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Structural and conceptual equivalence in the acquisition and use of emotion words in a second language

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The purpose of the study presented here is to examine the importance of structural and conceptual (non-)equivalence in the acquisition and use of emotion words in a second language (L2). The use of these words is examined in a corpus of 206 narratives collected with two stimuli from first language (L1) speakers of Russian and English, and L2 learners of Russian and English. The results of the quantitative and qualitative analyses of lexical choices made by the participants show that in the case of structural non-equivalence L2 learners can shift patterns of structural selection in the mental lexicon. Thus, L2 learners of English pattern with L1 English speakers in favoring adjectival constructions in the same context where L1 and L2 Russian speakers favor verbs. Conceptual non-equivalence, on the other hand, was shown to complicate acquisition of emotion words and lead to negative transfer, lexical borrowing, and avoidance. Implications are offered for models of the bilingual mental lexicon and for L2 instruction.

Cross-linguistic studies show that emotion lexicons may differ in structural and conceptual organization. In terms of structure, they may differ in dominant patterns of emotion encoding: Dutch speakers, for instance, favor emotion nouns, English speakers adjectives, and Russian speakers verbs (Pavlenko, 2002a, 2005; Semin, Görts, Nandram, & Semin-Goossens, 2002). Emotion lexicons may also differ in conceptual organization, reflecting distinct cultural norms governing the domain of emotions in different societies. In some languages this domain may be more salient, differentiated, and codable than in others; as a result, some emotion words may have no translation equivalents in other languages, while others may have two or three partial equivalents (Panayiotou, 2006; Pavlenko, 2005; Schmidt-Atzert & Park, 1999; Stepanova Sachs & Coley, 2006; Wierzbicka, 1992, 1999).

What do these differences mean for the acquisition and use of emotion words in a second language (L2)? More specifically, what happens when the first language

(L1) favors emotion adjectives or nouns, while the L2 favors emotion verbs? How does acquisition proceed when the L1 and L2 words are only partial conceptual equivalents? And what if particular words do not have conceptual equivalents in the other language? All of these questions are undoubtedly relevant for L2 vocabulary acquisition in general, but in the present paper I will focus on one vocabulary subset and examine how structural and conceptual (non-)equivalence affect acquisition and use of L2 *emotion words*, that is words that directly refer to primary (or basic) and secondary emotions (e.g., anger, fear, joy, surprise) (Ekman, 1992; Ilyin, 2002; Russell, 1991).

Structural and conceptual equivalence in the bilingual mental lexicon

Studies of the bilingual lexicon suggest that L2 learners first link the L2 words to meanings via their L1 equivalents; with time, they also establish direct links between L2 words and conceptual categories (Kroll & Tokowicz, 2005). Several word characteristics were shown to affect the L2 vocabulary learning process, among them word frequency, concreteness, and cognate status (De Groot & Van Hell, 2005). Scholars also agree that translation equivalents do not necessarily fully share conceptual representations (De Groot, 1993, 2002). What has remained relatively unexplored until now is the relationship between the degree of translation equivalence and the linking and re-linking processes in the L2 vocabulary learning; little attention has also been paid to words that lack L1 translation equivalents (see however Pavlenko, in press).

The notion of *translation equivalence* commonly refers to the link between two or more words posited by dictionaries or glossaries. It is well established that these word pairs are not necessarily fully equivalent and that native speakers of respective languages may use them in distinct contexts and for different purposes (De Groot, 1993, 2002; for examples of non-equivalent emotion words, see Panayiotou, 2006; Stepanova Sachs & Coley, 2006). For the purposes of the present study, I will differentiate between two types of equivalence, structural and conceptual. In what follows, I will illustrate these relationships with examples from Russian-English and English-Russian dictionaries (Gal'perin, 1979; Smirnitsky, 1987; see also the Russian-English emotion vocabulary glossary in Pavlenko & Driagina, 2008). I will also point out what these similarities and differences mean for L2 learners.

Table 1 illustrates three relationships of structural (non-)equivalence. *Structural equivalence* is found in cases where two languages encode particular emotion words through the same morphosyntactic categories (e.g., noun/noun, transitive verb/transitive verb, adjective/adjective) and where the words in question share at least some lexico-syntactic frames (e.g., *I love him* and *Я люблю его/Я люблю его*).

Table 1. Structural equivalence in Russian and English emotion vocabulary

	English	Russian
Structural equivalence	<i>to love</i> (transitive verb) <i>joy</i> (noun) <i>proudly</i> (adverb)	<i>любить</i> (<i>lubit'</i>) (transitive verb) <i>радость</i> (<i>radost'</i>) (noun) <i>гордо</i> (<i>gordo</i>) (adverb)
Partial structural (non-) equivalence	<i>to fear</i> (transitive verb) <i>to worry</i> (ambitransitive verb) <i>sad</i> (adjective)	<i>бояться</i> (<i>boiat'sia</i>) (reflexive ambitransitive verb) <i>беспокоиться</i> (<i>bespokoit'sia</i>) (reflexive intransitive verb) <i>грустный</i> (<i>grustnyi</i>) (adjective) <i>печальный</i> (<i>pechal'nyi</i>) (adjective)
Structural non-equivalence	<i>to get upset</i> (change-of-state verb + pseudo-participle) <i>to be sad</i> (state verb + adjective) <i>to be ashamed</i> (state verb+ pseudo-participle)	<i>расстраиваться</i> (<i>rasstraivat'sia</i>) (reflexive intransitive verb) <i>грустить</i> (<i>grustit'</i>) (intransitive verb) <i>стыдно</i> (<i>stydno</i>) (adverb) <i>стыдиться</i> (<i>stydit'sia</i>) (reflexive ambitransitive verb)

Notably, full structural equivalence may oftentimes be impossible as languages often have unique semantic and syntactic specifications and combinatorial properties. Examples in this category show that Russian and English encode emotion terms in the same basic categories — nouns, adjectives, pseudo-participles, verbs, and adverbs — and that some of these words are linked to their structural counterparts in the other language.

The relationship of *partial structural (non-)equivalence* involves cases where the basic structural categories are the same (e.g., verb/verb) but differences exist (a) in the categories themselves (e.g., transitive/transitive reflexive) and/or (b) in their combinatorial properties or lexico-syntactic frames. For instance, in the example here, adjectives *grustnyi* and *pechal'nyi* differ from *sad* in their frames whereby Russian favors constructions such as *она грустная/она grustnaia* (literally: she sad) in contexts where English requires a copula verb (e.g., *she is/feels sad*).

Structural non-equivalence is found in cases where the structural categories encoding translation equivalents are distinct. Examples in Table 1 highlight the most common case of non-equivalence between Russian and English emotion words, namely the fact that English adjectival constructions combining state and change-of-state verbs with emotion adjectives or pseudo-participles oftentimes correspond to Russian emotion verbs or adverbial constructions. These differences stem from the actual lexical options offered by the two languages and from the patterns of lexical preference. In terms of options, Russian has a high number

of intransitive emotion verbs, such as *грустить* (*grustit'*) (to be experiencing sadness) or *радоваться* (*radovat'sia*) (to be experiencing joy, happiness [oneself]), whereas English has only a few, such as *to rejoice*, *to worry*, *to fume*, or *to grieve* (Wierzbicka, 1992). In terms of preferences, previous research showed that in recalls of the same films, Russian speakers favored emotion verbs, while English speakers favored adjectival constructions (Pavlenko, 2002a; Pavlenko & Driagina, 2007).

These lexicalization differences also have implications for conceptualization: adjectival constructions present emotions as states and verbs as actions and processes. Furthermore, in some contexts where English speakers use adjectival constructions, Russian speakers may use adverbial constructions with nouns or pronouns in the Dative Case and emotion adverbs, e.g., *Вале грустно* (Valya is sad; literally: [To] Valya [it is] sad) or *Ему страшно* (He is scared; literally: [To] him [it is] scary). These structural differences also lead to differences in meaning, this time between agentive constructions (e.g., *I am sad*) and impersonal constructions (e.g., *мне грустно*/[to] *me* [it is] *sad*).

Consequently, English speakers studying L2 Russian have to learn to use verbs and adverbial constructions in contexts where in English they would use adjectival constructions. They also have to acquire reflexive verbs that do not have exact structural counterparts in English. Russian learners of L2 English have to learn to use adjectival constructions in contexts where in Russian they would use verbs or adverbs. This means that, together with the new words, L2 learners need to acquire new lexico-syntactic frames that change the structure of sentences incorporating these words, and to shift from talking about emotions as states to talking about them as processes or vice versa.

Besides structural differences, L2 learners also face differences in the content and boundaries of conceptual categories linked to emotion words (i.e. linguistic categories), and, in some cases, in the number of concepts linked to a particular word (polysemy). In what follows, the discussion of conceptual equivalence is limited to prototypical word meanings, commonly established in studies that match emotion words with a range of scripts (e.g., Schmidt-Atzert & Park, 1999; Stepanova Sachs & Coley, 2006). The term *script* refers here to hierarchically structured scenarios involving roles and actions, which in turn can be decomposed into further scripts (Fillmore, 1977; Rumelhart, 1980).

Table 2 illustrates three relationships of conceptual (non-)equivalence. *Conceptual equivalence* is found in cases where translation equivalents refer to the same range of situations, as in *upset/расстроенный* (*rasstroennyi*) (Pavlenko, 2002a,b; Pavlenko & Driagina, 2007). It is likely, however, that if subtle differences in usage are considered, two words may never be in a relationship of full conceptual equivalence. *Partial conceptual (non-)equivalence* is found in cases where there is only

Table 2. Conceptual equivalence in Russian and English emotion vocabulary

	English	Russian
Conceptual equivalence	<i>upset</i>	<i>расстроенный (rasstroennyi)</i>
Partial conceptual (non-) equivalence	<i>jealousy</i>	<i>ревность (revnost')</i>
Conceptual non-equivalence	<i>frustration</i>	–
	–	<i>переживать (perezhivat')</i>

partial overlap between prototypical referents of the two translation equivalents. For instance, in the word pair *jealousy/ревность (revnost')*, the English-language category is broader and may include 'envy' scripts, while the Russian word refers exclusively to romantic and sibling relationships (Stepanova Sachs & Coley, 2006). *Conceptual non-equivalence* is found in cases where words do not have exact translation equivalents in the other language, such as the English *frustration*¹ or the Russian *переживать (perezhivat')* (to suffer things through, to worry, to take things hard, to experience something keenly) (Pavlenko, 2002a, b; Pavlenko & Driagina, 2007; Wierzbicka, 1999).

Pavlenko and Driagina (2007) considered both structural and conceptual equivalence in a study of acquisition of emotion vocabulary by American learners of L2 Russian. The results demonstrated that the learners internalized the Russian preference for emotion verbs over adjectives. At the same time, L1 structural preferences continued to influence lexical selection in the L2 as seen in the instances of transfer of the adjectival pattern from L1 English into L2 Russian. The study also pointed to the role of conceptual differences in acquisition and use of L2 vocabulary. Conceptual equivalence, as in the case of *upset/расстроенный (rasstroennyi)*, appeared to facilitate internalization of new vocabulary (positive transfer). Partial conceptual (non-)equivalence, as in the case of *angry/сердиться (serdit'sia)*, facilitated internalization but also led to the use of L2 words in accordance with L1-mediated conceptual categories (negative transfer). Finally, the lack of a conceptual equivalent appeared to complicate internalization and use of the verb *переживать (perezhivat')* (to suffer things through, to worry, to take things hard, to experience something keenly) (avoidance).

What remains unclear, however, is the relative importance or the interplay of the two factors. Is it easier to learn words that are close conceptually but expressed through different structural categories? Or would it be easier to learn ones that are expressed through the same structural categories but have somewhat different meanings? The purpose of the present study is to conduct a systematic comparison of L2 acquisition of translation equivalents with different degrees of structural and conceptual equivalence. The influence of these two factors will be examined in two populations of L2 learners, American L2 learners of Russian and Russian L2 learners of English. To investigate this issue, the study appeals to *contrastive corpus*

analysis, an approach where corpora comparable in size are elicited with the same stimuli from speakers of different languages similar in age, gender, and socioeducational background. In the study of second language acquisition, corpora are collected from L2 learners, as well as from native speakers of the target language, in order to uncover similarities and differences between them (Belz & Vyatkina, 2005; Granger, Hung, & Petch-Tyson, 2002; Pavlenko & Driagina, 2007). Corpora collected from monolingual speakers illuminate the range of language variation within the confines of a particular task. Corpora collected from L2 learners permit us to see how closely the learners approximate target language speakers in their lexical choice.

Method

Participants

The 206 narratives analyzed in the present study were collected from the following four groups of participants:

(1) *L1 English corpus*. L1 English narratives elicited by *Mr. Bean in the swimming pool* and by *The Letter* were collected from 30 native speakers of English (15 females, 15 males). These participants, aged between 18 and 22 (*Mean age* = 20.2 years, *SD* = 1.4), were undergraduate students at the Pennsylvania State University, and were interviewed in English by a Russian-English bilingual. According to their self-reports, they had only minimal knowledge of French, Spanish, or Latin.

(2) *L1 Russian corpus*. L1 Russian narratives elicited by *The Letter* were collected from 29 native speakers of Russian (21 females, 8 males). Narratives elicited by *Mr. Bean in the swimming pool* were collected from 19 of these participants (13 females, 6 males). The participants, aged between 18 and 21 (*Mean age* = 19.7 years, *SD* = 0.84), were undergraduate students at Tomsk State University in Russia, and were interviewed in Russian by a native speaker of Russian. According to their self-reports, they had only minimal knowledge of German, English, or French.

(3) *L2 English corpus*. 23 advanced Russian L2 learners of English participated in data collection but due to subject attrition only 15 participated in both tasks. Narratives elicited by *Mr. Bean in the swimming pool* were collected from 20 of these participants (10 females, 10 males). *The Letter* narratives were collected from 18 participants (8 females, 10 males). The participants, aged between 18 and 40 (*Mean age* = 25.7 years, *SD* = 5.7), were undergraduate and graduate students at the Pennsylvania State University, none were enrolled in English as a Second (ESL) language classes. Their age of arrival (AOA) in the US varied between the ages of

9 and 33 (*Mean AOA* = 21.4 years; *SD* = 5.8). The length of exposure (LOE) to English in the US varied between 1 and 10 years (*Mean LOE* = 4.2, *SD* = 2.7). Most of the participants had studied English in secondary and higher education establishments in Russia and other post-Soviet countries (e.g., Ukraine, Kazakhstan) between 3 and 19 years (*Mean* = 8.9 years; *SD* = 4.2) and came to the US as students. They were interviewed in English by a Russian-English bilingual.

(4) *L2 Russian corpus*. L2 Russian narratives elicited by *Mr. Bean in the swimming pool* and by *The Letter* were collected from 30 advanced American learners of Russian (15 females, 15 males). These participants, aged between 19 and 56 (*Mean age* = 26.9 years, *SD* = 9.2), were undergraduate and graduate students enrolled in the advanced-level Russian courses in the intensive immersion program at the Middlebury College Summer Russian School. Out of these, 19 participants (9 females, 10 males) were between the ages of 19 and 24 (*Mean age* = 22.2 years) and 11 participants (6 females, 5 males) between the ages of 28 and 56 (*Mean age* = 35.7 years). On a 7-point scale where 1 equaled *poor* and 7 *native-like*, they rated themselves as better at comprehension skills, i.e. reading (*M* = 4.9) and listening (*M* = 4.7), than in production skills, i.e. speaking (*M* = 4.3) and writing (*M* = 4.2). The participants were interviewed in Russian by a Russian-English bilingual.

Notably, no claims are made here about the comparability of the L2 learner groups. The two are distinct in terms of learning trajectories, residence in the target language country, orientation toward the target language, and resulting levels of proficiency. American L2 learners of Russian were still in the process of studying Russian and only a few of them have visited Russia. In contrast, Russian L2 learners of English were living and studying in the United States with English as a medium of instruction and communication. To reflect these differences, the first group was labeled 'L2 learners' and the second group 'L2 users'. They will not be directly compared to each other — the only comparisons will be made to respective target language speakers.

Materials

Two short films with a sound-track but no verbal exchanges were used as elicitation stimuli. The first film, *Mr. Bean in the swimming pool*, is a short segment from a popular British TV series about a comical character, Mr. Bean. In this segment, Mr. Bean arrives at a swimming pool, tries to climb on a children's slide, and is chased by the lifeguard from the children's section. Then he moves to the adult section and notices a diving board. He decides to jump from it, but when he reaches the top and looks down he becomes visibly scared and changes his mind. Yet he cannot go back the way he came because two boys behind him are waiting for

their turn. Eventually, as Mr. Bean is hanging off the diving board still reluctant to jump, one of the boys stomps on his hand and Mr. Bean falls into the swimming pool. In the process he loses his swimming trunks and decides to stay in the pool until everyone leaves. Then he climbs out naked and is spotted by a girls' swimming team.

The results of analysis of recalls of *Mr. Bean* will then be compared to those from an earlier study (Pavlenko & Driagina, 2007) that used a stimulus specifically created by this researcher for the study of emotion vocabulary. In this 3-minute film, entitled *The Letter*, a young woman comes home, gets her mail, opens a letter, reads it, and becomes visibly upset. Her roommate comes in, tries to talk to her unsuccessfully, sees the letter, and begins reading it without permission. The first woman notices that the roommate is reading the letter, grabs the letter, and leaves the room. The focus of analysis in the study was on lexical choices in the complicating action sequence, that is, on descriptions of the main character's emotions upon receiving the letter. In addition to the data analyzed in Pavlenko and Driagina (2007), the present study also includes a corpus of narratives elicited with the use of *The Letter* from Russian L2 users of English.

Design and procedure

Each participant performed the recall task individually, one film at a time. All the recalls were tape-recorded and then transcribed in the language of the original. Oral, rather than written data, were elicited, because oral narratives are more representative of spontaneous speech. As a method that combines aspects of experimental and ethnographic approaches to the study of language use, narrative elicitation enjoys the advantages of both and the disadvantages stemming from their incompatibility. Like ethnographic data, elicited narratives allow researchers to study spontaneous lexical choices in context. At the same time, the controlled nature of the visual stimuli limits the scope of the data to third person descriptions. Like experimental data, elicited narratives involve a measure of control: All participants describe the same stimulus, consequently, their lexical choices can be meaningfully compared across groups. At the same time, the narrative nature of the task allows for individual variation. As a result, participants do not always produce the same number of words or even the same words, creating challenges for data interpretation.

Data analysis

All narratives were coded in terms of Labovian narrative structure (Labov & Waletzky, 1967). The analysis, however, differed from Labov's inclusive approach

and focused exclusively on words that directly refer to primary and secondary emotions (Ekman, 1992; Ilyin, 2002; Russell, 1991). These words were identified in the narratives by two independent researchers, bilingual in Russian and English. The researchers reached 100% agreement in terms of what words fit the definition of emotion words above. In a few cases this agreement required context-sensitive coding, as, for example, in the case of evaluative adverbs *плохо* (*plokho*, badly) and *тяжело* (*tiazhelo*; heavily) or emotion-related verbs *to sob* and *to cry*, all of which were used to depict the character being upset. Appendices A–D provide lists of emotion words collected from each group.

Throughout the analysis, *lemmas* (units of meaning or words) were distinguished from *tokens* (lexical items or lexemes). The quantitative analysis compared the distribution of emotion word tokens across morphosyntactic categories (nouns, adjectives, verbs, adverbs) in respective participant groups (L1 English, L1 Russian, L2 English, L2 Russian) in two tasks, *Mr. Bean* and *The Letter*.

Next, participants' lexical choices were analyzed qualitatively, as is common in cross-linguistic studies of lexical choice in narratives (e.g., Berman, 1999; Downing, 1980; Kaufman, 2001). The analysis focused on emotion lemmas that occurred most frequently and considered similarities and differences in lexical choice between target language speakers and L2 learners/users. Instances where L2 learners systematically selected the same emotion words as native speakers of the target language in the same narrative sequence were seen as evidence of successful acquisition of these lexical items. Instances of negative L1 transfer, structural and semantic errors, and avoidance of previously studied lexical items were taken as evidence of acquisition difficulties.

Results

In an initial analysis, the data were examined through planned comparisons to determine if there were any systematic differences that might compromise interpretations emerging from later analyses. For this purpose a series of t-tests were conducted (an analysis of variance was not possible because sometimes one level of a given factor involved a between group comparison while the other level involved a within group comparison). Table 3 summarizes the main characteristics of the corpora elicited by the two stimuli in terms of narrative length and the number of emotion word tokens. Narrative length appears to be somewhat affected by the task and language group. In terms of task, the *Mr. Bean* segment elicited almost twice as much output as *The Letter*. In terms of language group, significant differences were found between L1 English and L1 Russian speakers in *The Letter* corpus, $t(50.9) = 4.31$, $p < .001$, equal variances not assumed), with L1

Table 3. Word characteristics of the corpora

Language Task	L1 English		L1 Russian		L2 English		L2 Russian	
	Bean	Letter	Bean	Letter	Bean	Letter	Bean	Letter
N	30	30	19	29	20	18	30	30
Mean (and SD) of number of words per narrative	317.2 (149.49)	176.9 (64.86)	380.9 (145.36)	115.1 (43.56)	425.4 (185.97)	204.1 (95.40)	419.6 (149.18)	223.3 (91.02)
Mean (and SD) of number of emotion tokens per narrative	2.33 (1.37)	4.90 (1.73)	4.10 (1.91)	4.10 (1.80)	4.55 (2.95)	4.83 (1.82)	3.93 (2.38)	5.30 (2.69)

English speakers producing longer narratives than L1 Russian speakers ($M = 176.9$ vs. $M = 115.1$ words). In the *Mr. Bean* corpus it was L1 Russian speakers who produced somewhat longer narratives ($M = 379.8$ vs. $M = 317.2$ words) but the difference between the two corpora was not statistically significant, $t(47) = -1.47$, n.s.. Narratives in the L2 English and L2 Russian corpora were longer than those in the respective L1 corpora: the differences were statistically significant in the *Mr. Bean* corpus for L2 English, $t(48) = -2.27$, $p < .03$, and in *The Letter* corpus for L2 Russian $t(41.9) = -5.86$, $p < .001$. This increased length may be explained by the need to paraphrase and circumlocute to address lexical gaps. It is also possible that some L2 learners and users suspected that the quality of their verbal performance would be subject to judgment and tried to impress the researcher by producing more detailed narratives.

Importantly, increased narrative length did not result in increases in the mean number of emotion word tokens per narrative. As seen in Table 3, mean numbers of tokens vary between 3.9 and 5.3, that is, there were approximately 4–5 emotion words per narrative, with the exception of the L1 English *Mr. Bean* corpus where $M = 2.3$.

Together, these results suggest that the corpora are comparable and that the characters' emotions were described with a similar number of words across tasks and participants. The preliminary planned comparisons did not reveal any systematic patterns that could compromise the interpretations of the results provided below.

Structural equivalence

To analyze the distribution of morphosyntactic categories in the emotion word corpora, the data were collapsed across the two tasks (see, however, Figures 1 and 2 illustrating the results by task) and submitted to non-parametric Mann-Whitney U tests of significance between independent groups, and, where the cases were insufficient, to Chi Square tests. Non-parametric tests were used in these analyses

because individuals' frequency counts in the morphosyntactic categories ranged unevenly from 0 to 9 with many empty cells or counts of 1 and 2. Overall, median proportions provided more meaningful data than did mean proportions. The analysis revealed systematic differences between L1 and L2 speakers of English, on the one hand, and L1 and L2 speakers of Russian, on the other, in the distribution of adjectives, verbs, and adverbs (but not nouns).

Differences in the proportion of adjectives in the emotion corpora were found between L1 English (Mdn = .75) and L1 Russian (Mdn = .20) speakers ($U = 1.000$, $p < .01$, $r = -.47$), as well as between L2 English (Mdn = .83) and L2 Russian (Mdn = .20) (Chi Square (1) = 9.45, $p = .002$), with L1 and L2 English speakers using significantly more adjectives than L1 and L2 Russian speakers. No difference in the proportion of adjectives was found between L1 Russian (Mdn = .20) and L2 Russian (Mdn = .20) speakers, nor between L1 English (Mdn = .75) and L2 English (Mdn = .83) speakers.

Differences in the proportion of verbs in the emotion word corpora were found between L1 English (Mdn = .13) and L1 Russian (Mdn = .53) speakers ($U = 5.00$, $p < .02$, $r = -.58$), and between L2 English (Mdn = .07) and L2 Russian (Mdn = .50) (Chi Square (1) = 16.78, $p < .001$), with L1 and L2 Russian speakers using significantly more verbs than L1 and L2 English speakers. On the other hand, no difference in the proportion of verbs was found between L1 Russian (Mdn = .53) and L2 Russian speakers (Mdn = .50), nor between L1 English (Mdn = .13) and L2 English (Mdn = .07) speakers.

Differences in the proportion of adverbs were found between the L2 Russian corpus (Mdn = .19) and L1 English (Mdn = .004) (Chi Square = 26.45, $p < .001$) and L2 English (Mdn = .01) (Chi Square = 21.14, $p < .001$) corpora. No differences were found between L1 Russian (Mdn = .11) and L2 Russian (Mdn = .19) corpora.

Figures 1 and 2 illustrate these results by task. We can see that, in both sets of narratives, L1 and L2 English speakers favored emotion adjectives, while L1 and L2 Russian speakers favored emotion verbs. In addition, in *Mr. Bean* narratives, L1 and L2 speakers of Russian also used emotion adverbs, while L1 and L2 speakers of English did not use any adverbs. In *The Letter* corpus, L2 users of Russian over-used adverbs compared to all of the other groups, including L1 Russian speakers. This preference for adverbs is best explained through classroom instruction that overstresses predicate adverbs (see also Pavlenko & Driagina, 2007, for the discussion of *The Letter* corpus).

These results suggest that in the case of structural non-equivalence, advanced L2 learners and users can shift structural patterns of lexical selection in the mental lexicon patterning with speakers of the target language, rather than the L1. Now let us consider how their lexical choices compared to those of target language speakers in terms of conceptual (non-)equivalence. These choices will be considered in

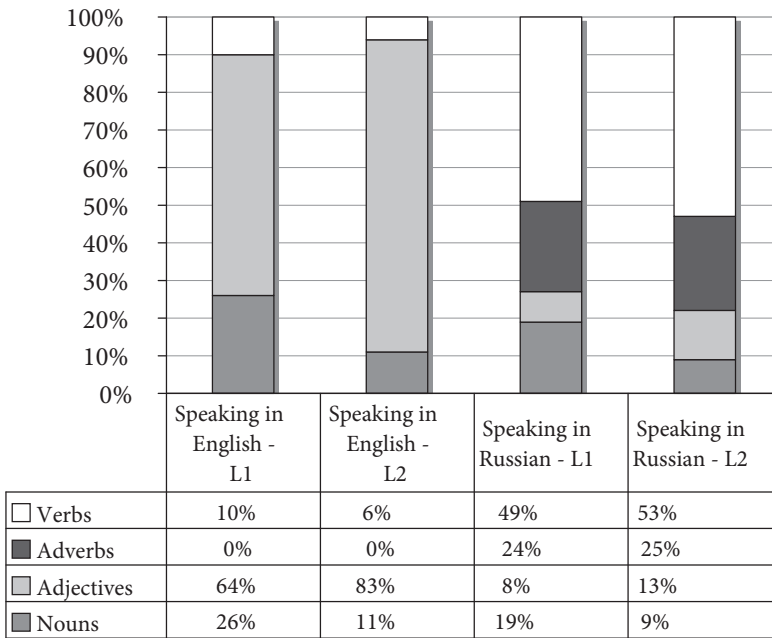


Figure 1. Proportion of emotion-word use across morphosyntactic categories in the *Mr. Bean* narratives as a function of language spoken

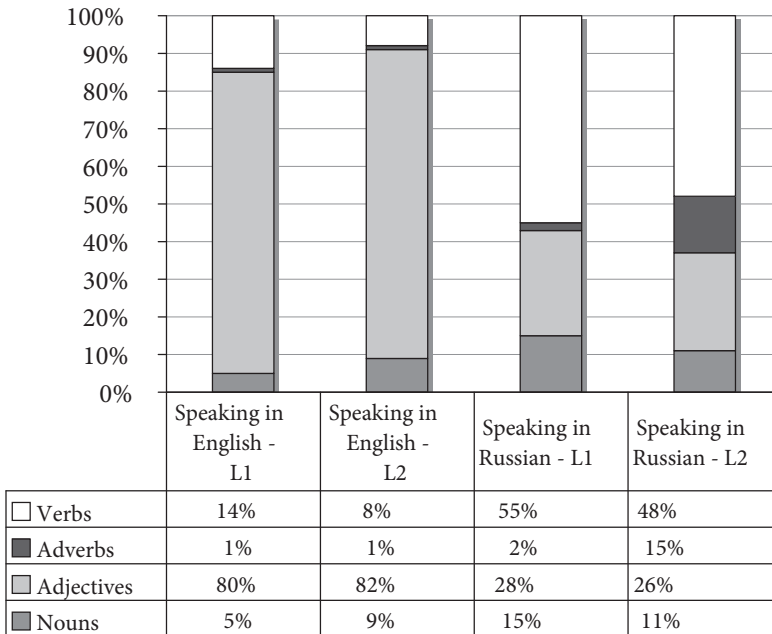


Figure 2. Proportion of emotion-word use across morphosyntactic categories in *The Letter* narratives as a function of language spoken

the context of three sequences in *Mr. Bean* narratives — orientation, complicating action sequence, and a coda — where most emotion words were located (for full lists of emotion words in the narratives see Appendices A–D).

Conceptual equivalence

Joy. The function of the orientation sequence in a narrative is to introduce the time and place of action and the main characters. In the present corpus, some orientation sequences contained references to Mr. Bean experiencing or anticipating enjoyment in the swimming pool. In what follows are four representative orientation sequences from the respective corpora, with emotion words underlined:

- (1) And first he spotted these slides that were for kids. And he thought that it would be fun to go onto the slide. (L1 English corpus)

Uhh so Mr. Bean arrives at the pool and he changes into his swimming shorts and he sees these little kids sl/sliding down these elephant-shaped slides. So he decides that it looks really fun and goes over and tries to go down the slides. (L2 English corpus)

Действие начина/действие происходит в бассейне. Главный герой пришел просто искупаться в бассейн. И заходит, и увидел две маленькие горочки в виде слоников. Увидел, что катаются на них мальчики, и радостный, как ребенок, побежал, туда за/залез. (L1 Russian corpus)

(The action begin/the action takes place in a swimming pool. The main character just came to swim in the pool. So [he] comes in, and saw two small slides shaped like little elephants. [He] saw boys sliding down, and joyful, like a child, ran there and climbed on.)

... потом он думал А! Да! Я думаю, что я хочу на эти горки, потому что думаю, что будет весело, и так что он постаралась влезть/влезть горки. (L2 Russian corpus)

(...then he thought Aha! Yes! I think I want [to go] to these slides, because I think it will be joyful and so he tried to climb/climb [on] these slides.)

In L1 English narratives 7 participants used the word *fun* (10 tokens) in this sequence, stating that Mr. Bean was looking forward *to have fun* (4 tokens), that things in the pool *looked like fun* (4 tokens), and that *it was* (or *would be*) *fun* (2 tokens). L1 Russian narratives contained only one reference to joy or enjoyment, an adjective *радостный* (*radostnyi*) (joyous, joyful).

The nominalized concept of *fun* does not have a full structural or conceptual equivalent in Russian. Its dictionary equivalents, nouns *веселье/vesel'e* (merriment,

gaiety) and *развлечение/razvlechenie* (entertainment, amusement) (Gal'perin, 1979), are rarely used in the same context as *fun*. Instead, Russian speakers use related verbs, adjectives, or the predicate adverb *весело/veselo* (merrily, gaily), commonly linked to *fun* in Russian-language textbooks (e.g., Nakhimovsky & Leed, 1987, p. 207; Rosengrant & Lifschitz, 1996, p. 86). Notably, due to their structural non-equivalence, *fun* and *veselo* appear in different lexico-syntactic frames: *fun*, for instance, often appears in agentive constructions, such as *I am having fun*, while *veselo* appears in dative constructions, such as *mne veselo* ([literally: It is joyful to me]), that refer to states people experience regardless of their will. As a result, the two serve to express somewhat different meanings. Furthermore, none of the equivalents above can be used to translate expressions where *fun* refers to the potential of particular events or phenomena to elicit joy, as in *linguistics is fun*, or *this party will be fun*. Given that Mr. Bean was not yet engaged in a merry activity, it is not surprising then that L1 Russian speakers did not for the most part refer to joy in the context where L1 English speakers referred to *fun*.

In the L2 English corpus, on the other hand, four participants mentioned that things *looked fun* (2 tokens) or that Mr. Bean *anticipated fun* (1 token) or was going *to have fun* (3 tokens). These instances suggest that some Russian L2 users of English select the term *fun* in the same context as native speakers of English, and use it in the same way, to refer to the potential of particular activities to elicit joy.

American L2 learners of Russian, in the same sequence, used the verbs *радоваться/radovat'sia* (to experience joy) (1 token) and *обрадовать/obradovat'* (to make someone happy, joyful) (1 token). They also produced 5 tokens of the adverb *veselo*, including instances such as *будет (очень) весело* [[it] will be (very) joyfully] (2 tokens) and *что-то весело происходит там* [something joyfully [is] going on there] (1 token). Structurally and conceptually, these utterances are direct translations of the English phrases *it will be fun* and *something fun is going on*. In Russian, the latter utterance violates not only semantic but also morpho-syntactic constraints, which require an adjective (e.g., *veseloe*) and not an adverb as a modifier of *что-то* (something). Consequently, these instances constitute a case of L1 transfer facilitated by the link made between *fun* and *veselo* in Russian-language textbooks.

Fear. The function of the complicating action sequence in a narrative is to introduce the challenges encountered by the characters. In the present narrative the challenge involves a diving board that is too high for Mr. Bean to jump from. In what follows are four representative sequences from the respective corpora, with emotion words underlined:

- (2) ...he went all the way up and there when he looked overboard he saw that/
how far he was, he got really scared, and braced himself against the side. And

as he was gonna come off the diving board these two kids came up and he didn't wanna think that he was inferior and scared to jump off the high dive. So uh... he looked over the edge and he got even more scared... (L1 English corpus)

But then suddenly he saw teenagers who went/went to the same diving board /board and he decided, well, they are so brave/he was/was thinking they are so brave and he didn't want to show them how afraid he was so he kind of pretended that he would jump. But he was very scared. It's kind of make him very funny the way he jumped from that. First he wanted to jump as... ordinary/as any divers would do but uhm... I guess he was so frightened that he couldn't do it. (L2 English corpus)

И подходит к краю вышки, и видит, что вода очень далеко, и он очень пугается. Хватается за поручни трамплина. Ему страшно. Он дрожит, пытается по-пластунски отлезть назад... на вышку поднимаются дети, и так, с ухмылкой, смотрят на него, смеются над ним. Он, чтобы не попасть впросак, пытается отойти к краю, опять пугается. (L1 Russian corpus)

(He comes over to the edge of the diving board, and sees that the water is very far away, and he gets scared [verb]. He grabs the diving board rails. He is afraid [literally: it is scary (adverb) to him]. He trembles, tries to crawl back...[some] kids climb up the diving board, and look at him with a grin, laugh at him. Not to look stupid, he tries to go back to the edge, and gets scared again [verb].)

...он подошел, и потом, когда он там стоял и смотрел вниз ему был страшно и он очень сильно боялся, и он просто долго долго готовился, готовил себя, чтобы прыгнуть, но не смог... (L2 Russian corpus)

(...he came over, and then when he was standing there and looking down, it was scary to him, he feared a lot, and he simply prepared, prepared himself for a very very long time, to jump, but he couldn't...)

In the L1 English corpus, in this sequence, 17 speakers used adjectival constructions with the verbs *to be* or *to get* and the adjective *scared* (30 tokens). The verb *to get* signaled a sudden change of state, while the verb *to be* referred to an ongoing state. The remaining 23 emotion word tokens in this sequence included emotion adjectives or pseudo-participles, such as *afraid*, *frightened*, or *terrified*, nouns, such as *fear* or *panic*, and verbs, such as *to freak out* or *to panic* (see also Appendix A Table A1). In the L1 Russian corpus, speakers favored reflexive emotion verbs (*испугаться/испугаться* (to get scared; 17 tokens, 13 speakers) and *бояться/бояться* (to fear, to experience fear; 8 tokens, 5 speakers) and an emotion adverb *страшно/strashno* (afraid; 8 tokens, 8 speakers). In this corpus, the differ-

ence between change of state and ongoing state was signalled by different lemmas. *Ispugat'sia* is a perfective verb that refers to completed action or a change in state, while the imperfective verb *boiat'sia* and the adverb *strashno* refer to an on-going state or process.

L2 Russian learners' lexical selections paralleled those of L1 Russian speakers, they also selected the verbs (*is*)*pugat'sia* (17 tokens, 11 speakers) and *boiat'sia* (33 tokens, 15 speakers) and the adverb *strashno* (11 tokens, 9 speakers). L2 English users similarly approximated L1 English speakers' dominant choice, using adjectival constructions with the verbs *to be*, *to become*, *to get* and *to look* and the adjective *scared* (14 tokens, 12 speakers). They also favored the adjectival construction *to be afraid* (21 tokens, 10 speakers). The remaining lexical choices were distributed among a variety of emotion adjectives, verbs, and nouns (see Appendix C Table C1).

Thus, we can see that both advanced L2 learners and L2 users have internalized new structural patterns of lexical selection of emotion vocabulary. Some L2 speakers have also approximated target language speakers in specific lexical choices. At the same time, Russian L2 users of English mirrored L1 speakers of Russian in favoring two different lemmas, *scared* and *afraid*, in the context where L1 English speakers used *scared*. This discrepancy suggests that some Russian L2 users of English may still signal the difference between the change of state and an ongoing process through different lemmas, as they would in Russian, rather than through state and change-of-state verbs.

Shame/embarrassment. The function of the narrative coda is to conclude the narrative. In this sequence, some narrators referred to Mr. Bean's embarrassment at being surprised naked. References to shame/embarrassment were also made in the complicating action sequence describing Mr. Bean's fear of heights. In what follows are representative sequences from the respective corpora, with emotion words underlined. The first set of examples comes from the complicating action sequence, and the second from the coda:

- (3) And he was embarrassed not to jump off so he slowly made his way to the edge and decided to hang off the high dive with his hands. (L1 English corpus)

He couldn't go back because small boys uhm... came there and obviously he was ashamed just to turn back. (L2 English corpus, participant RBM3)

Ему становится стыдно, что он не сможет прыгнуть. (L1 Russian corpus)
(He became ashamed that he wouldn't be able to jump.)

Это было ужасно потому что потом... господину Бину было очень стыдно не/не спрыгнуть... (L2 Russian corpus)

(It was terrible, because then... it was very shameful for Mr. Bean not to/not to jump....)

- (4) Then when he tries to get out, he thinks everyone is gone, a group of young girls comes in and sees him naked and he I think he gets a little embarrassed and drives away and probably doesn't go back. (L1 English corpus)

And he couldn't go because there were women and obviously he would be embarrassed. (L2 English corpus, participant RBM3)

Девушки были страс/страшно смущены. Они закричали, разбежались в разные стороны. Ну а дальше фильм почему-то прервался. (L1 Russian corpus)

(The girls were ter/terribly embarrassed. They screamed, ran away. And then the movie stopped for some reason.)

Ну все покинули бассейн, кроме него, конечно, он стесняется перед спасатели... (L2 Russian corpus)

(Well, everyone left the swimming pool, except for him, of course, he is embarrassed of the life guards...)

L1 English narrators did not pay much attention to the feelings of embarrassment in their narratives; only 4 tokens of *embarrassed* and *embarrassing* appeared in the two narrative sequences. L1 Russian narrators made a few more references and displayed some differentiation between the scenes. In the complicating action sequence they used adverbs *стыдно/styдно* (ashamed) (5 tokens) and *неловко/nelovko* (uncomfortable) (1 token). In the coda sequence, they used the verb *стесняться/stesniat'sia* (to be embarrassed) (2 tokens) and a participle *смущены/smushcheny* (embarrassed/confused) (1 token). The latter lemma, as seen in the example above, was used in reference to the young women who spotted Mr. Bean without his swimming trunks.

These differentiated choices reflect the organization of the domain of shame in Russian. Predicate adverbs *стыдно* (shameful, ashamed) and *неловко* or *неудобно* (uncomfortable) most commonly refer to feelings that arise from actions — or inactions — that violate particular ethical norms, regardless of whether these violations were witnessed by others (Ilyin, 2002; Shmelyov, 2002; Zalizniak, Levontina, & Shmelyov, 2005). The verbs *stesniat'sia* (to feel embarrassed/shy) and *smushchat'sia* (to feel embarrassed/confused), on the other hand, are relational verbs referring to feelings of shyness, discomfort, and unease that arise in social situations and may be caused by the presence of strangers, in particular those of the other gender (Ilyin, 2002; Pavlenko, 2003). Consequently, lexical choices made by L1 Russian

speakers underscore the somewhat different nature of respective transgressions and the feelings they caused. In the first case, Mr. Bean is too scared to jump and his shame of his own deficiencies may be independent of the fact that the two boys witness his fear (as seen in the utterance *Ему становится стыдно, что он не сможет прыгнуть* [He became ashamed that he wouldn't be able jump]). In the second case, his feeling of embarrassment is caused by the unexpected appearance of a group of women who witnessed his nudity. The fact that the feeling is mutual is underscored by the reference to embarrassment experienced by the young women (*Девушки были страс/страшно смущены* [The girls were ter/terribly embarrassed] (example 4)).

The distinction between the two situations was also made by some L2 English users. In the complicating action sequence, they used pseudo-participles *ashamed* (3 tokens) and *embarrassed* (2 tokens), and an adjective *uncomfortable* (2 tokens). In the coda sequence, they used *embarrassed* (9 tokens) and *embarrassing* (1 token), and a prepositional construction *in shame* (1 token). A clear example of the differentiation between the two situations comes from the narrative of one male participant, RBM3, cited above, who used *ashamed* in the first sequence and *embarrassed* in the second. American L2 learners of Russian favored the adverb *стыдно* (ashamed) across contexts (4 tokens in the complicating action sequence, 7 tokens in the coda). Two speakers, however, used the verb *stesniat'sia* (to feel shy/embarrassed) in the coda sequence (3 tokens), showing the internalization of distinctions made in Russian.

We can see then that some Russian speakers, both in L1 and in L2, differentiate between feelings experienced by the main character in two different situations, while English-speaking narrators either do not refer to them at all or do not differentiate between them (with the exception of two American L2 learners of Russian). Clearly, the low numbers of word tokens preclude any hasty conclusions in this area. Yet differences between Russian and English speakers displayed both in the L1 and the L2 warrant further inquiry into conceptual distinctions made in the domain of shame. This is particularly important given that previous research identified shame/embarrassment/guilt as an area where cross-linguistic differences in conceptualization and lexicalization are particularly apparent (Panayiotou, 2006; Tangney & Fischer, 1995; see also Vaid, Choi, Chen, & Friedman, in press).

Discussion

Let us now examine the meaning of these results for the processes of L2 vocabulary learning and linking and re-linking in the mental lexicon. Table 4 lists the key emotion words used in the *Mr. Bean* and *The Letter* corpora. It appears that

the differential performance on these word pairs cannot be easily explained in terms of word characteristics outlined by De Groot and Van Hell (2005). None of the word pairs involve cognates; all are emotion words and thus similar in concreteness and distinct from abstract and concrete words (Altarriba, 2006); and all have relatively high frequencies in the respective languages (Bradley & Lang, 1999; Sharoff, 2001).² To examine the effects of structural and conceptual equivalence on their learning, these words are grouped in terms of four possible relationships. Notably, these relationships represent the relations between the words of two languages but not necessarily ways in which words are linked to each other in individual bilingual lexicons.

The first relationship involves conceptual and structural equivalence and is exemplified by the word pair *upset/rasstroennyi*. As already acknowledged earlier, full equivalence may be an impossibility, since translation equivalents may still differ in some lexico-syntactic frames and contextual uses. Nevertheless, the two words in question belong to the same morphosyntactic category and appear to share a similar range of conceptual referents, namely situations where the agent is negatively affected by a particular turn of events. These words are also commonly linked in Russian-language textbooks (e.g., Kagan & Miller, 1996, pp. 51–52, 164). It is not surprising then that they present no acquisitional difficulties. The analysis of *The Letter* narratives shows that both American L2 learners of Russian and Russian L2 users of English use these emotion adjectives in ways similar to target language speakers (Pavlenko & Driagina, 2007).

The second relationship involves structural non-equivalence in the presence of (possibly partial) conceptual equivalence. Conceptually, the words in question refer to a similar range of scripts, namely situations where the agent is negatively affected by a particular turn of events (*to get upset/rasstraivat'sia*) or is experiencing an emotion of fear (*to get scared, to be afraid/ispugat'sia, boiat'sia, strashno*). Structural non-equivalence stems here from the preference for adjectival constructions in English and for verbs and adverbial constructions in Russian. The findings of the study show that these structural differences do not complicate acquisition of full or partial conceptual equivalents. In *Mr. Bean* narratives, for instance, both L1 and L2 Russian speakers used the words *boiat'sia, (is)pugat'sia, and strashno* in the same narrative sequence where L1 and L2 English speakers used adjectival constructions with *scared* and *afraid*.

These patterns of lexical selection suggest that conceptual equivalence facilitates L2 acquisition of structural non-equivalents. Some Russian L2 users of English, however, displayed L1 influence in their attempts to differentiate between change of state/completed action and an ongoing process through lexical choice rather than through the choice of a supporting verb. Similarly, when talking about a character that appeared upset some American L2 learners of Russian continued

Table 4. Structural and conceptual equivalence in Russian and English emotion vocabulary

	English	Russian
(1) Structural and conceptual equivalence	<i>upset</i> (adjective or pseudo-participle)	<i>расстроенный, -ая</i> (<i>rasstroennyi, -aia</i>) (adjective)
(2) Structural non-equivalence/ conceptual equivalence	<i>to get upset</i> (change-of-state verb + pseudo-participle)	<i>расстраиваться</i> (<i>rasstraivat'sia</i>) (reflexive intransitive verb)
	<i>to get scared</i> (change-of-state verb + pseudo-participle)	<i>испугаться</i> (<i>ispugat'sia</i>) (reflexive intransitive verb)
	<i>to be afraid</i> (state verb + adjective)	<i>страшно</i> (<i>strashno</i>) (pronoun + adverb) <i>бояться</i> (<i>boiat'sia</i>) (reflexive ambitransitive verb)
(3) Structural non-equivalence/ partial conceptual equivalence	<i>to be angry</i> (state verb + adjective)	<i>сердиться</i> (<i>serdit'sia</i>) (reflexive intransitive verb) <i>злиться</i> (<i>zlit'sia</i>) (reflexive intransitive verb)
	<i>to be ashamed</i> (state verb + adjective)	<i>стыдно</i> (<i>stydno</i>) (pronoun + adverb)
	<i>to be embarrassed</i> (state verb + adjective)	<i>стесняться</i> (<i>stesniat'sia</i>) (reflexive intransitive verb)
	<i>fun</i> (noun)	<i>весело</i> (<i>veselo</i>) (adverb)
(4) Conceptual non-equivalence	<i>frustration</i> (noun)	<i>переживать</i> (<i>perezhivat'</i>) (to suffer things through, to worry, to take things hard, to experience something keenly) (intransitive verb)

to transfer the adjectival pattern from L1 English into L2 Russian (Pavlenko & Driagina, 2007).

Structural non-equivalence is also involved in the third set of examples, which involves partial conceptual equivalence. The English adjective *angry* roughly corresponds to two Russian verbs, *serdit'sia* and *zlit'sia*. Both refer to the process of experiencing anger, but differ in causal antecedents: in the case of *serdit'sia* the anger is caused by and directed toward another person or people, while in the case of *zlit'sia* it may have abstract causes. Russian-language textbooks commonly link *angry* and *serdityi/serdit'sia* (Kagan & Miller, 1996, pp. 270, 335; Nakhimovsky & Leed, 1987, pp. 2, 242, 244) which is why American L2 learners of Russian perceive the two as complete translation equivalents. Consequently, in *The Letter* narratives the L2 learners used 24 tokens of *serditaia* (angry, cross) or *serdit'sia* while L1 speakers of Russian did not use this word even once (Pavlenko & Driagina, 2007).

As discussed earlier, an even more complex relationship exists between the English pseudo-participles *ashamed* and *embarrassed* and their Russian translation equivalents *styдно*, *stesniat'sia*, and *smushchat'sia*. As a consequence, L1 English speakers used *embarrassed* to describe the character's feelings in two distinct situations, while some L1 Russian speakers differentiated between the two, using *styдно* in one and *stesniat'sia* and *smushchat'sia* in the other. This differentiation was also seen in some narratives of Russian L2 users of English who favored *ashamed* as an equivalent of *styдно* and *embarrassed* as an equivalent of *stesniat'sia* and *smushchat'sia*. Only two L2 learners of Russian appear to have internalized this differentiation — they used the verb *stesniat'sia* in the same context as L1 Russian speakers. This lack of knowledge about the domain of shame is not surprising: among the texts surveyed by Pavlenko and Driagina (2008), *stesniat'sia* appeared in only one textbook, by Lekič, Kirsh, and Nikitina (1994). Textbook presentation was also linked to ways in which American L2 learners of Russian connected the noun *fun* to the Russian adverb *veselo* producing instances of semantic and morphosyntactic transfer. Some Russian L2 users of English, on the other hand, appeared to have internalized the notion of *fun*.

These patterns of L2 lexical choice suggest that while partial conceptual similarities facilitate overall acquisition of emotion words, subtle conceptual differences lead to instances of negative transfer where L2 learners select and use L2 words in accordance with the L1 constraints. A particularly salient example is the use of *veselo* and *serdit'sia* by L2 American learners of Russian in contexts where L1 Russian speakers do not use these words.

The fourth relationship considered here is that of conceptual non-equivalence. This category contains words that do not have exact translation equivalents in the other language, the English *frustration* and the Russian *perezhivat'*. It is this category that creates most challenges for L2 learners. Russian-language textbooks commonly introduce the verb *perezhivat'* (e.g., Dabars, Morris, & Stramnova, 1997, p. 330, 444; Nakhimovsky & Leed, 1987, pp. 19, 65), and several students in Pavlenko and Driagina's (2007) study mentioned during the debriefing session that they had encountered this word before. Nevertheless, they were not sure when and how to use it. Consequently, none of them used the word in *The Letter* narratives. It appears that the lack of a conceptual equivalent complicated the internalization of the emotion verb *perezhivat'*. On the other hand, some L2 users of English referred to *frustration* in *The Letter* narratives. This difference in the use of language-specific emotion words may be explained by the learners' distinct experiences with the target language context. Russian L2 users of English live in English and had many more opportunities to internalize language-specific vocabulary than American L2 learners of Russian for whom classroom instruction remains the main source of input. The analysis of the corpora also showed that L1 non-equivalents may affect

the learners' performance in the L2. This influence was seen in the lexical borrowing of *frustration* in American L2 learners' narratives in Russian. Considering that most were classroom learners it is unlikely that they were exposed to this term in Russian psychological literature where it appeared recently (cf. Ilyin, 2002); rather, it appears that they borrowed it from their native language. Together, these results suggest that conceptual non-equivalents may be difficult to acquire in the L2 and that L1 linguistic categories may be difficult to inhibit when speaking the L2 (for more on borrowing of conceptual non-equivalents across languages see Pavlenko, 2003).

Conclusions

The present study yields two important insights into the nature of acquisition and use of L2 emotion vocabulary. First, the study replicates the results of Pavlenko and Driagina (2007) using a different stimulus and shows that L2 learners' narratives display patterns of structural shift: toward verbs and adverbs for L2 learners of Russian and toward adjectives for L2 users of English. Secondly, the results of the study suggest that structural non-equivalence may lead to some instances of L1 transfer but generally does not preclude acquisition. In contrast, partial and complete conceptual non-equivalence complicate target-like acquisition of L2 emotion vocabulary and lead to instances of negative transfer, lexical borrowing, and avoidance.

These findings deepen our understanding of L2 learning, suggesting that conceptual (non-)equivalence needs to be added to the list of factors — such as word frequency, concreteness, and cognate status (De Groot & Van Hell, 2005) — that affect L2 vocabulary learning. They also present a challenge for the Revised Hierarchical Model of the bilingual lexicon that assumes an undifferentiated conceptual store and views L2 learning as linking between new forms and pre-existing concepts (e.g., Kroll & Tokowicz, 2005). The Modified Hierarchical Model, put forth in Pavlenko (in press), differentiates between L1 and L2 linguistic categories (i.e. concepts linked to particular words) and posits that in the case of partial or complete non-equivalence links between L2 words and L1 categories will result in negative transfer, such as the erroneous uses of *veselo* or *serdit'sia* by L2 learners of Russian. Target-like L2 performance will require not only direct links between L2 words and concepts, but the restructuring of the conceptual space (in the case of partial non-equivalence) and development of new L2 categories (in the case of complete non-equivalence).

These findings also have important implications for L2 instruction. As seen earlier, dictionaries and foreign-language textbooks often posit unproblematic

links between partial translation equivalents, without explaining differences in respective meanings. Such presentation may facilitate negative transfer from the L1 and lead to deviations from native speakers' patterns of lexical choice. To help L2 learners become target-like, L2 instruction needs to address cross-linguistic differences in word meanings and in patterns of structural selection and offer learners numerous opportunities to examine how words are used in context (e.g., through corpora such as the National Russian Corpus at www.ruscorpora.ru). To aid in the process, future research needs to investigate patterns of structural and conceptual (non-)equivalence in other semantic fields, in other language combinations, and through triangulation of research methods.

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Notes

1. Due to the lack of equivalents, the term *frustration* has been recently appropriated into Russian psychological literature as *фрустрация* (*frustratsiia*) (e.g., Ilyin, 2002).
2. The issue of frequency is particularly complex here because input frequencies differ based on individuals' experiences. Thus, for American L2 learners exposed to Russian almost exclusively via classroom instruction word presentation was also examined in the Russian-language textbooks.

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Appendix A. English emotion lemmas in the narratives by American monolinguals (n = 60)

Table A1. “Mr. Bean” Narratives (n = 30; lemmas = 20; tokens = 70)

Nouns (n = 18)	Adjectives (n = 45)	Verbs (n = 7)	Adverbs (n = 0)
anxiety 1	afraid 3	chicken out 1	—
fear 4	annoyed 1	freak out 2	
fun 10	embarrassed 3	panic 1	
nervousness 1	embarrassing 1	scare 2	
panic 2	frightened 1	surprise 1	
	happy 1		
	nervous 3		
	scared 30		
	stricken 1		
	terrified 1		

Table A2. “The Letter” Narratives (n = 30; lemmas = 27; tokens = 147)

Nouns (n = 7)	Adjectives (n = 118)	Verbs (n = 21)	Adverbs (n = 1)
depression 1	angry 14	bother 1	angrily 1
disbelief 1	depressed (-ing) 4	break down 1	
distress 1	disheartened 1	comfort 1	
emotions 1	distraught 3	console 1	
feelings 1	distressed (-ing) 3	cry 8	
unresolve 1	disturbed (-ing) 2	deal 2	
worrimment 1	frustrated (-ing) 1	disbelieve 1	
	furious 1	disturb 1	
	mad 10	sob 1	
	pissed off 1	upset (someone) 3	
	puzzled 2	worry 1	
	sad 5		
	shocked 1		
	unhappy 1		
	upset 67		
	upsetting 2		

Appendix B. Russian emotion lemmas in the narratives by Russian monolinguals (n = 48)

Table B1. “Mr. Bean” Narratives (n = 19; lemmas = 23; tokens = 78)

Nouns (n = 15)	Adjectives (n = 6)	Verbs (n = 38)	Adverbs (n = 19)
боязнь (dread, fear) 1	гордый (proud) 1	бояться (to fear) 8	гордо (proudly) 2
испуг (fright, scare) 1	ошарашенный	испугаться (to get scared)	неловко (uncomfortably) 1
мужество (courage) 2	(dumbfounded,	17	
паника (panic) 1	shocked) 2	напугаться (to get scared) 1	панически (in panic) 1
смелость (courage, bravery) 2	радостный (joyous, joyful) 1	насмелиться (to dare) 1	плохо (badly) 2
страх (fear, fright) 5	сильный (strong) 1	пугать (to frighten, to scare) 3	страшно (afraid) 8
ужас (terror, horror) 3	смущены (embarrassed, confused) 1	пугаться (to get frightened, scared) 5	стыдно (ashamed) 5
		расхрабриться (to get enough courage) 1	
		стесняться (to be embarrassed) 2	

Table B2. “The Letter” Narratives (n = 29; lemmas = 36; tokens = 118)

Nouns (n = 18)	Adjectives (n = 33)	Verbs (n = 65)	Adverbs (n = 2)
досада (annoyance) 1	взволнована (agitated, anxious, worried) 3	беспокоиться (to worry) 1	нервно (nervously) 1
злость (anger, malice, spite) 1	встревоженный (anxious, worried) 1	волноваться (to worry, to be anxious, agitated) 1	тяжело (heavily, with difficulty) 1
истерика (hysterics) 1	недовольна (unhappy, discontent) 2	(за-)плакать (to cry, to begin crying) 8	
настроение (mood) 1	нервная (nervous) 1	нервничать (to worry, to be anxious, nervous) 4	
огорчение (pain, suffering, vexation) 1	огорчена (-ная) 3	обижаться (to take offense, to feel hurt) 1	
паника (panic) 1	озабочена (concerned, worried) 1	обрадовать (to make someone happy) 1	
переживания (worries, emotional experiences) 1	печальная (sad) 3	огорчать(-ся) (to be pained, annoyed) 4	
слезы (tears) 1	подавлена (depressed) 1	переживать (to suffer, to worry, to experience something keenly) 11	
смех (laughter) 1	(не) рада (unhappy, literally: not joyful) 1	психовать (to behave in a crazy manner) 3	
смущение (embarrassment, confusion) 1	расстроена (-ная) 16	развеселить (to amuse) 1	
смятение (distress, disarray) 1	(не) счастлива (unhappy) 1	разозлиться (to become angry) 1	
чувства (feelings) 2		расстроить(-ся) (to upset, to get upset) 25	
эмоции (emotions) 3		сочувствовать (to empathize) 1	
		успокоить (to calm someone down) 1	

Appendix C. English emotion lemmas in the narratives by Russian L2 users of English (n = 38)

Table C1. “Mr. Bean” Narratives (n = 20; lemmas = 31; tokens = 91)

Nouns (<i>n</i> = 10)	Adjectives (<i>n</i> = 76)	Verbs (<i>n</i> = 5)	Adverbs (<i>n</i> = 0)
courage 1	afraid 21	fear 1	—
fear 1	angry 1	like 1	
fun 6	annoyed 2	worry 1	
panic attack 1	ashamed 3	scare off 1	
shame 1	bad 1	get cold feet 1	
	bored 1		
	(un)comfortable 3		
	disappointed 1		
	embarrassed 11		
	embarrassing 1		
	excited 2		
	frightened 2		
	happy 2		
	proud 1		
	scared 14		
	scary 1		
	shocked 4		
	sorry 1		
	surprised 2		
	terrified 1		
	threatened 1		

Table C2. “The Letter” Narratives (n = 18; lemmas = 25; tokens = 87)

Nouns (n = 8)	Adjectives (n = 71)	Verbs (n = 7)	Adverbs (n = 1)
anger 2	angry 3	disappoint 2	sadly 1
compassion 1	anxious 1	disturb 1	
concern 1	concerned 3	upset 4	
disappointment 3	crushed 1		
distress 1	desperate 1		
	disappointed 10		
	distressing 1		
	disturbed 1		
	frustrated 2		
	mad 2		
	sad 7		
	shocked 1		
	(un)happy 4		
	upsetting 2		
	upset 31		
	worried 1		

Appendix D. Russian emotion lemmas in the narratives by American L2 learners of Russian (n = 60)

Table D1. “Mr. Bean” Narratives (n = 30; lemmas = 27; tokens = 118)

Nouns (n = 11)	Adjectives (n = 15)	Verbs (n = 62)	Adverbs (n = 30)
восторг (delight, enthusiasm) 1	веселый (cheerful, merry, jolly) 1	бояться (to fear) 33	весело (merrily, gaily) 5
мужество (courage) 1	испуганный (scared) 7	испугаться (to get scared) 17	скучно (boring, dull) 1
паника (panic) 1	смелый (brave) 2	нервничать to worry, to be anxious, nervous) 1	смело (bravely, boldly) 1
страх (fear, fright) 2	страшный (scary) 1	нравиться (to please, to be liked by someone) 3	страшно (afraid) 11
трус (coward) 3	храбр(ый) (courageous) 4	обрадовать (to make someone happy) 1	стыдно (ashamed, shameful) 11
храбрость (courage, bravery) 2		пугаться (to get frightened, scared) 1	храбро (courageously, bravely) 1
ужас (terror, horror) 1		радоваться (to rejoice) 1	
		сочувствовать (to sympathize, to empathize) 1	
		стесняться (to be embarrassed) 3	
		страдать (to suffer) 1	

Table D2. “The Letter” Narratives (n = 30; lemmas = 36; tokens = 159)

Nouns (n = 18)	Adjectives (n = 41)	Verbs (n = 77)	Adverbs (n = 23)
беспокойство (the state of worrying) 1	грустная (sad) 14	беспокоиться (to worry) 2	грустно (sadly) 9
душа (soul) 1	невеселая (unhappy, sad) 3	бояться (to fear, to be afraid) 1	неприятно (unpleasantly) 1
кошмар (nightmare, horror) 1	печальное (sad) 1	возбуждать (to excite) 1	недовольно (unhappily) 1
настроение (mood) 1	радостная (рада) (happy, glad) 2	возмущаться (to be indignant) 2	обидно (hurtfully) 3
неудовольствие (discontent) 1	раздражена (irritated) 1	(за)плакать (to cry, to begin crying) 23	плохо (badly) 4
отчаяние (despair) 2	разочарована (disappointed) 2	обижаться (to take offense, to feel hurt [by someone]) 5	сердито (angrily) 2
раздражение (irritation) 2	расстроена (upset) 10	огорчать (-ся) (to be pained, annoyed) 2	смешно (funny, funnily) 1
сердце (heart) 1	сердитая (angry, cross) 7	раздражать (to irritate) 3	страшно (scary, scarily) 1
состояние (state) 2	счастлива (happy) 1	(рас-)сердиться (to get cross, angry [at someone]) 17	счастливо (happy, happily) 1
страх (fear) 1		расстраиваться (to get upset) 9	
ужас (horror) 1		сочувствовать (to empathize) 3	
фрустрация (frustration) 1		удивлять (to surprise) 1	
чувства (feelings) 2		успокоить(-ся) (to calm down) 2	
эмоции (emotions) 1		утешать (to pacify) 4	
		фрастрировать (to frustrate) 2	