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A NEW COGNITIVE FRAMEWORK FOR RUSSIAN ASPECT

ABSTRACT

The validity of the traditional approach to the semantics of verbal aspect in Russian based on the features "boundedness" and "totality" is questioned. It is argued that these features are not inherent in the meaning of all perfective verbs and cannot be regarded as the semantic invariant of aspectuality. A different approach is suggested, based on the analysis of morphological and syntactic evidence and on the assumption that the cognitive function of grammar is to categorize relevant human experience. It is shown that aspectual oppositions reflect the different cognitive statuses of the events expressed by paired verb lexemes: observed events are categorized in the form of aspectually marked verbs, whereas aspectually unmarked verbs categorize events without reference to observation. The grammatical meaning of aspect is defined as indication to the source of information about the event which can be definite (based on observation), or indefinite (based on speaker's knowledge), and has little to do with "boundedness" or "totality". The suggested analysis is consistent with the central claim of autopoiesis as the theory of the living: "Everything said is said by an observer to another observer".

1. Introduction. Verbal aspect as a grammatical category is singled out in different languages due to the existence of a system of grammatical (morphological) forms whose meaning is not limited to the reflection of the usual tripartite system of temporal distinctions, but also includes (at least such is the belief) an additional characteristic feature of the process (activity, state) expressed by the verb, that is, the manner in which the process occurs or activity is carried out. The manner, or character of the action flow and its distribution in time is considered to be a semantic categorial feature known as aspectuality.

However, the semantics of aspect continues to cause much dispute. Aspect studies in different languages take as a starting point the classical aspectual system in Slavic, in which the basic distinction between what is known as PERFECTIVE (PF) and IMPERFECTIVE (IMP) is morphologically sustained. It is exactly at this point that the whole controversy starts, for there is a profound lack of agreement on what the actual meanings of these aspect forms are. One of the most acclaimed interpretations of aspect meaning is that based on the notion of **boundedness**: "Boundedness is the idea of completeness (exhaustion) of the temporal manifestation of the action as expressed by the verb" (Бондарко, Буланин 1967: 47). Thus, the meaning of the Russian PF is defined as the totality of the action expressed by the verb, whereby the action is viewed as a spot-like, non-continuous event that reaches its bounds and whereupon a certain result of this action is obtained. The meaning of the IMP aspect is usually associated with continuity and linearity of the action in its occurrence, without any reference to action's bounds per se, and with its processual and generic-factual function (Шведова, Лопатин 1989; Храковский 1990).

This semantic approach was adopted by Indo-European linguistics and is reflected in the classification of verbs according to different aspectual classes (Vendler 1967), or the so-called

Aktionsarten. Yet, it is very likely that the whole controversy about the nature and meaning of aspect has been based on a fallacy: "The paradox of the current situation in linguistics is that aspect as a specific set of features of the verb lexeme is singled out strictly and consistently on exclusively grammatical grounds (i. e., combinability and paradigmatic relationships. - A.K.). However, all the efforts of scholars have been directed at presenting aspect in such a way as if it were a category defined on strictly semantic grounds" (Милославский 1989: 39). As a result, traditional semantic theories of aspect in Russian are far from being simple and/or comprehensible, so it is no surprise that for a foreign learner of Russian acquisition of aspect is a challenge that cannot be met in an instructional classroom setting.

Acquisition of grammar is a natural self-regulatory process whereby a child develops an ability to categorize sensory input in symbolic form assigning specific cognitive values to linguistic items. This process relies on the trial-error principle in building the experiential signobject and sign-concept data bases. These two data bases account for the binary principle in the organization of grammatical categories. Consequently, two types of knowledge are distinguished as different cognitive values of grammatical categories: phenomenological and structural (Calver 1946; Goldsmith & Woisetschlaeger 1982; Bickerton 1990; Kravchenko 2002), and grammar is viewed as a system of categorized patterned cognitive experience (Bod 1998) since "everything said is said by an observer to another observer" (Maturana 1978).

In what follows I will not be concerned with the numerous current theories of aspect and their criticisms, since to do so would mean to continue the very tradition I want to break away from; rather, I will try to approach the phenomenon of aspect from a totally different angle looking, in the first place, at purely linguistic data. For this, I will first consider the notions of boundedness and totality which, according to current Russian grammars, constitute the semantic invariant of aspectuality. Then I shall look at some intriguing data from the Russian syntax and morphology and analyze the derivational patterns for base (non-derived) verbs (it is important to remember that in Russian aspect is a lexical-grammatical category based on both lexical and grammatical derivation). These observations will be followed by a discussion where I hope to show that the true nature of aspect in Russian is radically different from what it is traditionally believed to be.

2. Boundedness and Totality. Aspect studies in Russian have a long history, but it has been only recently that the cornerstone of the theory of aspect — the notion of boundedness — was brought to closer scrutiny. Doubts have been expressed about the plausibility of the assumption that actions expressed by verbs have any bounds imposed on them by the verb meaning.

It should be noted here that the term 'action' used to refer to whatever the verb stands for, is not a very good or convenient one: it is not an action that is described by a verb lexeme, but rather an activity, or process of which an action is, or can be, but a part. The notion of 'action' belongs to syntax; an action is not the referent of the verb itself, it is the referent of the verbal phrase. Outside the syntactic structure the meaning of the verb is that of activity or process (or change, in a general sense) and nothing more; it does not imply a starting point, or an end point, for that matter, so it cannot and does not have "inner bounds". Consider (1):

(1) Ty prishla vovremja. Ostalos' dve minuty.
You come PF PAST S F in time. Remain PF PAST IMPERS two minutes.
'You are in time. There are two minutes left'

Traditionally, *prishla* is defined as the past tense of the PF verb *prijti* 'come' or, in other words, the action expressed by this form has reached its inner bounds and is exhausted in the sense of its total completion.

Let us imagine a situation in which an utterance such as (1) could occur: I have to meet someone at a certain place at a certain time (let's say, it's a first night at a movie theater). My date, as is often the case, turns up at the very last moment. Even as she is approaching me, I start moving toward the entrance door, uttering (1). My date does not have a chance, or the time, to stop; in fact, she may even be having to speed up a bit to keep up with me. The activity of going, which is the lexical meaning of the verb *prijti*, is not interrupted even for a moment, it is still taking place after I utter (1). There does not seem to be a good reason for claiming that this very activity has exhausted itself reaching the inner bounds of the action.

An activity by itself, categorized in linguistic form as a certain type of real world phenomena, does not objectively have any inner bounds or limits (Степанов 1976). When we look out the window and see a moving object (a running dog, for example), we know that this object is moving due to successive changes of its positions in space, but nothing in the process itself indicates that it started at a moment prior to this time of observation, or that it is heading toward an end at some moment after. We only see what we see — nothing more and nothing less. Any speculation about there being a starting point or an end point of the dog's run is based not on what we know about the process, but on what we know about dogs as animal species which belong to a wider class of animate objects which constitute a part of our world-view. In a similar way, when we utter each of the following:

- (2) Ivan narisoval krug.
 Ivan draw PF PAST S M circle S M ACC
 'Ivan drew (has/had drawn) a circle'
- (3) Masha napisala pis'mo.

 Masha write PF PAST S F letter S N ACC
 'Masha wrote (has/had written) a letter'
- (4) Miss Marple svjazala paru perchatok.

 Miss Marple knit PF PAST S F pair S F ACC glove PL GEN

 'Miss Marple (has/had) knit a pair of gloves'

it is not the verb itself that accounts for the meaning of completeness of the activity referred to by the predicate, but our knowledge of how things referred to by respective complements in the above sentences, come into being. Starting with a curve and continuing one of its ends until it meets the other, Ivan does not necessarily have to interrupt the process thereupon. Suppose the lead of the pencil, or the tip of the brush (or whatever it is that Ivan is using for drawing) is very thin, and the picture he gets is rather light — it would be quite natural for Ivan (and many other people, for that matter) to enhance it by repeating the process as many times as necessary. Would the utterance of (2) in such a case (after the ends of the curve meet) mean that the activity of drawing is completed? Obviously not; it would mean that in the process of this activity a certain recognizable object has emerged, but surely this does not imply that at the moment this object comes into being, the activity that caused its appearance, ceases. For all we know, the circle may be only a part of a more complicated graphic pattern consisting of other elements, which Ivan can continue to draw without any pause (he may not even be thinking about it as a circle).

In (3) the situation described is not necessarily such that the activity of writing is no longer present therein; Masha can still be writing something (another letter or whatever) at the moment (3) is uttered. Are there sufficient grounds to assert that the activity of writing exhausts itself after reaching its "inner bounds"? The process of writing a letter may be only a part of the activity referred to by the verb, a certain stage singled out on the basis of our knowledge of what it is that we refer to as 'letter'.

In exactly the same way, the situation described by (4) does not necessarily preclude a possibility for the activity 'knitting' to be still in progress when (4) is uttered. Miss Marple can be starting work on a new garment right after she has finished the second glove, and we can utter (4) even as we are watching her skillfully setting out a new base pattern for something she wants to begin to work on. In this case, the activity referred to by the verb is still present in the situation as observed by the speaker, so an assertion about completeness of this activity as resulting from reaching the "inner bounds" thereof, would appear to be false.

However, the above considerations do not apply to all PF verbs. There are two other types of PF verbs (other than prefixed): non-derived (base) PF verbs and derived suffixed PF verbs. The number of base PF verbs is relatively small, and they are the survivors from an earlier stage of the development of the Russian language (such as *brosit'* 'throw', *past'* 'fall', *dat'* 'give', etc.). They are mainly verbs of motion and refer to what might be called the phenomena of primary cognition — as far as the linguistic categorization of processes and events is concerned; in other words, concepts expressed by such verbs belong to the class of semantic prototypes (Jackendoff 1983; Taylor 1989; Geeraerts 1989 *inter alia*).

Derived suffixed PF verbs (the -nu- verbs) such as prygnut' 'jump' (from IMP prygat'), dunut' 'blow' (from IMP dut'), metnut' 'cast' (from IMP metat') and many others, together with the base PF verbs, constitute the purely grammatical forms of the PF aspect (as opposed to lexical-grammatical forms in the case of prefixed verbs). These verbs, typically, name momentary events which are no longer observable at the moment the verb is used in an appropriate utterance. Cf. (5) - (8):

- (5) Lisa brosila kuklu.
 Lisa throw PF PAST S F doll S F ACC
 'Lisa (has/had) dropped the doll'
- (6) Lena dala mne knigu.
 Lena give PF PAST S F I DAT book S F ACC
 'Lena gave (has/had given) me a book'
- (7) Ivan prygnul vniz.
 Ivan jump PF PAST S M down
 'Ivan (has/had) jumped down'
- (8) Ona metnula na menja serdityj vzgljad.

 She cast PF PAST S F on I ACC angry S M glance S M ACC 'She cast an angry glance at me'

Brosila refers not to the object's motion itself, but to the manner in which this motion comes about, or to the action that causes this motion, this action being completed at the time of utterance. Similarly, the verbs prygnul and metnula describe the manner of the actions whereby the consequent processes (Ivan's motion from one place to another in (7), the movement of her [head and] eyes in (8)) come into being. In (6), a change of ownership relation is

described between the object and its possessor which, in a prototypical situation, is effected by the object losing physical contact with its former possessor and coming into physical contact with the new possessor. The form *dala* indicates that the above sequence obtains (i. e., the book is now in my hands), but it does not refer specifically to either one of the constituent actions (yielding and taking), they are viewed as a homogeneous event preceding the utterance of (6).

As examples (5)-(8) show, the meanings of some PF verbs do seem to incorporate the semantic features "boundedness" and "totality", although these verbs constitute only a part of the stock of PF verbs. The PF -nu -verbs seem to be a way of compensating for the loss of the majority of base PF verbs in Old Russian, so it is the base PF verbs that are of primary interest, as they appear to be the authentic bearers of the features "boundedness" and "totality". However, it remains unclear how the presence of these features in the meaning of base PF verbs can be accounted for, or what objective factors play a role in the semantic processes leading to linguistic categorization of these features in a special grammatical form of the verb, which a base PF verb is. And why are these semantic features not obligatorily characteristic of prefixed PF verbs? In searcjh of a possible answer, let us now look at the morphology of the Russian aspect.

3. The Grammar of Aspect

3.1. The Morphology of Aspect. Sentences (1)-(4) contain PF verbs which are derived from the corresponding IMP verbs by adding a prefix. In terms of productivity, prefixation is the primary means of perfectivization of IMP verbs in Russian, and the number of prefixes that serve this purpose is quite large. The majority of such prefixes are locative in nature, and they often preserve their original lexical meaning, especially in verbs of motion, cf.:

(9) Spatial Prefix + IMP idti 'go' → PF verb

vy-	'out'	vy jti	'go/come out'
<i>u</i> -	'away'	ujti	'go away, leave'
pri-	'to'	pri jti	'come'
pere-	'over, across'	pere jti	'go across, cross'
pro-	'through'	pro jti	'go through'
na-	'onto'	na jti	'find'
ot(o)-	'off, aside'	oto jti	'move/step aside'
s(o)-	'from'	so jti	'step down from'
za-	'behind'	za jti	'go behind', etc.

Sentences (5)-(6) contain base PF verbs which, together with derived (suffixed) PF verbs such as in (7)-(8), illustrate the purely grammatical phenomenon of the PF aspect proper. These verbs can take prefixes which modify the lexical meaning of the verb in terms of the motion's direction, but the grammatical meaning of the verb remains unchanged.

Suffixed PF verbs as well as prefixed PF verbs of the type illustrated in (7)-(9), are derived from IMP verbs such as *prygat'* 'jump', *metat'* 'cast', *idti* 'go', etc. Such IMP verbs are non-derived, therefore, they should also be considered as basic. Thus, there are two types of base

verbs, PF and IMP. Base PF verbs always have a base IMP counterpart, but the opposite is not true:

This gives us an idea of the hierarchy between base PF verbs and their counterpart IMP verbs, and characterizes the PF verb as the marked member of the category.

Base imperfective verbs behave differently: there is a series of verbs in Russian which form lexical pairs the same way as the PF/IMP pairs do, the difference being that both verbs in such a pair are non-derived IMP (IMP₁/IMP₂) verbs. These are mainly verbs of locomotion such as in (11):

(11)	IMP_1	IMP_2	Lexical Meaning
	idti	xodit'	GO
	bezhat'	begat'	RUN
	polzti	polzat'	CRAWL
	letet'	letat'	FLY
	vesti	vodit'	LEAD
	katit'	katat'	ROLL, etc.

Since the lexical meaning ('specific kind of locomotion') of these paired verbs is the same, what are the two different forms for? Several explanations have been suggested in literature.

Potebnya (Потебня 1977) defined the meaning of IMP_1 as "concrete" and contrasted it with the meaning "habitual" or "regular" for the IMP_2 verbs. In Jakobson's (1971) terms, the distinction is between the "determinate and indeterminate" aspects. In more recent literature these verbs have been contrasted either on the feature "directedness (IMP_1)/ undirectedness" (IMP_2), or on the double feature "duration/frequency". However, none of these approaches may be accepted as satisfactory. Cf.:

- (12) a. Lena idjot v shkolu.

 Lena go IMP₁ PRES 3S in school ACC

 'Lena is going to school'
 - b. Lena xodit v shkolu.

 Lena go IMP₂ PRES 3S in school ACC

 'Lena goes to school'
- (13) a. Ja idu.
 I go IMP₁ PRES 1S
 'I'm walking'

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b. Ja xozhu.
I walk IMP<sub>2</sub> PRES 1 S
'I walk'
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In (12), directedness is an obvious part of meaning in both (a) and (b), while the same cannot be said about (13a) and (13b).

The "duration/frequency" contrast does not constitute an opposition in the strict sense of the term as two ontologically different features are contrasted. We could speak of a categorial opposition in case of one of the following semantic contrasts: "durative/non-durative", or "frequentative/non-frequentative"; but in that case, IMP₁ would be the marked member in the first instance and the unmarked member in the second. Besides, in sentences such as (14a) and (14b), the idea of duration is an inherent feature of the verb's meaning:

- (14) a. *On bezhit po dorozhke uzhe tselyj chas*. He run IMP₁ PRES 3S along track DAT already whole hour 'He's been running along the track for a full hour already'
 - b. On begajet po dorozhke uzhe tselyj chas. He run IMP₂ PRES 3S along track DAT already whole hour 'He's been running on the track for a full hour already'

Explanations offered by Potebnya and Jakobson are apparently similar, although it is not clear what is understood by "concreteness" or "determinate aspect". However, all these approaches are justified, though be it intuitively and partially. Such features as "concreteness", "determinacy", "direction", "duration" and "frequency" bear, in a certain way, on the main categorial feature that underlies aspectual oppositions and which will be discussed later.

Besides the derivational patterns mentioned above, there is one more suffixation pattern that affects only base IMP_2 verbs capable of taking the -*yva*- suffix:

(15)
$$xodit' \rightarrow xazhyvat'$$
 'go' $letat' \rightarrow ljotyvat'$ 'fly' $delat' \rightarrow delyvat'$ 'do', etc.

The role of this suffix is purely grammatical, it does not affect the lexical meaning of the verb, nor does it change its aspectual status. Part of the meaning of the verbs with the - *yva* - suffix is reference to the denoted event or process as something taking place at a non-specified past time and relevant for the current experience of the agent, that is, it is close in meaning to the experiential perfect in English. In Modern Russian, the - *yva* - verbs are rather seldom used only in the past tense, gradually becoming obsolete (further marked with ¹).

So, in Russian there are three groups of morphologically opposed verbs, and the distinction within each of them is not lexical, but grammatical:

(16) A.	IMP_1	IMP_2	IMP ₃	MEANING
	idti	xodit'] xazhyvat'	GO
	vesti	vodit']vazhyvat'	LEAD
	letet'	letat'	¹ xazhyvat' ¹ vazhyvat' ¹ ljotyvat'	FLY
В.	PF_1	IMP ₂	IMP ₃	
			7	

	brosit' pustit'	brosat' puskat'	¹ brasyvat'	THROW LET
	past'	puskai padat'		FALL
C.	PF_2	IMP_2	IMP ₃	
	prygnut'	prygat'	¹prygivat'	JUMP
	prygnut' tolknut'	prygat' tolkat'	¹prygivat' ¹talkivat'	JUMP PUSH

We may leave the IMP₃ verbs aside as they are not part of regular oppositions due to their incomplete morphological paradigm. If we now compare the contrasted pairs in each of the three groups, it becomes obvious that the IMP₂ verbs are the weak members of the respective oppositions. However, if for Groups B and C their counterparts are marked for the so-called perfective aspect (allegedly expressing "boundedness" and "totality"), it is not so for Group A. What, then, is in common (if anything at all) between the IMP₁ verbs on the one hand, and the PF₁ and PF₂ verbs, on the other hand? Depending on how this question is answered, the entire conceptual framework for the theory of aspect may have to be revised.

All the aspect forms in (16) — IMP_1 , IMP_2 , IMP_3 , PF_1 , PF_2 — are base lexemes subject to further derivation by means of prefixation. Here we observe an intriguing phenomenon: what would seem to be a trivial case of lexical derivation suddenly results in a change of the grammatical status of the IMP_1 verbs, such as *idti* 'go' (cf. example (9)), whereas in the case of the IMP_2 verbs, an added prefix only modifies the lexical and does not affect the grammatical, meaning:

(17)	Spatial 1	Prefix + IMP ₂ xodit' 'go' \rightarrow	IMP _{2der} verb	
	vy-	'out'	vyxodit'	'go/come out'
	<i>u</i> -	'away'	u xodit'	'go away, leave'
	pri-	'to'	pri xodit'	'come'
	pere-	'over, across'	pere xodit'	'go across, cross'
	pro-	'through'	pro xodit'	'go through'
	na-	'on(to)'	na xodit'	'find'
	ot(o)-	'off, aside'	ot xodit'	'move/step aside'
	s(o)-	'from'	s xodit'	'step down (from)'
	za-	'behind'	za xodit'	'go behind', etc.

The prefixed IMP₃ verbs in Group A also retain their aspectual (in the traditional sense) status, but the prefix sometimes loses its spatial meaning, as in *vyxazhivat'* 'swagger', or the entire meaning of a prefixed verb may change due to metaphoric transfer, as in *uxazhivat'* 'nurse'.

In Group B, prefixation of the PF_1 verb is a purely lexical derivational procedure accompanied by an accent shift: the base PF_1 verb retains its aspectual meaning whereas its lexical meaning is modified just like in the case of the prefixed IMP_2 verbs:

(18) Spatial Prefix
$$+ PF_1 \rightarrow PF_{2der}$$
 vy - 'out' $brosit'$ 'throw' $vybrosit'$ 'throw out'

 u - 'away' $past'$ 'fall' $upast'$ 'fall down'

 za 'behind' $sest'$ 'sit' $zasest'$ 'sit in hiding'

The IMP₂ verbs in Group B behave similarly, that is, when a prefix is added they do not change their aspectual meaning (although in some cases there are certain constraints when a particular verb cannot take a particular prefix):

Some verbs, for example, *brosat'* 'throw', seem to be an exception as an added spatial pre-fix changes their grammatical status:

(20)
$$IMP_2$$
 + Spatial Prefix \rightarrow PF
 $brosat'$ 'throw' {......} \rightarrow $zabrosat'$, $sbrosat'$, $perebrosat'$, etc.

The vacant slot of the transformed IMP_2 verb (and of the inadmissible forms such as *vybrosat' 'throw out') in the aspectual paradigm is filled by a prefixed verb with the -yva-suffix, thus compensating for the loss:

Finally, in Group C, the PF₂ and IMP₂ verbs are affected by prefixation in a way similar to the PF₁ and IMP₂ verbs in Group B, except when prefixation is precluded by combinatorial constraints.

Our short survey of the morphology of aspect may be summed up as follows:

- 1. Aspect in Russian is a grammatical category sustained by regular morphological oppositions of two different verb forms which have the same lexical but different grammatical meaning.
- 2. There are three basic types of aspectual oppositions singled out on strictly grammatical (morphological) grounds:
 - (i) base PF₁ verbs vs. base IMP₂ verbs,
 - (ii) derived suffixed PF₂ verbs vs. base IMP₂ verbs,
 - (iii) base IMP₁ verbs vs. base IMP₂ verbs.
- 3. "Boundedness" and "totality" as semantic concepts associated with the grammatical meaning of the perfective aspect are applicable only to PF₁ and PF₂ verbs, but they cannot explain the meaning of the prefixed PF₃ verbs which constitute the overwhelming majority of perfective verbs in Modern Russian.
- 4. IMP_2 are the weak, and PF_1 and PF_2 are the strong members of the opposition. It means that IMP_1 also should be marked for the feature shared by PF_1 and PF_2 , the feature on which aspectual oppositions are based.

With this in mind, let us now look at the grammar of aspect, which embraces the data of two kinds: (i) the grammatical (morphological) paradigms of the Russian verb, and (ii) the functional constraints on the use of different aspects in discourse, and the nature of such constraints.

3.2. The Grammatical Paradigm of the Verb. The Russian verb has a rich morphology and a large number of different grammatical forms: the finite tense-aspect forms, the infinitive, two participles (active and passive), each of which has two forms traditionally labeled as "present" and "past", and two verbal adverbs. In this section, we will look at the grammatical paradigms of the three base-type oppositions as shown in (16) and at the effects of prefixation.

	Base Verb	S ('LEAD') + S	Spatial Prefix \rightarrow	Der	ived Verbs	
Morphol.	IMP ₁	IMP ₂	IMP ₃	PF ₃	IMP _{2der}	IMP _{3der}
type Infinitive	vesti	vodit'	¹ vazhivat'	vy vesti	vy vodit'	` vy vazhivat'
Tense				<u>I</u>		
Past	vjol	vodil	¹ vazhival	vyvel	vy vodil	vy vazhival
Present	vedjot	vodit	*vazhivajet		vy vodit	vy vazhivajet
Future	budet vesti	budet vodit'	*budet vazhivat'	vy vedet	budet vyvodit'	budet vyvazhi- vat'
			PARTICI	PLE		
Present						vy vazhiva-
Active	vedushchij	vodjashchij	*vazhivajushchij		vy vodjashchij	jushchij
Passive	vedomyj	vodimyj	*vazhivajemyj		vy vodimyj	vy vazhivajemyj
Past						
Active	vedshij	vodivshij	*vazhivavshij	vy vedshi	j vy vodivshij	vy vazhivavshij
Passive	*veden	¹ vozhen	*vazhivan	vy veden	*vyvozhen	*vyvazhivan
			VERBAL	ADVER	В	
Present	vedja	vodja	*vazhivaja		vy vodja	vy vazhivaja
Past	*vev	*vodiv	*vazhivav	vy vev	* vy vodiv	* vy vazhivav
∨ = metaph	orized					

Table 1. The grammatical paradigm for the IMP_1/IMP_2 opposition

Morphol.	PF ₁	IMP ₂	PF ₃	IMP _{2der}
type Infinitive	dat'	davat'	vydat'	vy davat'
Tense				
Past	dal	daval	vydal	vy daval
Present		dajot		vy dajot
Future	dast	budet davat'	vydast	budet vydavat'
		PARTI	CIPLE	
Present				
Active		dajushchij		vy dajushchij
Passive		davajemyj		vy davajemyj
Past				
Active	davshij	davavshij	vy davshij	vy davavshij
Passive	dan	¹ davan	vydan	*vydavan
		VERBAL	ADVERB	
Present		vodja		vy davaja
Past	dav	*vodiv	vy dav	* vy davan

Table 2. The grammatical paradigm for the $PF_1\ /IMP_2$ opposition

Morphol. type	PF ₂	IMP ₂	IMP ₃	PF _{2der}	PF ₄	IMP _{3der}
Infinitive	tolknut'	tolkat'	¹ talkivat'	vytolknut'	vytolkat'	vy talkivat'
Tense						
Past	tolknul	tolkal	talkival	vytolknul	vytolkal	vy talkival
Present		tolkajet	*talkivajet			vy talkivajet
Future	tolknjot	budet tolkat'	*budet talkivat'	vytolknet	vy tolkajet	budet vytalkivat
			PARTIC	IPLE		
Present						vy talkiva-
Active		tolkajushchij	*talkivajushchij			jushchij
Passive		tolkajemyj	*talkivajemyj			vy talkivajemyj
Past						
Active	tolknuvshij	tolkavshij	*talkivavshij	vy tolknuvshij	vy tolkavshij	vy talkivavshij
Passive	*tolknut	¹ tolkan	*talkivan	vytolknut	*vytolkan	* vy talkivan
			VERBAL	ADVERB		
Present		tolkaja	*talkivaja		*vy tolkaja	vy talkivaja
Past	tolknuv	*tolkav	*talkivav	vy tolknuv	vy tolkav	* vy talkivav

Table 3. The grammatical paradigm for the PF₂ /IMP₂ opposition

Table 1 gives an overview of the grammatical forms of the paired IMP_1/IMP_2 verbs. As can be seen, an almost complete paradigm is found in the case of IMP_2 with only one possible form missing, the past verbal adverb *vodiv. The IMP_1 paradigm is one member shorter, lacking the past passive participle with a resultative meaning, though it may be easily created in concordance with the derivational pattern. All the IMP_1 verbs are subject to this constraint, while the IMP_2 verbs yield present passive participles, for instance, katat' 'roll' $\rightarrow katan$, taskat' 'drag around' $\rightarrow taskan$. Even the intransitive IMP_2 verbs such as xodit' 'go/walk', jezdit' 'ride' used to be passivized: Modern Russian still features adjectivized past participles nexozhenyj

'not walked on', *nejezzhenyj* 'not ridden on', and impersonal predicatives such as *xozheno*, cf.:

(22) *Mnogo bylo* xozheno po etoj tropinke.

A lot be IMP₂ PAST IMPERS walk IMP₂ PRED along this trail DAT 'This trail had been walked a lot'

The IMP₂ past passive participles do not possess a resultative meaning, rather, their meaning is related to the concept "factual" based on empirical knowledge.

The IMP₃ verbs in Modern Russian have only one form, that of the past tense:

(23) *Xazhival* i ja kogda-to v restorany.

Walk IMP₃ PAST S M and I sometime in restaurants ACC 'There was a time when I too used to go to restaurants'

The right side of the table shows what happens when a spatial prefix is added to the base verb. Only the IMP₂ paradigm remains unchanged as, although the verb's lexical meaning of motion is directionally modified, the derived verb still belongs to the same grammatical class IMP. The IMP₁ verb becomes PF, representing another morphological type, PF₃, beside the base PF₁ and suffixed PF₂ verbs. The PF₃ verbs consistently preclude any present tense forms. Moreover, the present tense form *vedjot* 'lead' combined with a prefix (which retains its full lexical meaning) becomes a future tense form (*vyvedet*), and the missing past verbal adverb **vev* is restored in the prefixed PF form *vyvev*. As for the IMP₃ verb, it fully restores its grammatical paradigm through prefixation, but its meaning becomes metaphorized and the verb thus falls out of the aspectual opposition proper.

Let us now look at Table 2. The grammatical paradigms of the base IMP₂ and derived IMP_{2der} verbs are identical to the corresponding paradigms in Table 1, and the prefixed PF₃ paradigm in Table 1 is identical to the prefixed PF₃ paradigm in Table 2 which, in its turn, repeats the base PF₁ paradigm. The verb *dat'* 'give' (as well as *past'* 'fall', *pustit'* 'let') does not have an IMP₃ form, while the verb *brosit'* 'throw' does: the form *brasyvat'* has an incomplete paradigm similar to that of the verb *vazhivat'* 'lead' in Table 1 which, however, is fully restored as a result of prefixation. At the same time, the meaning of the prefixed verb in this case is not metaphorized, it is substituted by a meaning typical of IMP_{2der} and the verb *vybrasyvat'* 'throw out' makes up for the missing verb **vybrosat'*.

In Table 3, the picture is somewhat different. While the suffixed PF_2 and derived prefixed PF_{2der} paradigms correspond to the general PF pattern (with the exception of the past passive participle constraint on prefixed PF_2 verbs), an addition of a prefix to an IMP_2 verb suddenly results in a different aspectual status of the derived verb which becomes PF_4 , and its place in the aspectual opposition is taken up by a prefixed *-yva-* verb (just like in the case of the verb *brosat'* 'throw').

Another commonly shared feature for the verbs in Tables 1-3 is that, from the point of view of morphology, the future tense of all PF verbs (both base and derived) is the present tense form. It is very clearly observed in the case of the verbs *tolkat'* IMP₂ 'push' / *vytolkat'* PF₄ 'push out': the present tense form *tolkajet* becomes the future tense *vytolkajet*.

The above observations may be summed up as follows.

1. There are lexically equivalent pairs of verbs of the *vesti/vodit'* type traditionally treated as belonging to one aspect (IMP).

- 2. Upon addition of a spatial prefix, IMP₁ becomes PF, while the aspectual status of IMP₂ is not affected. (It must be noted, however, that some IMP₂ verbs may become PF, for instance, *tolkat'* IMP₂ 'push' *vytolkat'* PF₄ 'push out'.)
 - 3. PF is incompatible with present tense.
 - 4. Morphologically, PF future tense forms are present tense forms.
- 5. All PF verbs, both base and derived (with the exception of suffixed PF₂ verbs subject to certain constraints) yield past passive participles with a resultative meaning. IMP₂ past participles, both base and derived, gradually fall out of use, and when used possess a factual meaning.

Looking for possible explanations to these phenomena, we now turn to the functional features of aspectually paired verbs in discourse.

3.3 The Syntax of Aspect. As has been shown by Glovinskaya (Гловинская 1982), there is a certain relationship between the aspectual forms and the general meaning of the context in which they are used, and an aspectual analysis must take into consideration the figure of observer. Similar suggestions have been made by others as well (Падучева 1986; Бондарко 1988; Кошелев 1988). Moreover, the Russian term "vid" used to refer to the respective grammatical category, is related to the verb "videt" 'see' whose etymology can be traced from the Latin *videre* and Gr. εΐδος 'that which is seen'. However, this relationship between the grammatical meaning of the Russian verb and the figure of the observer has not been given sufficient attention.

As has been shown elsewhere (Кравченко 1992, 1993, 1996, 1999, Kravchenko 2001), the observer (as opposed to the speaker) is the primary point of reference for indexical phenomena in language and must be taken into account in the analysis of such grammatical categories as person, tense, aspect, voice, etc. The meaning of these categories cannot be fully explicated without tying it to the figure of observer. I suggest that we now take a look at the functional properties of aspectually paired verbs in two types of context of which one contains explicit indication to the observer as the source of information about the event while the other is neutral in this respect.

The PF₁/IMP₂ and PF₂/IMP₂ Verbs

Consider the following examples:

- (24) *Posmotri, on chto-to* brosil/*brosal v urnu.

 Look, he something throw PF₁/IMP₂ PAST S M into trash can 'Look, he dropped something into the trashcan.'
- (25) Kazhdyje polchasa on *brosil/brosal v kamin novoje poleno. Every half hour he throw PF₁/IMP₂ PAST S M into fireplace ACC new log ACC 'Every half hour he tossed a new log in the fireplace.'
- (26) Chelovek, tol'ko chto davshij/*davavshij vam prikurit', kto on?

 Man just give PF₁/IMP₂ PAST ACT PART S M you light up INF who he?

 'The man who just gave you a light who is he?'
- (27) Otchim, *davshij/davavshij mne rubl' po voskresenjam, menja ne ljubil. Stepfather give PF₁/IMP₂ PAST ACT PART S M me ruble on Sundays DAT me not like

'My stepfather, who used to give me a ruble on Sundays, didn't like me.'

In (24) and (26), the speaker describes directly observed events, and IMP_2 cannot be used. In (25), the verb phrase expresses the event as a one-time action, but the adverbial phrase every half hour indicates that the proposition is not based on some concrete information as the result of an observational event (that is, something that receives a unique spatio-temporal characteristic), but on some generalized knowledge as a result of multiple observations. In other words, production of utterance (25) does not depend on what can (could) be observed at a given moment, but on what is known; so, PF_1 cannot be used.

In (27) the event ("the giving of a ruble") is viewed as part of an indefinite sequence of similar events: the speaker tells about something he knows because of repeated, not one-time experience, and the use of PF_1 is precluded.

- (28) Ax, izvinitje, ja ne xotel vas tolknut'/*tolkat'!
 Oops, excuse, I not want IMP₂ PAST you push PF₂/IMP₂ INF
 'Oops, sorry, I didn't mean to push you!'
- (29) Perestan' menja *tolknut'/tolkat'!

 Stop me push PF₂/IMP₂ INF
 'Stop pushing me!'

In (28), the speaker refers to an event that just took place and the result of which can be observed, so only PF₂ is permitted. However, in (29) where the speaker is undoubtedly the observer, only IMP₂ is possible. Why?

The PF₁ and PF₂ verbs denote actions which are categorized as such on condition that a certain change (verbal referent) took place and was observed before the moment of utterance in which the corresponding verb is used (hence the concepts of "boundedness" and "totality"). The meaning of such verbs as *begin*, *continue*, *stop* (regardless of their aspectual class) is incompatible with PF since it is not possible to begin, continue, or stop doing something that is absent in the observed and described situation. Sentence (29) describes a situation in which either someone tries to physically move me from the place where I am, or someone keeps trying to make me move by repeatedly applying physical pressure. In the first case, a completion of the action is not followed by its expected natural outcome (change of my position in space), and the PF verb cannot be used. In the second case, reference is to a series of actions of "pushing" whereas a typical PF verb refers to a one-time action. As a consequence, in both the cases only the IMP verb may be used.

Sentences with a negative pronoun as the subject, such as *nobody*, do not allow PF when *nobody* has the generalized meaning "not one of all the existing persons", cf.:

synok? — Nikto menja ne *tolknul/tolkal.

Who you push PF₂ PAST S M sonny? — Nobody me not push PF₂/IMP₂ PAST S M 'Who pushed you, sonny? — Nobody pushed me.'

(31) *Kto tebja sjuda pustil?* — *Nikto menja ne puskal.*Who you here let PF₁ PAST S M in? — Nobody me not let IMP₂ PAST S M in. 'Who let you in here? — Nobody let me in.

Ja sam sebja pustil.

I myself me let PF₁ PAST S M in
I let myself in.'

(30) *Kto tebja tolknul*,

The negative subject *nobody* implies that the action did not take place in reality. If an action did not take place, it couldn't be observed, therefore the entire event (or non-event, to be precise) is viewed as presenting inferential knowledge rather than the result of live observation (it is, of course, possible for the statement itself to be false). The question *Who pushed you, sonny?* is asked because the speaker observes something that he interprets as the result of "pushing" as an action with *sonny* as its object; in this case, only PF may be used. Contrarily, the boy who is the speaker, uses IMP which does not imply observability of the event. In (31), the context of both utterances is similar to that in (30), but in *I let myself in* PF is used just like in the opening utterance *Who let you in here?* because the speaker makes a statement about something that he himself observes. The use of *nobody* with indefinite reference ("not one of a given set of persons") requires a PF verb, as in (32):

(32) Chego on plachet? Nikto jego dazhe ne tolknul/*tolkal.

What GEN he cry IMP₂ PRES 3S M. Nobody him even not push PF₂/IMP₂ PAST S M

'Why is he crying? Nobody even as much as jostled him'

As a rule, the PF_1 and PF_2 verbs have one-time actions as their referents, and it affects the interpretation of utterances with such verbs, cf.:

- (33) a. *Ona rodila devochek.* She give birth PF₁ PAST S F girls 'She delivered girls'
 - b. *Ona rozhala devochek*. She give birth IMP₂ PAST S F girls 'She kept bearing girls'
- (34) a. *On djornul* za verjovki. He pull PF₂ PAST S M on ropes 'He pulled the ropes'
 - b. *On djorgal* za verevki. He pull IMP₂ PAST S M on ropes 'He kept pulling the ropes'

In (33a), the act of giving birth is viewed as a one-time event whereby twins (triplets, etc.) are delivered. In (33b), the act of giving birth is viewed as an unspecified number of events whereby an unspecified number of female babies are delivered. Likewise, in (34a) *ropes* is a multiple object of a one-time action, whereas (34b) is about an unspecified number of actions each with an unspecified number of objects.

The IMP₁/ IMP₂ Verbs

Consider the following examples:

(35) Smotri, kuda eto ona jego vedjot/*vodit?

Look where this she him lead IMP₁/IMP₂ PRES 3S 'Look, where is she taking him?'

(36) V kontse ulitsy pokazalsja slon, vedomyj/*vodimyj
In end LOC street GEN showed PF3 elephant lead IMP1/IMP2 PRES PASS PART M S

dvumja fakirami.
two INS fakirs PL INS
'At the end of the street appeared an elephant lead by two fakirs'

The context of both utterances includes explicit reference to the observer (the verbs look and showed), and only IMP_1 is permissible. In the next example, no reference to the observer is made, and thus the use of IMP_1 is precluded:

(37) *Kto tebja obychno *vedjot/vodit v shkolu?*Who you ACC usually lead IMP₁/IMP₂ PRES 3S in school ACC? 'Who usually takes you to school?'

Consider one more example:

- (38) Chto ty znajesh o zhivotnom mirje?

 "What do you know about animal life?"

 Ptitsy *letjat/letajut, zveri *begut/begajut, ryby

 Birds fly IMP₁/IMP₂ PRES 3PL, beasts run IMP₁/IMP₂ PRES 3PL, fish

 *plyvut/plavajut, zmei *polzut/polzajut.
 - swim IMP₁/IMP₂ PRES 3PL, snakes crawl IMP₁/IMP₂ PRES 3PL "Birds fly, beasts run, fish swim, snakes crawl."

When answering the question in (38), the speaker chooses IMP₂ guided by the verb *know* used in the question, that is, he makes a statement on the ground of what he knows about such objects as birds, beasts, etc. Were he to use IMP₁, his answer would be communicatively inappropriate because he would not be saying something about what he knew, but about what he was observing at the moment of utterance. Correspondingly, if someone — let us say, in a city park —approached me and said with an assertive intonation:

(39) Zmei polzajut.
Snakes crawl IMP₂ PRES 3PL
'Snakes crawl'

my most probable reaction would be "So what?" (meaning something like "It's common knowledge", or "Everybody knows that, so why are you telling me?"). However, if this someone said:

(40) *Zmei* polzut.

Snakes crawl IMP₁ PRES 3PL
'Snakes are crawling'

my most likely response would be to start looking around, asking "Where?"

4. The Meaning of Aspect. Examples illustrating the difference in meaning between aspectually paired verbs could be provided ad infinitum. This distinction consistently reflects the contrast between two types of knowledge about the event: phenomenological knowledge based on individual empirical experience, and structural knowledge based on abstraction. In other words, the grammatical term *vid* (literally meaning "view") unambiguously specifies the distinctive feature of the aspectual contrasts, which is the cognitive status of the event expressed by the verb: observed events are contrasted to events reference to which does not imply the observer. Consequently, paired verbs of the *idti/xodit'* ('go') type traditionally labeled as IMP, constitute bona fide aspectual oppositions in the same way as the PF₁/IMP₂ and PF₂/IMP₂ verbs do.

The difference between the cognitive statuses of paired verbs was intuitively felt by Potebnya (compare his "concrete" vs. "habitual" events) and by Jakobson ("determinate" vs. "indeterminate"). Other explanations of the semantic difference between the paired verbs ("duration" vs. "frequence", or "directedness" vs. "undirectedness") also stem from the cognitive semantics of the verb: motion in space as an event categorized by the aspectually marked IMP₁ verb is, in a prototypical situation, present (= exists) at the moment of utterance, it unfolds even as the speaker is describing it — hence the idea of duration associated with such an event. When a moving object is being observed, the idea of directedness of its motion is always present as the observer's eyes follow the object's trajectory.

By contrast, the aspectually unmarked IMP_2 verb expresses knowledge the speaker has about the event; the source of this knowledge may be either a one-time observation as in (41), or multiple observations as in (42):

- (41) Vchera Petja xodil v kino. Yesterday Pete go IMP₂ PAST S M in movies 'Yesterday Pete went to the movies.'
- (42) Petja xodil po komnate
 Pete go IMP₂ PAST S M on room F S DAT
 'Pete was pacing the floor.'

The IMP₂ verb in (42) refers to a process that consists of a number of phases ("to" and "fro") that can be singled out empirically; in a prototypical situation of observation, reference to each single phase would be made with the help of the IMP₁ verb *idti*, as in (43):

(43) Petja idjot po komnate.

Pete go IMP₁ PRES 3S M along room F S DAT

'Pete is moving across the room.'

A sequence of observations registers the recursive character of such phases, which accounts for the feature "frequency" ascribed to the IMP₂ verbs.

5. Conclusion

As a grammatically consistent and functionally oriented analysis shows, the grammatical term *vid* unambiguously specifies the distinctive feature of aspectual contrasts in Russian, namely, the cognitive status of the event expressed by the verb: observed events are categorized in the

form of aspectually marked verbs, whereas aspectually unmarked verbs categorize events without reference to observation. Consequently, the grammatical meaning of aspect is defined as indication to the source of information about the event which can be definite (based on observation), or indefinite (based on the speaker's knowledge), and has very little to do with "boundedness" or "totality" as the so-called semantic invariant.

The suggested cognitive framework for Russian aspect parallels a similar framework for English (Кравченко 1990; 1997; Kravchenko 2002), providing a unified methodology for cognitively oriented typological studies of aspect in different languages.

ABBREVIATIONS

1	First person	LOC	Locative
3	Third person	M	Masculine
ACC	Accusative	NOM	Nominative
ACT	Active	PASS	Passive
DAT	Dative	PAST	Past
F	Feminine	PART	Participle
FUT	Future	PF	Perfective
GEN	Genitive	PL	Plural
IMP	Imperfective	PRED	Predicative
IMPERS	Impersonal	PRES	Present
INF	Infinitive	S	Singular
INS	Instrumental		_

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