Resultatives, Particles, Prefixes and Argument Structure
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1.0   Introduction

In this paper, I discuss the argument status of postverbal DPs in English resultative constructions, English verb-particle constructions and Russian prefixed verbs. The examples of the three constructions are given in (1): (1a) is a resultative construction, (1b) is a verb-particle construction and (1c) is a Russian prefixed verb:

(1)   a.   Jane wiped the table clean.
       b.   Jane wiped the table down.
       c.   Masha vy-terla   stol.
             Masha VY-wiped.PF table-ACC
             'Masha wiped the table (clean).'

A resultative construction consists of the main verb that denotes an activity and a resultative phrase that is predicated of the postverbal DP and denotes the state achieved by this DP as a result of the activity denoted by the main verb. Thus, (1a) means that the table became clean as a result of wiping; it can never mean that Jane became clean as a result of wiping.[1] The addition of a resultative phrase turns an activity into an accomplishment by specifying a resulting state.

As was suggested in various studies, the verb-particle construction is a relative of the resultative construction (Levin and Rappaport Hovav 1995; Spencer and Zaretskaya 1998, among others). The base verb in a verb-particle construction is typically an activity and the addition of a particle just like the addition of a resultative phrase often turns this activity into an accomplishment. Thus, in (1b), *wipe* is an activity verb, whereas *wipe down* is an accomplishment.

Russian   has   neither   resultative   constructions   nor   verb-particle constructions. However, it has a process of lexical prefixation that derives new

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[1] Rappaport Hovav and Levin (2001) reject the direct object restriction, i.e. the fact that the resulative phrase in a resultative construction is always predicated of the object, on the basis of examples such as *The wise men followed the star out of Bethlehem*, where the resultative phrase expressed as a PP *out of Bethlehem* is predicated of the subject *the wise men* and not the object *the star*. Without going into much detail, for the purposes of this paper, I assume the direct object restriction to be a valid generalization for resultative constructions whith a resultative phrase expressed as an AP.

verbs by adding a prefix to the original base. As Spencer and Zaretskaya (1998) point out, the process of prefixation in Russian almost always changes aspectual properties of the stem, frequently by adding an end point. In (1c) above, the verb stem *teret'* wipe is an acitivity verb, whereas the addition of the prefix *vy-* turns it into an accomplishment and the expression means that the table was wiped, presumably with the intention to make it clean.

One of the properties shared by the three constructions is that they can take direct internal arguments different from those selected by their base verbs, as illustrated by the following examples:

(2) a. We danced our feet black and blue. (Martha McGinnis, p.c.)
     b. *They danced their feet.

(3) a. They blew the bridge up.
     b. *They blew the bridge.

(4) a. Masha is-pisala svoju   ruchku.
         Masha IZ-wrote[2] her-ACC pen-ACC
         'Masha's pen has run out of ink'
     b. *Masha pisala svoju   ruchku.
         Masha   wrote her-ACC pen-ACC
         'Masha wrote her pen.'

In (2), *dance* is an intransitive verb which does not allow a direct object in isolation, as shown by the ungrammaticality of (2b).[3] Similarly, in (3), *blow* does not take *bridge* as its internal argument outside of a verb-particle construction. Finally, in (4), the base verb *pisat'* 'write' does not take *ruchka* 'pen' as its internal argument which explains the ungrammaticality of (4b).

As argued by Levin and Rappaport Hovav (1995), the postverbal DPs in English resultative constructions based on intransitive verbs and unspecified object verbs (e.g. *drink*) are not arguments but *unselected objects*, i.e. objects that the verb

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[2] *iz-* is listed in Townsend (1975) and is usually considered as a basic (underlying) form. [z] is devoiced when followed by voiceless consonants.
[3] Intransitive verbs such as *dance* or *laugh* can take cognate objects:

(i) a. Jane and Magnus danced a beautiful dance.
     b. Mary laughed hysterical laughter.

However, for the purposes of the present paper, I do not consider such objects.

does not subcategorize for. On the other hand, Spencer and Zaretskaya (1998) suggest that English resultative constructions, verb-particle constructions and Russian prefixed verbs belong to essentially the same kind of complex predicate. Based on the fact that all three constructions have a very similar semantic structure and that in Russian, DPs that follow prefixed verbs have the properties of a regular direct object they argue that such DPs in all three constructions are arguments of the complex predicate.

I argue that postverbal DPs in English resultative constructions on the one hand and verb-particle constructions and Russian prefixed verbs on the other hand have different argument status. As shown by various studies, English resultatives are syntactically derived constructions (Carrier and Randall 1992; Neeleman and Weerman 1993; Levin and Rappaport Hovav 1995, among others), whereas Russian prefixed verbs are lexically derived (Townsend 1975; Brecht 1985, Zaliznjak and Shmelev 1997, among others). I assume that lexical derivation as opposed to syntactic derivation is less productive and may change a verb's meaning in an unpredictable way. Given this, the addition of a resultative phrase affects neither the meaning nor the argument structure of the main verb (Levin and Rappaport Hovav 1995; Rappaport Hovav and Levin 1998). Therefore, postverbal DPs in resultative constructions based on intransitive verbs are not arguments but unselected objects. In contrast, the addition of a Russian prefix often changes the meaning of the base verb, which in turn may affect its aspectual classification and argument structure. Although the status of English verb-particle constructions is more debatable than that of Russian prefixed verbs, they have more properties of morphological words than syntactic phrases. The addition of a particle, similar to the addition of a prefix, often changes the meaning of the base verb, which in turn may have an effect on its aspectual classification and argument structure. As a result, Russian prefixed verbs and English verb-particle constructions often have different meaning from their base verbs and may have different arguments.

In section 2, I briefly outline syntactic evidence that the verb within a resultative construction has the same meaning and the same syntactic properties as it does in isolation (Levin and Rappaport 1986; Carrier and Randall 1992). It will be shown that middle constructions, adjectival passives and nominalizations are grammatical when derived from resultative constructions based on transitive verbs but unacceptable when derived from resultative constructions based on intransitive verbs. In section 3, I discuss Russian prefixed verbs. I show that Russian prefixed verbs are lexically derived and often have different meaning and different syntactic properties from their original stem (Townsend 1975; Brecht 1985). I also discuss the difference between English resultative constructions and Russian prefixed verbs

in terms of compositionality and productivity. Section 4 discusses similarities between Russian prefixed verbs and English verb-particle constructions. I also provide further arguments against analyzing Russian prefixed verbs and English verb-particle constructions as counterparts of English resultatives.

2.0   English resultatives – tests for argumenthood

2.1   Middle formation

Carrier and Randall (1992:188), following Keyser and Roeper (1984), assume that the rule of middle formation, just like the rule of verbal passive formation suppresses a verb's external argument and its ability to assign accusative case. However, middle formation and verbal passive formation do not apply to the same class of verbs. Some verbs can undergo verb passive formation but not middle formation:

(5)   a.   The politician was laughed at.
       b.   *Politicians laugh at easily. (Carrier and Randall (1992:189 (41)).

To account for the contrast between (5a) and (5b), they propose the Argument Structure Condition on middle formation:

(6)   Middle formation applies to a verb only if it has a direct internal argument. (Carrier and Randall 1992:189 (42)).

This condition predicts that middle formation can apply to the resultative constructions based on transitive verbs, but not to the resultative constructions based on intransitive verbs. The following examples show that this is indeed the case:

(7)   a.   She wiped the table clean.
       b.   This table wipes clean easily.
            (Levin and Rappaport Hovav 1995:43 (26a))

(8)   a.   They drank the teapot dry.
       b.   *This teapot drinks dry in no time at all.
            (Levin and Rappaport Hovav 1995:43 (26b))

12

2.2 Adjectival passive formation

Various studies agree that adjectival passive formation externalizes a direct internal argument (Williams 1981, Levin and Rappaport 1986, Grimshaw 1990, among others). For example, Levin and Rappaport (1986) provide evidence that involves dative verbs such as *feed*, where the adjectival passive formation is possible with their direct internal arguments but ungrammatical with the indirect internal arguments:

(9) a. They fed the baby peas.
     b. the fed baby
     c. *the fed peas
         (Carrier and Randall 1992:193 (53a), (51), and (52) respectively)

According to Levin and Rappaport (1986), *feed* can also have an argument structure where it has two obligatory arguments – theme and goal – and where the direct internal argument is the theme:

(10) They fed peas to the baby. (Carrier and Randall 1992:193 (53b))

In this case, if adjectival passive formation applies, the output should be grammatical. However, the outputs of adjectival passive formation should also satisfy the theta-Criterion which requires all obligatory arguments to be realized. The derived adjectival structure *the fed peas* is ungrammatical because the second obligatory argument – *the baby* – remains unexpressed.

Levin and Rappaport (1986) note also a different condition illustrated by the verb *read* with two optional internal arguments: theme and goal. Whatever argument is externalized the output should be grammatical. However, as the examples below show, this is not the case:[4]

(11) a. The kids read the books.
      b. the recently read books
      c. *the recently read kids (Carrier and Randall 1992:194 (57a-b))

Levin and Rappaport (1986) state the following condition on the adjectival passive formation:

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[4] The example (11a) is mine.

13

(12) Adjectival passive formation can apply to a verb only if it has a direct internal argument
(Carrier and Randall 1992:194 (58)).

Given this condition, Carrier and Randall (1992) use adjectival passive formation as a diagnostic for the argumenthood of postverbal DPs in resultative constructions. As the following examples show, adjectival passive constructions can be derived only from the resultative constructions based on transitive verbs:

(13) a. a wiped-clean table
     b. *a drunk dry teapot (Levin and Rappaport Hovav 1995:43 (27))

2.3   Nominaliation
The rule of nominal formation applies to the resultative constructions based on transitive verbs but not to the resultative constructions based on intransitive verbs. Carrier and Randall (1992) focus on –*ing* process nominals because they retain the argument structure of the base verb (as opposed to result nominals). They assume that the rule of nominal formation, similar to the rule of verbal passive formation, suppresses the external argument of the base verb. The verbal passive and the nominal have the argument structure of their base verb, except that they do not have the external argument:

(14) a. Hungry students [$_V$ devour] vast quantities of junk food.
     b. Vast quantities of junk food were [$_V$ devoured].
     c. The [$_N$ devouring] of vast quantities of junk food takes no time at all.
         (Carrier and Randall 1992:198 (63))

To determine the argument structure of process nominals Carrier and Randall (1992) analyze the DP immediately adjacent to the head – the *of-DP*. In the nominals derived from transitive verbs, this DP is interpreted as the direct internal argument of the nominal, inherited from its base verb (see (14) above). In contrast, in nominals derived from intransitive verbs this DP is an optional adjunct PP corresponding to the suppressed external argument:

(15)   The rejoicing (of the villagers) lasted for days.
        (Carrier and Randall 1992:199 (66))

14

The third interpretation of *of-DPs* corresponds to the *adverbial adjunct* interpretation. They are also PP adjuncts:

(16)   The constant rejoicing of the holiday season makes Fred nervous.
        (Carrier and Randall 1992:199 (67))

Carrier and Randall (1992) use the interpretation of *of-DPs* in nominals to determine the argument status of postverbal DPs in transitive and intransitive resultatives. Naturally, the *of-DP* of any nominal derived from a resultative construction can only be interpreted as a direct internal argument. When the nominal is derived from a transitive resultative this condition is satisfied, since the nominal preserves the direct internal argument of the base verb. But when the nominal is derived from an intransitive resultative this DP can only be interpreted as an adjunct since the base verb does not have a direct internal argument for the nominal to inherit. Therefore, nominals derived from intransitive resultatives are ungrammatical. The following examples illustrate this point:

(17) a. The gardener watered the tulips flat.
     b. The watering of tulips flat is a criminal offense in Holland.
         (Carrier and Randall 1992:173, 201 (1a) and (74a))

(18) a. The joggers ran their Nikes threadbare.
     b. *The jogging craze has resulted in the running of a lot of pairs of Nikes threadbare.
         (Carrier and Randall 1992:173, 201 (2a) and (74b))

The data outlined in this section show that middle constructions, adjectival passive constructions and nominalizations can be derived from resultative constructions based on transitive verbs but not from resultatives based on intransitive verbs. This suggests that the postverbal DPs in resultative constructions based on intransitive verbs are not arguments.

3.0   **Russian prefix and the verb meaning**
In this section, I present some data on Russian prefixation given in Townsend (1975) and Brecht (1985). They show that prefixation in Russian is a lexical process that has to do with meaning of the verb, its aspectual classification and argument structure. These issues are related as follows: prefixation in Russian often changes the meaning of the verb in unpredictable ways, that is, the meaning of the

15

prefixed verb is not derived compositionally from the meaning of the prefix and the meaning of the stem. Meaning change may affect a verb's aspectual classification and argument structure. This, in turn, suggests the different argument status of the postverbal DPs in English resultative constructions and Russian prefixed verbs. I also discuss the difference between Russian prefixed verbs and English resultative constructions in terms of compositionality and productivity. I show that the meaning of an English resultative, which is a syntactically derived construction, is derived compositionally from the meaning of the main verb and the meaning of the resultative phrase and that the formation of resultative constructions, being a syntactic process, is more productive than the lexical process of prefixation.

3.1 Prefixation: meaning change

Townsend (1975:114-8) describes Russian verbal prefixes and the process of prefixation as follows. An unprefixed verbal stem is called a simplex stem. The majority of simplex stems in Russian are imperfective. With limited exceptions, the addition of a prefix perfectivizes a simplex imperfective stem. Traditionally, in most grammar books, Russian prefixes are regarded as either 'nonsemantic' or 'semantic'. The addition of a nonsemantic prefix to a simplex imperfective stem merely perfectivizes it and is regarded as the perfecitve partner of the imperfective verb:

(19) a. stroit' – PO-stroit'
       build – buid.PERF
    b. pisat' – NA-pisat'
       write – write-PERF (Townsend 1975:116)

However, if the prefix is semantic, it not only perfictivizes the stem, but also changes its meaning. In this case, a new verb is not a perfective partner of the unprefixed stem and must build its own imperfective with an imperfectivizing suffix. This imperfective is sometimes called a 'second' or a 'secondary imperfective':

(20) a. stroit' – U-stroit' – U-stra-iva-t'
       build – arrange – arrange.IMPF
    b. pisat' – ZA-pisat' – ZA-pis-yva-t'
       write – write down – write down-IMPF (Townsend 1975:117)[5]

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[5] The examples of secondary imperfectives are mine.

16

Note that a given prefix may be nonsemantic for one stem but semantic for another:

(21) a. delat'   – s-delat'
          do-IMPF   – S-do-PERF
          'do – do'
      b. prosit'   – s-prosit'
          ask-IMPF – S-ask-PERF
          'ask (request) – ask (information)' (Townsend 1975:117)

However, Townsend (1975:117) points out that the number of prefixes which may serve as nonsemantic perfectivizers is very limited. The only prefixes which appear to have a purely perfectivizing function with any regularity are *po-* and *s-*.[6]

However debatable the issue of Russian prefixes is, Townsend (1975) maintains that it is still clear that prefixation in Russian is a process which involves some alteration in the meaning of the original simplex stem. He considers two types of prefixation: lexical and sublexical. A lexical prefix forms a new lexeme, usually related to one of the physical meanings of the original stem, or an abstract or qualitative meaning derived from it. In this case a secondary (derived) imperfective is built. In contrast, a sublexical prefix does not form a new lexeme but modifies the action in some way, usually with respect to time or intensity. The types of meaning involved here are usually called *Aktionsart* or 'mode of action'. Prefixed verbs formed by means of sublexical prefixes normally build no secondary (derived) imperfective. In general, the more the new perfective is felt to have independent meaning and not just aspectual or sublexical, the greater the chances of its having a derived imperfective.

Brecht (1985:14-6) also discusses the process of lexical and sublexical prefixation. He points out that atelic states and activities are normally represented in Russian by simplex stems which are mainly imprfective. It is possible to form different lexical items by adding various prefixes to these stems. This prefixation is a strictly lexical process and is accompanied by an automatic shift in the aspect of the verb. The new prefixed verbs represent different situations, specifically telic

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[6] Townsend (1975:117) points out that some studies in fact questioned even whether the cases like *stroit' – po-stroit'* (build – build-PERF) and *delat' – s-delat'* (do – do-PERF) can be treated as true aspectual pairs, assigning to the prefix in these cases 'resultative' rather than purely perfective meaning (Isachenko 1962). Under this analysis, prefixation never results in mere perfectivization but always changes or modifies meaning of the original stem. Suffixal imperfictive derivation can be considered the only process producing true aspectual pairs.

ones – in the examples below, 'finding', 'rewriting', signing', etc. all imply a goal or endpoint. Brecht's (1985) example (14) is given here as (22):

(22) a. *pisat'* 'write' PERE-pisat' 'rewrite'
                          ZA-pisat'   'jot down'
                          POD-pisat' 'sign'
                          PRI-pisat' 'ascribe'
                          VY-pisat'   'copy out'
     b. *chitat'* 'read' PERE-chitat' 'reread'
                          ZA-chitat'   'read out'
                          DO-chitat'   'read up to'
                          VY-chitat'   'find (in a book)"

In contrast, a sublexical prefixation, or *Aktionsart* (mode of action) represents the focus on one component of a situation – its inception, conclusion, intensification, a limited period of its duration, etc. The sublexical prefixation also transforms the situation from atelic to telic by transforming an indefinite state or activity into achievement or culmination:

(23) a. *kurit'* 'smoke' VY-kurit'   'finish smoking'
                          DO-kurit'-sja 'smoke to a climax'
                          ZA-kurit'   'begin to smoke, light up'
                          ZA-kurit'-SJA 'smoke too much'
                          NA-kurit'-SJA 'smoke one's fill'
                          PO-kurit'   'smoke for a while'
                                         (Brecht 1985: (15))

According to Brecht (1985), the crucial difference between lexical and sublexical prefixation is the character of the modification of the situation. Sublexical prefixation involves a semantic field which focuses on a component of the situation, whereas lexical prefixation creates an entirely different situation. As can be seen from this brief outline, the prefixation in Russian usually involves change in meaning and aspectual classification.

However, neither Townsend (1975) nor Brecht (1985) discusses explicitly a change of the argument structure of the verb as a result of prefixation. Table 1 below contains the verb *pisat'* 'write' combined with a number of different prefixes. These examples demonstrate that the arguments structure of a verb may

18

change as a result of prefixation.[7] Note that all the prefixed verbs form their own imperfective:

Table 1: The Verb *pisat'* 'write'

VERB STEM	PREFIX (PERFECTIVE)	SECONDARY IMPERFECTIVE	MEANING	OBJECTS
pisat'	-	-	write	letter, poem, book, paper...
	a. ZA-pisat'	ZA-pis-YVA-t'	1. write down	answer, name, address...
			2. record	concert...
	b. IS-pisat'	IS-pis-YVA-t'	1. bring smth to its end by writing	1.pen, pencil...
			2. fill out with writing	2.blackboard, notebook...
	c. POD-pisat'	POD-pis-YVA-t' sign		agreement, document...
	d. O-pisat'	O-pis-YVA-t'	1. describe	1. person, situation...
			2. circumscribe	2.circumference, circle...
	c. S-pisat'	S-pis-YVA-t'	1. copy	1. text...
			2. write off	2. equipment...

[7] Not all possible prefixes are included in the table and not all possible meanings for every combination are given. Also, the column 'Objects' does not contain a complete list of all possible arguments that may occur with the verb *pisat'* preceded by a particular prefix. The purpose of Table 1 is to show that prefixed verbs and thier base verbs alone may take different arguments.

As Table 1 shows, when the verb *pisat'* 'write' is used transitively it means 'to bring something into existence by writing'. This is a verb of creation and can take as its direct object anything which potentially can be brought into existence by the activity denoted by this verb: a letter, a poem, a book, etc. The prefix *iz-* changes the meaning of this verb in the sense that it is not a verb of creation any more. It is used to describe a different event. It means 'to bring something to its end by writing' and now it subcategorizes for a different kind of direct objects: this verb refers usually to surfaces that potentially can be used for writing or tools of writing – we have *is-pisat' ruchku/tetrad'* 'iz-write a pen/a notebook'. Spencer and Zaretskaya (1998) point out that when a prefixed verb takes a different direct object from its original stem, such an object has all the properties of a regular direct internal argument. The application of the tests for argumenthood, discussed in section 2 shows that this is indeed the case. Adjectival passive constructions, middle-type reflexive constructions and nominalizations can be derived from a prefixed verb *is-pisat'* 'iz-write' plus *ruchka* 'pen':

(24) a. is-pisannaja ruchka
        IZ-written   pen
        'a pen that has run out of ink'
    b. Takie ruchki ochen' bystro is-pisyvajut-sja
       such pens   very   quickly IZ-write- REFL
       'This sort of pen runs out of ink quickly.'
    c. is-pisyvanie ruchek
       IZ-writing   pens-GEN
       'the using up of pens' (Spencer and Zaretskaya 1998:24 (90d-e))

The examples in (24) suggest that in Russian, the direct object of a prefixed verb is an argument of the complex unit formed by the original stem and prefix.

3.2   Compositionality and productivity

I assume that the notions of compositionality and productivity are important for determining syntactic versus lexical nature of a construction. The meaning of a syntactic construction is derived from the meaning of its parts as opposed to a lexical construction, whose meaning often may not be derived compositionally. Besides, syntactic derivation tends to be more productive than lexical derivation. Given these assumptions, I shall now examine the difference between English resultative constructions and Russian prefixed verbs.

20

The crucial fact about semantics of English resultative constructions is that their meaning is derived compositionally, that is, it is predictable from the meaning of the main verb and resultative phrase. Though verbs impose various semantic restrictions on the resultative phrase that can appear with them – for example, as Spencer and Zaretskaya (1998) (12) observe, though we can say *wipe the glasses clean* we cannot say **wipe the glasses shiny* – under the assumption that we deal with the appropriate verb and adjective, in most cases, the meaning of the whole is derived compositionally. This is due to the fact that the main verb and resultative phrase are semantically specific. By definition, a resultative construction has to specify two components – a change of state and the activity which brought about this change of state. Thus, the meaning of the expression *she painted the door green* or *she wiped the table clean* is derived from the meaning of the verbs *paint* and *wipe* which define the activity, and the adjectives *green* and *clean* which specify the resulting change of state.

In contrast, in Russian, the meaning of the prefixed verb is not, in general, semantically compositional because Russian prefixes cannot be attributed a precise meaning on their own. According to Townsend (1975), most verbal prefixes have primary meanings of a physical, directional or spatial nature, often close to the meanings of the prepositions, to which they are historically related. Besides these primary meanings, many prefixes have one or several abstract meanings, whose connection with the primary sense may vary from obvious or remote to undistinguishable. Townsend (1975) also points out that many prefixed verbs are not worth analyzing in terms of possible meanings of the prefix because the prefix defies categorization entirely or because in order to categorize it we would have to come up with a prohibitively large number of meanings for a single prefix.

The notion of productivity is a tricky one. On the one hand, the process of prefixation in Russian may seem very productive. Any stem can be attached at least one prefix (usually there are more than two prefixes that can be combined with the same stem) and there is a large number of prefix-stem combinations. On the other hand, English resultative constructions may be claimed to be less productive. As already mentioned, verbs impose various restrictions on resultative phrases that can appear with them. However, although the number of prefix-stem combinations in Russian is indeed enormous, it does not seem possible to combine every stem with every prefix and there are no obvious reasons that would prevent certain stems from occurring with certain prefixes.

Meanwhile, the restrictions on resultative phrases that can appear with different verbs in resultative constructions in many cases can be explained. For

21

example, Rappaport Hovav and Levin (1998) observe that result verbs cannot participate in resultative constructions:

(25) a. *Kelly broke the dishes off the table.
     (meaning: Kelly broke the dishes and as a result they went off the table)
   b. *Kelly broke the dishes into a pile.
     (meaning: Kelly broke the dishes and made a pile out of them)
   c. *Kelly broke the dishes valueless.
     (meaning: Kelly broke the dishes and as a result they were valueless)
     (Rappaport Hovav and Levin 1998:103 (9a), (10a) and (43a)
     respectively)

Rappaport Hovav and Levin (1998:105) propose that verb meaning is built up in a monotonic fashion, which precludes the elimination of any basic element of meaning and also the expansion of the meaning beyond the fully lexically-specified representation. They assume that manner verbs are mainly activity verbs which do not have a resulting state as a part of their lexical representation, whereas many result verbs are either achievements or accomplishments which have a resulting state as a part of their lexical representation. Resultative constructions involve the expansion of an activity to yield an accomplishment. The main verb normally denotes an activity (e.g. *wipe* or *paint*) and the addition of a resultative phrase extends the meaning of this verb to include a resulting state. Accomplishments, however, have fully lexically-specified representations. No additional expansion of their representation is possible since they represent the most complex representation available. Result verbs are normally accomplishments; accomplishments specify a change of state; no additional change of state can be introduced. Therefore, resultative constructions with result verbs such as *break* are ungrammatical.[*]

As we see, for both constructions there are restrictions on elements that can be combined. In Russian, it is impossible to combine every prefix with every stem to receive a valid output. Similarly, in English, not every verb and adjective can form a valid resultative construction. However, in Russian the combination of a prefix and a stem seems to be arbitrary whereas in English, it is possible to predict what kind of resultative phrase a verb is compatible with. In other words, if we confine ourselves to activity verbs and apply our knowledge of the world as to

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[*] Levin and Rappaport Hovav (1995:55-62) discuss in depth various semantic restrictions on English resultative constructions.

what activities may potentially lead to what resulting states, the formation of English resultative constructions may be quite productive.

4.0   Prefixed verbs and verb-particle constructions
I argue that Russian prefixed verbs are much closer related to English verb-particle constructions than to English resultatives. As mentioned above, the similarity between prefixes and particles is the lack of a specific semantic content. English particles and Russian prefixes form a new semantic unit with the base verb, whose meaning often may not be derived compositionally. Just like Russian prefixed verbs discussed above, English verb-particle constructions often have a different meaning and different syntactic properties from their base verb.

4.1   Particles and prefixes
English particles, similar to Russian prefixes, often carry the directional meaning and correspond to the function of the homophonous prepositions:

(26) a.   The soldiers ran up the hill and blew the bridge up.
      b.   Maria s-terla   pyl'   s   polki.
         Maria s-wiped dust-ACC from   shelf
         'Mary wiped dust off the shelf.'

Although English verb-particle constructions are claimed in some studies to be syntactic constructions (Neeleman and Weerman 1993, among others), they are more lexical in their behavior than English resultatives. Just like Russian prefixed verbs, the meaning of English verb-particle constructions often is not derived compositionally. Table 2 contains a set of verbs combined with different particles. Some particles seem to be more productive than the others; sometimes, the output is ungrammatical.[9] Note that though result verbs such as *break* do not participate in resultative constructions, they can form verb-particle constructions:

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[9] The choice of verbs is arbitrary. Though native speakers' judgments vary regarding some of these examples, in general my informants were unanimous. I marked (!) those verb-particles constructions that were judged as ungrammatical or problematic by my informants but nonetheless were listed in the English Dictionary for Advanced Learners (Collins Cobuild, third edition 2001).

Table 2: English Verbs and Particles

VERB	PARTICLE				
	DOWN	IN	OFF	OUT	UP
a. break	break down	break in	break off	break out	break up
b. cry	*cry down	*cry in	cry off(!)	cry out	*cry up
c. grow	*grow down	grow in	*grow off	grow out	grow up
d. look	look down	look in	*look off	look out	look up
e. make	*make down	*make in	make off	make out	make up
f. run	run down	run in	run off	run out	run up
g. show	*show down	show in	show off	?show out	show up
h. take	take down	take in	take off	take out	take up
j. wake	*wake down	*wake in	*wake off	*wake out	wake up

English particles as well as Russian prefixes may affect a verb's aspectual classification and argument structure. Consider the examples below:[10]

(27) a. Sally wiped the table.
     b. *Sally wiped.

(28) a. Sally wiped out on the ski hill.
     b. *Sally wiped out the man/wiped the man out.[11]

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[10] Thanks to Heather Bliss for these examples.
[11] The verb-particle construction *wipe out* can also mean 'destroy', in which case it would be transitive.

In (27), the verb *wipe* is obligatorily transitive as shown by ungrammaticality of (27b). Meanwhile, in (28) the verb-particle construction *wipe out* does not allow a direct object. Under the assumption that the verb in (28) is unaccusative, a change in argument structure is dramatic: with the addition of the particle, the verb changes from an obligatorily transitive verb whose external argument is an agent (at least in this case) to a verb which has only one argument and this argument is internal.

Another observation which suggests that English verb-particle constructions as well as Russian prefixed verbs are more lexical in nature than resultative constructions is that they can form an infinitive, while it is impossible with English resultative constructions – the latter cannot form conjoined verbs:

(29) a. I need to write off or fix my car.
     b. You should wipe down or wash the table.

(30)   Oni sobirajutsja po-chinit' ili s-pisat'   staruju mashinu.
        they are going   PO-fix.INF or S-write.INF old.ACC car.ACC
        'They are going to fix or write off the old car.'

(31) a. *She wants to paint green and sell her bike.
     b. *She wants to wipe clean or wash the table.

In addition, English verb-particle constructions may be substituted by a morphologically simple verb:

(32) a. The soldiers blew the bridge up.
     b. The soldiers exploded the bridge.

As the example below show, it is possible to replace some resultative constructions with a single verb as well:

(33) a. She hammered the metal flat.
     b. She flattened the metal.

However, in this case, the replacement is not completely adequate, as the expression with a single verb refers only to the result and looses its activity

25

component. In (33b), the metal became flat, but we do not know how she made it flat.[12]

The direct internal arguments of English verb-particle constructions also have properties of a regular direct object. Again, the application of the tests for argumenthood shows that middle constructions, adjectival-passive constructions and nominalizations are much better when derived from verb-particle constructions than from resultative constructions which involve transitive verbs:

(34) a. Wooden bridges blow up more easily than stone ones.
     b. ?The cars of this type write off often.

(35) a. the blown-up bridge
     b. ?/*the written-off cars

(36) a. The blowing up of bridges is prohibited.
     b. ?The writing off of cars is a common thing.

Obviously, some of these examples are problematic. However, they are definitely better than the sentences derived from intransitive resultatives (see section 2 above). This suggests that English verb-particle constructions are intermediate between Russian prefixed verbs which are morphological words and resultative constructions which are syntactically derived complex predicates. Thus, middle constructions, adjectival passive constructions and nominalizations derived from English verb-particle constructions are not as bad as those derived from intransitive resultatives but they are still worse than those derived from Russian prefixed verbs.

Apparently, English verb-particle constructions, being lexically derived phrasal verbs, preserve some characteristics of their basic verb. The extent to which such sentences are problematic might depend on how far the meaning of the verb-particle construction is from the original verb and how conceptually different is the direct object of the verb-particle construction from the direct object required

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[12] In some resultative constructions it is possible to substitute a verb + a resultative phrase by a single verb:

(i) a. She run herself ragged.
     b. She exhausted herself.

However, in this case, the construction seems to be idiomatic in the sense that its meaning is not derived compositionally, since the verb *run* does not denote the actual running activity.

by the original verb. For example, *write off* does not preserve much of the meaning of its basic verb *write* and *car* is not a prototypical direct object of *write*. Thus, middle formation, adjectival passive formation and nominalization for *write a car off* are problematic. On the other hand, the verb-particle construction *blow up* seems to bear more conceptual similarity to its basic verb *blow* though *bridge* hardly could be considered as a prototypical direct object of this verb. It is not clear why in (34) – (36) the a-examples are better than the b-examples. However, here I am only interested in the contrast in grammaticality between middle constructions, adjectival passive constructions and nominalizations that are derived from intransitive resultatives and those derived from verb-particle constructions and I leave the account for this contrast for further research.

4.2   More about prefixes, particles and resultatives
Some additional observations suggest that neither Russian prefixed verbs nor English verb-particle constructions should be analyzed as counterparts of English resultatives. First, since the meaning of Russian prefixes and English particles is too vague they fail to specify a resulting state. Russian prefixes and English particles often transform an activity into an accomplishment or an achievement. However, as Levin and Rappaport Hovav (1995) point out, resultative constructions differ from simple accomplishments in that they lexically specify both the activity and the resulting state. In contrast, though Russian prefixed verbs and English verb-particle constructions are often accomplishments, they do not lexically specify the resulting state. For example, if we analyze the Russian expression *ona vy-terla stol* 'she *vy*-wiped the table' the same way as we analyze the English resultative construction *she wiped the table clean*, the Russian expression would mean that the table became *vy*- as a result of wiping. This is meaningless because the prefix *vy*- is too vague to define the change of state that the table undergoes. Similarly, the verb-particle construction *she wiped the table down* would mean that the table became down as a result of wiping. Let us have a look at the following examples:

(37) a.   #Morris wiped the table clean but it is still dirty.
     b.   Masha vy-terla   stol,   no on ostalsja   grjaznym.
          Masha VY-wiped table-ACC but it   remained dirty.
          'Masha wiped the table but it remained dirty.'
     c.   Mary wiped the table down but it is still dirty.

The resultative construction in (37a) is semantically ill-formed whereas the Russian sentence with a prefixed verb in (37b) is not a contradiction. The English expression explicitly states that the table is clean now, but in Russian, this is only pragmatically presupposed. The Russian expression only says that she acted (presumably) to make the table clean and that she completed the action but it says nothing about how efficient her job was. The same is true about the English verb-particle construction in (37c). This sentence is not a contradiction for exactly the same reasons as the Russian sentence. Since it is impossible to attribute to the particle *down* any precise meaning on its own, we cannot define what exactly change of state the table has undergone.

Second, Russian prefixed verbs as well as English verb-particle constructions do not necessarily express a change of state. Compare the following sentences:

(38) a. Masha razo-grela   sup.
        Masha RAZ-warmed soup-ACC
        'Masha warmed up the soup.'
     b. Olga vy-myla   chashki.
        Olga VY-washed cups-ACC
        'Olga washed the cups.'

(39) a. Mary rolled the carpet up.
     b. Denis turned the page over.

(40) a. Claudia do-chitala knigu.
        Claudia DO-read   book-ACC
        'Claudia finished reading the book.'
     b. Morris pro-igral   partiju v shaxmaty.
        Morris PRO-played game   in chess-ACC
        'Morris lost a game of chess.'

(41) a. We looked the information up.
     b. Tina thought the matter over.

In (38) and (39), the objects undergo a change of state. The soup, when it is warmed up, the cups, when they are washed, the carpet when it is rolled up and even the page when it is turned over, each undergoes a different kind of change. In contrast, the objects in (40) and (41) does not seem to undergo any obvious change

of state. The book hardly undergoes any change of state when somebody finishes reading it and even less so a chess game when it is lost. Similarly, the information and the matter do not undergo any change of state when they are looked up and thought over respectively.

These observations put together suggest that Russian prefixed verbs and English verb-particle constructions do not work exactly as English resultatives. They should not be given the same analysis because they do not have the two essential characteristics of the resultative construction. First, prefixes and particles, which presumably correspond to the resultative phrase, cannot precisely describe the result because their meaning is too vague. Second, since the meaning of prefix verbs and verb-particle constructions is not derived compositionally and may often be different from that of the base verb, direct objects of Russian prefixed verb constructions and verb-particle constructions does not necessarily undergo a change of state.

5.0   Conclusion

The crucial assumption of this paper is that the syntactic behavior of a verb is determined by its meaning. Given this assumption, English resultative constructions on the one hand, and English verb-particle constructions and Russian prefixed verbs on the other hand, have different syntactic properties. As follows from the analysis above, the latter two share a very important semantic feature. English particles and Russian prefixes cannot be attributed any precise meaning on their own; they comprise a single semantic unit with the verbs they are combined with. This new lexical unit often has a different meaning from that of the original verb and, as a result, may exhibit different syntactic properties. In contrast, in English resultative constructions, the meaning of the two components of a complex predicate – a verb and a resultative phrase – is precisely defined. The meaning of the verb within the English resultative construction does not change with an addition of the resultative phrase and selects the same arguments as in isolation. Therefore, postverbal DPs within English resultative constructions on the one hand and English verb-particle constructions and Russian prefixed verbs on the other hand have different argument status. In the case of English resultative constructions based on intransitive verbs they are not arguments but unselected objects. However, in Russian, they are arguments of prefixed verbs and exhibit all the properties of normal direct objects. In English verb-particle constructions, the argument status of such DPs is less obvious. Some examples of middle constructions, adjectival-passive constructions and nominalization are problematic. This is perhaps due to the fact that English verb-particle constructions are phrasal

verbs and constitute a kind of intermediate category between English syntactic resultatives and Russian morphologically derived prefixed verbs. Besides, as suggested in section 4, English verb-particle constructions and Russian prefixed verbs cannot be treated as counterparts of English resultative constructions because they do not specify a resulting and their direct objects do not always undergo a change of state.

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