



UDC 81'366.593=111

81'367.625.41=111

Original scientific article

Received on 09.07. 2014

Accepted for publication on 03.12. 2014

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## Aspect use in the imperative and the prescriptive infinitive in recipes in Bosnian, Croatian, Serbian and Russian: A comparative account<sup>1</sup>

In this article, I present the results of a comparative study of the use of aspect in Bosnian (Bn), Croatian (Hr), Serbian (Sr) and Russian (Ru) imperatives and prescriptive infinitives—infinitives used with imperative function—as these verb forms are used in recipes. Based on an initial survey I narrow down my object of study to a limited set of verb phrases, including equivalents of the transitive ‘to bake’ and ‘to fry’, ‘to boil’, ‘to knead a dough’, ‘to cut’ and ‘to chop’, ‘to sprinkle’ and ‘to strew’, and ‘to fill’ and ‘to stuff’. The common denominator of (most of) these verb phrases is that they involve an incremental theme in the form of a direct object, of which the referent gets its qualities changed during a process. Typically, the situation type in question is an accomplishment, in the sense of Vendler (1957).

Based on analyses of this corpus, from which I provide more than 40 examples, I draw the following conclusions. First, the use of aspect in the imperative and the prescriptive infinitive, as these verb forms are used in recipes, is approximately identical in all four languages. Second, the use of what I refer to as the *fake* IPF – the use of IPF to refer to a single, complete event – is more widespread in Bn, Hr and Sr than in Russian. The latter is contrary to the results of Benacchio (2010), von Waldenfels (2012) and Alvestad (2013)

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<sup>1</sup> The article is based on my M.Phil. thesis, listed as Alvestad (2006) in References. Thanks are due to my respondents, Ljiljana Šarić, Irena Marijanović and Maria Filiouchkina Krave, and also to Atle Grønn, for helpful and valuable comments. I am also grateful to two anonymous reviewers, whose comments contributed to significant improvements of the article.



and suggests that the aspect use in the imperative and the prescriptive infinitive in literature such as recipes deserves further investigation.

**Keywords:** verbal aspect; *fake* IPF; imperative; prescriptive infinitive; recipes; Bosnian; Croatian; Serbian; Russian.

## 1. Introduction

In comparative Slavic aspectology, infinitives in particular, but also imperatives – at least until recently – have been largely ignored. As a case in point, in the most comprehensive account of Slavic aspect to date, Dickey (2000), infinitives and imperatives are two of the very few verb forms that are not considered.

As far as the imperative is concerned, three recent works in particular have shed light on how aspect is used in Slavic languages – namely, Benacchio (2010), von Waldenfels (2012), and Alvestad (2013). However, none of these works deals specifically with imperatives as they are used in written, successive instructions that are not related to any obvious utterance time and where the addressee is unspecified, such as in recipes. They are solely or mostly concerned with everyday dialogue situations. The last word has therefore not been said about aspect use in the Slavic imperative.

Against this background, I take as my point of departure in this article a corpus of Bosnian, Croatian, Serbian and Russian recipes, focusing on five kinds of situations that are frequently described in recipes – some of which are exemplified in (1–4) below – and compare how aspect is used in the languages in question. I conclude that, first, for all the languages the use of aspect in the imperative is approximately identical to that in the infinitive, as this verb form is used in recipes.<sup>2</sup> Second, the use of imperfective (IPF) aspect is more widespread in Bosnian, Croatian and Serbian than in Russian. This finding is contrary to the results of Benacchio (2010), von Waldenfels (2012), and Alvestad (2013) and suggests that aspect use in written instructions such as recipes needs further investigation.

As an appetizer to the article, consider the Bosnian (Bn), Croatian (Hr), Serbian (Sr) and Russian (Ru) examples below.

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<sup>2</sup> I will henceforth refer to the use of the infinitive in imperative function as the *prescriptive infinitive* (see, e.g., Veyrenc, 1979: 18). In this use, the infinitive form is the matrix verb in the clause and has modal force on its own. Typically, in their non-prescriptive uses, infinitive forms are complements, frequently embedded under modal auxiliary verbs. Such uses of the infinitive are not included in this study, however.



- (1) *Krompir ogulite, izrežite na veće komade, patlidžane izrežite na duguljaste kriške, luk **režite**<sup>IPF</sup> samo ako je veći, a bijeli ostavite u komadu.* (Bn)  
'Peel the potato, cut it into chunks, cut the eggplants into longer slices, *cut* the onion only if it is large, and leave the garlic bulb whole.'
- (2) *Kupus **kuhajte**<sup>IPF</sup> u slanoj vodi.* (Hr)  
'Boil the cabbage in salted water.'
- (3) *Kada riža postane staklasta, skinite sa šporeta, dodajte struganu šargarepu, začinite solju, biberom i seckanim peršunovim lišćem, pa ovom masom **punite**<sup>IPF</sup> očišćene paprike.* (Sr)  
'When the rice becomes translucent, remove [it] from the stove, add the grated carrot, season with salt, pepper and chopped leaves of parsley and, with this mixture, *fill* the peeled peppers.'
- (4) *Нафаршированный перец уложите в глубокую сковороду, добавьте немного воды и **запекайте**<sup>IPF</sup> в духовке.* (Ru)  
'Put the stuffed pepper into a deep frying pan, add some water and *bake* [it] in the oven.'

In all these examples, the emphasized imperative verb phrase (VP) arguably refers to a single, complete event. The direct object in all cases is a definite noun phrase (NP), and the action in question is to be performed such that its end point is included. All the same, the aspect in all cases is imperfective (IPF). This is one of the puzzles I will address in this article.

The article is structured as follows. In section 2, I provide an overview of the state of the art and outline the assumptions on which the subsequent analysis rests. In section 3, I give an account of the methodology used in this study. Section 4 is split into five sub-sections, one for each of the five kinds of situations referred to above. For each type of situation I will present and discuss examples from all the languages in the study. Finally, in section 5, I will draw conclusions and give suggestions for further research.

## 2. Background

### 2.1. *The state of the art*

In the most comprehensive account to date of how aspect is used in Slavic languages, (Dickey, 2000), seven different "parameters" of aspect use – habituality, the historical present, and verbal nouns, for example – are considered, but two important verb forms are not accounted for: the imperative and the infinitive. The im-



perative has recently been investigated, by Benacchio (2010), von Waldenfels (2012), and Alvestad (2013), but as already mentioned, and as will become evident, puzzles still remain. As for the infinitive, this verb form is still unaccounted for.

In his study, Dickey (2000) observes a cross-Slavic divide in how aspect is used. In the West Slavic languages, including Slovak, Czech, and Slovene, the perfective (PF) aspect is most widespread, whereas in the East Slavic languages, including Russian and Ukrainian, IPF is most frequent. These findings are corroborated for the imperative by Benacchio (2010), von Waldenfels (2012), and Alvestad (2013). In Alvestad (2013, 14), the share of IPF imperative forms out of the total number of imperative forms investigated for each language included in the study, is given in percent as follows.<sup>3</sup>

Russian (60%) > Belarusian (59%) > Ukrainian (58%) > Bulgarian (48%) > Polish (47%) > Serbian, Croatian (45%) > Macedonian (44%) > Upper Sorbian (43%) > Slovak (33%) > Czech (31%) > Slovene (29%)

As we can see, the East Slavic languages – Russian, Belarusian, and Ukrainian – use IPF in about 60% of the cases, whereas the West Slavic languages Slovak and Czech and Slovene do so in just about 30% of the cases. Serbian and Croatian use IPF in about 45% of the examples and thus find themselves in the middle of this IPF-PF scale of Slavic languages.

Against this background, we would expect IPF to be more widespread in Russian than in Bosnian, Croatian and Serbian in the present corpus as well, but as already mentioned, this expectation is not borne out.

In her cross-Slavic questionnaire-based 2010 study, Benacchio is concerned with how aspect is used in the imperative in everyday dialogue situations, including speech act types such as *invitations*, *farewells*, *well-wishes*, and *permissions*. She argues that in the imperative, the aspects take on secondary meanings that they do not have in the indicative. More specifically, the aspects are taken to be connected to varying degrees of politeness. In the East Slavic languages, for example, IPF supposedly encodes either a very high, or a very low degree of politeness, while PF encodes formality and correctness (Benacchio, 2010: 13, 177). For a critique of this theory, see Alvestad (2013, 211–213), who points out, among other things, that in

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<sup>3</sup> Alvestad's (2013) study is based on the ParaSol corpus (cf. <http://parasol.unibe.ch>) and includes 234 Russian imperatives – referring to any one of Vendler's (1957) situation types, that is, *states*, *activities*, *accomplishments*, and *achievements* – and their translation into 11 other Slavic languages. As yet, the ParaSol corpus does not include Bosnian.



many cases where the imperative is used, politeness is hardly an issue at all. One such case are written instructions like recipes.

In their investigations into aspect use in the imperative in Slavic, von Waldenfels (2012) and Alvestad (2013) take belletristic texts as their point of departure – Bulgakov’s *Master i Margarita* and Ostrovskij’s *Kak zakaljalas’ stal’*, respectively. Due to the characteristics of the novel as a genre, the typical imperative under scrutiny will be one issued by speaker A to speaker B in the context of a dialogue. Indeed, Alvestad (2013) provides 251 examples, only one of which is of the kind that we find in recipes – namely, successive instructions directed toward an undefined addressee that are not related to any obvious utterance time.<sup>4</sup> She does not include this example in her statistics. As far as von Waldenfels (2012) is concerned, he provides four examples, none of which is of the kind met in recipes.

It is time, therefore, that the imperative as it is used in literature such as recipes gets its fair share of attention too, not least when it comes to the use of aspect. This is one of the objectives of this study, alongside shedding light on the use of aspect in the prescriptive infinitive.

## 2.2. Basic assumptions

Dickey (2000) explains the cross-Slavic divide in aspect use by arguing that the aspects have different meanings in different Slavic languages. For example, in the East Slavic languages, IPF designates “qualitative temporal indefiniteness”, while in the West Slavic languages it designates “quantitative temporal indefiniteness” (Dickey 2000: 259ff). Although Dickey’s theory has proved quite powerful, I take a different view. The Slavic languages are closely related, and differences in aspect use do not have to imply differences in aspect semantics. Thus, as far as the Slavic PF is concerned, I take an *invariant* approach and follow Galton (1976: 7) when he argues that “[t]he essence (invariant meaning) of the verbal aspect remains one and the same in all Slavic languages, for all their interesting differences in detail”. I follow Klein (1995) and Grønn (2004) and take the meaning of the Slavic PF to be the temporal inclusion of the event time in the reference time:  $e \subset t$ . The Slavic IPF is semantically underspecified and designates an overlap relation between the event time and the reference time:  $e \circ t$ .

<sup>4</sup> The example is from Macedonian and is given as follows.

i Погтоа месото внимателно *извадете* го од маста.

Then, *take* the meat carefully out of the fat. (Alvestad 2013: 12, ex. 20)



Furthermore, I subscribe to the markedness theory of Slavic aspect. I follow Comrie (1976: 112) and take the core meaning of the Slavic PF to be completeness. As semantically underspecified, IPF may take on the meaning of PF. This is to say that the Slavic PF is *marked*, while the IPF is *unmarked* for the feature *completeness*. I thus follow Jakobson (1932), Comrie (1976), and many others, in considering IPF to be the unmarked aspect in Slavic.

IPF may, but need not refer to a single, complete event. Consequently, in some contexts, the aspects compete with each other, a phenomenon referred to as *aspectual competition* in the literature (see, e.g., Mathesius, 1938). For a given *aspectual pair* – a pair of one IPF and one PF verb that differ in meaning only when it comes to aspect – when the IPF member in a given context “wins” against its PF counterpart in the indicative, IPF has a so-called *general-factual* (see, e.g., Padučeva, 1996) or *statement of fact* (Smith 1997, 158) meaning. A classic example from the literature is the Russian *Ja čital «Vojnu i mir»* ‘I have read *War and Peace*’. In such cases, IPF simply “asserts the existence of a complete event” (Grønn, 2004), typically in the past, “more rarely the future” (Dickey, 2000: 96). Another example is (5) below, from Alvestad (2013: 219, ex. 203), which also includes Croatian and Serbian, as well as Ukrainian (Uk), Bulgarian (Bg), Polish (Pl), Slovak (Sk), Macedonian (Mk), Slovene (Sn), and Czech (Cz). (As far as Croatian and Serbian are concerned, the general-factual IPF is used only in Croatian in this example. In Serbian, a PF VP is used.) In the example, William and Adso find themselves in a labyrinth. William reasons about how they may get out, and Adso is impressed.

- (5) a. Ru: – *Как вы все это помните? Вы изучали лабиринты?*  
– *Нет. Я вспомнил старинный текст, который однажды читал*<sup>IPF</sup>.
- (ParaSol. Eco: *Il nome della rosa* [The Name of the Rose])  
“How do you know all that? Are you an expert on labyrinths?”  
“No, I am citing an ancient text I once read.”
- b. Uk: – *Ні, я цитую з однієї давньої книги, яку колись читав*<sup>IPF</sup>.
- c. Bg: – *Не, цитирам ти един древен текст, който четох*<sup>IPF</sup> *доста отдавна.*
- d. Pl: – *Nie, recytuję tylko stary tekst, który kiedyś czytałem*<sup>IPF</sup>.
- e. Hr: – *Nisam, izgovaram dio starog spisa koji sam jednom čitao*<sup>IPF</sup>.
- f. Sk: – *Nie, to len citujem jeden starý text, ktorý som kedysi čítal*<sup>IPF</sup>.
- g. Sr: – *Не, наводим из једног старог текста који сам некада прочи-*



*mao*<sup>PF 5</sup>.

- h. Mk: – *He, samo citiram eden antički tekst što odamna go imam прочитано*<sup>PF</sup>.
- i. Sn: – *Ne, navajam iz starega spisa, ki sem ga nekoč prebral*<sup>PF</sup>.
- j. Cz: – *Kdepak, cituji starý text, který jsem si kdysi přečetl*<sup>PF</sup>.

As Alvestad (2013) points out, the parallel between examples such as the declarative clause in (5), and the imperative clause in examples like (6) below is evident (Alvestad, 2013: 1–3, ex. 1). Along with Russian, both Croatian and Serbian use IPF in this case, as do Belarusian (By), Uk, Bg, Upper Sorbian (US) and Sn. Pl, Mk, Sk and Cz, however, use a PF imperative VP.

In the example, the nurse is writing in her diary about a specific patient of hers, Korčagin, with whom she is very impressed. He is severely injured but does not complain. When she asks him why, he gives the following reply.

- (6) a. Ru: – *Читайте*<sup>IPF</sup> роман “Овод”, тогда узнаете.  
(ParaSol. Ostrovskij: *Kak zakaljalas’ stal*)  
“Read the novel *The Gadfly* and you’ll know.”
- b. By: – *Чытайце*<sup>IPF</sup> раман “Авадзень”, тады будзеце ведаць.
- c. Uk: – *Читайте*<sup>IPF</sup> роман “Овід”, тоді знатимете.
- d. Bg: – *Четете*<sup>IPF</sup> романа “Стършел”, тогава ще разберете.
- e. Sr: – *Čitajte*<sup>IPF</sup> roman “Obad”, tada ćete saznati.
- f. Hr: – *Čitajte*<sup>IPF</sup> roman “Obad”, tada ćete saznati.
- g. US: – *Čitajće*<sup>IPF</sup> roman “Spinadło” a budžeće wědžeć!

<sup>5</sup> The difference in aspect use between Croatian and Serbian in (5) may be related to the kind of adverbial involved. A Bosnian respondent would, as a matter of fact, choose IPF *čitao* with *jednom* but PF *pročitao* with *nekada*. The respondent’s interpretation of *jednom čitao* is one of a single, complete event, whereas the interpretation of *nekada čitao* would be one where the speaker used to read such an ancient text at that time in the past. In other words, *nekada čitao* would imply several complete events. An anonymous reviewer points out the analogy with the verb *slušati* in this case, in which the difference in interpretation becomes even clearer. Compare i. and ii. below.

- i. *To je bend koji sam jednom slušao*<sup>IPF</sup>.  
*That is the band that I heard once.*
- ii. *To je bend koji sam nekada slušao*<sup>IPF</sup>.  
*That is the band that I used to listen/listened to (during some salient time period in the past).*



- h. Sn: – *Berite*<sup>IPF</sup> roman “Obad”, pa boste vedeli.
- i. Pl: – *Przeczytajcie*<sup>PF</sup> powieść “Szerszeń”, to się dowiecie.
- j. Mk: – *Прочумайте*<sup>PF</sup> го романом “Штркел”, тогади ќе разберете.
- k. Sk: – *Prečitajte*<sup>PF</sup> si román “Ovad”, dozviete sa.
- l. Cz: – *Přečtěte*<sup>PF</sup> si román “Střeček” a dovíte se to!

Korčagin’s message in (6) is for the nurse to complete a single event of a particular kind – namely, an event of reading the novel *The Gadfly*. Yet, in two thirds of the languages, an IPF imperative VP is used. Against the background of numerous examples of this kind, i.e., the kind in which an IPF imperative VP refers to a single, complete event, Alvestad (2013) argues that the phenomenon referred to as the general-factual IPF when it occurs in the indicative, occurs in the imperative too. Note that this is not obvious, since, first, imperatives hardly assert the truth of anything at all – that is the task of declaratives – and, second, imperatives are not about facts.

Since imperatives are not associated with facts, Alvestad (2013) follows Iatridou (2000) and Grønn (2013) and refers to IPF when it designates a single, complete event in the imperative as *fake*: when IPF refers to a single complete event, it is devoid of its usual meaning and has a perfective meaning instead. It is an aspectual impostor, being IPF in form but perfective in meaning.

Throughout this article I will follow Alvestad (2013) on this point. To anticipate the analysis, I will argue that what we see in examples such as (1), (2), (3) and (4) are manifestations of the fake IPF.

The assumptions I have now outlined motivate my methodology, which I will turn to next.

### 3. Methodology

If we accept that imperatives, including those of the kind used in recipes and similar literature, are typically used when a certain *change of state* is to be brought about so that a particular *result* obtains, then we would also expect the aspect most frequently used in this verb form to be PF. In other words, when PF is used in an imperative VP, this is as we would expect. From this perspective, the intriguing cases to consider are those where *IPF* is used.

However, in some contexts IPF would be the expected aspect in a given imperative VP too, for example in the following warning from a parent to a child: *Be do-*





ing your homework by the time I get back, or else there will be no television tonight! The progressive is a typologically frequent interpretation of IPF alongside the generic (see, e.g., Iatridou, 2000: 236), the durative and the habitual/iterative interpretation.

It follows from the above that the examples of particular interest are those in which IPF is used with perfective meaning, that is, cases where IPF is fake. I therefore proceeded as follows. First, I compiled a corpus of recipes in the four languages from non-translated cookery books and from the internet comprising approximately 230 pages (see References).<sup>6</sup> Next, I conducted an initial survey, and based on this initial survey I narrowed down my object of study to a set of predicates in which the fake IPF was frequent in one or more of the languages in question. The predicates under investigation refer to situations that are frequently described in recipes and involve what Dowty (1991, 568) refers to as an *incremental theme*. Dowty's incremental theme has several manifestations, but the predicates in question here have in common the fact that they involve "effected" objects, that is, concrete objects that undergo a change of state and, hence, have their qualities altered during a particular process. A process in which an object is being baked, for example, implies that the object proceeds from being raw to becoming baked.

I will be dealing with *telic* predicates (cf., e.g., Comrie, 1976: 44) and, typically, but not always, the situations described will be categorized as *accomplishments* (Vendler, 1957).

Thus, the predicates I will be concerned with in section 5 below are the Bosnian, Croatian, Serbian and Russian equivalents of the transitive 'to bake' and 'to fry' (exemplified in (4)); 'to boil' and 'to cook' (exemplified in (2)); 'to knead a dough'; 'to cut' and 'to chop' (exemplified in (1)); and 'to sprinkle', 'to pour', and 'to stuff' (exemplified in (3)). I will also include cases where PF verbs are used, so as to establish what verbs enter into aspectual pairs with each other. Aspectual competition, of course, can only occur if the language in question in a given case has one PF and one IPF verb at its disposal. In a comparative aspect study such as the present, we need to know whether language A uses a fake IPF form in a particular case because this form "won" the competition against its PF counterpart, or because there is no PF alternative. Examples of the latter type, of course, do not tell us anything about the tendency in language A to prefer IPF to PF.

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<sup>6</sup> Verb forms other than the imperative and the prescriptive infinitive are not included in this study. In other words, other verb forms frequently used in recipes, such as present tense verb forms in the passive voice and 1. p. pl. present tense forms are not considered.



It will become evident that examples where PF is used can be intriguing and instructive too.

Before I turn to the analysis I will point out some challenges I met during the process. First, in some cases it is hard to determine which two verbs in a given language constitute an aspectual pair. Consider the following scenario. According to a dictionary of language A, the IPF verb *x* has the PF aspectual partner *y*. The PF verb that is most frequently used, however, is *z*, while the IPF partner of *z* is not used at all. What is more, the PF verbs *y* and *z* syntactically behave like PF, delimitative Aktionsart verbs. The question in such a case is whether there is an aspectual pair at all, and, if so, which two verbs are the members of that pair.

Having established what two verbs constitute an aspectual pair in language A, the comparative aspectologist is faced with the question of what the equivalent of this pair is in language B. Consider the following scenario. The aspectual pair <*a*, *b*> in language A is used in a situation *s* and, based on its morphology, it should be semantically equivalent to the aspectual pair <*c*, *d*> in language B. Indeed, <*a*, *b*> and <*c*, *d*> do frequently occur under approximately equivalent circumstances. However, we observe that in language A, only PF verbs are used, while IPF verbs are quite frequent in language B. We find out that <*a*, *b*> in A can only be part of a telic VP, whereas <*c*, *d*> may, in addition, be part of an atelic VP. In such a case, are <*a*, *b*> and <*c*, *d*> semantically equivalent? And, against this background, is it correct to say that as regards verbs used in situation *s*, in the imperative and the prescriptive infinitive as these verb forms are used in recipes, language B tends to use IPF verbs more often than language A?

Another challenge arises in a scenario in which there are more significant differences in aspect use between two aspectual pairs in language A, than between one aspectual pair in language A, on the one hand, and one aspectual pair in language B, on the other hand. Consider the following scenario. To describe the situation *s*, language A uses the aspectual pairs <*e*, *f*> and <*g*, *h*>, while language B uses the pair <*i*, *j*>. We observe that the IPF verb *e* is used significantly more often with respect to its PF correlate *f* than the IPF verbs *g* and *i* are used with regard to their respective PF correlates *h* and *j*. Which of the two aspectual pairs in language A should be the decisive one? In other words, what is the correct claim—that IPF verbs tend to be more frequently used in A than in B, or equally often in the two languages? I have taken such issues into consideration in this study and some of them will be exemplified in section 4.

For each situation in question, I have selected the verbs that are most frequently used in each language. For some situations, some verbs are particularly prominent,



while for others several verbs are in use. The number of verbs discussed in the sub-sections in 4 reflect this fact. In all cases, however, the question I have sought to answer is this: under what circumstances are IPF and PF verbs used in the languages at hand?

## 4. Examples, discussion, and analysis

### 4.1. Verbs of baking and frying

The verbs considered in this sub-section are presented in Tables 1 and 2. In these and the subsequent tables, the most frequent verbs are, in most cases, presented first. Aspectual pairs are determined partly on the basis of dictionaries, partly on the basis of findings in the corpus.<sup>7</sup>

Table 1. Verbs involved in equivalents of the transitive ‘to bake’.

	Bosnian	Croatian	Serbian	Russian
1	<i>peći - ispeći</i>	<i>peći - ispeći</i>	<i>peći - ispeći</i>	<i>vypekat' - vypeč'</i>
2	<i>speći</i>	<i>zapeći</i>	<i>zapeći</i>	<i>zapekat' - zapeč'</i>
3	<i>zapeći</i>			<i>peč' - ispeč'</i>
4				<i>speč'</i>

Table 2. Verbs involved in equivalents of the transitive ‘to fry’.

	Bosnian	Croatian	Serbian	Russian
1	<i>pržiti - ispržiti</i>	<i>pržiti - ispržiti</i>	<i>pržiti - ispržiti</i>	<i>žarit'</i>
2	<i>popržiti<sup>delim8</sup></i>	<i>popržiti<sup>delim</sup></i>	<i>popržiti<sup>delim</sup></i>	<i>obžarivat' - obžarit'</i>
3	<i>popržiti<sup>delim</sup></i>	<i>zapržiti</i>		<i>podžarivat' - podžarit'</i>
4		<i>opržiti</i>		<i>podžarit<sup>delim</sup></i>
5				<i>prožarivat' - prožarit'</i>
6				<i>zažarivat' - zažarit'</i>

Before I present and discuss the examples, some remarks are in order. First, Ru IPF *peč'* ‘to bake’ has, according to Berkov (1994), two PF correlates – namely, *speč'* and *ispeč'*. However, IPF *peč'* is also listed as the IPF correlate of PF *vypeč'*, even though there exists an IPF *vypekat'*. In the table, *vypekat'* – *vypeč'* are given as an aspectual pair because in the present corpus, *vypekat'* occurs almost three times as

<sup>7</sup> Given that the languages are so closely related, it seems fair to assume that aspectual pairs such as the Bn, Hr, and Sr IPF *peći* - PF *ispeći* semantically correspond to each other. To arrive at an exact answer here, however, further investigations are needed.

<sup>8</sup> *delim* = the delimitative Aktionsart (cf., e.g., Comrie, 1976: 17).



frequently as *peč'*. Moreover, *ispeč'* is given as the PF correlate of *peč'* because *ispeč'* occurs six times, while *speč'* occurs only once.

According to Berkov (1994), Ru IPF *žarit'* has two PF correlates – namely, *zažariv'* and *podžariv'*. Both IPF *zažarivat'* and *podžarivat'* exist, however, which is why IPF *žarit'* is placed in a cell of its own, even though none of the two secondary IPF verbs mentioned occurs in the corpus.

It is also worth pointing out that not all the verbs in the table are observed equally often. As regards the verbs for 'to bake', this holds for Ru PF *vypeč'*, which does not occur in the corpus at all. While *vypekat'* occurs about three times as often as *peč'*, *zapekat'* occurs twice as often. Of examples involving PF verbs, there are six in which *ispeč'* is used and four where *zapeč'* is used.

As for the verbs designating 'to fry', the Bosnian, Croatian and Serbian PF *zapržiti* occurs twice and PF *opržiti* once. The table shows that of the verbs designating the delimitative Aktionsart, *popržiti* is the preferred verb in Croatian whereas Serbian prefers *propržiti*, and in Bosnian we find both.<sup>9</sup> As for the Russian verbs for 'to fry', *žarit'* and *obžarivat'* are the only IPF verbs occurring in the corpus—ten times and once, respectively. PF *obžarit'* occurs twice as often as *podžariv'*, while *zažariv'* occurs only once.

As far as the main findings for the baking and frying verbs are concerned, a first observation is that there are no systematic differences in the use of aspect between the imperative and the prescriptive infinitive in any of the languages in question. The results presented below are thus true of the imperative as well as the prescriptive infinitive.

As for the baking-verbs, IPF is used in two thirds of the examples in all four languages. As far as the frying-verbs are concerned, IPF is used in 40% of the cases in Bn, Hr and Sr and in two thirds of the cases in Ru. IPF verbs of baking are modified by durative adverbials in half of the cases in Bn, Hr and Sr and more than 70% of the cases in Ru. IPF frying-verbs are modified by durative adverbials in 40% of the cases in Bn, Hr and Sr and in half of the cases in Ru. In exceptional cases, PF verbs of baking or frying are modified by temporal adverbials of duration. This holds for five of eight instances of the Bn, Hr and Sr PF *zapeći*, which suggests that this verb may designate a delimitative Aktionsart.

PF and IPF verbs of baking and frying are modified by manner adverbials equally often in all four languages. Examples are 'on low heat', 'in fat', 'at 180 de-

<sup>9</sup> In fact, *propržiti* does not occur in the Hr part of the corpus.



grees Celsius', etc. Both PF and IPF baking- and frying-verbs are typically part of the last VP in the sentence in which they occur, in all four languages. The direct object is explicitly expressed twice as often in VPs involving a PF as with an IPF verb of baking or frying. This holds for all four languages in question.

Now let us look at some examples.

- (7) *Peci*<sup>IPF</sup> *ih zatim na jakoj vatri. Ispečene i ohlađene preseku se popola i pune sledećim kremom...* (Sr)

Subsequently, *bake* them at high heat. When they are done and have cooled off they are cut in halves and stuffed with the following cream:...

- (8) *Pitu završite dvijema jufkama. Pecite*<sup>IPF</sup>. *Kada je pita gotova, isjecite je na komade pa zalijte supom.* (Bn)

Finish the pita by means of two bands of dough. *Bake* [it]. When the pita is done, cut it into pieces and pour over the soup.

- (9) *Pržite*<sup>IPF</sup> *na masti sitno kosan luk i umiješajte ga na kraju u "škrob".* (Hr)

*Fry* the finely chopped onion in fat and, finally, mix it into the "starch".

There is no doubt in any of these cases that the action of baking or frying is to be performed such that the end point is included. Clues to this are *ispečene* 'when they are done' in (7), *kada je pita gotova* 'when the pita is done' in (8), and *na kraju* 'finally' in (9). Thus, IPF in these cases refers to complete events or, more precisely, events that are to be completed. On this analysis, therefore, IPF is fake in all three examples.<sup>10,11</sup>

IPF is used in the next three examples as well, but in these cases the event of baking or frying is to be performed simultaneously to another event. Arguably, therefore, the examples (10–12) instantiate the durative configuration of IPF. In other words, IPF is "real" in these cases.

<sup>10</sup> Another possible interpretation is that the end point is *not* included, since, if it were, the elements referred to in the text as "clues" would be redundant. On such an interpretation, the IPF baking- and frying-verbs in (7), (8), and (9) would probably instantiate the durative configuration of IPF.

<sup>11</sup> An anonymous reviewer suggests another possible explanation of why IPF is used in examples such as (7), (8), and (9) – namely, that the nature of recipes is such that the verb forms do not refer to single events but, rather, to events that may, or are to be repeated an unlimited number of times. On such an interpretation, IPF would not be fake, but real, and would have a habitual reading. Although this is an interesting idea, I will stick to my analysis of IPF in examples such as (7), (8), and (9) as fake. The main reason for this is that, had the events in recipes been conceptualized as habits, then we would expect PF to be used only rarely in Bn, Hr, and Sr recipes, and hardly ever in Ru recipes, but this is not the case. Rather, PF is widespread in recipes in all four languages in question.



- (10) *Mafiše **pržite**<sup>IPF</sup> u dosta vrelog ulja, ali pazite da ostanе bleđo žute boje.* (Sr)  
*Fry the mafišes in lots of hot oil, but mind they remain bright yellow in colour.*
- (11) *Zatim ih izvadite i **pecite**<sup>IPF</sup> na slanini na umjerenoj vatri uz češće okretanje.* (Hr)  
*Then, take [the partridges] out and fry them in salo over medium heat, turning them frequently.*
- (12) *Добавьте кусочки орехов кешью или фундука и, постоянно помешивая, **жарьте**<sup>IPF</sup> до золотисто-коричневого цвета.* (Ru)  
*Add pieces of cashew or hazelnuts and, stirring constantly, roast [them] until they are golden brown.*

In the next group of examples, a PF verb is used under circumstances where we typically find IPF verbs in their durative interpretation. For example, in (13) the action of frying described by the PF verb is to be performed simultaneously with a complex event of adding hot water little by little. In (14), the same PF frying-verb is modified by a durative adverbial.

- (13) ***Поджарить**<sup>PF</sup> на масле мелко нарезанный репчатый лук, добавляя понемногу горячую воду ...* (Ru)  
*Fry the finely chopped onion in fat, adding the hot water little by little ...*
- (14) *Опустите миндаль на 2 минуты в кипяток и очистите от кожицы, **поджарьте**<sup>PF</sup> в духовке 10 минут (180 градусов).* (Ru)  
*Soak the almonds in boiling water for two minutes and peel them, bake [them] in the oven for ten minutes (180 degrees).*

The Ru PF *podžarit'* in (13) and (14) calls to mind a delimitative Aktionsart verb, such as Ru PF *poguljat'* in the VP *poguljat' v parke dva časa* 'to walk in the park for two hours'. The same is true of Ru PF *obžarit'*, cf. (15–17).<sup>12</sup>

<sup>12</sup> My Russian respondent also accepts *podžarit'* in (15)–(17) but not, interestingly, *prožarit'*. I therefore suggest that IPF *prožarivat'* - PF *prožarit'* constitute a telic aspectual pair designating an accomplishment, while the pairs *podžarivat'* - *podžarit'* and *obžarivat'* - *obžarit'* only, at best, may do the same. Thus, my respondent does not accept i. below with *prožarit'*. She would, however, accept *podžarit'* in this case.

- i. <sup>?</sup> *Стакан гречневой крупы **прожарьте**<sup>PF</sup> на сковороде до тех пор, пока она не подрумянится.*  
*Roast a glass of buckwheat in a frying pan until it browns.*



- (15) **Обжарьте**<sup>PF</sup> *перец на одной ложке сливочного масла минуты 3.* (Ru)  
Fry the pepper in a tablespoon of butter for three minutes.
- (16) **Обжарьте**<sup>PF</sup> *в масле чеснок, мидии, лук, петрушку 10 минут, добавьте фасоль.* (Ru)  
Fry the garlic, mussels, onion and parsley in butter for ten minutes, [then] add the beans.

But are Ru PF *podžariti*' and *obžariti*' delimitative Aktionsart verbs? Before I propose an answer to this question, consider (17).

- (17) *Перец и лук порежьте и обжарьте*<sup>PF</sup> *в масле почти до готовности.*  
Cut the pepper and the onion and fry [it] in butter until almost done.

Against this background, and since the IPF *podžarivat*' and *obžarivat*' exist, I suggest that Ru *podžarivat*' - *podžariti*' and *obžarivat*' - *obžariti*' are—at least in some of their uses – what Zaliznjak and Šmelev (2000: 57–58) call *gradacionnye pary* 'gradational pairs'; aspectual pairs that encode a process that can continue after the culmination. Gradational pairs are opposed to so-called *predel'nye pary*, in which the process cannot continue when the *predel* 'boundary', or culmination has been reached. On this interpretation, the two Ru aspectual pairs in question are of the same kind as Ru IPF *povyšat'sja* – PF *povyisit'sja* 'to rise' (of temperature, for example). The sentence *Temperatura povysilas*<sup>PF</sup>, *i vse ešče povyšaetsja*<sup>IPF</sup> 'The temperature has risen and is still rising', for example, is perfectly fine.

Some examples suggest that the Bn, Hr and Sr IPF *peći* – PF *ispeći* and IPF *pržiti* – PF *ispržiti* can also make up gradational aspectual pairs. As for the first pair, consider (18–20).

- (18) *Kada je pita ispečena*<sup>PF</sup>, *izrežite je na komade i prelijte ostatkom masnoće i kajmaka pa zapecite*<sup>PF</sup>. (Bn)  
When the pita is baked, cut it into pieces and pour over the rest of the fat and the cream and bake [it].
- (19) *Izvaditi iz pećnice, preliti rastopljenim maslacem, posipati ... bademima, ... i ispeći*<sup>PF</sup> *do kraja.* (Hr)  
Take [the cake] out of the stove, pour over the melted butter, sprinkle with ... almonds, ... and bake [it] until it is done.
- (20) *Tijesto dobro umijesiti i pustiti da se diže, zatim razvaljati veličine lima, opet pustiti da se dignu i dopola ispeći*<sup>PF</sup>. (Hr)

According to my respondent, then, *prožarivat*' - *prožariti*' encode an inherent boundary, after which the frying-event can no longer continue.



Knead the dough well and leave it to rise, then roll it to the size of a baking pan, let it rise again and *bake* [it] until it is half done.

The felicitous use of PF *zapeći* after the PF past passive participle *ispečena* in (18), along with the fact that *do kraja* is not redundant as a modifier of *ispeći* in (19), and that *dopola ispeći* is acceptable, suggest that *peći* – *ispeći* are also a gradational pair, at least in some of their uses. The same holds for *pržiti* – *ispržiti*, cf. (21) below, in which the onion can be “*pržen*” after having been “*ispržen*” without being destroyed, and (22), in which *napola ispržiti* is felicitous.

(21) *Na ulju ispržiti*<sup>PF</sup> ... *luk, dodati spanać, pa još malo sve zajedno pržiti*<sup>IPF</sup>. (Sr)

*Fry* ... the onion in oil, add the spinach, and then fry it all together some more.

(22) *Izmešati kajmak, mleko i ispečene paprike ... i napola ispržiti*<sup>PF</sup>. (Sr)  
Mix cream, milk and the baked peppers ... and fry [it] until half done.

Evidently, the inherent boundary of a prototypical baking- or frying-event is beyond the scope of both *ispeći* and *ispržiti*. Based on the examples we have seen, the meaning of these verbs is ‘to bake/fry something up to a certain point’ rather than ‘to bake/fry something up to, and including the natural, inherent boundary’.

Concluding this sub-section, I have given a little taste of my findings for verbs of baking and frying. First, of the aspectual pairs considered, only the Ru *prožarivat*’ – *prožarit*’ and *vypekat*’ – *vypeč*’ are telic aspectual pairs in all their manifestations, thereby together designating an accomplishment. The aspectual correlates *peći* – *ispeći* and *pržiti* – *ispržiti* in Bn, Hr and Sr, and *peč*’ – *ispeč*’ in Ru most often encode a meaning of gradation. This holds to an even higher degree for Ru *podžarivat*’ – *podžarit*’ and *obžarivat*’ – *obžarit*’.

## 4.2. Verbs of boiling

The verbs involved in the equivalents of the transitive ‘to boil’ and ‘to cook’ are given in Table 3 below.

Table 3. Verbs involved in equivalents of the transitive ‘to boil’ and ‘to cook’.

	Bosnian	Croatian	Serbian	Russian
1	<i>kuhati</i> – <i>skuhati</i>	<i>kuhati</i> – <i>skuhati</i>	<i>kuvati</i> – <i>skuvati</i>	<i>varit</i> ’ – <i>svarit</i> ’
2	<i>kuvati</i> – <i>skuvati</i>			





A first observation concerning this sub-set of the corpus is the same as that for the verbs of baking and frying – namely, that there are no systematic differences in aspect use between the imperative and the prescriptive infinitive in any of the languages in question. Therefore, unless otherwise noted, the findings mentioned below pertain to both the imperative and the prescriptive infinitive.

As regards the question of the lexical semantics of the verbs in Table 3, one hypothesis could be that the IPF correlates – Bn, Hr and Sr *kuhati/kuvati* and Ru *varit'* – designate the process of bringing something to a boil, while the PF correlates *skuhati/skuvati* and *svarit'* in addition encode the culmination, the liquid's reaching the boiling point. 100 degrees Celsius, the standard boiling point of water, would then represent the *telos*, the culmination or inherent boundary, in the case of these predicates. The hypothesis would then be that the IPF aspectual partners designate the process of heating the liquid up to 100 degrees Celsius, while the PF aspectual partners in addition encode the moment at which the liquid reaches the boiling point. The Hr and Ru examples below, however, show that the IPF correlates may designate what is going on *after* the water has reached the boiling point and is continuing to boil, too. It is not the case, therefore, that Bn, Hr and Sr IPF *kuhati/kuvati* and Ru IPF *varit'* can be used only to refer to the heating up of liquid to 100 degrees Celsius.

- (23) *Stavite na vatru da provrije, a poslije kuhajte<sup>IPF</sup> na laganoj vatri dok meso ne omekša.* (Hr)  
Place [it] on the stove so that it boils, and then *boil* [it] over low heat until the meat is tender.
- (24) *На сильном огне варите кашу три минуты, затем убавьте огонь до среднего и варите<sup>IPF</sup> ещё девять минут.* (Ru)  
Boil the porridge for three minutes over high heat, then turn the heat down to medium and *boil* [it] for another nine minutes.

In both Hr and Ru, IPF *kuhati* and IPF *varit'* are used to describe a situation in which liquid is continuing to boil after having reached the boiling point. In both cases, the IPF verbs are used when the temperature is higher than 100 degrees Celsius. The difference in use between IPF Bn, Hr and Sr *kuhati/kuvati* and Ru *varit'*, on the one hand, and the PF *skuhati/skuvati* and *svarit'*, on the other hand, must, then, be another.

In the present corpus, the IPF *kuhati/kuvati* and the IPF *varit'* are modified by temporal adverbials expressing duration in almost 75% and approximately 90% of the cases, respectively. (23) and (24) above are cases in point. In such instances, IPF is



real. Let us have a look at an example where, at first sight, IPF appears to be fake.

- (25) *Картофель ... варите<sup>IPF</sup> в "мундире", а чтобы он не слишком разварился, добавьте в воду больше соли.* (Ru)  
*Boil the potatoes in their "uniforms" (i.e., with their skins on), and in order for them not to fall too much apart, add more salt to the water.*

An end point could, in theory, be included in the boiling-event in this case. On the other hand, the boiling-event is to be interrupted by another event before it reaches its end point. Specifically, the action of adding salt to the water is to be performed before the event of boiling the potatoes has reached its end point. In (25), therefore, we see a case of the progressive interpretation of IPF in the imperative.

In the two final examples I will provide of IPF verbs of boiling, IPF is, arguably, fake. (26) is from Hr and (27) is from Ru.

- (26) *Pomiješajte voće i šećer te kuhajte<sup>IPF</sup> do željene gustoće.* (Hr)  
*Mix the fruit and the sugar and boil [it] until preferred thickness.*
- (27) *Посолите, засыпьте рис и варите<sup>IPF</sup> кашу до готовности.* (Ru)  
*Season with salt, add the rice and cook the porridge until it is finished.*

In both cases, IPF is used even though the action described is to reach its end point. The latter is even made explicit, by means of the adverbials *do željene gustoće* 'until preferred thickness' and *do gotovnosti* 'until it is finished', respectively. The predicates are telic and the boundary – which in this case is actual, not inherent – is to be reached, yet IPF is used. IPF is, therefore, fake in (26) and (27).

Finally, let us have a look at some examples in which PF is used. (28) is from Bn and (29) from Ru.

- (28) *Agdu skuhajte<sup>PF</sup> od preostale vode, šećera i limunovog soka, prelijte preko pečenih ružica i ostavite da se hlade.* (Bn)  
*Boil a syrup of the remaining water, sugar and lemon juice, pour [it] over the baked, rose-shaped cookies and let them cool off.*
- (29) *Свёклу сварите<sup>PF</sup> в кожуре, охладите, очистите и натрите на мелкой тёрке.* (Ru)  
*Boil the beets with their skins on, let them cool off, rinse them and grate them on a fine grater.*

Contrary to (25), the boiling-events in (28) and (29) are to be completed before the subsequent action described in the recipe is to be performed. The boiling-events in (28) and (29) are the first in a sequence of events that are to be brought about, one



after the other. (28) and (29) are thus typical examples of the PF verbs of boiling in the present corpus. Specifically, in all the cases in the corpus where Ru PF *svarit'* is one of two or more verbs in a sentence, this verb occurs as the first. The corresponding share for Bn, Hr and Sr PF *skuhati/skuvati* is more than 2/3. When the IPF correlates are used, the verb is typically the last in the sequence, as in (26) and (27).<sup>13</sup>

(28) and (29) are typical examples of the PF verbs of boiling in another respect as well—namely, in that the direct object is explicitly expressed. In 85% of the examples involving PF *skuhati/skuvati* and in all but one example involving PF *svarit'*, the direct object of these verbs is explicit. When the corresponding IPF verbs are used, in Bn, Hr and Sr as well as Ru, the direct object is typically left implicit, as in (26).

Another interesting characteristic of the typical direct object of the PF verbs of boiling in the corpus can be seen in (28) and in (30) below.

(30) **Сварить**<sup>PF</sup> *глазурь из ... сахара, ... воды, ... сливочного масла, и полить верх торта.* (Ru)

*Boil an icing of ... sugar, ... water, ... butter, and pour [it] over the cake.*

The direct objects of Bn PF *skuhajte* in (28) and Ru PF *svarit'* in (30) have in common that what they refer to – a syrup and an icing – do not exist at the time when the boiling-event starts. The referents of both these direct objects come into existence as a result of the boiling-events. The referents thus represent the result state of the boiling-events in question. In (2) and (25), on the other hand, in which IPF boiling-verbs are used, the referents of the direct objects – the cabbage and the potatoes, respectively – already exist when the boiling event starts. The VPs are of the form 'to boil x'. The VPs involving PF boiling verbs, on the other hand, typically are of the form 'to boil an x from y and z'. This calls to mind a group of verbs that have been referred to as *creativity verbs* in the literature (see Israeli, 1996: 27) and that are typically used in PF, at least in the past tense in Ru (*ibid.*). Indeed, in the present corpus, direct objects of the kind in (28) and (30) only occur in VPs in which the boiling-verb is PF. This holds for all the languages in question. Further examples from the corpus are Sr *skuvati sirup gustine ređeg meda* 'to boil a syrup

<sup>13</sup> An anonymous reviewer points out that one might also analyze IPF in (26) and (27) as encoding a process to which it is necessary to devote special attention: the boiling in (26) and the cooking in (27) should not last too long; otherwise, it will lead to unwanted consequences. On this interpretation, IPF focuses on specific phases of the verb process and emphasizes the importance of interrupting the process at the right moment.



as thick as thin honey’ and Hr *skuhati kremu od maslaca i čokolade* ‘to boil a cream of butter and chocolate’, and Ru *svarit’ kašu* ‘cook a porridge’ and *svarit’ sirop iz sakhara i vody* ‘boil a syrup of sugar and water’. In all these cases, the boiling-event is completed when the referent of the direct object has come into existence. This temporal interval is the inherent boundary of the VPs in question. When this boundary has been reached, the boiling-event can no longer continue.

In the present corpus of boiling-verbs, there are, furthermore, particular adverbials that only occur together with the PF verbs. These are adverbials that draw the attention to the result state of the events. Consider the examples below.

- (31) *Jaja skuhati<sup>PF</sup> utvrdo i narezati na kolute.* (Hr)  
*Boil the eggs such that they become hard-boiled and cut [them] into slices.*
- (32) *Сварить<sup>PF</sup> вкрутую 5 яиц, очистить и не очень мелко порубить.* (Ru)  
*Boil five eggs such that they become hard-boiled, peel [them] and chop [them], but not too fine.*

The adverbials *utvrdo* and *vkrotuju* in (31) and (32) do not tell us about the *manner* in which the eggs are to be boiled. Rather, they tell us what qualities the eggs are to possess when the boiling-event is completed. The prefixes *u-* in *utvrdo* and *v-* in *vkrotuju* signal that the focus is to be placed on something that finds itself in the future with respect to the boiling-event.<sup>14</sup> The two adverbials thus function more like adjectives, describing the characteristics of the referents of the direct objects when the result state has been reached, than like adverbs.

I will now move on to comment upon a Ru example that stands out in the corpus, in that a PF boiling-verb is combined with an adverbial indicating the boundary of the boiling-event.

- (33) *Сварите<sup>PF</sup> картофель в кожуре до мягкости.* (Ru)  
*Boil the potato with its skin on until it gets soft.*

In the present corpus, when Ru IPF *varit’* or PF *svarit’* is combined with a goal-indicating *do*-construction, the verb is IPF *varit’* in 14 out of 15 cases. Indeed, my Russian respondent does not consider *svarit’ do mjagkosti* ‘boil<sup>PF</sup> until softness’ to be optimal. Apparently, there is an inherent boundary encoded in the lexical semantics of the verb *svarit’*. Explicit information about an end point becomes redundant.<sup>15</sup> This suggests that Ru IPF *varit’* – PF *svarit’* constitute a telic aspectual pair,

<sup>14</sup> Cf. the fact that the prepositions designate direction when used with the accusative case.

<sup>15</sup> The case is different, however, for Ru PF *otvarit’*. With this verb my respondent accepts the construction *do polugotovnosti* ‘until half done’ as well as durative temporal adverbials. Thus, the as-



and not just a gradational pair, as seen for some of the frying- and baking-verbs in 4.1.

Summing up the section on boiling-verbs, there are, first, no systematic differences in aspect use between the imperative and the prescriptive infinitive in any of the languages in the corpus. Second, we have seen that in all languages, although the tendency is slightly stronger in Bn, Hr and Sr than in Ru, IPF boiling-verbs are used when something is to be boiled (as opposed to cases where  $x$  is to be boiled from  $y$  and  $z$ ).

As regards the semantic content of the verbs investigated, we have found that IPF *kuhati/kuvati* and *varit'* not simply describe the situation of preparing something in a liquid over heat up until it starts boiling. We have also found that PF *skuhati/skuvati* and *svarit'* not simply mean 'to bring something to a boil'.<sup>16</sup> The *telos* of the boiling-event that the aspectual pairs describe, is reached at a later stage than that at which the liquid reaches the boiling point, 100 degrees Celsius.

Taking a time axis as the point of departure, the *telos* of the boiling-event will be located at a point  $x + y$ , of which both are variables.  $X$  is the time it takes from a kettle of water is placed on the stove and the heat is turned on, until the water starts boiling.  $X$  will depend on, i.a., the stove, the kettle, the amount of water, whether or not the lid is on.  $Y$  is the time it takes to boil the food until it is done.  $Y$ , therefore, will depend on what is to be boiled. If we are going to boil spaghetti, *telos* will be reached at point ( $x + 11$  minutes), but if we are going to boil potatoes it will be reached at point ( $x + 20$  minutes).

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pectual pair *otvarivat' - otvarit'* is of the same type as *obžarivat' - obžarit'* discussed in 4.1. It is not telic, but has a meaning of gradation. In other words, it is a gradational pair.

<sup>16</sup> All the languages in question have separate (transitive) verbs for this—namely, Bn, Hr and Sr *provreti/provrijeti* and *uzavreti/uzavrijeti*, and Ru *vskipjatit'*.



### 4.3. Verbs of kneading a dough

In this sub-section, I will discuss examples involving verbs of mixing specific ingredients and kneading a dough. The verbs in question are given in table 4.

Table 4. Verbs involved in equivalents of ‘to knead (a dough)’.

	Bosnian	Croatian	Serbian	Russian
1	<i>mijesiti - umijesiti</i>	<i>mijesiti - umijesiti</i>	<i>mesiti - umesiti</i>	<i>mesit’</i>
2	<i>zamješivati - zamijesiti</i>	<i>zamješivati - zamijesiti</i>	<i>zamešivati - zamesiti</i>	<i>vymesit’</i>
3	<i>premješivati - premijesiti</i>	<i>premješivati - premijesiti</i>	<i>premešivati - premesiti</i>	<i>zamešivat’ - zamesit’</i>
4			<i>izmesiti</i>	<i>promesit’</i>

Before I present the examples, some remarks are in order with respect to the verbs in the table. According to Benson (1993), the PF aspectual correlate of Bn, Hr and Sr IPF *mijesiti/mesiti* is *umijesiti/umesiti*, but in the present corpus PF *zamijesiti/zamesiti* occurs almost four times as often as *umijesiti/umesiti*. For these three languages, PF *premijesiti/premesiti* has also been taken into consideration. As far as Ru is concerned, IPF *mesit’* is included, which, according to Berkov (1994), does not have any PF aspectual partner. In the present corpus, the PF verbs of kneading used are *vymesit’* and *zamesit’*, which occur equally often, and *promesit’* occurs occasionally. According to Berkov (1994), Ru PF *zamesit’* has a secondary IPF aspectual partner – namely, *zamešivat’*, but this verb does not occur in the corpus.

The first observation is the same for these verbs as for the verbs discussed in 4.1. and 4.2. – namely, that there are no systematic differences in aspect use between the imperative and the prescriptive infinitive in either Bn, Hr, Sr or Ru.

Second, IPF verbs of kneading frequently occur together with adverbials of duration. This holds for more than half of the occurrences of Bn, Hr and Sr *mijesiti/mesiti* and more than 80% of the cases of Ru *mesit’*. In more than half of the cases, *mijesiti/mesiti* is in addition modified by an adverbial of manner. *Mesit’* does not occur with such an adverbial.

Furthermore, in eight of nine examples in which IPF *mijesiti/mesiti* is one of two or more verbs in a sentence, IPF *mijesiti/mesiti* is placed as the final verb in that sentence. In seven of these nine examples, the direct object of IPF *mijesiti/mesiti* is explicitly expressed. On this point, the verbs of kneading diverge from the verbs of



boiling. The two groups of verbs are similar, however, when it comes to the position of the PF correlates in the sentence. Specifically, in Bn, Hr and Sr, of the cases in which a PF verb of kneading occurs as one of two or more verbs in a sentence, this verb occurs as the first in approximately 70% of the cases.

As far as Ru is concerned, IPF *mesit'* is the final verb in the sentence in all four cases in the corpus where it occurs as one of two or more verbs. The direct object of IPF *mesit'* is explicitly present in just one of six cases. On this point, as well as with respect to the position of the PF verbs of kneading in the sentence, Ru differs from Bn, Hr and Sr. In Ru, a PF kneading-verb is placed as the first verb in the sentence in less than a third of the cases in which such a verb occurs as one of two or more verbs in a sentence. In more than half of the cases, it occurs as the final verb in the sentence.

Now we are ready for some examples. Consider (34) and (35) below from Hr and Ru, respectively.

- (34) *Razbijte jaje i ulijte ga u sredinu, posolite brašno i postepeno nalijte mlakne vode, i mijesite<sup>IPF</sup> tijesto.* (Hr)

Crack the egg and drop it into the middle, add salt to the flour and gradually pour over lukewarm water, and *knead* a dough.

- (35) *В готовую опару добавьте соль, всыпьте муку и месите<sup>IPF</sup> гладкое тесто.* (Ru)

Add salt to the ready sourdough, sprinkle with flour, and *knead* a smooth dough.

In both (34) and (35), we are concerned with telic predicates and the situations they refer to, are to be performed to their end point. The predicates refer to single, complete events, yet IPF verbs are used. On the present analysis, IPF is fake in these cases. Note, as well, that the referent of the direct object does not exist at the time when the kneading-event starts in either (34) or (35). The existence of a dough is part of the result state of the kneading-event in both cases. When the action described has been brought about, there exists a dough. In this respect, (34) and (35) call to mind the PF boiling-verbs in (28) and (30).

This concludes the section on kneading-verbs.

#### 4.4. Verbs of cutting and chopping

In this sub-section, I will discuss examples involving verbs of cutting and chopping. The verbs in question are given in the two tables below.



Table 5. Verbs of cutting.

	Bosnian	Croatian	Serbian	Russian
1	<i>sjeći - isjeći</i>	<i>izrezivati</i> - <i>izrezati</i>	<i>seći - iseći</i>	<i>narezát' - narézat'</i>
2	<i>izrezivati</i> - <i>izrezati</i>	<i>narezati</i> <sup>PF</sup>	<i>narezati</i> <sup>PF</sup>	<i>porézat</i> <sup>PF/distr?17</sup>
3	<i>narezati</i> <sup>PF</sup>	<i>rezati</i> <sup>IPF</sup>	<i>raseći</i> <sup>PF</sup>	<i>razrezát' - razrézat'</i>
4	<i>rezati</i> <sup>IPF</sup>	<i>razrezati</i> <sup>PF</sup>	<i>rezati</i> <sup>IPF</sup>	
5	<i>razrezati</i> <sup>PF</sup>	<i>sjeći - isjeći</i>		

Table 6. Verbs of chopping.

	Bosnian	Croatian	Serbian	Russian
1	<i>sjeckati</i> - <i>isjeckati</i>	<i>nasjeckati</i> <sup>cumul</sup>	<i>seckati - iseckati</i>	<i>rubit'</i>
2	<i>nasjeckati</i> <sup>cumul18</sup>		<i>naseckati</i> <sup>cumul</sup>	<i>porubit'</i>
3				<i>narubit</i> <sup>cumul</sup>

Before I present and discuss the examples, some remarks are in order with respect to particular verbs in the tables. As far as the verbs of cutting are concerned, of the Bn and Hr aspectual pair *izrezivati – izrezati*, only the PF correlate is observed in the present corpus. PF *izrezati* occurs almost twice as frequently as PF *narezati*.

Some verbs occur rarely in the corpus but are presented in the tables all the same. This holds for Bn *narezati*, *rezati* and *razrezati*, which occur three times, twice, and once, respectively. It also holds for Hr *sjeći – isjeći*, of which only the PF correlate is observed – once. For Sr it concerns *narezati* and *raseći*, which both occur twice, and *rezati*, which occurs once. As for the chopping-verbs, in Bn and Hr *nasjeckati* is observed only once, while *naseckati* occurs twice in Sr. As for Ru, there is one example involving IPF *rubit'*, while PF *porubit'* and PF *narubit'* are found four times each.

The main findings regarding the verbs of cutting and chopping are as follows. First, the use of aspect in the imperative and the prescriptive infinitive is approximately the same in all four languages in question. As regards the verbs of cutting –

<sup>17</sup> The verb behaves like a distributive (= distr) Aktionsart verb in some contexts.

<sup>18</sup> cumul = the cumulative Aktionsart.





given in Table 5 – an IPF verb is used in about 20% of the cases in Bn, Hr and Sr, but in none of the 77 cases in Ru. In other words, all Ru verbs of cutting in the corpus are PF. As for the verbs of chopping, a PF verb is used in all 23 examples from Bn, Hr or Sr and in eight of nine examples from Ru. In other words, there is one example in the corpus in which an IPF verb of chopping is used in Ru.

As regards the position of the IPF versus PF verbs of cutting and chopping in the sentence, the tendency is not as clear as for the verbs discussed in section 4.1, 4.2, and 4.3, that is, the verbs of baking and frying, boiling, and kneading a dough. As regards the presence versus absence of explicit direct objects, however, it is. The direct object is explicit slightly more often when the verb is PF than when it is IPF. For example, the direct object of IPF *rezati* and *sjeći/seći* is present in more than half and in 75% of the cases, respectively, while the corresponding share for the PF *izrezati*, *narezati*, *razrezati*, *isjeći/iseći*, and *rasjeći/raseći* is 80%.

The adverbials that typically modify verbs of cutting are of the kind ‘into pieces’. IPF *rezati* and *sjeći/seći* are modified by such an adverbial in less than 40% and in 50% of the instances, respectively. The corresponding shares for the PF verbs vary. PF *narezati*, for example, is modified by such an adverbial in more than 80% of the cases, while the share for *izrezati* is about 60%. I will propose an explanation for the divergence between these two verbs as I discuss the examples below. PF *isjeći/iseći* and *rasjeći/raseći* are modified by an adverbial of the ‘into pieces’-kind in almost 75% of the cases.

Now, three issues must be clarified. First, we need to explain the rest of the examples with IPF *rezati* and *sjeći/seći*. We must also explain why the PF *narezati* and *izrezati* and *isjeći/iseći* more often than, respectively, IPF *rezati* and *sjeći/seći* are modified by adverbials of the type ‘into pieces’.

Let us start the analysis by looking at some examples.

- (36) *Trake [tijesta] složiti jednu povrhu druge, a zatim rezati<sup>IPF</sup> rezance širine 1-2 cm.* (Hr)  
Place the bands [of dough] one on top of the other and then cut 1-2 cm long strips.
- (37) *Meso izrežite<sup>PF</sup> na kockice, posolite i naglo prepržite na maslacu.* (Bn)  
Cut the meat into small cubes, add salt and fry [it] quickly once more in fat over high heat.
- (38) *Srolajte [jufku] na oklagiju, izvucite je i sjecite<sup>IPF</sup> ružice široke 2 cm.* (Bn)  
Roll the band of dough around the rolling pin, pull the pin out and cut



small, 2 cm wide pieces in the shape of roses.

- (39) *Pečenu pitu **iseći**<sup>PF</sup> na četvrtastu parčad i toplo služiti kao predjelo.* (Sr)  
*Cut the baked pita into squares and serve it hot as a starter.*

Based on the remarks above regarding the main findings for this sub-group of verbs, we can see that all four examples are typical and representative. Thus, in (36) and (38), an IPF verb of cutting occurs as the final verb in the sentence, the direct object is explicit, and adverbials of the ‘into pieces’-kind are missing. In (37) and (39), on the other hand, a PF cutting-verb occurs as the first verb in the sentence, the direct object is explicit, and ‘into pieces’-type adverbials are present. The IPF and PF VPs of cutting thus follow two distinct patterns. The PF VPs are of the form ‘to cut *x* into *y*-s’ and are telic. The IPF VPs, on the other hand, are of the form ‘to cut *y*-s’ and are atelic. We can therefore say that IPF in both (36) and (38) is real. Indeed, more than half of the direct objects of IPF *rezati* and *sjeći/seći* are of the same kind as those in (36) and (38). As for the PF verbs of cutting, the direct objects of all 22 occurrences of PF *narezati* and more than 80% of the occurrences of PF *izrezati* are of the same kind as those in (37) and (39). The same holds for 63 of the 64 direct objects of PF *isjeći/iseći* and *rasjeći/raseći* in the corpus.

Now consider (40) below from Hr.

- (40) *Meso **izrezati**<sup>PF</sup> na komade debljine prsta (*rezati*<sup>IPF</sup> suprotno od smjera vlakana) i preliti juhom.* (Hr)  
*Cut the meat into pieces as thick as a finger (cut against the grain) and pour over soup.*

(40) calls to mind a classic example of the fake IPF in the literature. Consider (41) below, from Ru.

- (41) *В этой портерной я **написал**<sup>PF</sup> первое любовное письмо к Вере. **Писал**<sup>IPF</sup> карандашом.*  
*In this tavern I wrote my first love letter to Vera. I wrote [it] in pencil.* (Forsyth, 1970: 86; Grønn, 2004: 192)

Here, a writing-event is introduced in the context as new information by means of PF *napisal* ‘wrote’. When what is arguably the same writing-event is referred to again, IPF is used. Then, the writing-event is *presupposed*, in the sense of *taken for granted, assumed to be known*. In the VP involving IPF *pisal* ‘wrote’, the new information is *how* the writing-event occurred – namely, in pencil – not the writing-event itself. The verb is deaccentuated and the focus is shifted to the adverbial, *karandašom*.



The parallel between (40) and (41) is evident. The new information in the VP involving PF *izrezati* is the cutting-event, while in the VP involving IPF *rezati* the new information is *how* the cutting-event is to be brought about – namely, *suprotno od smjera vlakana*. For a detailed account of how examples such as (40) can be analyzed formally, I refer the reader to Alvestad (2013). Suffice it here to note that on this analysis, (40) is a case of the fake IPF of the *presuppositional* variant, as opposed to the *existential* type, exemplified in (5) and (6).<sup>19</sup>

Now let us look at some more examples. (42) is from Hr and (43) from Sr.

- (42) [*Hladetinu*] **Rezati**<sup>IPF</sup> *na komade, preliteri uljem i octom, popapriti i posluživati s narezanim lukom.* (Hr)

*Cut* [the aspic] into chunks, pour over oil and vinegar, season with pepper and serve with chopped onion.

- (43) *Testo razvući, seći*<sup>IPF</sup> *u kvadrate, pa u svaki staviti malo pekmeza.* (Sr)

Roll out the dough, *cut* [it] into squares and place a bit of jam on each of them.

In both (42) and (43), the verbs of cutting are IPF, even though the cutting-events referred to must be completed before the subsequent instruction can be followed. What is more, the adverbial and the (implicit) direct object in both cases are of the kinds that most frequently occur with PF cutting-verbs. The VPs in question in both (42) and (43) are of the form ‘to cut *x* into *y*-s’. In other words, we expect PF to be used in both examples, but instead we find IPF. There is no doubt that the events of cutting are to be performed till their end points. Thus, in both (42) and (43) IPF is fake.

Now let us look at the situation in Ru. First, there are, as mentioned, no Ru examples in the corpus in which an IPF verb of cutting is used. We are only dealing with PF verbs in this sub-group, and they follow the pattern detected for the other Ru PF verbs in this study, in that they tend to be placed as the first verb in the sentence with an explicitly expressed direct object. Specifically, of the cases in which a Ru cutting-verb is one of two or more verbs in the sentence, it is placed as the first in almost 60% and last in just 25%. An explicit direct object is present in 80% and an adverbial of the ‘into pieces’-kind is present in two thirds of the cases. This adverbial is given in the instrumental case following *narézat*’ and *porézat*’ and by means of *na* + accusative following *razrészat*’.

<sup>19</sup> Note, however, that IPF *režite* in (1) must be explained differently, since in that case the cutting-verbs – of which there are three in that sentence – each refer to distinct cutting-events.



In about one third of the examples involving *narézat'* and *razrézat'*, but almost half of the examples involving *porézat'*, more than one entity is to be cut. This may indicate that *porézat'* has a distributive meaning in addition to its strictly perfective meaning. In other words, it appears that *porézat'* may mean 'to cut one entity after another' in addition to 'to complete a cutting-event'.

There is one Ru example involving a verb of cutting on which I would like to comment. At first sight, a PF cutting-verb modified by the adverbial construction *ne do konca* 'not until the end' may appear contradictory, but my Russian respondent accepts the sentence.

- (44) Смазать [пахлаву] жёлтками (2 шт.), **нарезать**<sup>PF</sup> ромбиками не до конца и печь. (Ru)  
Smear [the baclava] with yolks (2 pcs.), *make shallow, rhombus shaped cuts* on the surface and bake.

Evidently, Ru PF *narézat'* combined with the adverbial *ne do konca* is here used to convey what in English culinary jargon is called 'to score': to make small, shallow cuts on the surface of a food. The interpretation is, therefore, not that only a part of the baklava is to be cut into pieces. Since the sentence is accepted by a native speaker, it appears that the aspectual pair *narezát' – narézat'* is not telic but rather encodes the meaning of gradation. Had *narezát' – narézat'* encoded the meaning of cutting something until the inherent boundary is reached, the verbs in question would have been less acceptable when modified by an adverbial such as *ne do konca*, which contributes an actual boundary.

As regards the verbs of chopping, I will confine myself to commenting on the only example in the corpus in which an IPF verb is used. Consider (45) below from Ru.

- (45) Муку насыпать на доску горкой, в центр положить масло и **рубить**<sup>IPF</sup> ножом, одновременно смешивая муку с маслом, добавить щепотку соли и сметану, замесить однородное тесто. (Ru)  
Pour the flour on the table in a pile, place the butter in the middle and *chop* with a knife while at the same time mixing the flour with the butter, add a pinch of salt and the sour cream, knead a smooth dough.

An IPF chopping-verb is used in (45) because the interpretation is durative. The action of chopping is to be performed simultaneously with another action – namely, of mixing the flour with the butter.

Summing up the section on cutting- and chopping-verbs, a first observation was, again, that there are no systematic differences in the use of aspect between the im-



perative and the prescriptive infinitive in any of the languages investigated. We also observed that in Bn, Hr and Sr, cutting-verbs tend to enter into two kinds of VPs, one of which is telic and includes a PF verb, while the other is atelic and involves an IPF verb. As for Ru, only the first, telic type is observed in the corpus. As far as the chopping-verbs are concerned, all the VPs in the corpus are of the form mentioned first for the cutting-verbs – namely, to chop *x* into *y*-s, and PF is used in all but the Ru example in (45).

#### 4.5. Verbs of sprinkling, pouring and filling

In this final sub-section, I will first discuss a selection of verbs of sprinkling and pouring, and next some verbs of filling.

##### 4.5.1. Verbs of sprinkling and pouring

The verbs under consideration in this sub-group are given in Table 7 below.

Table 7. Verbs of sprinkling and pouring.

	Bosnian	Croatian	Serbian	Russian
1	<i>posipati - posuti</i>	<i>posipati - posuti</i>	<i>posipati - posuti</i>	<i>posypát' - posýpat'</i>
2	<i>posipati</i> <sup>PF20</sup>	<i>posipati</i> <sup>PF</sup>		<i>zasypát' - zasýpat'</i>
3				<i>obsypát' - obsýpat'</i>
4				<i>posýpat'</i>

A first observation regarding these verbs is that IPF forms are seldom used, and this holds for all languages in question. There are 81 examples of sprinkling-verbs in Bn, Hr and Sr in the corpus, and an IPF form is used in three of them. In two of these three cases, one can ask whether we are not rather dealing with the PF homonym of the IPF *posipati* (cf. Maretić, 1931). There are 26 Ru examples of sprinkling-verbs in the corpus, and the verb is PF in all of them.

Another early finding is that, again, there are no systematic differences in aspect use between the imperative and the prescriptive infinitive in any of the languages under consideration.

Now let us have a look at two examples. (46) is from Ru and (47) is from Sr.

- (46) *И вот после вторичного подъёма теста, примните его, **добавьте**<sup>PF</sup>  
2/3 всего изюма и цукатов предварительно обваляв их в муке и дайте*

<sup>20</sup> Cf. Maretić (1931).



*тесту подойти в третий раз. А теперь разделим тесто и переложим его в заранее подготовленные формы (не забывайте что только до половины формы) засыпайте<sup>IPF</sup> оставшийся изюм и цукаты сверху и снова дайте подойти подняться (sic) тесту на  $\frac{2}{3}$  формы. (Ru)*

And next, when the dough has risen for the second time, take it, *add*  $\frac{2}{3}$  of the raisins and the candied peel, having first rolled them in flour, and leave the dough to rise for the third time. And now we divide the dough and place it in the forms that are prepared beforehand (don't forget that [the dough is to go] only halfway up the sides of the form), *strew* the rest of the raisins and candied peel on top and leave the dough to rise one more time until [it reaches]  $\frac{2}{3}$  [of the height] of the form.

- (47) *Pospite<sup>PF</sup> polovinom struganog kačkavalja, stavite sva, ali neumućena, žumanca, pospite<sup>PF</sup> ostatkom struganog kačkavalja i na kraju, tankim listićima sečenog maslaca.*<sup>21</sup> (Sr)

*Sprinkle* with half of the grated cheese, add the egg yolks, which are all unbeaten, *sprinkle* with the rest of the grated cheese and, finally, with butter cut into small, thin slices.

The two examples are similar in that, first, parts of a certain ingredient is to be added to the mixture, while the rest of this ingredient is to be added at a later stage. The two adding-instructions are interrupted by one or several other instructions. The examples are different, however, in that two PF sprinkle-verbs are used in Hr, while in Ru, a PF verb is used for the first instruction and an IPF verb for the second. I will concentrate on the Ru example, which is the only Ru example in the corpus where an IPF sprinkle-verb is used.

There is no doubt that the action of strewing the rest of the raisins and the candied peel is to be performed up to its end point. In other words, IPF in this case refers to a complete event and is fake. The example is similar to the Hr (40) and the Ru (41), but different in that the two verbs in question – PF *dobavit'* 'add' and IPF *zasypát'* 'strew' – belong to distinct aspectual pairs. All the same, they are seman-

<sup>21</sup> An anonymous reviewer points out that, in (47) an indirect object (in the form of a non-prepositional instrumental) is used, which blocks IPF, but if a direct object serves as the verb complement instead, IPF is possible, cf. i. below.

- i. *Sipajte<sup>IPF</sup> polovinu struganog kačkavalja, stavite sva, ali neumućena, žumanca, sipajte<sup>IPF</sup> ostatak struganog kačkavalja...*  
*Sprinkle* half of the grated cheese, add the egg yolks, which are all unbeaten, *sprinkle* the rest of the grated cheese...



tically close, and on my analysis IPF is used in the Ru (46) because the same course of action has already been put under consideration in the discourse –namely, by the preceding, PF *dobav'te*. Thus, IPF *zasypajte* in (46) is an instance of the pre-suppositional type fake IPF: an event type of adding raisins and candied peel is introduced in the discourse by PF *dobav'te* and picked up, referred to anaphorically, by IPF *zasypajte*. See Alvestad (2013) for how this phenomenon can be captured in a formal theoretical framework.

#### 4.5.2. Verbs of filling and stuffing

In this sub-section I will discuss examples involving verbs of filling and stuffing. The verbs under consideration are presented in the table below.

Table 8. Verbs of filling and stuffing.<sup>22</sup>

	Bosnian	Croatian	Serbian	Russian
1	<i>puniti - napuniti</i>	<i>puniti - napuniti</i>	<i>puniti - napuniti</i>	<i>zapolnjat' - zapolnit'</i>
2	<i>nadijevati - nadjenuti</i>	<i>nadijevati - nadjenuti</i>	<i>nadevati - nadenuti</i>	<i>napolnjat' - napolnit'</i>
3	<i>filovati</i> <sup>biasp23</sup>	<i>ispunjivati/ ispunjavati - ispuniti</i>		<i>dopolnjat' - dopolnit'</i>
4	<i>dolmiti - nadolmiti</i>			<i>farširovat' - nafarširovat'</i>

A first observation regarding the verbs of filling and stuffing is that the use of aspect in the imperative and the prescriptive infinitive is approximately the same in all languages in question. The second observation is that IPF is used more frequently in Bn, Hr and Sr than in Ru. There are 69 examples of filling-verbs in Bn, Hr and Sr in the corpus and an IPF verb is used in 39 of them. The share of IPF forms is 65%. In Ru, on the other hand, an IPF form is used in only one of 14 cases, which gives a share of IPF of approximately 7%.

Now let us have a look at some examples. (48) is from Sr and (49) is the only example in which an IPF filling-verb is used in Ru.

(48) *Ohlađene korpice puniti<sup>IPF</sup> sa zgnječenim jagodama do polovine.* (Sr)

<sup>22</sup> The IPF verbs *ispunjivati/ispunjavati* and *dolmiti* in Bn, Hr and Sr, and *napolnjat' dopolnjat'* and *farširovat'* in Ru are not observed in the corpus. Since they are listed in consulted dictionaries as respective aspectual partners, they are included in the table all the same.

<sup>23</sup> The verb appears to be biaspectual (= biasp).



*Fill* the cooled, pocket-shaped little buns with crushed strawberries up to half [their volume].

- (49) *Тестом заIPFполнять форму на 1/3.* (Ru)  
*Fill* the form with dough up to 1/3 [of the height of the sides].

In both examples, the referent of the direct object is not to be filled completely, but up to half its volume and 1/3 of the height of the sides of the form, respectively. And in both cases, an IPF verb is used. One could, therefore, hypothesize that IPF is used when the referent of the direct object is not to be filled entirely. However, both predicates are telic and the actions described – filling buns with stuffing up to half their volume, and filling a form with dough up to a third of the height of its sides – are to be performed to their end points. In other words, we expect the use of PF verbs but our expectation is not borne out. IPF is fake, therefore, in both (48) and (49).

In the corpus, there are four examples from Bn, Hr and Sr in which it is explicitly expressed that the referent of the direct object is not to be filled entirely. A PF verb is used in three of them. It appears, then, that the use of IPF in (48), (49), and other cases is not due to the fact that the entity in question is to be filled only up to a certain point, and not 100%. As I will return to below, in Bn, Hr and Sr, the likelihood of IPF increases when the number of ‘effected objects’ is higher than one. In other words, the plurality of objects appears to favour the use of IPF in these languages.<sup>24</sup>

As for Bn, Hr and Sr we can furthermore note that, similarly to the verbs previously discussed in this study, IPF and PF verbs of filling and stuffing also tend to be placed last and first, respectively, when they occur as one of two or more verb forms in the sentence. Approximately two thirds of the IPF filling-verbs are placed last, and more than 40% of the PF filling-verbs are placed first when they occur as one of two or more verbs in the sentence.

Another difference between the IPF and PF VPs of filling and stuffing in Bn, Hr and Sr lies in the nature of the direct object. The direct object is equally often explicitly present with IPF as with PF verbs, however, but compare (3) with (50) below.

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<sup>24</sup> Against this background, an anonymous reviewer points out that IPF in example (48) may also be analyzed as real, in the sense of having a habitual or repetitive interpretation. My analysis of IPF in (48) as fake is based on the assumption that the filling of the buns is conceptualized as a single, complete event, albeit a complex one consisting of a series of smaller complete events.





- (50) *Očišćenu ribu **napunite**<sup>PF</sup> dobivenom smjesom i stavite u nauljeni pleh.*  
(Hr)

*Fill the cleaned fish with the mixture that you have now got and place [it] in an oiled baking pan.*

The difference lies in the number of entities that are to be filled. In (50), one fish is to be stuffed, and a PF verb is used, while in (3) an unspecified number of peppers are to be filled, and IPF is used. When more than one entity is to be stuffed, the action of filling has to be repeated. To describe repeated events is a common task of IPF. Furthermore, out of 17 cases in the corpus in which only one entity is to be filled, a PF verb is used in 12. In Ru, however, the situation is different. PF is used in all six cases in the corpus in which more than one entity is to be stuffed. The verb of filling may be placed first, last, or in the middle of the sentence. In (51) below, for example, a PF filling-verb is used even though there are several effected objects and the action is to be performed simultaneously with another action—namely, the action of striving to give each egg half the shape of a whole egg.

- (51) *Всё это хорошо растолочь и полученным фаршем **наполнить**<sup>PF</sup> с верхом половинки яйца, стараясь придать каждой половинке форму целого яйца.*

*Crush all this well and with the stuffing that you have now got, fill the top of the egg halves, striving to give each half the shape of a whole egg.*

Summing up this sub-section of verbs of filling and stuffing, we have seen that, once again, there are no systematic differences in the use of aspect between the imperative and the prescriptive infinitive in any of the languages in question. We have also seen that there appears to be a tendency in Bn, Hr and Sr to use IPF when more than one entity is to be stuffed. In Ru, on the other hand, the plurality of objects appears to be irrelevant, since PF is used in such cases as well.

## 5. Conclusion and further outlook

In this article, I have presented the results of a comparative study of the use of aspect in Bn, Hr and Sr and Ru imperatives and prescriptive infinitives as these verb forms are used in recipes. My initial survey showed a preference for PF in both verb forms in all languages, but especially in Ru. In the description of particular situations, though, IPF was widespread in one or more of the languages. Against this background, I narrowed down my object of study to a limited set of verb phrases, including equivalents of the transitive ‘to bake’ and ‘to fry’, ‘to boil’, ‘to knead a dough’, ‘to cut’ and ‘to chop’, ‘to sprinkle’ and ‘to strew’, and, finally, ‘to



fill’ and ‘to stuff’. The common denominator of (most of) these verb phrases is that they involve an incremental theme in the form of a direct object, of which the referent gets its qualities changed during a process. Typically, the situation type in question was an accomplishment, in the sense of Vendler (1957).

Based on analyses of this corpus I drew the following conclusions. First, the use of aspect in the imperative and the prescriptive infinitive, as these verb forms are used in recipes, is approximately identical in all four languages.<sup>25</sup> Second, the use of fake IPF is more widespread in Bn, Hr and Sr than in Russian. The latter is contrary to the results of Benacchio (2010), von Waldenfels (2012) and Alvestad (2013) and suggests that aspect use in the imperative and the prescriptive infinitive in literature such as recipes deserve further investigation.

In the table below, the situations considered in this study are ranked according to the percentage of IPF forms – imperatives or prescriptive infinitives – out of the total number of examples of the given aspectual pair in the corpus, in Bn, Hr and Sr compared with Ru. The higher the frequency is of IPF when the situation is referred to, the higher the situation is placed in the table. (Note that the table includes both “real” and fake IPF forms.)

Table 9. The share of IPF forms in % of the total number of examples with the given aspectual pair.

	Bosnian, Croatian and Serbian	Russian
90 – 100%		
80 – 90%		
70 – 80%	‘To bake’ ‘To fry’	‘To bake’ ‘To boil’
60 – 70%	‘To boil’	
50 – 60%	‘To fill/stuff’	‘To fry’
40 – 50%		‘To knead a dough’
30 – 40%	‘To knead a dough’	
20 – 30%		
10 – 20%	‘To cut’	

<sup>25</sup> The closest I have got to an exception here regards the Ru aspectual pair IPF *podavat’* – PF *podat’* ‘to serve’. There are several examples of both aspects in the prescriptive infinitive in my corpus, but only IPF in the imperative. This is not due to any morphological hole; a quick search on the internet shows that PF *podajte* exists and is in frequent use, but in other contexts than recipes. I do not have any explanation for this at the moment. An anonymous reviewer suggests that an explanation may lie in the nature of the infinitive versus the imperative verb form, which is an interesting idea that, in my opinion, deserves further investigation.



0 – 10%	‘To sprinkle’	‘To fill/stuff’ ‘To cut’ ‘To sprinkle’
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I also demonstrated in this article how complex comparative aspect studies may be. First, one has to determine what two verbs in a language constitute an aspectual pair. Recall, for example, the intricacies of the Ru verbs of frying. Second, one has to determine whether the aspectual pairs in the languages are equivalent and comparable. In this context, recall the verbs of cutting and how the Ru verbs in question could only be part of a telic VP whereas those in Bn, Hr and Sr could be part of an atelic VP in addition.

Concluding this article I have two suggestions for further research. First, Grønn (2004) observes that the general-factual IPF, in this article referred to as the fake IPF, in a given context has one out of two interpretations—specifically, it is either of the *existential* type, as demonstrated in (5a-f) and (6a-h), or the *presuppositional* type. In the latter case, the IPF refers to an event, or event type, that has already been introduced in the discourse, typically by means of a PF VP. In past tense contexts, the existential type is most widespread (cf. Grønn, 2004). As for the imperative, Alvestad (2013) shows that in this verb form the presuppositional type is, by far, the most widespread type. However, recall that Alvestad (2013) is concerned with the imperative as used in dialogue situations. Then, the question for further research is this: of what kind are the fake IPF forms we have seen in this article – of the existential, the presuppositional, or some other type? I have already suggested that IPF *rezati* in (40) and IPF *zasypajte* in (46) are of the presuppositional type. Further investigation is needed, however, when it comes to determining the type in, for example, IPF *rezati* in (1).

My second suggestion derives from the fact that in this study, contrary to Benacchio (2010), von Waldenfels (2012), and Alvestad (2013), the fake IPF is more widespread in Bn, Hr and Sr than in Ru. This result begs the question whether there might be a connection between this widespread use of fake IPF in Bn, Hr and Sr recipes, on the one hand, and the widespread use of IPF past passive participles in similar contexts in the same languages, on the other hand, as shown in Table 10 below. Note that in Ru, PF is dominant, as is the case in the present corpus of imperatives and prescriptive infinitives in recipes.<sup>26</sup>

<sup>26</sup> On the theoretical approach taken here, the aspect expected to be the most widely used in past passive participles is PF. Intuitively, at least, the inherent boundary of the process has to be reached



Table 10. Aspect in past passive participles in Bosnian, Croatian and Serbian compared to Russian.

Bosnian, Croatian and/or Serbian	Russian	English translation
<i>punjene</i> <sup>IPF</sup> <i>rajčice</i>	<i>farširovannye</i> <sup>IPF</sup> <i>pomidory</i>	‘stuffed tomatoes’
<i>prženo</i> <sup>IPF</sup> <i>testo</i>	<i>zažarennoe</i> <sup>PF</sup> <i>testo</i>	‘pan-fried dough’
<i>mrvljena</i> <sup>IPF</sup> <i>feta</i>	<i>syr feta, razrezannyj</i> <sup>PF</sup> <i>na kusočki</i>	‘crumbled feta’
<i>seckani</i> <sup>IPF</sup> <i>peršun</i>	<i>narezannaja</i> <sup>PF</sup> <i>petruška</i>	‘chopped parsley’
<i>pečena</i> <sup>IPF</sup> <i>patka</i>	<i>utka, zapečennaja</i> <sup>PF</sup> <i>v duxovke</i>	‘oven-fried duck’
<i>mljeveno</i> <sup>IPF</sup> <i>meso</i>	<i>rublenoe</i> <sup>27</sup> <i>mjaso</i>	‘minced meat’
<i>kuvana/kuhana</i> <sup>IPF</sup> <i>je-la/hrana</i>	<i>varěnaja</i> <sup>28</sup> <i>eda/pišča</i>	‘boiled/cooked dishes/food’
<i>lubenice rezane</i> <sup>IPF</sup> <i>na kriške</i>	<i>arbuzy, porezannye</i> <sup>PF</sup> <i>na kusočki</i>	‘water melons cut into pieces’
<i>strugana</i> <sup>IPF</sup> <i>šargarepa</i> (cf. ex. 3)	<i>těrtaja</i> <sup>IPF</sup> <i>morkov’</i>	‘grated carrot’
<i>sušeno</i> <sup>IPF</sup> <i>voće</i>	<i>suxofrukty</i> <sup>29</sup>	‘dried fruit’
<i>tučeno</i> <sup>IPF</sup> <i>vrhnje</i> (but <i>umučena</i> <sup>PF</sup> <i>pavlaka</i> )	<i>vzbitye</i> <sup>PF</sup> <i>slivki</i>	‘whipped cream’
<i>punjena</i> <sup>IPF</sup> <i>paprika</i>	<i>nafarširovannyj</i> <sup>PF</sup> <i>perec</i> (cf. ex. 4)	‘stuffed pepper’

It appears that in past passive participles, fake IPF is more widespread in Bn, Hr and Sr than in Ru, but this also needs further investigation.

In other words, within the realm of Slavic aspect, many questions can still be asked and, hopefully, answered, not least when it comes to the imperative and the prescriptive infinitive as these verb forms are used in literature such as recipes.

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for such a past passive participle to be applicable in the first place. On the approach taken here, therefore, IPF in the forms in the table is fake.

<sup>27</sup> *Rúblennyj* may ultimately derive from IPF *rubit’* ‘to chop’, but it is not strictly a past passive participle. It is rather an adjective.

<sup>28</sup> *Varěnyj* may ultimately derive from IPF *varit’* ‘to boil’, but it is an adjective rather than strictly a past passive participle.

<sup>29</sup> The form *sušěnyj* ‘dried’ exists and may ultimately derive from the IPF *sušit’* ‘to dry’, but as with *varěnyj* and *rúblennyj* above, it is not strictly a past passive participle. It is rather an adjective.



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**UPORABA GLAGOLSKOG VIDA U IMPERATIVU I PRESKRIPTIVNOM INFINITIVU U KUHINJSKIM RECEPTIMA U BOSANSKOM, HRVATSKOM, SRPSKOM I RUSKOM JEZIKU: KOMPARATIVNI PRISTUP**

U radu se predstavljaju rezultati komparativne studije uporabe glagolskoga vida u bosanskim (Bn), hrvatskim (Hr), srpskim (Sr) i ruskim (Ru) imperativima i preskriptivnim imperativima (infinitivima koji se koriste u funkciji infinitiva) kako ih se koristi u kuhinjskim receptima. Na temelju inicijalne pretrage, sužavamo predmet istraživanja na ograničeni skup glagolskih fraza koje uključuju ekvivalente prijelaznih uporaba glagola ('peći' i 'pržiti'; 'kuhati', 'mijesiti tijesto', 'rezati', 'sjeckati', 'posipati', 'puniti'). Zajednički nazivnik (većine) ovih glagolskih fraza je da uključuju rasteću semantičku ulogu teme u obliku direktnog objekta, odlike čijeg referenta doživljavaju promjenu tijekom toga procesa. Obično se radi o postignuću kao tipu situacije po Vendleru (1957).

Na temelju analiza korpusa, iz kojih se nudi više od 40 primjera, izvlačimo sljedeće zaključke. Prvo, uporaba glagolskoga vida u imperative i preskriptivnom imperative na način na koji se koriste u receptima je otprilike jednaka u svim četirima jezicima. Drugo, uporaba onoga što nazivamo lažnim nesvršenim vidom, odnosno njegova uloga da bi se označilo jedan, potpuni događaj raširenija je u bosanskome, hrvatskome i srpskome nego u ruskome. Potonje se razlikuje od rezultata u Benacchio (2010), von Waldenfels (2012) i Alvestad (2013) i upućuje na to da uporaba glagolskoga vida u imperativu i preskriptivnome infinitive u tipu teksta kao što su recepti zahtijeva daljnje analize.

**Keywords:** glagolski vid; lažni nesvršeni vid; imperativ; preskriptivni infinitiv; recepti; bosanski; hrvatski; srpski; ruski.