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Susan M. Janecek  
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enc.: rough pages

## BEYOND THE PAIR: ASPECTUAL CLUSTERS FOR LEARNERS OF RUSSIAN

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### *1. Introduction*

The pair model of Russian aspect is convenient and it works well, at least for beginning learners. However, as our courses advance, both we and our students need to move beyond the pair. This article offers a ready solution worked out in detail for the entire vocabulary typically learned in the first two years of Russian class. This solution, the “cluster” model (based on Janda 2007), is a simple, elegant system regulated by familiar concepts.

The cluster model recognizes that most Russian verbs are members of aspectual clusters containing more than two verbs. The cluster model builds on rather than abolishes the familiar pair model, and thus can be integrated into existing Russian courses. The cluster model is not significantly harder to learn, and it a) enables a learner to recognize and use a greater range of verbs (including items not listed in dictionaries), b) seamlessly accounts for some difficult aspectual phenomena (such as motion verbs and bi-aspectual verbs), and c) makes it possible to guess the cluster structure of newly learned verbs based on their lexical meaning. This article is supplemented by an on-line resource, a pedagogical database listing the cluster structures of 266 verbs typically learned in first- and second-year Russian courses (<http://hum.uit.no/lajanda/clusterfrontpage.html>).

In section 2 we present the four types of Perfective verbs that can inhabit a cluster along with an Imperfective verb. There are four Key Cluster types, with one, two, three, or all four types of Perfectives, and these are presented in section 3. There are two concepts that drive the entire system, making it

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possible to guess the likely cluster structure even of novel verbs, as shown in section 4. We demonstrate in section 5 that the motion verbs are central to the system of aspectual clusters, and the bi-aspectual verbs are also accommodated in the cluster model. Section 6 gives a guided tour of the on-line database of verb clusters and offers a menu of teaching suggestions and exercises, and section 7 offers some conclusions.

Throughout this article, we use a superscript “p” to identify Perfective verbs and a superscript “i” for Imperfective verbs.

## 2. The Four Types of Perfectives

The Perfective category is not uniform. In addition to an Imperfective Activity, we distinguish four different types of Perfectives:

**Natural Perfective**—This is the Perfective that is the natural culmination of an Imperfective Activity, equivalent to the Perfective “partner” in the pair model. The Perfectives сыграть<sup>p</sup> ‘play’ and спеть<sup>p</sup> ‘sing’ are Natural Perfectives. A few Natural Perfectives, like услышать<sup>p</sup> ‘hear’, describe a sudden attainment. Natural Perfectives do not normally have secondary Imperfectives.

**Specialized Perfective**—This type of Perfective is present when a prefix adds new information, usually motivating the derivation of a secondary Imperfective, as we see with выиграть<sup>p</sup>/выигрывать<sup>i</sup> ‘win’ and переработать<sup>p</sup>/перерабатывать<sup>i</sup> ‘revise’. When we say that a cluster contains a Specialized Perfective, this means that there may be one or more Specialized Perfectives, along with any secondary Imperfectives and Complex Act Perfectives derivable from the secondary Imperfective(s).

**Complex Act Perfective**—This type of Perfective combines an Activity with a limit on its beginning, ending, or duration. The prefixes most commonly used to build Complex Act Perfectives are по- ‘for a while’, про- ‘for a certain duration’, за- ‘begin’, and от- ‘stop’. Some examples are поиграть<sup>p</sup> ‘play for a while’, заулыбаться<sup>p</sup> ‘begin to smile’, проработать<sup>p</sup> ‘work for a certain duration’, отлюбить<sup>p</sup> ‘stop loving’. It is generally not possible to derive a secondary Imperfective from a Complex Act Perfective.

**Single Act Perfective**—This type of Perfective tells us that only a single act was performed, or that a single act is extracted from an Activity made up of conceptually identical repeated units. The verb чихнуть<sup>p</sup> ‘sneeze once’ is a Single Act Perfective, since чихать<sup>i</sup> ‘sneeze’ describes an Activity composed of identical units. Most Single Act Perfectives contain the suffix -ну, but motion verbs (see section 5) can use prefixes for this purpose, as in сходить<sup>p</sup> ‘walk someplace and back once’. It is generally not possible to derive a secondary Imperfective from a Single Act Perfective.

As we see in the descriptions of the four types of Perfectives above, each type is distinct. The recognition of a variety of Perfectives is in keeping with what we know from linguistic research (Isačenko, Tatevosov, Janda 2007). The recognition of Complex Act and Single Act Perfectives makes it possible

to cover the issue of actionality (a.k.a. “Aktionsart,” see Tatevosov 2002, Sasse 2002) in a way that is accessible for learners.

The Natural Perfective best corresponds to the Perfective familiar from the pair model. It is possible for an Imperfective to combine with two, three or all four types of Perfectives, or to have no Natural Perfective at all. However, it is not the case that “anything goes” in terms of cluster structures. Section 3 presents the cluster types illustrated with examples. Section 4 demonstrates how two familiar concepts regulate the system, making it possible to guess the cluster structure of a given verb. For convenience we abbreviate the names of the cluster components as follows: A = (Imperfective) Activity, NP = Natural Perfective, SP = Specialized Perfective, CAP = Complex Act Perfective, SAP = Single Act Perfective.

### 3. The Clusters

This section gives an inventory of the four Key Cluster types that exist in Russian and their variants.

#### 3.1 Illustrations of Four Key Clusters

There are two good reasons for students to become familiar with the four key cluster types: a) most of the verbs they are likely to encounter have these cluster types, and b) the remaining cluster types are simple variants of these four. This section presents one cluster drawn from the pedagogical database for each of the four cluster types, along with a figure stating the percentage of verbs with this cluster type found in the aggregate vocabulary of *Nachalo* and *Vputi*. The presentations here are purely for illustration; they are not intended to represent the full extent of any given cluster. There are three reasons for this: a) fuller representations are available in the pedagogical database (see section 6); b) it is not uncommon for a cluster to contain many Specialized Perfectives, plus Imperfectives secondarily derived from them, and then possibly Complex Act Perfectives derived from the secondary Imperfectives—the illustrations here give samples rather than full clusters in order to conserve space; and c) the system is dynamic, meaning that there are no fixed boundaries to the clusters, which are continuing to evolve as Russian evolves, so it would be artificial to declare any representation to be the “full” cluster of a given verb. The latter issue does not undermine the value of the clusters. Clusters are real, but it would be wrong to assert that they are fixed or exceptionless.

#### Key Cluster 1: A+NP

Activity: благодарить<sup>i</sup> ‘thank’

Natural Perfective: поблагодарить<sup>p</sup> ‘thank’

Frequency: 36.1%

#### Key Cluster 2: A+NP+SP

Activity: красть<sup>i</sup> 'steal'

Natural Perfective: украсть<sup>p</sup> 'steal'

Specialized Perfective(s): обокрасть<sup>p</sup> (обкрадывать<sup>i</sup>) 'rob', выкрасть<sup>p</sup> (выкрадывать<sup>i</sup>) 'loot, clean out'

Frequency: 19.5%

Key Cluster 3: A+NP+SP+CAP

Activity: играть<sup>i</sup> 'play'

Natural Perfective: сыграть<sup>p</sup> 'play'

Specialized Perfective(s): выиграть<sup>p</sup> (выигрывать<sup>i</sup>) 'win', проиграть<sup>p</sup> (проигрывать<sup>i</sup>) 'lose'

Complex Act Perfective(s): поиграть<sup>p</sup> 'play for a while', заиграть<sup>p</sup> 'begin to play'

Frequency: 13.2%

Key Cluster 4: A+NP+SP+CAP+SAP

Activity: резать<sup>i</sup> 'cut, slice'

Natural Perfective: нарезать<sup>p</sup> (also: срезать<sup>p</sup>, зарезать<sup>p</sup>, вырезать<sup>p</sup>) 'cut, slice'

Specialized Perfective(s): врезать<sup>p</sup> (врезать<sup>i</sup>) 'cut into', обрезать<sup>p</sup> (обрезать<sup>i</sup>/обрезывать<sup>i</sup>) 'trim, circumsise', перерезать<sup>p</sup> (перерезать<sup>i</sup>/перерезывать<sup>i</sup>) 'cut in two', разрезать<sup>p</sup> (разрезать<sup>i</sup>/разрезывать<sup>i</sup>) 'cut into pieces'

Complex Act Perfective(s): порезать<sup>p</sup> 'cut for a while'

Single Act Perfective: резнуть<sup>p</sup> 'cut, slice once'

Frequency: 4.1%

More examples of Key Cluster 4 are presented in section 5, since this cluster type is most characteristic of the motion verbs, which have a very high token frequency. Note that this cluster brings up some important issues, such as the fact that there are sometimes several Natural Perfectives available for a given Activity, or two variants for the derived Imperfective of a Specialized Perfective.

### 3.2 Illustrations of Variant Clusters

With one exception, listed first, the variant cluster structures can be derived by subtracting a Natural Perfective and/or a Specialized Perfective from one of the Key Clusters.<sup>1</sup> The first variant is derived instead by subtracting an Imperfective Activity.

1. The "derivation" of variant cluster structures from the Key Cluster structures is solely a pedagogical device. Its purpose is to organize the introduction of the various cluster structures, starting with the most important (key) structures. The Key Clusters progressively add one type of Perfective after another, and the secondary structures can be thought of as variants of the Key Clusters. It would not make sense, however, to claim that the cluster of отдыхать<sup>i</sup> 'rest' is "derived" from the cluster of играть<sup>i</sup> 'play'.

258 *Slavic and East European Journal*

Variant of Key Cluster 1: NP

Natural Perfective: состояться<sup>P</sup> 'take place'

Frequency: 0.4%

Variant of Key Cluster 1: A

Activity: уважать<sup>I</sup> 'respect, esteem'

Frequency: 3.8%

Variant of Key Cluster 2: A+SP

Activity: знать<sup>I</sup> 'know'

Specialized Perfective(s): познать<sup>P</sup> (познавать<sup>I</sup>) 'perceive', признать<sup>P</sup>

(признавать<sup>I</sup>) 'admit', сознать<sup>P</sup> (сознавать<sup>I</sup>) 'recognize', узнать<sup>P</sup>

(узнавать<sup>I</sup>) 'find out'

Frequency: 4.9%

Variant of Key Cluster 3: A+CAP

Activity: беспокоиться<sup>I</sup> 'be worried'

Complex Act Perfective(s): побеспокоиться<sup>P</sup> 'be worried for a while',

забеспокоиться<sup>P</sup> 'begin to be worried'

Frequency: 5.3%

Variant of Key Cluster 3: A+NP+CAP

Activity: отдыхать<sup>I</sup> 'rest'

Natural Perfective: отдохнуть<sup>P</sup> 'rest'

Complex Act Perfective(s): поотдыхать<sup>P</sup> 'rest a while'

Frequency: 4.1%

Variant of Key Cluster 3: A+SP+CAP

Activity: работать<sup>I</sup> 'work'

Specialized Perfective(s): заработать<sup>P</sup> (зарабатывать<sup>I</sup>) 'earn',

обработать<sup>P</sup> (обрабатывать<sup>I</sup>) 'process, polish', переработать<sup>P</sup>

(перерабатывать<sup>I</sup>) 'convert, revise', разработать<sup>P</sup> (разрабатывать<sup>I</sup>)

'work out'

Complex Act Perfective(s): поработать<sup>P</sup> 'work for a while',

заработать<sup>P</sup> 'begin to work'

Frequency: 6.8%

Variant of Key Cluster 4: A+CAP+SAP

Activity: улыбаться<sup>I</sup> 'smile'

Complex Act Perfective(s): заулыбаться<sup>P</sup> 'begin to smile'

Single Act Perfective: улыбнуться<sup>P</sup> 'smile once'

Frequency: 0.8%

Variant of Key Cluster 4: A+SP+CAP+SAP

Activity: дуть<sup>I</sup> 'blow'

Specialized Perfective(s): вдуть<sup>P</sup> (вдуть<sup>I</sup>) 'blow into', выдуть<sup>P</sup>

(выдуть<sup>i</sup>) ‘blow out’, раздуть<sup>p</sup> (раздуть<sup>i</sup>) ‘inflate’, сдуть<sup>p</sup>  
 (сдуть<sup>i</sup>) ‘blow away, off’  
 Complex Act Perfective(s): подуть<sup>p</sup> ‘blow for a while’, задуть<sup>p</sup> ‘begin  
 to blow’  
 Single Act Perfective: дунуть<sup>p</sup> ‘blow once’  
 Frequency: 1.1%

The example of работать<sup>i</sup> ‘work’ as an illustration of an A+SP+CA cluster brings up another issue endemic to the Russian aspect system: homonymy. Заработать<sup>p</sup> represents two kinds of Perfective verbs, a Specialized Perfective meaning ‘earn’ that has a derived Imperfective, and a Complex Act Perfective meaning ‘begin to work’ that does not have a derived Imperfective.

#### 4. The Motives Behind the Clusters

The two concepts that motivate cluster structure are Completability and Granularity. These concepts are grounded in everyday experiences with physical motion and substances like sand and water. Together the two concepts motivate the four different types of Perfectives and thus the structures of aspectual clusters. By assessing the values for Completability and Granularity associated with potential uses of a verb, it is usually possible to guess what types of Perfectives it will have.

##### 4.1 Completability

Completability has to do with whether an Activity “goes” somewhere or not. In a very real sense, this distinction parallels the two Russian words for ‘where’: куда ‘whither, to what destination’ vs. где ‘at what location’. It also parallels the Determined vs. Non-determined distinction among motion verbs (see section 5).

All verbs in Russian can be compared to motion verbs. There are some Activities that have a destination and lead to a natural finishing point, like reading a novel, baking a cake, or walking to the store. There are other Activities that we don’t finish, but just stop doing at some point, like working at the office, living in Moscow, or strolling in the park. Here are some Russian examples to illustrate:

##### Completable Activities

- 1) Сестра читает<sup>i</sup> *Войну и мир*. ‘My sister is reading *War and Peace*.’
- 2) Сестра печет<sup>i</sup> торт к моему дню рождения. ‘My sister is baking a cake for my birthday.’

##### Non-completable Activities

- 3) Брат живет<sup>i</sup> в Москве. ‘My brother lives in Moscow.’
- 4) Брат любит<sup>i</sup> мясо. ‘My brother loves meat.’

If my sister keeps on doing the things claimed in examples 1–2, she will fin-

ish the novel and I will have a birthday cake, and when these goals are achieved, her Activity will cease because she will be done. If my brother keeps doing what he is doing, nothing will change. He might stop doing either of these things at some point, but that is not because his Activity has reached a conclusion. If he stops, it is because of something else: he moved or he became a vegetarian. Completability is already familiar to English speakers, because it motivates the use of words like *finish*. It would be weird to say \**My brother finished living in Moscow*. The same intuition works when evaluating Completability for Russian verbs.

More often than not, Russian verbs are ambiguous, expressing Completability in some contexts and Non-completability in others. Examples 5–6 contain verbs that can be used to express both Completability and Non-completability. They are repeated here with contrasting options, such that the a) examples are Completable and the b) examples are Non-completable:

5a) Сестра читает<sup>i</sup> Войну и мир. ‘My sister is reading *War and Peace*.’

5b) Сестра читает<sup>i</sup> романы. ‘My sister reads novels.’

6a) Сестра печет<sup>i</sup> торт к моему дню рождения. ‘My sister is baking a cake for my birthday.’

6b) Сестра отлично печет<sup>i</sup> пирожки. ‘My sister does an excellent job of baking pirozhki.’

In all of these sentences, the Completable meanings are present when an Activity is heading toward a result. The Non-completable meanings are present when we are talking about something that one does all the time, or has the capacity to do without any result in sight.

Adding a prefix can sometimes give an overall “shape” to an Activity, creating new opportunities for expressing Completability. The prefix *раз-* when added to *дуть<sup>i</sup>* ‘blow’ yields *раздуть<sup>p</sup>* ‘inflate’, which has an inherent endpoint, and we see a parallel change if we add *пере-* to *жить<sup>i</sup>* ‘live’ to get *пережить<sup>p</sup>* ‘survive, experience’. New Completability meanings are also possible for verbs that already express Completability even before a prefix is added, as we see in *перечитать<sup>p</sup>* ‘recite, reread’. Not all verbs can gain a Completability meaning this way. *Стонать<sup>i</sup>* ‘moan’ and *скрипеть<sup>i</sup>* ‘squeak’ cannot normally express Completability, with or without a prefix.

Completability gives us a lot of information about the structure of clusters and distribution of Perfectives in Russian. Verbs that can have a Completability reading have Natural Perfectives. Thus *читать<sup>i</sup>* ‘read’ and *печь<sup>i</sup>* ‘bake’ have Natural Perfectives with the same meanings: *прочитать<sup>p</sup>*, *испечь<sup>p</sup>*. Verbs that don’t have a Completability reading don’t have Natural Perfectives, like *бояться<sup>i</sup>* ‘be afraid’, *дуть<sup>i</sup>* ‘blow’, *работать<sup>i</sup>* ‘work’, *жить<sup>i</sup>* ‘live’. If Completability can be expressed with the help of a prefix, Specialized Perfectives result, as in *раздуть<sup>p</sup>* ‘inflate’ and *пережить<sup>p</sup>* ‘survive, experience’, and these Perfectives usually have secondary Imperfectives as well, as in



раздувать<sup>i</sup> ‘inflate’ and переживать<sup>i</sup> ‘survive, experience’. Only verbs that can have a Non-completable interpretation are eligible to have Complex Act Perfectives such as поиграть<sup>p</sup> ‘play for a while’, проработать<sup>p</sup> ‘work for a certain duration’, заулыбаться<sup>p</sup> ‘begin to smile’. Both verbs that are ambiguous for Completeness (играть<sup>i</sup> ‘play’, танцевать<sup>i</sup> ‘dance’) and verbs that are unambiguously Non-completable (работать<sup>i</sup> ‘work’) can have Complex Act Perfectives. In other words, given the meaning of a verb, one can evaluate its Completeness, and from there guess whether or not it might have a Natural Perfective and Complex Act Perfectives.

#### 4.2 Granularity

The concept of Granularity sanctions the fourth type of Perfective, which is the final piece in the basic structure of aspectual clusters. Granularity is relevant only for verbs that already have a Non-completable meaning and one or more Complex Act Perfectives. In other words, this concept pertains only to Activities that can be thought of as not “going anywhere”. A stagnant mass can either be like a pile of sand or like a puddle of water, i.e., granular or liquid. A pile of sand is Granular because it consists of many identical grains, any one of which can be picked out. A liquid is Non-granular because it is continuous. Non-completable Activities can also be Granular or Non-granular. Granular Activities are composed of many identical cycles. Verbs that express Granular Activities include резать<sup>i</sup> ‘cut, slice’ and чихать<sup>i</sup> ‘sneeze’ because they describe repeated actions. Because these verbs express Granularity they have the Single Act Perfectives резнуть<sup>p</sup> ‘cut, slice once’ and чихнуть<sup>p</sup> ‘sneeze once’. Non-granular Activities are those that are not decomposable into identical units, like работать<sup>i</sup> ‘work’ and жить<sup>i</sup> ‘live’, and do not as a rule form Single Act Perfectives. Some verbs describe Activities that can be thought of either as Granular or as Non-granular. For example кричать<sup>i</sup> ‘yell’, дуть<sup>i</sup> ‘blow’, and улыбаться<sup>i</sup> ‘smile’ can be thought of as either continuous yelling, blowing and smiling, or as a series of single yells, puffs of wind and smiles. Because the second, Granular, interpretation is possible, these verbs also form the Single Act Perfectives крикнуть<sup>p</sup> ‘yell once’, дунуть<sup>p</sup> ‘blow once’, and улыбнуться<sup>p</sup> ‘smile once’. The Non-determined motion verbs likewise can describe both continuous motion and a series of roundtrips; since the latter use is Granular, these verbs have Single Act Perfectives such as сходить<sup>p</sup> ‘walk someplace and back once’.

#### 4.3 Guessing the Cluster Structure

The meaning of a verb is an important clue to the structure of its aspectual cluster. Three questions and one precaution are important in guessing the likely cluster structure for a verb:

- 1) Can the verb describe a Completable Activity?

YES: a Natural Perfective is likely

NO: a Natural Perfective is unlikely

2) Can the verb describe a Non-Completable Activity?

YES: a Complex Act Perfective is likely

NO: a Complex Act Perfective is unlikely

If the answer to 2 is YES, proceed to 3.

3) Can the verb describe a Granular Activity?

YES: a Single Act Perfective is likely

NO: a Single Act Perfective is unlikely

Precaution: Always be on the lookout for Specialized Perfectives—most verb clusters have Specialized Perfectives, but they can be hard to predict.

Let's try this out with a learner who gets three new verbs in a vocabulary list: *крыть*<sup>1</sup> 'cover', *кашлять*<sup>1</sup> 'cough', and *варить*<sup>1</sup> 'cook'. She starts with the first one and goes through the questions: 1) Is *covering* an Activity that can lead to a result? Yes, we can wind up with a table or wall that is covered. So we expect a Natural Perfective, which turns out to be *покрыть*<sup>P</sup>. 2) Is *covering* an Activity that can be Non-completable? Well, no, since any kind of covering does result in covering, so we don't expect a Complex Act Perfective and we can skip question 3. We suspect that all verbs might have Specialized Perfectives, so finding *закрыть*<sup>P</sup>/*закрывать*<sup>1</sup> 'close' and *раскрыть*<sup>P</sup>/*раскрывать*<sup>1</sup> 'reveal' is no surprise. The student has correctly guessed that this verb has an A+NP+SP cluster structure.

Now she turns to *кашлять*<sup>1</sup> 'cough'. 1) Is *coughing* Completable, does it "go anywhere"? No, so she doesn't expect a Natural Perfective. 2) Can *coughing* be Non-completable, something one just does for a while? Yes, it can, so she expects Complex Act Perfectives like *покашлять*<sup>P</sup> 'cough for a while' and *закашлять*<sup>P</sup> 'begin to cough'. Since the answer to 2 was yes, she proceeds to 3) Can *coughing* be granular, consisting of identical units? Yes, each cough is such a unit, so she expects a Single Act Perfective, and it is *кашлянуть*<sup>P</sup> 'cough once'. Our student doesn't know for certain that there aren't any Specialized Perfectives (there aren't), but she has correctly guessed that the cluster structure contains A+CAP+SAP.

Her last word is *варить*<sup>1</sup>. 1) Is *cooking* completable? Yes, that's how we get our meals, so our student expects a Natural Perfective, which is *сварить*<sup>P</sup>. 2) Is *cooking* something that one can do for a while without a result? Yes again, since one can cook away at some things for quite a while, and cooking can be a job description, so our student is not surprised to find Complex Act Perfectives like *поварить*<sup>P</sup> 'cook for a while'. Since the answer to 2 was affirmative, she proceeds to 3) Is *cooking* composed of identical units? No, so there shouldn't be a Single Act Perfective, and indeed there is not. Our student doesn't know for sure at this point whether there are any Specialized Perfectives, but since cooking is a part of many chemical and industrial applica-

tions, she is not surprised to find a verb like *выварить<sup>p</sup>/вываривать<sup>i</sup>* ‘extract’. She has once again correctly guessed a cluster structure based on the meaning of the verb; this time it is A+NP+SP+CAP.

### 5. Motion Verbs and Bi-aspectual Verbs

Motion verbs are a classic problem for learners and instructors alike. The cluster model does more than just fit the motion verbs into the system—in the cluster model, the motion verbs are central to the whole system. There are two reasons to claim that the motion verbs show us the ultimate clusters: a) the key ideas behind the motion verbs are the same ideas that are behind the whole system of clusters; and b) the motion verbs have the maximal cluster structure, namely A+NP+SP+CAP+SAP, so in a sense all other clusters are either of the same structure or reduced variants of the cluster type associated with motion verbs. The first point is illustrated with examples from the *идти<sup>i</sup>/ходить<sup>i</sup>* ‘walk’ cluster; other motion verbs illustrate the second point.

#### 5.1 Motion Verbs Use the Same Key Concepts

The most important concept motivating the structure of clusters is Completeness, which, as we hinted above, directly parallels the Determined (*идти<sup>i</sup>*) vs. Non-determined (*ходить<sup>i</sup>*) distinction among motion verbs. A typical Completable action is like a journey, so it has a beginning (a departure point), a middle (progress along a path), and an ending (an arrival point), paralleling the use of a Determined motion verb like *идти<sup>i</sup>*. As we have seen, Completeness plays an important role throughout the Russian aspect system, and verbs can express Completeness, Non-completeness, or both. In the case of the Russian motion verbs, this distinction is more salient because it has been grammaticalized, with a Determined stem (*идти<sup>i</sup>*) specialized for the expression of Completeness and a Non-determined stem (*ходить<sup>i</sup>*) specialized for the expression of Non-completeness. This division of labor carries over into the formation of Perfectives. The Perfectives associated with Completeness, namely the Natural Perfective and the Specialized Perfectives, are formed from the Determined (= Completable) stem: *идти<sup>i</sup>*. Thus we have the Natural Perfective *пойти<sup>p</sup>* ‘go (on foot)’ and Specialized Perfectives like *уйти<sup>p</sup>* ‘leave (on foot)’, *прийти<sup>p</sup>* ‘arrive (on foot)’. The Perfectives associated with Non-completeness, namely the Complex Act Perfectives and the Single Act Perfective, are formed from the Non-determined (= Non-completable) stem: *ходить<sup>i</sup>*. Thus we have Complex Act Perfectives like *походить<sup>p</sup>* ‘walk for a while’ and *заходить<sup>p</sup>* ‘begin to walk’ and the Single Act Perfective *сходить<sup>p</sup>* ‘walk someplace and back once’.<sup>2</sup>

2. Note that while most Imperfectives secondarily derived from the Specialized Perfectives of the motion verbs continue this pattern, using the Non-determined (= Non-completable) stem, as in *уходить<sup>i</sup>* ‘leave (on foot)’, some motion verbs use a stem variant for this purpose, as in the case of *уезжать<sup>i</sup>* ‘leave (by vehicle)’, *уплывать<sup>i</sup>* ‘leave (sailing or swimming)’.

The Determined vs. Non-determined distinction and the Completable vs. Non-completable distinction are the *same* distinction. Completable vs. Non-completable is a metaphorical version of Determined vs. Non-determined, where actions are thought of either as journeys (thus Determined/Completable) or as mere motion (thus Non-determined/Non-completable). Russian verbs can express one or both of these meanings, and these meanings decide how verbs behave in clusters.

The second concept motivating cluster structure is Granularity. Granularity is relevant only for Non-completable actions, so for motion verbs this means that Granularity involves only Non-determined stems. A Non-determined stem like *ходить*<sup>1</sup> 'walk' has three meanings:

- a) ability to walk, as in *Наш ребенок уже ходит*<sup>1</sup>. 'Our child is walking already'.
- b) non-directed walking motion, as in *Наш ребенок ходит*<sup>1</sup> по парку. 'Our child is walking around in the park'.
- c) repeated round trips, as in *Наш ребенок ходит*<sup>1</sup> в школу. 'Our child goes to school'.<sup>3</sup>

The first two meanings are continuous and Non-granular, but the third one offers a Granular interpretation where the roundtrips are repeated units. This is why a Single Act Perfective such as *сходить*<sup>P</sup> 'walk someplace and back once' can be formed from a Non-determined motion verb. The fact that *сходить*<sup>P</sup> is a Single Act Perfective explains why there is no derived Imperfective for this verb.

### 5.2 Motion Verbs have the Maximal Cluster Structure

Here are two examples of the A+NP+SP+CAP+SAP cluster structure typical for motion verbs, followed by some commentary.

Activity: *ехать*<sup>I</sup> (Determined); *ездить*<sup>I</sup> (Non-determined) 'ride'

Natural Perfective: *поехать*<sup>P</sup> 'go (by vehicle)'

Specialized Perfective(s): *уехать*<sup>P</sup> (*уезжать*<sup>I</sup>) 'leave (by vehicle)', *приехать*<sup>P</sup> (*приезжать*<sup>I</sup>) 'arrive (by vehicle)'

Complex Act Perfective(s): *поездить*<sup>P</sup> 'ride for a while', *заездить*<sup>P</sup> 'begin to ride'

Single Act Perfective: *съездить*<sup>P</sup> 'ride somewhere and back once'

Activity: *лететь*<sup>I</sup> (Determined); *летать*<sup>I</sup> (Non-determined) 'fly'

Natural Perfective: *полететь*<sup>P</sup> 'go (flying)'

3. It is possible to get a reading of a single round trip, as in *Вчера мы ходили в кино*. 'Yesterday we went to the movies'. But this is a result of the general-factual use of the Imperfective with verbs expressing reversible actions, parallel to examples like *Кто здесь открывал окно?* 'Who opened the window here?'. For a discussion of the relevant pedagogical issues, see Janda 2003.

Specialized Perfective(s): улететь<sup>P</sup> (улетать<sup>i</sup>) ‘leave (flying)’, прилететь<sup>P</sup> (прилетать<sup>i</sup>) ‘arrive (flying)’

Complex Act Perfective(s): полетать<sup>P</sup> ‘fly for a while’, залетать<sup>P</sup> ‘begin to fly’

Single Act Perfective: слетать<sup>P</sup> ‘fly somewhere and back once’

The presence of stem variants in forms like уезжать<sup>i</sup> ‘leave (by vehicle)’, убежать<sup>i</sup> ‘leave (running)’ (note the stress), or лазить<sup>i</sup> and лазать<sup>i</sup> (both are Non-determined) ‘climb’ is unproblematic since the cluster model does not stipulate a limit on the number of aspectually related verbs and thus easily accommodates multiple forms. The motion verbs are particularly prone to idiomatic usage, and in some cases this has compromised the Determined vs. Non-determined distinction, at least for some meanings. For example, носить<sup>i</sup> ‘carry’ can also mean ‘wear’, in which case it is no longer a Non-determined motion verb, but merely an ordinary Activity verb, and thus can form Specialized Perfectives like заносить<sup>P</sup> (занашивать<sup>i</sup>) ‘soil by wearing too long’, износить<sup>P</sup> (изнашивать<sup>i</sup>) ‘wear out’, разносить<sup>P</sup> (разнашивать<sup>i</sup>) ‘break in (shoes)’, and a Complex Act Perfective like поносить<sup>P</sup> ‘wear for a while’. For pedagogical purposes it may be best to consider носить<sup>i</sup> in the meaning ‘wear’ to be a separate verb with the cluster structure A+SP+CAP.

### 5.3 Bi-aspectual verbs

The use of a single form to express both Activity and Natural Perfective, as we see in эмигрировать<sup>i/p</sup> ‘emigrate’, is an example of homonymy within a cluster. In fact, it is common for the Bi-aspectual verbs to display both homonymy and variant forms in their clusters, as in the case of рекомендовать<sup>i/p</sup> ‘recommend’, which serves as both the Activity and the Natural Perfective, with two further variants for the Natural Perfective: порекомендовать<sup>P</sup> and отрекомендовать<sup>P</sup>. We see another pattern with the Bi-aspectual родиться<sup>i/p</sup> ‘be born’, where we again have homonymy between the Activity and the Natural Perfective, and in addition a variant form for the Activity: родиться<sup>i</sup>.

Bi-aspectual verbs typically have either A+NP or A+NP+SP clusters. Examples of the A+NP cluster type include обещать<sup>i/p</sup> ‘promise’, рекомендовать<sup>i/p</sup> ‘recommend’, родиться<sup>i/p</sup> ‘be born’ and эмигрировать<sup>i/p</sup> ‘emigrate’; and examples of the A+NP+SP cluster type are блокировать<sup>i/p</sup> ‘block’ and организовать<sup>i/p</sup> ‘organize’. The concept of Completability explains this distribution of cluster types. A Bi-aspectual verb must have a strong capacity to express Completability if the same form that expresses the Activity can also express the Natural Perfective. These verbs are usually unambiguously Completable, so their clusters tend to lack Perfectives formed on the basis of Non-completable meanings, namely Complex Act and Single Act Perfectives (Janda forthcoming).

### 6. Pedagogical suggestions

The database is located at <http://hum.uit.no/lajanda/clusterfrontpage.html> and can be accessed without any login or password. The webpage contains links to searchable PDF files listing the clusters of verbs. Within each list, the clusters appear in alphabetical order according to the Activity verb. Within all lists it is possible to search for any verb or any combination of letters by pressing CTR+F. There is an overall list, the “Complete Pedagogical Database,” plus a separate list for each of the Key Cluster types and each of the variant types described above in section 3.

This section suggests two ways to integrate the cluster model into existing Russian courses by encouraging learners to “grow” beyond the pair model at crucial points. Both option 1 and option 2 below assume that learners will first be exposed to the pair model, and that subsequently they will have an opportunity to expand their understanding of Russian aspect to include clusters. We add some suggestions for exercises to help students acquire the cluster model.

#### 6.1 Option 1: Gradual Build-up of Clusters

This option begins with the initial introduction of the Perfective vs. Imperfective aspectual distinction and ends with the introduction of the Determined vs. Non-determined distinction for motion verbs. The cluster model can be gradually built up between these two points by adding the successive Key Clusters and their variants. Each cluster type can be illustrated with verbs that the learners have already had in their vocabulary lists. The learner begins with the pair model, which corresponds to Key Cluster 1: A+NP. The variant clusters consisting of only NP or only A can be introduced with relevant verbs such as *состояться*<sup>P</sup> ‘take place’, *стоить*<sup>I</sup> ‘cost’ and *ненавидеть*<sup>I</sup> ‘hate’. Once these are secure, we can add Specialized Perfectives to the system with verbs that represent Key Cluster 2: A+NP+SP. This brings the variant A+SP. After learners are familiar with Specialized Perfectives, it is possible to point out that both Natural Perfectives and Specialized Perfectives are used when describing Completability, and that many Russian verbs can describe Non-completability. This paves the way for introducing Complex Act Perfectives and Key Cluster 3: A+NP+SP+CAP, along with its variants: A+CAP, A+NP+CAP and A+SP+CAP. The concept of Granularity and the Single Act Perfective can come next, yielding Key Cluster 4: A+NP+SP+CAP+SAP and its variants A+CAP+SAP and A+SP+CAP+SAP. When the learners are subsequently faced with the motion verbs, they already have the full architecture of the cluster types, so they have a place to put the motion verbs. At this point it is possible to talk about the parallels between Completability vs. Non-completability and Determined vs. Non-determined. Learners can strengthen their understanding of the motion verbs and review the cluster model at the same time.

### 6.2 Option 2: Clusters Based on the Motion Verbs

This option delays the introduction of clusters until the learners get to the motion verbs. At this point, motion verbs are presented as examples of Key Cluster 4: A+NP+SP+CAP+SAP, and the concepts of Completability and Granularity are presented as extensions of the meanings of motion verbs (Determined vs. Non-determined and successive round trips). This option then runs the process described under option 1 in reverse, going through the Key Cluster types and variants by means of subtraction from Key Cluster 4, illustrating the types with existing vocabulary. Alternatively, one could postpone the cluster model to a later point in the curriculum (second- or even third-year Russian), and then work through the Key Clusters in either order. This could then be integrated into a review of aspect and motion verbs at an advanced level.

### 6.3 Sample Exercises

This section offers a few ideas for exercises designed for the purpose of teaching the cluster model. In addition, we recommend that students be instructed to look up cluster structures in the pedagogical database and write the structures into their vocabulary lists.

#### 6.3.1 Fill in a Table

In this exercise, the learner receives Table 1 (or something similar):

1. писать	написать	записать переписать	записывать переписывать	пописать	
2. платить	заплатить	выплатить переплатить	выплачивать переплачивать		
3. работать		переработать заработать	перерабатывать зарабатывать	поработать проработать	
4. благодарить	поблагодарить				
5. улыбаться				заулыбаться	улыбнуться
6. беспокоиться				побеспокоиться	забеспокоиться
7. дуть		вдуть раздуть	вдувать раздувать	подуть	дунуть
8. щипать	ощипать	выщипать отщипать	выщипывать отщипывать	пощипать	щипнуть
9. идти / ходить	пойти	прийти уйти	приходить уходить	походить заходить	сходить

Together with the class or as homework, learners go through the table, verifying the meanings of the verbs with the instructor or a dictionary. They are then asked to identify the columns of the table and to label each column according to the type of cluster component it contains. Finally they are asked to state the cluster structure for each verb.

Answer key: From left to right the columns contain Activities, Natural Perfectives, Specialized Perfectives, secondary Imperfectives (Activities), Complex Act Perfectives, Single Act Perfectives. The cluster types are: 1. A+NP+SP+CAP; 2. A+NP+SP; 3. A+SP+CAP; 4. A+NP; 5. A+CAP+SAP; 6. A+CAP; 7. A+SP+CAP+SAP; 8. A+NP+SP+CAP+SAP; 9. A+NP+SP+CAP+SAP.

### 6.3.2 Identify the Types of Perfectives

This exercise orients learners to the various types of Perfectives. An exercise like this can be constructed by extracting examples like the ones below from the Russian National Corpus ([www.ruscorpora.ru](http://www.ruscorpora.ru)) or another searchable on-line resource. Glosses can be supplied for learners as needed.

играть:

1. А вечером на гитарах поиграли, песни попели, чаю попили.
2. Наш друг выиграл золотую олимпийскую медаль.
3. В 1937 году актриса сыграла свою первую роль на сцене этого театра.

советовать:

1. Врач посоветовал ему пройти курс лечения в санатории.
2. А еще я ей отсоветовала уходить из техникума.

держатъ:

1. Ивана подержали ещё несколько секунд, и потом опустили.
2. Вора уже через полчаса задержали милиционеры.

Answer key: играть: 1. Complex Act Perfective; 2. Specialized Perfective; 3. Natural Perfective; советовать: 1. Natural Perfective; 2. Specialized Perfective; держатъ: 1. Complex Act Perfective; 2. Specialized Perfective.

### 6.3.3 Figure out the Clusters Based on the Perfectives

The next type of exercise is particularly useful with new vocabulary items and can be constructed using information from the pedagogical database. The learner gets a list of verbs in a cluster and has to identify what types of Perfectives are present and what the total structure of the cluster is.

1. мешать<sup>i</sup> 'mix', помешать<sup>p</sup> 'mix', вмешать<sup>p</sup> 'mix in', вмешивать<sup>i</sup> 'mix in', примешать<sup>p</sup> 'alloy', примешивать<sup>i</sup> 'alloy'
2. есть<sup>i</sup> 'eat', съестъ<sup>p</sup> 'eat (up)', переестъ<sup>p</sup> 'overeat', переедать<sup>i</sup> 'overeat',



- изъестъ<sup>P</sup> 'corrode', изъедать<sup>i</sup> 'corrode'
3. варить<sup>i</sup> 'cook', сварить<sup>P</sup> 'cook', переварить<sup>P</sup> 'cook again or too much', переваривать<sup>i</sup> 'cook again or too much', разварить<sup>P</sup> 'cook until soft', разваривать<sup>i</sup> 'cook until soft', поварить<sup>P</sup> 'cook for a while'
  4. воевать<sup>i</sup> 'fight, wage war', завоевать<sup>P</sup> 'conquer', завоевывать<sup>i</sup> 'conquer', повоевать<sup>P</sup> 'fight for a while'
  5. гладить<sup>i</sup> 'iron', выгладить<sup>P</sup> 'iron', погладить<sup>P</sup> 'iron or iron for a while', разгладить<sup>P</sup> 'flatten out', разглаживать<sup>i</sup> 'flatten out'

Answer key: 1. A+NP+SP, 2. A+NP+SP, 3. A+NP+SP+CAP, 4. A+SP+CAP, 5. A+NP+SP+CAP

#### 6.3.4 Guess the Clusters

This exercise can include one or two steps, depending upon the sophistication of the learner(s). In Step 1 the learner guesses the likely cluster structure based on the meaning of the verb, guided by the concepts of Completability and Granularity. In Step 2, the learner uses on-line dictionaries and searches to verify the components in the clusters and illustrate their uses.

Guess the cluster structures for these verbs: просить, учить, жить, рисовать, крыть.

Answer key: просить: A+NP+SP; учить: A+NP+SP+CAP; жить: A+SP+CAP; рисовать: A+NP+SP+CAP; крыть: A+NP+SP

#### 6.3.5 Adopt-a-cluster

This exercise is for fairly advanced students, who might first need a tutorial on how to use the Russian National Corpus or another searchable corpus of Russian. In this exercise, each student "adopts" an aspectual cluster from the pedagogical database. The student then culls examples of each verb in the cluster and selects from among them good example sentences that illustrate how each verb is used (creating tasks similar to 6.3.2). Then each student presents the best example sentences to the class and asks them to correctly identify what types of Perfectives they represent.

### 7. Conclusions

The cluster model can extend students' appreciation for the Russian aspect system and can be integrated into any Russian curriculum. Students who are exposed to the cluster model will know that Russian has four types of Perfective verbs, and will know what kinds of Perfectives to expect and how to interpret them. The cluster model is compactly organized and readily accommodates the aspectual peculiarities presented by Bi-aspectual and motion verbs. An online database lists the cluster structures and example verbs for the vocabulary of a typical two-year sequence of Russian courses and can serve as a

resource for both instructors and learners, and sample exercises are offered.

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### Абстракт

Лора Янда и Джон Корба  
 Модель видовых гнезд для изучающих русский язык

Модель видовых гнезд не отвергает существование видовых пар, но включает их в более сложную модель, которая лучше соответствует разнообразию аспектуальной системы русского языка. Видовые пары, в том случае, когда они образуются, являются частями видовых гнезд, в которых обыкновенно присутствует больше двух глаголов. Все глаголы в данном гнезде находятся в видовом отношении с одной и той же лексемой. Типичное гнездо как правило включает глагол несовершенного вида (имперфектив), плюс разные типы перфективов. Число перфективов варьируется, обыкновенно от нуля до четырех. Модель видовых гнезд не создает дополнительных трудностей при обучении, при этом она дает студентам более правильное представление о системе русского вида, и может привлекаться в любом курсе русского языка. Студенты, которые освоят эту модель, поймут, что на самом деле в русском языке существует четыре типа перфективов, и можно определить какие перфективы образуются у каждого отдельно взятого глагола, а также что эти перфективы обозначают. Модель включает и объясняет «исключения» в видовой системе русского языка, как например, глаголы движения и двувидовые глаголы. Авторы предлагают читателям разные типы упражнений и кроме того список 266 видовых гнезд, который всем доступен в интернете. Список построен на базе типичного словарного запаса студентов, изучающих русский язык на первом и втором курсах.