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Typological constraints in foreign language acquisition:

The expression of motion by advanced Russian learners of English

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Typological constraints in foreign language acquisition:
the expression of voluntary motion by advanced Russian learners of English

Abstract
This study examines the impact of typological constraints on foreign language acquisition in a classroom setting. It explores the hypothesis of conceptual transfer from first to foreign language L1>FL (Jarvis 2011). Based on Talmy’s (2000) distinction between Verb- and Satellite-framed languages, corpus-based analyses compare descriptions of voluntary motion events along three paths (UP, DOWN, ACROSS), elicited in a controlled situation from Russian advanced learners of English and from native speakers (Russian, English). Special accent is made on the encoding of UP-events in Russian given that this type has not yet been systematically explored. Results show that in spite of considerable differences between Russian and English native speakers’ performance, idiosyncratic forms produced by multilinguals rarely mirror L1 motion conceptualization. The discussion highlights factors that might interact with typological constraints in SLA.

Key words: space, voluntary motion conceptualization, typology, adult SLA, conceptual transfer, multilingualism

1. Introduction
Following Cook (2002: 3), an individual can be called bilingual if she uses a FL at any level and exposed to any amount of it. In this paper, the terms foreign language (FL) and second language (L2) are used interchangeably. Similarly, the terms learner, bilingual, multilingual and L2 user are used as synonyms. Cook’s definition presupposes that advanced L2 users have considerable changes in ‘L1 thinking’, independently of the context in which hey acquire languages (immigrants vs classroom learners) and that they possess specific/unique TFS (“thinking for speaking”) perspectives when using their languages. This vision is challenged by Pavlenko (2011: 4) who states learners who acquire FL in non-immigrant contexts rarely undergo shift in L1 TFS.

Talmy (2000) classifies Russian and English as satellite-framed languages (hereafter S-languages). S-languages display a specific way of mapping spatial information onto linguistic means, that is, the main verb of the utterance vs. other devices (Hendriks & Hickmann 2010). A canonical S-pattern encodes Path in diverse devices associated with the main verb, and Manner being lexicalized in the main verb root. Russian and English share some similar peripheral devices such as prepositions, adverbs, gerunds and infinitives. In addition, there is language-specific peripheral means typical of both languages: prefixes in Russian and particles in English (Talmy 2000; Pavlenko 2010). Secondly, there is variation in the semantic structuring of Russian and English verbs (Hasko 2010; Pavlenko 2009; Gor, Cook, Malyushenko & Vdovina, 2009). Finally, the third type of variation has been reported at the level of lexicalization patterns (Hasko 2009: 363-364) where Russian shows a higher degree of variability than English. For instance,
Russian displays a V-pattern in the pair of verbs spustit'sja/spuskat'sja ‘descend, get down [PF/IMP]’ (Hasko 2010). High variation in lexicalization patterns were also reported in some Slavic languages other than Russian. For instance, Serbo-Croatian displays a frequent V-framed pattern (Filipovic 2010: 263), whereas Polish conflates Manner and Path in verbs, e.g. ws-pinac sie1 [up-(non autonomous root)-itself] ‘climb-up’ (Kopecka 2010: 237).

The present study examines variation in Russian lexicalization patterns. With respect to SLA, we investigate the role of typological factors in L2 acquisition of English by advanced Russian learners whose descriptions are compared with those of native speakers of the two languages. Previous studies have detected L1 typological transfer>FL at different levels of learners’ proficiency: advanced (Lambert, Weimar, Flecken, Caroll & v. Stutterheim 2011; Choi & Lantolf 2008), intermediate (Brown & Gullberg 2011: 82) and less advanced (Hendriks & Hickmann 2010). These studies mostly focused on comparisons between typologically distant languages (see, however, Cadierno 2004 who studied a combination of V-languages). Our study examines L1 transfer between typologically similar languages in bilinguals with a predominant L1 (Russian) and fluent L2 (English) and refers to the theory of Structural Ambiguity (Müller, 1998), according to which the degree of transfer (L1<->FL) depends on the relative variability of the languages in question.

In the following chapter, we report the variation among S-languages revealed by previous studies in order to present challenges that L2 learners face in SLA of languages belonging to the same family. In section 3 we focus on the models of the bilingual mind (Slobin 2006, Müller 1998, Green 1998) which are followed by a presentation of our hypotheses concerning L1 and L2 speakers and the methodology used. Then follows a presentation of our results and the discussion in which we summarize our findings in the light of factors other than typology which might account for multilinguals’ linguistic conceptualization of motion at the micro-level (Bassetti & Cook 2011).

2. Expression of motion in S-languages

There are several claims regarding motion talk in Russian. We will mainly focus on three of them: 1) the omnipresence of Manner in motion description (Pavlenko 2010, Slobin 2006); 2) the variability of typological patterns displayed (Hasko 2009, 2010); 3) the semantic composition of Russian verbs encoding basic types of Manner of voluntary motion (running, walking, climbing etc.). Experts in Slavic studies call the latter verbs Verbs of Motion (hereafter VoM)) and distinguish between determinate (arguably encoding direction of motion) and indeterminate (denoting no particular orientation of motion) verbs. It is not surprising that Russian speakers extensively use VoM (and their derivatives formed through adding affixes to VoM roots) in their descriptions of motion.

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1 Ws-pinac sie is a semi-transparent reflexive verb with a verbal root which has no particular meaning in synchrony.
Talmy’s cognitive and typological approach has inspired research on different aspects of lexicalization patterns in languages of the world. According to Matsumoto (2003), there are several perspectives stemming from this Talmy’s framework. One of them focuses on ‘sentence constructions’ in which linguists study main verbs and ‘other devices’ separately (Hickmann, Hendriks & Demagny 2008). Within this perspective, it has been shown that S-languages display considerable disparity (Hasko 2009, 2010, Filipovic 2010, Schmiedtova et al. 2012; Czechowska & Ewert 2011). Some studies which examine lexicalization patterns are not limited to the level of utterances. For instance, in von Stutterheim and Nüse’s framework (2003: 851), lexicalization patterns are analyzed at discourse level in a stretch of connected discourse. In this paper, the data is analyzed both at ‘utterance construction’ and discourse level(s).

In the following section we present an overview of differences between English and Russian reported in the literature. Recent research shows that the predominance of a unique lexicalization pattern (massive encoding of Manner in verbs with Path expressed in other devices) in S-languages is no more than a simplification of complex systems which vary with regard to event types analyzed, both intra- and inter-linguistically. In the following section we how the following components are expressed in Russian and English: 1) Manner 2) aspect 3) Path.

2.1. Manner specification

In both languages, the intra-linguistic frequency of Manner specification depends on the type of motion analyzed. For instance, in English OUT-events expressing voluntary motion mainly (68%) encode Path both in verbs and adjuncts (e.g. *come out*) (Slobin 2006), whereas UP/DOWN/ACROSS-events expressing CAUSED motion massively encode Manner (Hickmann, Hendriks & Demagny 2008). In Russian, Manner is encoded in 100% of descriptions representing OUT-of-a–tree-hole events (Slobin 2006). Similarly, Pavlenko (2009: 51) points out that Russian native speakers obligatorily specify Manner. However, it seems to hold only for the expression of motion along a horizontal plane but not of a vertical one (*podn’atsia* ‘ascend’, *zabrat’sja* ‘climb’, *zalezt’* ‘climb on/in/onto/into’, *spustit’sja* ‘descend’, *slezt’* ‘climb down’) in which Manner is not always omnipresent.

2.2. Grammatical aspect

In English aspect is encoded with specific tenses, for instance, by means of the -ing form (Schmiedtova et al. 2011). English grammatical aspect is not an obligatory category and it is never encoded in the infinitive. In contrast, Russian is « dominated » by grammatical aspect: « […] Russian speakers are required to mark verb aspect, regardless of whether the marking contributes to the meaning of the sentence » (Pavlenko, 2010: 50). Aspect is marked not only in the finite verb but also in the infinitive, the imperative and in participles.

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2 Russian, English, German, Czech, Serbo-Croatian, Polish
3 The choice lies between motion on foot, e.g. *idti* ‘walk’, and motion carried out by (various) means of transportation, e.g. *exat’* ‘drive/ride’.
Each English verb corresponds to at least two Russian forms (perfective/imperfective): for instance, the verb *climb* may be translated by Russian reflexive morphologically ‘semi-transparent’ verbs such as the imperfective *zabirat’sja* or the perfective *zabrat’sja*. However, only reflexive verbs mentioned above are limited to a single form per each type of aspect (perfective/imperfective). Other verbs display more numerous forms including several perfectives and sometimes secondary imperfectives. As for Russian VoM, they display numerous forms (mostly perfective) many of which indicate different Actionsarts (po-iti ‘start/leave-walk’) or acquire additional semantic components (pri-xodit’ ‘arrive-walk’) (Wlodarczyk 2007). Recall that VoM paradigm is composed of determinate/indeterminate pairs. Each correlate (imperfective and unprefixed) of these pairs has their own perfectives. For instance, the English verb *to run* corresponds to two Russian VoM: ‘bezhat[DET]’ and ‘begat[DET]’. Both correlates encode the identical Manner of motion (running) but differ in that the first denotes motion in one linear direction, whereas the second contains no specific indication with respect to motion orientation (Isachenko 1960). The determinate VoM ‘bezhat’ combines with 19 Russian prefixes and thus form 19 perfective correlates, whereas the indeterminate ‘begat’ has 6 perfective correlates.

To sum up, with ACROSS, UP and DOWN-events, English uses S-pattern, whereas with IN/OUT events, English mainly uses Path verbs. In contrast, Russian displays a complex and variable system with obligatory aspect-marking. With IN/OUT events Russian systematically lexicalizes Manner in perfective verbs (e.g. vy-letet’ ‘out-fly’). In the expression of ACROSS-events and some UP/DOWN events Manner is encoded either in the imperfective VoM (bezhat’ ‘run[DET]’; lezt’ ‘climb/move with the help of limbs’) or perfective (pere-bezhat’ ‘across-run’; za-lezt’ za-climb’; s-lezt’ ‘down-climb’) verbs. Finally, UP- and DOWN-events are expressed by means of prefixed semi-transparent verbs (zabrat’sja ‘climb (on)’, spustit’sja ‘descend’).

### 2.2.1 Grammatical aspect in narrations

As has been shown above, English uses a complex system of tenses only some of which are marked with aspect, whereas Russian employs only two tenses both of which are aspectual marked. Russian aspect has an autonomous status with respect to grammatical tenses (Pavlenko, 2010: 49-50). When Present tense forms combine with perfective aspect, they express future. The Present tense allows exclusively for imperfective forms. As for the Past tense, it interacts with both perfective and imperfective aspect within two distinct systems: a narrative and a retrospective ones (Lafite 2010). In the narrative system, perfective aspect “is used for the introduction of new events”, meaning it marks the foreground (Schmiedtova 2012: 3), whereas imperfective aspect marks the background, slowing the narrative dynamics down and providing descriptions and commentaries of events introduced by the perfectives (Lafite 2010).

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4 Depending on the context, the English verb *read* may correspond to 7 different verbs: chitat’ ‘read[PP]’, *pro-chitat’* ‘read[PF]’, pere-chitat’ ‘read once more[PP]’, za-chitat’ ‘read outloud[PP]’, *pro-chita-yvat’* ‘read[IPF], pere-chita-yvat’ ‘read once more[IPF].

5 Additionally, some indeterminate VoM have secondary imperfective derivatives, e.g. poxazhivat’ ‘walk from time to time; walk to and fro’.

6 Note that this vision of VoM is not unanimous (Vreynec 1980)

7 In our study we focus exclusively on short narratives, so the retrospective system will not be discussed any further.
However, according to Lafite (2010), this dichotomist distinction is too simplistic: some imperfectives (e.g. with meanings of durativity) also contribute to the plot development and introduce new events just as the perfective forms do. English does not use the same means of foreground/background differentiation as Russian (Schmiedtova et al. 2012: 4). As for the literature on the acquisition of tense- and aspect-switching in the productions of Russian-speaking learners of English, according to Schmiedtova et al. (2012: 4-5), these bilinguals idiosyncratically use past endings to represent completed events and non-past endings to represent non-completed events.

2.3. Path

With a few exceptions, the Russian prepositions *na* ‘on/onto’ and *v* ‘in/into’ combine with both the Locative and the Accusative cases depending on whether they denote general *Locations* in static situations, or *GOALS* in dynamic situations, e.g. *na dereve/derevo* ‘on the tree[LOC/ACC]’. The same principle guides the German system of endpoints encoding, the Dative case denoting Localisation, and the Accusative denoting endpoints towards which motion is directed. In Russian and German both cases combine with identical prepositions. In contrast, English does not use case marking but instead differentiates locative, directional and boundary-crossing prepositions (*in* vs. *on* vs. *to* vs. *into/onto*).

Pavlenko (2009) compares how English and Russian distribute Path information between different components of utterances. Whereas English often has a choice between the expression of this component either in a particle OR a preposition (depending on whether the speaker wishes to mention Ground or not), Russian frequently distributes Path over both a prefix AND a preposition. The two latter linguistic means in Russian are sometimes homomorphic and express more or less identical Path information (boundary-crossing and reaching, as suggested by Hasko 2010), e.g. *v-lect’ v [into-to get using limbs into] : « […] satellite combinations often work in semantic and syntactic tandem to express meanings that are encoded through a single element in English » (Pavlenko 2010: 50). Other verbs combine with allomorphic prepositions, e.g. *pere-bezhat’ cherez [across-to run across]*. In both examples the morphological constituents (prefixes and roots) are autonomous units the meanings of which in autonomy are preserved within the prefixed structures.

In some cases the distribution of Path between prefixes and prepositions is less clear with semi-opaque prefixed reflexive verbs expressing vertical motion, e.g. *podnimat’sja ‘ascend[IPF]*’, *zabirat’sja ‘get somewhere with the help of the limbs[IPF]*’. Recent research shows that there is no consensus regarding the encoding of boundary-crossing in the expression UP-/DOWN- EVENTS in different languages, including Russian. This leads to difficulties in the encoding of verbs expressing these events:

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8 There is controversy with respect to the interpretation of these results: some authors interpret such findings as L1 transfer, whereas others view it as the manifestation of “a general learner strategy” (Schmiedtova et al. 2012).

9 In some cases on and on can denote boundary crossing (*He goes in the shed*)
There are many questions related to “ups-and-downs” cross-linguistically that are still waiting to be answered. For example, is the movement along a vertical axis to be treated as boundary-crossing or non-boundary-crossing? (Filipović 2010: 259)

To summarize section 2, we showed there is a striking variability in how Manner, aspect and Path are encoded in Russian and English. In terms of space, English is often described as a highly systematic system which contrasts with a higher degree of variability in Russian. However, English seems to be much less transparent in temporal anchoring of events because it uses a complex system of tenses, whereas Russian employs only the Present and the Past tenses. Now when variability between Russian and English is demonstrated, we turn to theoretical models which explain how bilinguals cope with the variability that their languages present.

3. Processes in the bilingual mind
First of all, we refer to Green’ model (1988: 68) according to which during verbal production, a bilingual has all his languages present in his/her mind at different levels of activation: “in order to speak one language rather than another, its activation level must exceed that of the other language”. The second issue we make reference to is an on-going debate whether language acquisition (both mono- and bilingual) influences non-verbal and verbal cognition. Although some studies (Soroli, 2011; Czechowska et al. 2001) found language-specific effects on non-verbal cognition in the expression of motion, this idea is not widely accepted. In contrast, there is a more widespread view that ‘codability’ of immediately available concepts frequently represented in language influences a special type of thinking which is necessary for the encoding of verbal language-specific messages. This idea is known as “Thinking for speaking” hypothesis (hereafter TFS), according to which the speaker of a particular language assimilates “ways of looking at events” through frequently encoded perspectives (Slobin 1996). According to Slobin (1996), these perspectives structure L1 discourse and interfere in SLA:

[Each native language has trained its speakers to pay different kinds of attention to events […] when talking about them. This training […] is exceptionally resistant to restructuring in adult second-language acquisition (italics are introduced by the author of the present article) (Slobin 1996: 89).

Our initial aim is to examine L1 restructuring or L1 conceptual transfer in Pavlenko’s terms (2011: 246-247). The results previously reported in the literature are variable and depend on the combinations of languages studied: for instance, Cadierno (2004) reported a limited support for L1 transfer (Danish<>Spanish). In contrast, studies exploring French<>English (Hendriks et al. 2010; Hickmann et al. 2008; Lambert, et al. 2011), Japanese(L1)-English(L2) (Brown & Gullberg 2011: 82) and Korean<>English (Choi & Lantolf 2008) combinations provide supporting evidence for L1 transfer at different levels of L2 proficiency.

Findings stemming from the studies of French-English combinations seem to suggest that L1 transfer might depend on the linguistic variability of the systems involved in acquisition. We refer here to the theory of Müller (1998) who suggested that bilinguals might favour a linguistic system/language which provides
more systematic and transparent patterns/input. However, the factor of relative variability is not sufficient to explain all aspects of L2 acquisition: for instance, studies of French<->English combination show that English is more systematic than French in expression of both voluntary and caused motion, which, according to Müller’s framework, should point to uni-directional transfer from English (more systematic language) to French (less systematic one). However, English triggers massive L1 transfer only in the expression of caused motion (Hendriks et al. 2010). The results regarding voluntary motion are less evident (Hickmann et al. 2008). Similarly, in Choi and Lantolf’s (2008: 219) study of motion by English-Korean bilinguals, results depend on the type of motion analyzed: Korean is more variable than English with both voluntary and caused motion; however, the description of voluntary motion shows less L1 transfer than that of caused motion.

Finally, we refer to the “Revised hierarchical model” (hereafter RHM) by Kroll & Stewart (1994), mainly inspired by sequential language acquisition. This model operates at the level of translational equivalents of single L1 and L2 words. It assumes that L1 and L2 lexicons are separate and that it is easier for a bilingual to retrieve a word in the stronger language than in a weaker one. Finally, it suggests that similarly to L1 words, L2 words “access conceptual memory directly” but this link is less strong than that of L1 words.

4. Hypotheses

4.1. Monolinguals
Recall that English is highly systematic and uses no more than two patterns: (an) \textit{S-pattern} with DOWN-, UP- and ACROSS-events (Hendriks et al. 2010) and a \textit{V-pattern} with OUT-events (Slobin 2006). We expect native speakers of English to show a high degree of systematicity in their motion talk, expressed by means of a single lexicalization \textit{S-pattern} with DOWN-, UP-, ACROSS-events. Russian is expected to show a less transparent configuration of lexicalization patterns which are expected to be event-type-specific, DOWN- and UP-events probably displaying patterns different from those displayed by ACROSS-events. (V- and Manner-and-Path conflation pattern vs S-pattern). In this case, Russian and English use identical typological patterns exclusively with ACROSS-events.

4.2. SLA
Although the initial aim of our study is to examine L1 conceptual transfer in adult bilingual acquisition, the ultimate task is to understand which processes and factors (other than L1 transfer) guide bilinguals’ motion conceptualisation. If our hypothesis that English and Russian encode similar types of information only in the expression of ACROSS-events, we expect learners to have difficulties in the descriptions of vertical motion. However, these difficulties might be attenuated by the \textit{systematicity} of English: overall, we expect the learners to shift to L2 relatively transparent linguistic conceptualisation and to display restructuring of L1-based perspectives or frames. At the same time, we expect such aspects of L1 TFS (such as VoM conceptualisation and morphological verb composition) to resist the restructuring, especially given a non-immersion context in which L2 acquisition of our participants took place (Pavlenko 2011).
Thus, we expect both L1 and, with a greater degree, systematic L2 properties to have an impact on bilingual acquisition. Whereas learners are supposed to use the highly systematic English system when representing *space*, temporality is expected to be influenced by a relatively systematic L1 Russian.

5. Method

4.1. Participants.

The present paper differs from previous studies of adult English-Russian bilingualism (Wolff & Ventura 2009; Pavlenko; 2011; Hasko 2009; Gor et al. 2009) in that these studies focused on Russian-English bilinguals with English being their dominant or main language of environment (in the US). Our study examines the system of Russian-English multilingual speakers residing in Russia. Most of these speakers had French as L3 (10 subjects out of 12). Our study compares three groups of participants: Russian natives (N=12); English natives (N=17) and advanced Russian multilingual learners of English (N=12). Russian natives had no active knowledge of any L2 language: given that monolingual populations are non-existent among students, we selected participants with the mean age of 48. Although they reported to have learnt some FL at school, it means that they were last in contact with their FL more than twenty years prior to the moment the experiment took place. As for the learners, the mean age was 30, participants having more or less similar social background and having never left Russia for more than three weeks. We selected participants with the *Advanced Level* of English which at the evaluation scale of Council of Europe corresponds to a C1 level (‘competent users’). In order to identify learners’ levels, we asked participants to complete a short version of written Oxford Quick Placement Test.10 The learners’ age of onset of bilingual acquisition (Russian L1 + English FL) varied from 5 to 11 years old.

4.2. Stimuli and procedure

The instruction was to describe 24 very short animated clips each of which lasted for no more than 30 seconds. Participants were asked to answer the question *What happened?* No time limitations were imposed. Participants were allowed to describe cartoons either in the process or in the end of watching. The experimenters testing all the three groups were multilingual speakers. Those who tested natives/monolinguals were natives of respective languages; the one who tested multilinguals was a native speaker of Russian whose dominant language was French (she has been living in France for five years prior to the experiment) and whose level of L2 English was roughly equal to that of participants. As Figure 1 shows, the clips showed voluntary motion carried out in various manners along three paths (UP, DOWN, ACROSS). Note that upward and downward motion exclusively portrayed a ‘climbing’ Manner of motion. The supports (GROUNDS) for these types of motion were mainly trees, poles and tables. As for ACROSS-events, Manner of motion (as well as types of GROUND) was much more variable: running, skating sliding, swimming (roads, lakes, rivers).

10 The Oxford Quick Placement Test distinguishes between 5 levels: Beginner, Elementary, Lower Intermediate, Upper Intermediate, Advanced.
4.3. Segmentation analyses

Participants produced short narratives that were further decomposed into several parts. For instance, motion represented in Figure 2 might include the description of a TOWARD-event (a monkey appears on the left of the screen and heads for the tree), or that of a setting (there is a monkey), an UP-event (the monkey is climbing the tree), a DOWN-event (climbing down) and a final part (the monkey walking to the right and disappearing). TOWARD-events and final parts of the descriptions were not selected for our analyses of lexicalization patterns. However, TOWARD-events data is included in our analyses of temporality.

4.4. Coding choices

4.4.1 Reflexive verbs and verbs containing the prefix za-

This section gives a detailed analysis of Russian verbs and constructions which describe UP-events. Let us first examine the perfective/imperfective pair of verbs zaibratsja/zaibiratsja [PF/IPF] na ‘climb/get on/onto smth’. According to Plunguian & Rakhilina (2007: 10), such Russian verbs are barely analyzed in the literature, which arouses numerous questions about how to code them linguistically. For instance, zaibratsja/zaibiratsja [PF/IPF] na are ambiguous in terms of the encoding of a boundary-crossing semantic component for two reasons 1) it is not clear whether the prefix za- that they contain and which in Janda’s framework (1986) denotes a lateral boundary transgression between a ‘normal’ and an ‘abnormal’ domains, retains this meaning in the prefixed structure; 2) the imperfective zaibiratsja can describe two types of a situation (Figure 2), 1a implying no boundary-crossing and 1b implying the crossing of a lower boundary:

As for the verb root –brat’sja, its meaning within the prefixed structure is difficult to define. Thus, if we translate each morphological component of zaibratsja/zaibiratsja [PF/IPF], we will get the following scheme:

(1) za-birat’sja [IPF] [(Prefix)=lateral boundary transgression - (Verbal root)=[no particular meaning]-itself] na derevo[ACC] ‘he climbs on(to) the tree’

The root –brat’sja can be analyzed in two ways: 1) as an autonomous verb; 2) as a non-autonomous root (Dobrushina Mellina & Paillard 2001). 1) In autonomy, brat’sja hardly denotes any motion: it obligatorily combines with a limited number of complements, (e.g. brat’sja za raboty ‘to accept/start[PF] a job/mission’). Furthermore, brat’sja itself can be decomposed into the root ‘to take’ and the reflexive postfix sja ‘oneself’: [take-oneself]. 2) In the framework of Dobrushina et al. (2001: 139), the non-autonomous root -brat’sja (as a non-decomposable whole) is associated with the component of <difficulty of motion>, which, is, according to Stosic (2010) and Aurnague (2011), one of the traits of Manner.

In contrast to (1) which views zabrat’sja as a decomposable structure, we can analyze it as an indecomposable whole without a detachable prefix. In this case, the fuses Manner <use of limbs> and Path

\[11\] The symbol “ ł ” means that the verb is not totally morphologically transparent in synchrony.
(arguably denoting up-ward motion when it combines with the preposition na ‘on’ and boundary-crossing) within a root, roughly approaching the meaning of the English combination climb-up-onto. This type of interpretation does not view the meaning of the whole structure as a sum of the meanings of its components. In contrast, English does not display such an ambiguity of interpretation with respect to which types of spatial information are expressed by which components of the structure. For instance, in He climbs up the tree, the components climbs (Manner) and up the tree (Path) encode specific types of information and the meaning of the whole construction is a sum of the meanings of its components.

The prefixed zaibrat’sja/zaibrat’sja na ‘climb/get on/onto [IPF/IPF]’ behave differently when describing upward motion (zaibrat’sja na derevo ‘climb the tree [IPF]’), vs motion other than upward-oriented (e.g. zabirat’sja v dom ‘illegally get into/trespass somebody’s house [IPF]’, pod odejalo ‘under the blanket’). In the latter case, the boundary-crossing is clearly implied, whereas with upward motion, the component is perceived only by some native speakers but questioned by others. It is possible that in the course of a diachronic development such reflexive verbs have started losing their Path component (initially encoded in the prefix), depending on the properties of the Ground, e.g. with vertical vs. non-vertical orientation and their functional features. Similarly, morphologically transparent za-lezat’ [IPF] na derevo ‘climb on the tree’ is problematic in terms of coding because it can describe two types of a situation (Figure 2): with and without boundary-crossing.

In our data zabiraetsja [IPF, PRES] na derevo ‘he climbs the tree’ and spuskajetsja [IPF, PRES] s dereva ‘he climbs down the tree’ and their perfective equivalents are encoded as structures containing indecomposable verbs which do encode boundary-crossing, although, as we have shown, such interpretation is not the only possible one. In our analyses, zabiraetsja and its perfective correlate are coded for Path-and-Manner conflation. Spuskat’sja/spustit’sja [PF/IPF] are coded for Path only. As for the pair of morphologically transparent verbs za-lezat’/za-lez’ (na derevo) ‘climb on the tree’, we coded them as roots with separate ‘other devices’, the former encoding Path (boundary-crossing) and the latter encoding Manner.

4.3.2. Directionality and Verbs of Motion (VoM)

The class of VoM shows lack of linguists’ unanimity as to what types of information it expresses. There is a large body of work on VoM which offers different (sometimes contradictory) explanations of their semantics (Janda 2010; Isachenko 1960; Veyrenc 1966; Maisak & Rakhilina 2007). As has already been noted within Isachenko’s framework (1960), canonical determinate/indeterminate correlates share identical Manner of Motion (e.g. bezhat’/begat’ ‘run [DT/IDT]’) but differ in the type of directionality they denote. In studies inspired by Talmy’s work, directionality/orientation is viewed as a type of Path of Motion. Thus, within this framework, determinate VoM fuse Manner and Path and indeterminate VoM lexicalize Manner only.
In contrast, Veyrenc (1980) explicitly rejects the criterion of uni-/multiple directionality claiming that both VoM correlates can designate identical readings in terms of orientation depending on the presence or absence of final GOAL PPs. Instead, this scholar’s criterion is the foregrounding vs. backgrounding of motion: whereas the semantics of foregrounded motion is attributed to the determinate VoM, this feature is accessory in the semantics of the indeterminate VoM. This is in line with Rakhilina’s (2007) claim that in some uses the indeterminate individual verb plavat’ ‘swim[IND]’ indicates rather Localisation rather than motion. In Veyrenc’s view, the indeterminate VoM designate a kind of a mission or an activity. In this respect, Veyrenc considers the following illuminating example: On glavnym obrazom xodil: v etom zakluchalas’ ego rabota. ‘Most of the time he walked[IDT]; this was his job’ (quoted and translated from Veyrenc 1980). Veyrenc’s idea is that the same situation implying motion can be described through both determinate and indeterminate VoM, depending on the observer’s/speaker’s point of view.12. Within this approach, all VoM encode Manner only.

Given differences between these approaches, we coded our data twice. This paper reports findings based on Isachenko’s framework which uses the criterion of (non)-uni-directionality.

6. Results (monolinguals)

6.1. Variability of patterns

As expected, results show that L1 English displays a much higher degree of transparency of patterns than Russian (Figures 3 and 4). English uses a clear canonical S-strategy with the three types of motion under investigation. In contrast, Russian presents a complex combination of different patterns. In addition to the S-strategy used with both vertical and crossing-motion, Russian frequently employs a V-strategy in the expression of vertical motion (podn'atsja/podnimat'sja na[ACC] ‘ascend onto [PF/IPF]’; spustit'sja/spuskat'sja s[GEN] ‘descend from [PF/IPF]’) and also frequently conflates Manner-and-Path in verbs (zabrat'sja/zabirat'sja na[ACC] ‘climb onto [PF/IPF]’) in the expression of upward motionVariability is more striking in verbs than in other devices, although ACROSS-events do equally show some variability. As expected, English and Russian use the same pattern with ACROSS-events. However, S-pattern is equally used in the expression of UP- and DOWN-events (even though less frequently than other patterns).

Thus, in Russian, all verbs employed in the target parts of descriptions express either Manner or Path or a combination of both. This finding is in line with Pavlenko’s findings (2010) according to which Russian rarely uses ‘neutral’ verbs (comparable to the English verbs go and get), whereas English does, even though, as our data show, relatively infrequently with the three types of motion in question. Thus, English uses both specialized Manner verbs and ‘neutral’ verbs. As for other devices, there are unexpected differences in Russian and English: 1) English sometimes expresses simple Localisation (ACROSS), whereas

12 « Le mouvement de déplacement est celui que le sujet produit à partir de lui-même ; le mouvement de fonction est celui que le sujet reporte sur lui-même et assume en lui-même ». 
Russian never does (all types of events); 2) on a global level, Russian sometimes employs bare verbs [without other devices] English hardly ever does (Figures 3b and 4b).

6.2. Tense in the descriptions of motion

Figure 5 shows results concerning those motion descriptions in L1 Russian which contained more than one sentence per stimulus. First of all, in the majority of cases there is no code-switching: most often the narratives are produced either in the Past or, less frequently in the Present Tense. However, Russian native speakers do occasionally produce aspectual switching within the Past tense between the imperfective and the perfective (10%) within a stimulus description. In these cases, the TOWARD-motion (in the beginning parts of descriptions) is described through the imperfective forms whereas UP-, DOWN- or ACROSS-events are described by the perfective forms.

Figure 6 presents the encoding of tenses (without taking into account tense-switches) in the encoding of four types of events (DOWN, UP, ACROSS, TOWARD) by monolingual speakers. Russian monolinguals most frequently use the Past Tense, especially with DOWN-events. It is worth noting that most of the Past forms are prefixed and encode perfective aspect. In contrast, English monolinguals mostly use the Present Simple tense, especially with TOWARD-events. Note that the Present Progressive forms are present even though not predominant with UP- and ACROSS-events.

7. SLA Results

7.1. Lexicalization patterns

Figure 7 shows our results elicited from learners’ descriptions. The data are in line with Bassetti et al.’s (2011: 170) observation that “[…] a contrastive analysis of differences between two languages and two groups of speakers does not necessarily predict what will happen in bilinguals”.

First of all, as expected, L2 typological properties have impact on multilinguals’ description of motion in English, because target-like structures containing Manner verbs and Path satellites are frequent, especially with UP-events. However, the pattern ‘Manner-in-verbs & Path-in-other-devices’ is often idiosyncratic, ex. (2, 5). As expected, learners do not totally switch to the English systematic S-pattern in the expression of vertical motion: these descriptions display more variable types of information than those by English monolinguals. However, learners’ descriptions do not mirror L1 Russian typological patterns (especially, ACROSS- and DOWN-events). For instance, learners often express Path in the description of ACROSS-motion, ex. (2), which is totally unexpected because both groups of monolinguals massively conceptualize a single Manner-only pattern with this event type. Another example is that learners do not use Manner and ‘neutral’
verbs with native-like frequencies: for instance, the expression of downward motion in L2 is dominated by the pattern *go down* which is infrequent in English natives’ and totally absent from L1 Russian descriptions.

Furthermore, learners use bare verbs (=verbs without other devices) more often than natives, and not exclusively with downward and motion as it is the case in L1 Russian, ex. (8). When using other devices (with ACROSS), learners express very diverse types of information, among which are Path ex. (2), Manner alone, ex. (9, 10), Manner-with-Path, ex. (12), or *Localisation*, ex. (3). Overall, learners express *Localisation* more often than natives, ex. (3, 6, 7, 11), whereas Russian native speakers never do.13

(2) the boy fell down to the water and *swam crossing the river.*
(3) the boy is swimming *in the river* [to express CROSSING-motion]
(4) some boy is *crossing the river*
(5) the sportsman *running crossing the road.*
(6) the girl skating *on the lake.*
(7) the caterpillar climbing *on the grass*
(8) the girl is skiing
(9) the man is crossing the frozen river *slipping [=sliding on] it.*
(10) a girl is crossing the lake by [l/l] *on skates* or she is crossing the lake by *skating.*
(11) a man *running on the snow,* then he jumps *on the river,* *skiing on it* and then run *away on the other snowy shore.*
(12) a baby went *on his knees across the road*

8.2. Idiosyncratic forms

Results show that target-like forms are highly frequent in other devices (approximately 94% of all descriptions), 6% representing a wrong preposition choice, ex. (13, 14 [UP], 23 [ACROSS]). As for verbs, idiosyncratic forms are more frequent and variable. They include 1) idiosyncratic choice of lexemes, ex. (19-25); 2) idiosyncratic morphology, ex. (15, 18, 19, 22); 3) idiosyncratic absence of an auxiliary verb, ex. (25); 4) idiosyncratic combination of a verb with a COD ex. (16).

(13) squirrel runs, then *climb *up to the tree*
(14) a bear climbs *to the tree*
(15) sportman *rans across the road*
(16) the boy swam the river
(17) the mouse *put itself up into the tree*
(18) the caterpillar *put up on the stem*
(19) some boy *squeeze, *smooth no? *smooth on the ice from one side of river to another near the bridge

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13 Finally, we detected instances of code-switching used by advanced learners to ask for missing vocabulary ex. *[in Russian] how does one say “a train”?* This might be due to the learners’ awareness that the experimenter is multilingual and masters the same combination of languages as they do (Grosjean 1998).
(20) the boy is *slippering, no! *slip, the boy was trying to do some ice skating but it just *slippered, *slippering, he fell down, I think. Ah, yes he's done some *gliding yeh

(21) this wonderful mouse *put down on the floor

(22) a girl comes up to this lake, she *ski [for the description of skating]

(23) it is winter, so the boy *rides on his feet *to the ice and runs away

(24) I see a baby a little boy that is *crambling across the street

(25) a man [pause] swimming across the lake and goes away

(26) it's a lizard, it*'s *went up and it*'s *eats some piece of a leaf and went down

8.4. Tense
Unexpectedly, the learners give preference to the Present Continuous tense, rarely using the Present and Past tenses (present in L1). TOWARD-events are an exception: here the learners have preference for the target-like Present Tense.\(^\text{14}\)

6. Discussion
6.1. Lexicalization patterns
Results show two frequent non-target-like patterns in learners’ descriptions: 1) a V-pattern, ex. (4, 6, 7, 8-10); and 2) ‘go down/up’ pattern (which in monolingual English does not express Manner). As for the V-pattern, we could explain its emergence by several factors: for instance, the influence of L3 French.\(^\text{15}\)

Another explanation is the strategy of simplification. In order to explain this point, let us turn back to examples (19) and (20) which contain false starts and point to participants’ search for appropriate Manner verbs in the description of ACROSS-events. The verb cross used, for instance, in ex. (4) can serve as a means of simplification allowing bilinguals to avoid a sometimes difficult retrieval of linguistic units from a rich lexicon of English Manner verbs. Still another possibility is the specificity of the input that learners have or had in the classroom: the verb cross might be frequent in the locutions (Do not cross the street!) presented in textbooks. All the three explanations need validation in new experimental studies.

The specificity of classroom input might equally explain the emergence of the second pattern ‘go down/up’. Another explanation of such a pattern might be L1 influence: recall that in Russian there is no semantic equivalent to the neutral English verb to go. The Russian pair idti/xodit’ ‘walk\(^\text{DT/IDT}\)’ almost always denotes motion on foot\(^\text{16}\) and thus specifies Manner. The English verb go might be idiosyncratically perceived by learners as an equivalent of idti/xodit’. If this hypothesis is correct, then learners do massively express salient Manner of motion while using English but they conceptualize the English verb go in a non-

\(^\text{14}\) With all types of events, both monolinguals and learners sometimes used verbs with no inflection (10%), ex. (25). The code used for such cases is “Ambigous” (Figure 7 and 8).

\(^\text{15}\) All participants reported that their knowledge of English was largely superior to that of French.

\(^\text{16}\) However, Rakhilina (2007) showed that the verb idti can denote motion performed by buses and cars when their itinerary is known in advance.
native-like manner. Additionally, some learners produced idiosyncratic descriptions with the verb *walk*, which confirms that learners do not conceptualise the distinction between *go* and *walk* in a native-like way:

(27) a cat is *walking* up the pole, takes eggs of some bird and *walks* down the pole and *walks away*

In (27) *walk* allows for a two-fold interpretation: 1) either it is employed as a generic verb comparable to the verb *go* in its standard usage; or 2) the speaker is perfectly aware of the type of Manner it denotes but he overgeneralises Manner specification, typical of motion description along a horizontal plane in L1 Russian and extends it to the vertical plane while using L2 English.

L1 influence could also explain the idiosyncratic choice of verbs in ex. (17, 18). Their structure roughly corresponds to the morphological composition of the pair *za-brat’-sja/za-birat’-sja (na derevo) ‘take oneself on(to) the tree’*. For instance, in example (17) the learner uses the reflexive form ‘itself’ and the preposition *into* the latter arguably corresponding to the semantic content of the prefix *za-* (Janda 1986). Although the verb *put* produced by the learner does not directly correspond to the meaning of *brat’* ‘take’, both *put* and *take* are similar in that they share the component of CAUSE.

Another possible example of L1 interference/transfer might account for the difficulties that speakers experience in their search for appropriate Manner verbs in (19) and (20). In these examples both learners seem to search for an English equivalent of the Russian verb *skol’zit’* ‘slide’. At the same time, L2 English is equally activated because these L2 learners produce the lexemes *smooth*, *glide*, *slipper* which in some way, are phonological approximations of the target verb *slide*. The choice of the verb *slipper* is extremely interesting because its translation into Russian is a prefixed *pod-skol’z-nut’sja* which is derived from the Russian *skol’zit’* ‘slide’. *Skolzit’* is precisely the word whose English translational equivalent the learner were supposedly looking for. These examples suggest that when advanced learners fail to automatically retrieve appropriate linguistic L2 units, they turn to concepts and lexemes of their L1, without switching off their L2 English. In these cases (ex. 17,19,20), L1 and L2 seem to simultaneously compete and complement each other.

6.2. Tense

Results show that unexpectedly Russian monolinguals most frequently use a single tense without any switching. This might be due to the fact that the cartoons are very short, whereas tense-switching reported by Schmiedtova et al. (2012) might demand more elaborated plots. However, a non-negligible percentage (34%) of descriptions containing more than one sentence did contain switches. In Past->Present switches, which constituted 7% of such descriptions, the opposition between foreground and ground is easily traced: indeed, Russian native speakers provided relatively long descriptions in which they introduced new events through the Past perfective forms, whereas comments were encoded with the Present imperfective verbs.
However, in the remaining 27% of cases, the switches can not be explained by foreground/background distinction.17

The learners mostly use the Present Continuous Tense, which is neither L1- nor L2- native-like. It probably has to do with how the function of the Present Continuous tense are explained in the classroom: in theory, the Present Continuous denotes an on-going motion and, from this point of view, the use of such forms is justified. Moreover, the description of animated cartoons is a very specific task which the learners probably encountered for the first time. In this case there was only a very small chance that they had previously had access to appropriate authentic input.

7. Conclusion
To sum up, both L1 and L2 properties have impact on bilingual acquisition but the weight of the former (L1) seems to be limited. Thus, our data to some extent support the hypothesis that learners show a preference for a highly systematic English pattern for representing space. Except for the downward motion, the multilingual users most frequently produce similar (but not identical as revealed by qualitative analyses) lexicalization patterns as native speakers of English. In terms of typological variation between Russian and English, the analysis ‘verbs vs. other devices’ shows that 1) with DOWN-, UP-, ACROSS English shows a systematic S-pattern; 2) Russian, being less transparent, does not massively employ S-patterns with these events. With respect to L2 acquisition, despite the idiosyncrasies detected in the descriptions of advanced FL users, results overall show little L1->FL conceptual transfer. It is limited to the variability in other devices with ACROSS and for the choice of verbs in examples (17, 18, 20, 21). Note that the latter examples are infrequent and do not make significant changes to the learners’ general typological tendencies. However, many descriptions significantly deviate from the target-like patterns in unique ways: for instance, in terms of frequency and the semantic structuring of verbs. Additionally, when L2 users fail to retrieve appropriate L2 linguistic material, they turn to both L1 and L2 systems which results in idiosyncratic descriptions. Parameters and factors which interact with typological properties are 1) the influence of another FL having been or being acquired (French), 2) strategies of simplification generally applied by multilinguals studying different linguistic combinations; 3) the input received by learners; 4) the depth of analysis of motion conceptualization in English provided in the classroom.

![a) without boundary-crossing  b) with boundary-crossing](image1)

![a) vertical motion  b) crossing motion](image2)

17 For instance, the TOWARD-motion was introduced in the Present, but then the speaker switched to the Past perfective to introduce the other events constituting the plot. New research is needed to explain this phenomenon.
Figure 2. Situations described by zabirat’ja

Figure 1. Examples of stimuli

Figure 3. Distribution of semantic information among Russian monolingual speakers
a) verbs
b) other devices

Figure 4. Distribution of semantic information among English monolingual speakers
a) verbs
b) other devices

Figure 5. Tense-aspect switching in the descriptions by Russian monolinguals

Figure 6. Use of tenses by monolinguals
Figure 7. Distribution of semantic information among advanced learners of English

a) verbs
b) other devices

c) Learners of English

Figure 8. Use of tenses by learners

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Résumé

Ce papier examine l’impact des facteurs typologiques sur l’acquisition des langues étrangères en explorant l’hypothèse du transfert conceptuel L1>LE. En nous référant à la distinction de Talmy entre les langues à satellites et langues à cadrage verbal, nous comparons des corpus contenant les descriptions du mouvement volontaire effectué de Manières diverses et selon des axes vertical (DESCENDRE, MONTER) et horizontal (TRAVSERSER). Les descriptions étudiées sont produites par les apprenants de l’anglais LE et par les locuteurs natifs (russophones, anglophones). Nous nous focalisons d’abord sur la conceptualisation des buts du mouvement , puis sur les patrons typologiques (verbes vs. autre procédures) produits par les natifs et les apprenants, avec une attention particulière octroyée/accordée à l’expression du mouvement vertical par les natifs russophones ; et enfin, sur l’utilisation des temps grammaticaux. Les résultats montrent que les idiosyncrasies détectées dans les productions des apprenants sont rares ou absents à la fois de l’anglais L1 et du russe L1. Nous terminons par la discussion où nous faisons des hypothèses concernant des facteurs qui puissent interagir avec les contraintes typologiques dans ALE.