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Iconicity and Prototypes: A New Perspective on Russian Verbs of Motion¹

1. Introduction

The notions of 'prototype' and 'iconicity' have been pivotal in recent functionally and cognitively oriented linguistics (Croft 1990; Croft 1991; Lakoff 1987; Langacker 1987; Langacker 1991; Newmeyer 1998). In this paper I argue that they facilitate an account of the derivational morphology of Russian verbs of motion. More specifically, my central claims are:

- A "non-directional" motion verb evinces a more prototypical morphological **form** than its "unidirectional" partner.
- A "non-directional" motion verb evinces a more prototypical **meaning** than its "unidirectional" partner.
- Hence, form and meaning are related in terms of iconicity in that prototypical form corresponds to prototypical meaning and non-prototypical form to non-prototypical meaning.

The scholarly and pedagogical literature tends to focus on the meaning of Russian verbs of motion to the exclusion of form. In shifting the perspective to the relationship between meaning and form I am influenced by Jakobson's (1971/1966) remarks on iconicity and aspect. However, the analysis to be developed in what follows is different from (albeit not at variance with) Jakobson's suggestions.

I shall build my argument step by step. In section 2 I shall survey the morphology of the motion verbs and show that they constitute a hierarchy. In section 3 this hierarchy will be related to the notion of 'prototype', and then, in section 4, to iconicity.

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2. Russian Verbs of Motion and the Hierarchy Generalization

Pairwise occurring verbs of motion in Russian constitute a small, closed and non-productive class. A full list of verbs is given in Table 1. Some scholars add a handful of verbs to the list in Table 1, but the inclusion or exclusion of these verbs has no bearing on any conclusion to be drawn in this paper. I follow what seems to be common practice in considering 13 pairs of motion verbs.²

Table 1: List of Russian Verbs of Motion

Non-directional verb:	Unidirectional verb:	Gloss:
<i>bégať</i> (aj-verb)	<i>bežát'</i> (a-verb)	'run'
<i>ézdít'</i> (i-verb)	<i>échat'</i> (a-verb)	'travel, ride'
<i>gonját'</i> (aj-verb)	<i>gnat'</i> (a-verb)	'drive, chase'
<i>katát'</i> (aj-verb)	<i>katít'</i> (i-verb)	'roll'
<i>lázít'</i> (i-verb)	<i>lezt'</i> (Ø-verb)	'climb'
<i>letát'</i> (aj-verb)	<i>letét'</i> (e-verb)	'fly'
<i>nosít'</i> (i-verb)	<i>nestí</i> (Ø-verb)	'carry'
<i>plávat'</i> (aj-verb)	<i>plyt'</i> (v-verb)	'swim, float'
<i>pólzat'</i> (aj-verb)	<i>polztí</i> (Ø-verb)	'crawl'
<i>taskát'</i> (aj-verb)	<i>taščít'</i> (i-verb)	'drag'
<i>vodít'</i> (i-verb)	<i>vestí</i> (Ø-verb)	'lead'
<i>vozít'</i> (i-verb)	<i>veztí</i> (Ø-verb)	'convey, transport'
<i>chodít'</i> (i-verb)	<i>idtí</i> (Ø-verb)	'go, walk'

Different sources use different terms for the members of the pairs. The most widely accepted terms in English seem to be *determinate/indeterminate* (Foote 1967; Forsyth 1970; Jakobson 1971/1966; Ward 1965) and *unidirectional/multidirectional* (Mahota 1996; Wade 1992). I prefer *unidi-*

² I have not included the verb pairs *brodít'/brestí* 'wander', *lomát'/lomít'* 'break', *mýkat'/mčat'* 'rush', and *valját'/valít'* 'drag', because in present day Russian the members of each couple do not evince the same semantic difference as the verbs in Table 1 and therefore do not constitute pairs of the same type as those listed in Table 1 (Garde 1980, 386; Isačenko 1982, 427; Wade 1992, 340; Ward 1965, 250). Garde (1980, 385) includes the pairs *volóč'/volčít'* 'drag' and *vlačít'/vleč'* 'draw, drag', but in most sources they are not considered. Finally, I have not listed so-called reflexive verbs like *gonját' sja/gnát' sja* 'chase', since for purposes of morphological analysis these verbs are identical to the corresponding verbs without *-sja*.

rectional to *determinate*, because the former gives a better indication of the meaning of the verbs in question. The term *multidirectional*, however, is unfortunate since it—as we shall see in section 4 of this paper—covers only one of several meanings of the relevant verbs. A more precise term would be non-unidirectional, which corresponds closely to the Russian term *glagoly neodnonapravlennoho dviženija* employed by the Academy grammar (Švedova 1980), but as Ward (1965, 252f.) points out, this term is rather cumbersome. In what follows I shall use the term *non-directional*, which seems both sufficiently simple and precise. Throughout the paper I shall add the tag -NON to the gloss of a non-directional verb and -UNI to the gloss of a unidirectional verb.

The verbs display different formal relationships between the present tense and the past tense (infinitive) stems, and accordingly belong to different verb classes listed in Table 2. I shall refer to the class of verbs like *bégat'* 'run-NON', which have an alternation /aj/ ~ /a/ between the two stems, by means of the mnemonic tag '*aj-verb*'. In the same fashion I shall label verbs with an alternation Ø (zero) ~ /i/ (e.g. *ézdít'* 'travel, ride-NON') "*i-verbs*", verbs with Ø ~ /e/ (e.g. *letét'* 'fly-UNI') "*e-verbs*" and verbs with an alternation Ø ~ /a/ (e.g. *bežát'* 'run-UNI') "*a-verbs*". As a cover term for *i-*, *e-* and *a-*verbs I shall employ "*V-verbs*" (with a capital "V"), since they all display Ø ~ vowel alternations. The verb *plyt'* 'swim-UNI' evinces a /v/ ~ Ø alternation, and is accordingly referred to mnemonically as a "*v-verb*" (with a lower-case "v"). Verbs like *nestí* 'carry-UNI' are labelled "*Ø-verbs*" since their present and past tense stems are identical. For explicitness each verb in Table 1 is provided with a marker for verb class.

Table 2: Verb Classes Relevant for Verbs of Motion

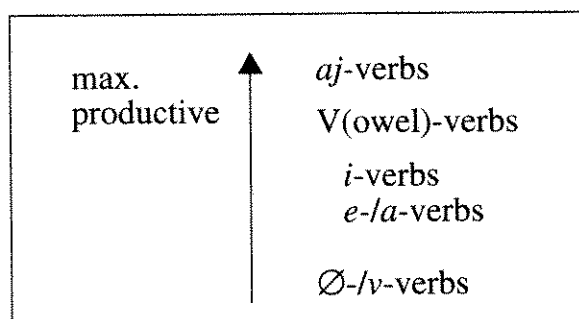
	Label:	Alternation:	Present:	Past:	Gloss:
a)	<i>aj-verb</i>	/aj/ ~ /j/	/b'égaj-ot/	/b'éga-l/	'run-NON'
b)	<i>V-verb</i>	Ø ~ V			
i)	<i>i-verb</i>	Ø ~ /i/	/jézd'-it/	/jézd'-i-l/	'travel-NON'
ii)	<i>e-verb</i>	Ø ~ /e/	/l'ot'-ít/	/l'ot'-é-l/	'fly-UNI'
iii)	<i>a-verb</i>	Ø ~ /a/	/b'ež'-ít/	/b'ežá-l/	'run-UNI'
c)	<i>v-verb</i>	/v/ ~ Ø	/plyv'-ót/	/plý-l/	'swim-UNI'
d)	<i>Ø-verb</i>	no alternation	/n'os'-ót/	/n'os/	'carry-UNI'

In Figure 1 I have organized the verb classes in a hierarchy spanning from the productive and most common classes to the smallest, non-productive

classes. Both *aj*- and *i*-verbs constitute productive classes in Contemporary Standard Russian (Švedova 1980, §1553), but there are good grounds to place *aj*-verbs highest up in the hierarchy, since this class, which involves all so-called secondary imperfective verbs and extremely productive suffixes like *-ičat'*, is known to be the most productive verb class in Russian (cf. e.g. Feinberg 1996; Isačenko 1982, 223). According to Bielfeldt (1952, 398) about half of all Russian verbs belong to this class. The classes of $\emptyset$ - and *v*-verbs comprise only a handful of (simplex) verbs altogether, and they are therefore placed at the bottom of the hierarchy. In order to avoid complications that are irrelevant for my line of argumentation, I have placed $\emptyset$ - and *v*-verbs in one slot, and I have also provided only one slot for *e*- and *a*-verbs.

The Verb Class Hierarchy in Figure 1 is a good point of departure for making generalizations about the morphology of motion verbs. The first

Figure 1: The Verb Class Hierarchy



observation to be made is that the members of a pair belong to different verb classes and therefore occupy different slots in the hierarchy. If we as a first approximation treat V-verbs as one class (i.e. without distinguishing between *i*-, *e*- and *a*-verbs) and disregard the single *v*-verb *plyt'* 'swim-UNI', we see that all logically

possible combinations of verb classes are attested. The examples in (1a–c) show that *aj*-verbs co-occur in pairs with both V-verbs and $\emptyset$ -verbs, and V-verbs and $\emptyset$ -verbs also go together in pairs. Notice, however, that the mirror images of the pairs in (1a–c) are not attested, as can be seen from (1d–f). On this basis it is possible to formulate the generalization that the non-directional member of a pair is always higher up in the Verb Class Hierarchy than its unidirectional partner. I call this the "Hierarchy Generalization". For clarity it is given in (2).

(1)

	Non-directional:	Unidirectional:	Example:	Gloss:
a.	<i>aj</i> -verb	– V-verb	<i>katát' – katít'</i>	'roll'
b.	V-verb	– $\emptyset$ -verb	<i>nosít' – nestí</i>	'carry'
c.	<i>aj</i> -verb	– $\emptyset$ -verb	<i>pólzat' – polztí</i>	'crawl'

d. V-verb	– aj-verb	[not attested]
e. Ø-verb	– V-verb	[not attested]
f. Ø-verb	– aj-verb	[not attested]

(2) The Hierarchy Generalization:

In a pair of motion verbs, the non-directional member is higher up in the Verb Class Hierarchy than its unidirectional partner.

Two verb pairs do not fit into the simplified taxonomy in (1): the pair *ézdít'* (*i*-verb)—*échat'* (*a*-verb) 'travel, ride' and *plávat'* (*aj*-verb)—*plyt'* (*v*-verb) 'swim'. However, these verbs are not at variance with the generalization, because in both pairs the non-directional verb occupies a slot higher up in the hierarchy than the corresponding unidirectional verb.

The Hierarchy Generalization is the first step from chaos to order in the derivational morphology of Russian motion verbs, but in order to give it more explanatory power I would like to relate it to the notions of 'prototype' and 'iconicity'. This is the topic of sections 3 and 4 of the paper.

3. Prototypes

3.1 Global Prototype

The notion of 'prototype' is one of the cornerstones of cognitive linguistics. Indeed, the work by Eleanor Rosch (cf. Lakoff 1987, 39ff.) on prototypes in psychology was one of the major influences that led to the birth of cognitive linguistics. It is convenient to illustrate categorization in terms of prototypes by means of a non-linguistic example, namely the category of birds. Robins and sparrows are felt to be more typical birds than, say, penguins and ostriches, because the former exhibit a property that most birds have, namely the ability to fly. They therefore belong to a subcategory of birds that is more representative for the category as a whole than penguins and ostriches which lack the ability to fly. The notion of 'prototype' may be defined as a central subcategory that shows the highest degree of representativity of the category as a whole.³ A category that is organized around

³ More elaborate definitions are given in the cognitive linguistics literature (cf. e.g. Langacker 1987, 371; Taylor 1990, 529), but the simple definition is sufficient for present purposes. Notice, that although cognitive linguistics has been concerned mainly with semantics, the notion of 'prototype' is not only applicable to meaning, but also to form. For instance, Bybee and Slobin (1982) and Bybee and Moder (1983) explore the prototypical structure of past tense morphology in English, and Taylor (1995, 222ff.) even argues that phonemes may be analysed as structured categories organized around prototypes.

a prototype is often referred to as a "radial category" (Lakoff 1987, 91), and this usage will be adopted in what follows.

(3) **Prototype:**

A central subcategory that shows the highest degree of representativity of the category as a whole

Prototypicality in the sense of the definition in (3) may be applied straightforwardly to the Verb Class Hierarchy. The subcategory of *aj*-verbs has more members than that of *i*-verbs, which in turn is a larger subcategory than $\emptyset$ -verbs. Since *aj*-verbs display the most frequent and hence most representative type of stem alternation, they are prototypical Russian verbs, while *i*-verbs constitute a less central subcategory and $\emptyset$ -verbs quite a peripheral subcategory. In other words, the Verb Class Hierarchy reflects prototypicality directly. Hence the Hierarchy Generalization may be reformulated in terms of prototypes as in (4):

(4) **The Hierarchy Generalization (prototype version):**

In a pair of motion verbs, the non-directional member represents a more prototypical verb class than its unidirectional partner.

The Hierarchy Generalization illustrates the ability of prototype theory to capture morphological generalizations, and given that categorization in terms of prototypes is central in cognitive linguistics, the Hierarchy Generalization lends support to a cognitive linguistics approach to morphology. I hasten to add, however, that it is certainly possible to reformulate the generalization in terms of e.g. markedness, which may be defined as "an asymmetric relationship between two or more elements" (Janda 1996, 209). As an alternative to the generalization in (4) one might state that a non-directional motion verb represents a less marked verb class than its unidirectional partner.

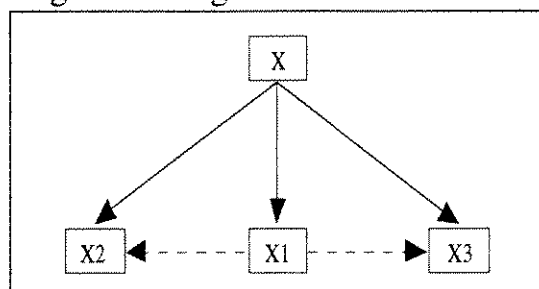
A discussion of the relationship between markedness and prototypicality is beyond the scope of the present paper, but the reader is referred to Janda (1996, 228) who argues that from the perspective of cognitive linguistics markedness appears as a natural consequence of the way linguistic knowledge is organized (see also Lakoff 1987, 59ff.). The reason why I, as a cognitive linguist, prefer to talk about prototypes is that this term emphasises the connection to psychology. Recall that prototype theory came to cognitive linguistics from psychology through the work of Rosch. In addition, prototypes facilitate an account of the variation among V- and $\emptyset$ -/v-

verbs with regard to stem alternations, stress and number of syllables. This variation is the topic of sections 3.2 and 3.3.

3.2 Local Prototype 1: Ø- and *v*-verbs

We have seen that the Verb Class Hierarchy reflects a category structured around a prototype where *aj*-verbs are the most prototypical and Ø-/*v*-verbs the most peripheral subcategory. However, in addition to being related to the global prototype of *aj*-verbs, V-verbs and Ø-/*v*-verbs themselves constitute radial categories structured around local prototypes. In order to show this clearly, I shall employ Langacker's (1987, 369ff.) network model for categorization, illustrated in Figure 2. Each node in the network is called a schema. The schemas on the bottom level represent the subcategories of the category, labelled X1, X2 and X3. The schema on the top level represents all the information that is shared by all the subcategories, viz. X, and it is thus compatible with the lower level schemas, but less specific than them. This specificity relationship is called instantiation and represented by solid arrows. The dashed arrows symbolize the relationship between the prototype, in this case the schema X2, and the peripheral subcategories. This relationship is called extension.

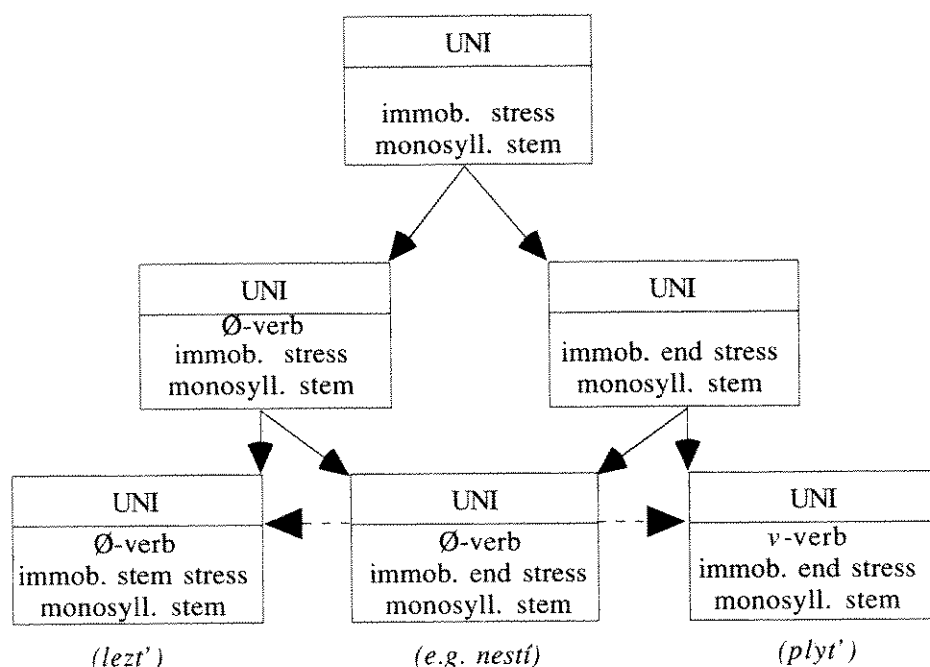
Figure 2: Langacker's Network Model



In Figure 3 (on page 112), I give a network for Ø- and *v*-verbs. Each schema is represented as a box with two parts. The upper part contains the relevant aspects of the meaning, in this case UNI(-directional). The lower part of each box represents form. In order to illustrate the structure of the category it is necessary to take into consideration not only stem alternations, but also stress patterns. If we restrict ourselves to the present tense, Russian verbs belong to either of three stress patterns illustrated in Table 3 (on page 112). Normally, Ø-verbs display immobile end stress. The only exception among these verbs is *lezt'* 'climb-UNI', which has stem stress. Accordingly, I consider end-stress prototypical for Ø-verbs, whereas *lezt'* constitutes a peripheral subcategory.

Stress also allows us to extend the category in another direction. The *v*-verb *plyt'* 'swim-UNI' resembles prototypical Ø-verbs in that it has end stress and also monosyllabic stem. Since both properties are relatively rare in Russian verb morphology, but characteristic of Ø-verbs, they provide a

Figure 3: The Subcategory of Ø-/v-verbs



salient connection between *plyt'* and Ø-verbs. On this basis I assume an extension relation between *plyt'* and the prototypical Ø-verbs. The fact that Ø- and v-verbs are related so as to constitute a radial category, lends further support to my decision in section 2 to place them in the same slot in the Verb Class Hierarchy.

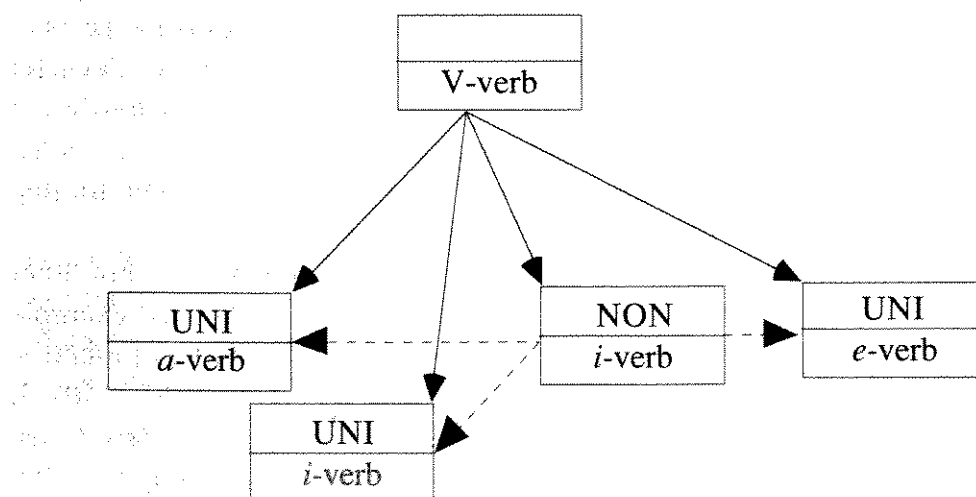
Table 3: Stress Patterns in the Finite Present Tense.

	Immobile stem stress:	Mobile stress:	Immobile end stress:
1. sg	letáju	nošú	nesú
2. sg	letáeš'	nósiš'	nesěš'
3. sg	letáet	nósit	nesět
1. pl	letáem	nósim	nesēm
2. pl	letáete	nósite	nesēte
3. pl	letájut	nósjat	nesút
Gloss	'fly-NON'	'carry-NON'	'carry-UNI'

3.3 Local Prototype 2: V-verbs

We now turn to V-verbs, i.e. the verbs with a vowel ~ zero alternation. The group comprises nine *i*-verbs, three *a*-verbs (*bežát'* 'run-UNI', *échat'* 'travel, ride-UNI' and *gnat'* 'drive, chase-UNI') and one *e*-verb (*letét'* 'fly-UNI'). Given that *e*- and *a*-verbs constitute minorities, I consider them peripheral subcategories in Figure 4. This situation is in harmony with the situation in the language as a whole, since *i*-verbs represent a productive pattern, whereas *e*- and *a*-verbs do not. Notice that all the *e*- and *a*-verbs in the category of motion verbs are unidirectional. Thus, there is a correlation between non-prototypicality and unidirectional meaning, which complies with the Hierarchy Generalization. In this way, the structure of the subcategory of V-verbs lends additional support to the generalization. Further support comes from the fact that the *a*-verbs all evince idiosyncracies in their conjugation. The verb *gnat'* 'drive, chase' has a vowel ~ zero alternation in the root, *échat'* 'travel, ride' displays an idiosyncratic consonant alternation in the root, and *bežát'* 'run' a unique blend of conjugation patterns.

Figure 4: The Subcategory of V-verbs



While *e*- and *a*-verbs are unidirectional, *i*-verbs tend to be non-directional. Only two *i*-verbs of a total of nine are unidirectional: *katít'* 'roll' and *taščít'* 'drag'. In Figure 4, these two verbs are depicted as a non-prototypical subcategory related to the prototypical subcategory of non-directional *i*-verbs.

3.4 Conclusion

To summarize the discussion of prototypicality, I have argued that Russian verbs of motion display prototypicality on two levels. The subcategory of *aj*-verbs constitute a **global** prototype. On the **local** level V-verbs and Ø-/v-verbs constitute radial categories structured around prototypes. The notion of 'prototype' allows us to describe the relationships between more and less regular categories. This makes it possible not only to rephrase the Hierarchy Generalization in terms of prototypes, but also to handle the variation among V- and Ø-/v-verbs with regard to stem alternations, stress and number of syllables. In conclusion, then, the notion of 'prototype' provides a valuable tool in morphological analysis.

4. Iconicity

4.1 Introduction

Saussure (1984/1916) focused on the arbitrariness of the linguistic sign. For instance, there is no reason why a certain mammal should be designated as *koza* in Russian and *goat* in English. Not all linguistic signs are arbitrary, however. The most well known counterexample is onomatopoeic words like English *bang* where the word's sound shape imitates the phenomenon it signifies (for discussion of onomatopoeia see e.g. Dressler 1995). Signs where in Jakobson's (1971/1965, 347) words a relationship of "factual similarity" holds between the signifier and the signified are called *icons*, a term coined by Charles S. Peirce (see Andrews 1990; 1996 for discussion with reference to Slavic languages; Shapiro 1983).

Onomatopoeia represent a somewhat marginal phenomenon, but other types of iconicity are in fact pervasive in grammar. A much cited example of iconicity in syntax is Caesar's *veni, vidi, vici* where the order of mention mirrors the order the actions took place (Jakobson 1971/1965, 350). It would indeed be possible to express the same content by, say, *before I conquered, I came and saw*, but as pointed out by Hopper and Traugott (1993, 26), this would appear less natural and require more complex syntactic constructions. In morphology, a good example of iconicity is the plural of nouns (Jakobson 1971/1965, 352), which is very often across languages formed by the addition of an affix to the singular, like in Russian *nos* 'nose' (nom. pl: *nosy*). This is iconic, since what is semantically 'more' is also formally 'more' (Mayerthaler 1981, 25; Wurzel 1989, 11).

It is easy to find counterexamples to iconicity in Russian and other languages, but nevertheless iconicity is of theoretical importance, because it seems to represent a "natural state of affairs" which linguistic change often strives to establish or preserve (Anttila 1989, 255), and which forms the basis for typological comparison and formulation of linguistic universals (Croft 1990, 164ff.). Against this background, it stands out as an important task to establish how much iconicity there is in a given language. With this task in mind let us return to the Russian verbs of motion.

4.2 Iconicity and Prototypicality

In order to demonstrate that Russian motion verbs evince iconicity, a short discussion of their semantics is necessary. The verbs I have labelled "unidirectional" denote motion in one direction towards a goal. Illustrative examples are given in (5). Particularly telling is, perhaps, (5a) in which the context tells us that the aircraft in question goes on flying in the same direction as before, despite the fact that it is on fire.

- (5) a. *Samolët [...] gorel, no prodolžal letet'.* (Čukovskij, after Foote 1967, 13)
 'The plane was on fire, but still went on flying.'
 b. *Vy letite v Moskvu?* (Mahota 1996, 10)
 'Are you flying to Moscow?'
 c. *Kuda ty menja veděš'?* (Mahota 1996, 10)
 'Where are you taking me (on foot)?'

Non-directional verbs are used to denote a wider range of motion patterns, as can be seen from the sentences in (6)–(8). The sentences in (6) illustrate motion 'round about', i.e. with no particular direction involved. Notice the characteristic preposition phrases with *po* + a noun phrase indicating the spaces within which the motion takes place.

- (6) a. *Kogda učitel' čital diktant, on chodil po auditorii.* (Mahota 1996, 8)
 'While the teacher was reading the dictation, he walked around the room.'
 b. *Teper' oni vmeste sobirajut griby, polzajut po trave...* (Aksënov, after Foote 1967, 23)
 'Now they gather mushrooms together, crawling about in the grass.'

The examples in (7) involve motion to a destination and back again. Russians often use a non-directional motion verb in order to indicate that they

have been to a place. It is not appropriate to utter a sentence like (7a) before you have gone to the Caucasus and then returned back home.

- (7) a. Ja ezdil odin raz na Kavkaz. (Judina, after Forsyth 1970, 326)
 'I have been to the Caucasus once.'
 b. Ostrosablin tol'ko čto letal na aërodrom za gorjučim... (Čukovskij, after Foote 1967, 24)
 'Ostrosablin has just been to the aerodrome to get fuel.'

In (8), directionality is not relevant at all, as the sentences are about the ability to perform the relevant type of motion as such. This is important in the present context. Given that non-directional verbs are used in sentences like (8), it seems reasonable to assume that the general meaning, i.e. the meaning that covers all usages, of these verbs involves no specification for directionality. As Dennis Ward (1965:252) puts it, "[t]he only meaning common to the indeterminate verbs [non-directional verbs in my terminology —TN] on all occasions is absence of the idea of motion in one direction". This is why I prefer to call them **non-directional**, rather than e.g. **multidirectional**. The unidirectional verbs, on the other hand, obviously are specified to denote motion in one particular direction. Against this background it seems reasonable to assume a privative opposition in Trubetzkoy's (1939) sense, where unidirectional verbs are specified for directionality, while non-directional are not. This conception was first proposed by Isačenko (1982, 423), and is adopted by most researchers in the field (cf. Forsyth 1970, 322 and 346; Ward 1965, 252 for particularly clear statements).⁴

- (8) a. Ja ljublju samolëty... Ja choču letat'. (Čukovskij, after Foote 1967, 28)
 'I love aeroplanes... I want to fly.'
 b. Olja prekrasno plavaet. (Mahota 1996, 8)
 'Olja is a great swimmer.'

Leaving motion verbs for a second and shifting our attention to verbs in general, it is clear that most Russian verbs are not specified for directionality in space. Unidirectional motion verbs are therefore special in that they evince a semantic specification which is only found on a small number of verbs. Non-directional motion verbs, on the other hand, adhere to the nor-

⁴ A somewhat different analysis has been proposed by Durst-Andersen (1997). For discussion of the meaning of motion verbs with special focus on Russian and East European works, see Mäkilä (1988).

mal state of affairs, since they are not specified for directionality. In section 3.1 above I stated as the Hierarchy Generalization that "in a pair of motion verbs, the non-directional member represents a more prototypical verb class than its unidirectional partner". We now see that this situation on the form side of the sign (the signifier) is mirrored on the meaning side (the signified), insofar as the more prototypical form (i.e. verb class) corresponds to the prototypical meaning (no specification of directionality). According to the definition I gave in section 4.1, this is an instance of iconicity, and I therefore dub the statement in (9) "The Iconicity Generalization".

(9) The Iconicity Generalization:

In Russian, a non-directional verb of motion evinces more prototypical form and meaning than its unidirectional partner.

4.3 Jakobson's Approach

As mentioned in section 1, Jakobson (1971/1966) sketches an analysis of iconicity in Russian verbs of motion. He observes that the stem suffix of a non-directional verb ("indeterminate" in his terminology) is longer than that of a corresponding unidirectional ("determinate") verb. The suffix of an *aj*-verb (i.e. *-aj*) is longer than that of a *V*-verb (*-i*, *-e* or *-a*), which in turn is longer than the $\emptyset$ suffix of $\emptyset$ -*v*-verbs. In Jakobson's (1971/1966, 200) words, unidirectional verbs signal "the integrity and unbrokenness of the narrated event", whereas non-directional verbs are "devoid of such signalization". Given this, Jakobson argues, unidirectional (determinate) verbs have a more restrictive meaning, which iconically mirrors their more restrictive (i.e. shorter) form.

The analysis proposed in the present paper is different from Jakobson's approach. Whereas the formal basis for the iconic pattern discussed by Jakobson is the length of stem suffixes, the present paper has taken prototypical verb class as its point of departure. However, a linguistic category may evince iconicity in many ways, and there is no conflict between the two analyses. On the contrary, the analysis presented here lends support to Jakobson's (1971/1965) hypothesis of iconicity as the "essence of language" in advancing further evidence for the pervasiveness of iconicity in Russian verb morphology and for the fruitfulness of a semiotic approach to this part of Russian grammar (see e.g. Shapiro 1980; 1983; Feinberg 1996 for further discussion of iconicity with regard to Russian verb morphology).

5. Conclusion

In conclusion I would like to focus on two aspects of the analysis I have developed in the present paper. First, what on the face of it looks like an unstructured list of verbs, upon closer inspection turns out to be a well-defined semiotic system. Secondly, it is the notion of 'prototype' that enables us to bring out the iconicity of the Russian motion verbs. In this way the proposed analysis shows that prototype theory and cognitive linguistics in general can contribute to the study of language as a semiotic system.

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