-called reversible target state predicates. In chapter 7, we argue that Pf explicitly requires the target state to be valid at the end point of the assertion time. Aspectual competition gives rise to a pragmatic implicature saying that factual Ipff is used by the speaker either in order to convey the message that the target state has been cancelled, or in case the validity of the target state is irrelevant in the discourse situation.

There are two different ways of looking at these phenomena. The analysis presented here supports the idea that factual Ipff is associated with interpretations which are pragmatically strengthened due to the competition with Pf. This is particularly true of the presuppositional and bidirectional readings, which receive a rather specific ‘complete event reading’ compared to Pf which is the default choice in this environment. We suggest in chapter 7.3 that this view is compatible with the phenomenon of ‘deblocking’, currently discussed in Optimality theory. However, according to this reasoning, (factual) Ipff is not reduced to being the unmarked member of the aspectual category. In the restricted domain of reference to complete events, factual Ipff is the ‘marked’ choice.

As part of future research, we also discuss an alternative strategy, which is to explicitly encode the temporal anchoring of Pf in the semantics. This move restores the traditional intuition behind Pf as the marked aspect. Furthermore, this idea is compatible with the various discourse relations of the two aspects. Within the framework of SDRT we suggest that Pf is characterised positively by temporal sequencing (‘Narration’), while Ipff in general, and factual Ipff in particular, participate in different ‘non-sequencing’ temporal relations.

Given this analysis of factual Ipff (and its variants), what is our view on Ipff in general? We propose that Ipff is genuinely vague, and gives rise to the underspecified overlap relation $e \bigcup t$. However, in practice we get a disjunction $t \subseteq e \lor e \subseteq t$. A small assertion time triggers a processual reading, while a factual Ipff interpretation arises with a big assertion time (cf. chapter 5.3.3). Analysing factual Ipff is therefore a juggling act: Ipff in itself merely amounts to temporal overlap, but relativised to certain contexts it is legitimate to talk about a specific inclusion relation.

This reinterpretation of the overlap relation is again a question of pragmatics. In the present work, where focus is on a particular reading (factual Ipff) induced by a certain form (imperfective morphology), the linguistic context plays a decisive disambiguating role. This implies that we cannot look at semantics alone, we are constantly referred to the semantics-pragmatics interface.
We believe this is what has made the present work interesting and challenging, and we have therefore put much emphasis on carving out appropriate tools for this task. The tools will have to be modified as more experience is gained in applying formal semantics and pragmatics to Russian data, but hopefully our findings will remain valid.
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