Chapter 8

Envy and Jealousy in Russian and English: Labeling and Conceptualization of Emotions by Monolinguals and Bilinguals

OLGA STEPANOVA SACHS and JOHN D. COLEY

Introduction

It is a frustrating experience familiar to many bilinguals—something that is easily said in one language requires an awkward and lengthy explanation in another. This problem is particularly pervasive when it comes to talking about abstract concepts or intangible things, such as emotions. There are many known cases of emotion terms that exist in one language but do not exist in others. For example, Schadenfreude in German means pleasure derived from another’s displeasure (Russell, 1991). This term does not exist in English, except as a lexical borrowing, although by imagining a romantic rival suffering a tragic accident, we can easily understand the concept behind it. Nevertheless, the really interesting question is whether this linguistic difference causes German and English speakers to categorize emotions differently. Russell (1991) suggested that there is a particularly strong relationship between linguistic labeling and categorization of emotions. One reason for this is the fact that much of the evidence for categorization of emotions involves words—something researchers have to resort to in the absence of Munsell chips for emotions.

More generally, Russell proposed that labeling an emotion may have an effect on subsequent cognitive processes, such as encoding, responding to, and remembering emotions. Cross-linguistic variability of emotion terms may lead to the possibility that people who speak different languages have different conceptual representations of emotions. For example, speakers of different languages may disagree on what emotions seem more similar to them or on the degree of overlap between various members in the domain of emotion terms. Alternatively, it could be that
underlying conceptual structure of emotions is fairly universal, and that
differences in how language maps onto this conceptual structure have
no impact on the structure itself. A study by Romney, Moore and Rusch
(1997) showed that a combination of the two alternatives is possible as
well. While they found a number of significant and interesting differences
in the Japanese and English semantic structures of emotion terms, they
concluded that these differences represented a very small proportion of
the overall effect and argued that English and Japanese share a single
model of the semantic structure of emotion terms.

The question whether cross-linguistic variability of emotion terms is a
reflection of the differences in the conceptual structure of emotions will
be addressed in this paper. We will focus on the habitual use of words
envious and jealous by American English speakers, and words revent
(ъ/я is being jealous) and zavdihet (ъ/я is being envious) by Russian
speakers (we used adjectives in English and verbs in Russian to reflect
language-specific patterns of emotion encoding). Members of each pair
refer to two distinct emotions identified by social psychologists – the
emotion of jealousy and the emotion of envy (Parrott & Smith, 1993;
Salovey & Rodin, 1986). The emotion of jealousy is usually described
as a situation where a person fears losing an important relationship
with another person to a rival. The emotion of envy is defined as a situa-
tion where a person lacks another’s superior quality, achievement,
opportunity, or possession and either desires it or wishes that the other
lacked it (Parrott & Smith, 1993). These definitions are very similar to
the definitions provided for these words in English and Russian
dictionaries.

At first glance the situation looks simple: there are two emotion terms
in each language, and two emotions that these words refer to. One
would expect that these words would map on to emotions the same
way in both languages. However, any Russian–English bilingual will
agree that the reality of how these words are used by Russian and
English speakers is far from being that simple. In Russian there is
a one-to-one mapping of emotion terms to emotions described in the
literature: the word revent is used to refer to the emotion of jealousy;
the word zavdihet is used to refer to the emotion of envy. In English,
on the other hand, the word jealous is applied to both jealousy and
envy (see Figure 8.1).

American English speakers habitually refer to different kinds of situ-
ations using the word jealous; for example:

You have a nice car. I’m so jealous!
Don’t flirt with that man. Your boyfriend is already jealous.

In contrast, Russian speakers use the formal equivalent of jealous, revent,
to refer only to what Americans often call romantic jealousy. If the two

Figure 8.1 Mapping of the words ZAVDHIET/REVNET and ENVIOUS/
JEALOUS to the emotions of jealousy and envy in Russian and English

sentences above were to be said in Russian, two different words would
have to be used to describe the emotions elicited by someone’s car and
the emotional state of a man whose girlfriend is flirting with someone
else; for example:

U teba khonobai matshina. Ya tek treb zavdihet!
You have a nice car. I am so envious!
Ne zaigryvai teb nuchini. Tsvi katow’ tebe revent.
[Don’t flirt with that man. Your boyfriend is already jealous.]

We are interested in whether this discrepancy in the way that labels
map onto categories of emotions is a reflection of how speakers of
English and Russian conceptualize situations that evoke envy or jealousy.
To answer this question we must first show a systematic linguistic dif-
fERENCE in the way Russian and English speakers use words jealous/envious
and revent/zavdihet to refer to the emotions of jealousy and envy. This
step will be taken in Experiment 1. The second step is to see whether
there is a corresponding conceptual difference in the way Russian and
English speakers categorize envy and jealousy situations. This will be
done in Experiment 2. The important difference between the two experi-
ments is that the first experiment is designed to investigate how these
emotions are labeled in the two languages. Therefore, it involves words
jealous/envious and revent/zavdihet. The second experiment, on the
other hand, is designed to look into conceptual representations of envy
and jealousy and examine how situations that usually make one experi-
ence these emotions are categorized by Russian and English speakers.
To limit any linguistic interference, actual words jealous/envious and
revent/zavdihet were not used in the second experiment.
In addition, we are interested in the mechanism by which such conceptual differences, if any, come about. We attempt to pinpoint these mechanisms by examining not only monolingual Russian and American English speakers, but also Russian–English bilinguals, that is, native speakers of Russian who are also fluent in English. Bilinguals are a particularly interesting test case because they allow us to begin to tease apart the influence of native language, language being spoken at the time, and mere exposure to a language that may bias emotional space differently. In general, we hope that examining bilinguals as well as monolinguals will help to shed light on the mechanisms by which language may influence conceptual structure.

**Experiment 1**

**Method**

**Participants**

Three groups of subjects were involved in Experiment 1: 22 monolingual speakers of Russian (MR), 22 monolingual speakers of American English (ME), and 22 Russian–English bilinguals. Bilinguals were randomly assigned to either Russian or English testing conditions. Overall, 11 bilinguals were tested in Russian (BR) and 11 were tested in English (BE). The age of MR ranged from 19 to 37 years (M = 24.9), ME ranged from 18 to 28 (M = 23.4), and bilinguals ranged from 19 to 28 (M = 23.3).

The MR subjects were recruited in one of the Moscow public libraries. They were rewarded for participation in the study with Northeastern University T-shirts. ME subjects were undergraduates at Northeastern University fulfilling their Introductory Psychology research participation requirement. Bilinguals were recruited in Moscow and in Boston. Bilinguals from Moscow (n = 18) were either English majors in local universities, or worked at a workplace where English was the dominant language, or had spent a considerable amount of time in the United States. Bilinguals from Boston (n = 4) grew up speaking Russian and learned English in their teens when their families moved to the United States. Although it is possible that bilinguals recruited in Moscow were different from bilinguals recruited in Boston, there was no difference in their self-assessed knowledge of English or in the number of years they have been speaking English. Also, as seen in Table 8.1, there were no significant differences between bilinguals tested in English and bilinguals tested in Russian.

**Materials**

Each subject was presented with five stories describing prototypical envy- or jealousy-accusing situations (two jealousy stories and three envy stories). No boundary envy–jealousy scenarios were used in this experiment because of the lack of clear theoretical predictions for such cases. A typical envy story would describe a situation where one of the two friends gets something that the other one wants very much—a job or a role in a play, while both of them are equally qualified for it. A typical jealousy story would describe a couple involved in a romantic relationship where one of the partners suspects the other one’s unfaithfulness. Full stories in English are provided in Appendix A to this chapter.

The stories had been pretested to ensure that they indeed describe prototypical envy and jealousy situations. Twenty-five American English speakers were asked to assign them to one of three categories.

1. Stories that are consistent with the emotion that has the following definition: a person lacks another’s superior quality, opportunity, or possession and either desires it or wishes that the other lacked it. This is one of the standard definitions of envy in social psychology literature that we adopted for the task (Parrott & Smith, 1993).
2. Stories that are consistent with the emotion that has the following definition: a person fears losing an important relationship with another person to a rival. This is one of the standard definitions of jealousy (Parrott & Smith, 1993).
3. Stories that are not consistent with any of the emotions defined above.

The actual words jealousy and envy were never mentioned during the stories or in the instructions given to the subjects. Results of this pretesting showed that the stories were consistent with the definitions; every subject assigned the stories to the expected category, and no stories were assigned to the third category.

<table>
<thead>
<tr>
<th>Table 8.1</th>
<th>Russian–English bilinguals: second language (L2) proficiency and age of acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bilinguals tested in Russian</td>
</tr>
<tr>
<td>L2 speaking</td>
<td>3.73</td>
</tr>
<tr>
<td>L2 listening/comprehension</td>
<td>5.91</td>
</tr>
<tr>
<td>L2 reading</td>
<td>6.30</td>
</tr>
<tr>
<td>L2 writing</td>
<td>5.09</td>
</tr>
<tr>
<td>Years speaking English</td>
<td>13.82</td>
</tr>
<tr>
<td>Age</td>
<td>23.5</td>
</tr>
</tbody>
</table>
All stories were translated into Russian and then subjected to backward translation into English by another translator who was not familiar with the experiment. The final English translation was virtually identical to the original English copy. The Russian version of the materials is provided in Appendix B.

**Procedure**

Participants were tested individually in a quiet room. Instructions to MK and MI were given in Russian or English, respectively. Bilinguals were randomly assigned to either Russian or English condition. Depending on what condition they were assigned to, they were given instructions in a Russian or English. The experiment was conducted by a Russian native speaker who was also fluent in English.

After reading each story, participants were presented with 10 words denoting various emotions (happy, jealous, upset, satisfied, glad, proud, surprised, envious, sad, content). They were asked to rate the appropriateness of each of these words for the description of the emotion one of the protagonists was likely to feel in the situation described in the story. Filler terms were used to avoid making the purpose of the experiment too obvious; responses to these terms are not further analyzed. The ratings in this paper and pencil task were to be done on a 1 to 7 scale, with 1 meaning 'not appropriate' and 7 'very appropriate'.

**Results**

**Envy stories**

The data were analyzed by calculating the mean appropriateness rating for the words jealous/jealous and envious/envious across all stories and comparing them for each group of subjects (see Table 8.2). As expected, Russian speakers made a sharp distinction between the appropriateness of the Russian word and the English word to describe the emotion of characters in envy stories. They rated嫉妒 несколько более высокий than jealous (ジェalous) (M_d = 5.30 and M_E = 2.63, t(65) = 8.41, p < 0.001). English speakers, on the other hand, rated envious and jealous as being equally appropriate for describing the emotion of the main characters in envy stories (M_d = 6.02 and M_E = 5.97, t(65) = 0.40, p = 0.69). Bilinguals tested in Russian showed results similar to Russian monolinguals, rating嫉妒 несколько более высокий than jealous (M_d = 5.52 and M_E = 4.21, t(32) = 3.73, p = 0.009). Bilinguals tested in English showed no such distinction (M_d = 4.61 and M_E = 4.41, t(32) = 0.95, p = 0.37).

An additional analysis was done to compare difference scores between ratings of 嫉妒 and jealous for each group of subjects tested in Russian and jealousy and jealous for subjects tested in English. The difference score for each subject was obtained by subtracting the mean jealousy/jealous rating (across all envy stories) from the mean 嫉妒/jealous rating (across all envy stories). A high difference score would mean a high degree of differentiation between the two emotion terms; a low score indicates little differentiation. The results of a single factor ANOVA showed that the difference scores were significantly higher for Russian monolinguals than for any other subject group, F(3, 62) = 14.76, p < 0.001. Paired comparisons (Fisher's LSD test) also showed that bilinguals tested in Russian had higher difference scores than English monolinguals tested in Russian (p = 0.02) and bilinguals tested in English (this difference was marginal, p = 0.08). English speakers did not differ from bilinguals tested in English (p = 0.75).

**Jealousy stories**

The data were analyzed by calculating the mean appropriateness rating for the words jealous/jealous and envious/envious across the two jealousy stories and comparing them for each group of subjects (see Figure 8.3). All groups of subjects rated jealous higher than envious when they had to describe the emotion of characters in jealousy stories. Russian speakers rated嫉妒 несколько более высокий than jealous (M_d = 6.25 and M_E = 2.55, t(43) = 12.37, p < 0.001) and English speakers rated...
higher than envious. In contrast, monolingual English speakers viewed the words envious and jealous as being equally appropriate for describing the emotions of characters in envy stories. Monolingual English speakers did rate jealous as more appropriate than envious for jealousy stories, but the differentiation was still less pronounced than for monolingual Russian speakers.

For bilinguals, testing language determined responses. Bilinguals tested in Russian responded like Russian monolinguals, whereas bilinguals tested in English responded like English monolinguals, despite the fact that both groups of bilinguals had Russian as their native language and were similar in their self-rated English proficiency. Bilinguals speaking English seemed to blur the distinction between envy and jealousy-invoking situations in a way that bilinguals speaking Russian did not. However, bilinguals tested in Russian did not respond exactly like monolingual Russian speakers; for envy stories, the difference between the ratings of envious and jealous was greater for Russian speakers than for bilinguals tested in Russian. So while they clearly differed from English monolinguals and bilinguals tested in English, these two groups also differed from each other, with bilinguals 'moving' in the direction of English monolinguals. This raises the possibility that the overlapping conceptual representation of the two emotions in English has affected bilinguals by making jealousy and envy seem more similar to each other than they normally would to native Russian speakers. Apparently, it also affected the way they use words envious and jealous in Russian. Bilinguals tested in English, on the other hand, did not differ from English monolinguals in the difference score analyses, either on jealousy or on envy stories. Therefore, in addition to the previously identified comparisons (Russian monolinguals versus English monolinguals, bilinguals tested in Russian versus bilinguals tested in English), we might also expect conceptual differences between Russian monolinguals and bilinguals tested in Russian.

Overall, results of Experiment 1 provide clear evidence for linguistic differences in how emotion terms map onto emotion-laden situations in English and Russian, and allow us to build a schematic representation of how the Russian words zavidit and ravnit and the English words envious and jealous apply to emotions (see Figure 8.4). We can conclude that these terms overlap only marginally in Russian but strongly in English. The next step will be to see if these differences in labeling envy and jealousy situations will translate into differences in how these emotions are represented on the conceptual level. Therefore, in the next experiment we will ask whether Russian and English speakers differ in how they classify situations that would make one either jealous or envious.

Discussion

The results of Experiment 1 show a clear linguistic difference between subject groups. Monolingual Russian speakers applied words zavidit and ravnit differently to envy and jealousy stories. They gave zavidit much higher appropriateness ratings than ravnit for envy stories and they did the opposite on jealousy stories – ravnit was rated much higher than zavidit.
Envy and Jealousy in Russian and English

Russian might perform similarly, and look distinct from bilinguals tested in English and native English speakers, suggesting the presence of relatively flexible emotion categories, and indicating that the language spoken may render certain distinctions or similarities salient online. Finally, all speakers of English (i.e. monolingual speakers of English and both bilingual groups) might pattern similarly, and differ from the monolingual Russian speakers. This would suggest that learning English had some effect on how bilinguals' emotions concepts are organized.

Method

Participants

These were the same as in Experiment 1.

Materials

Twenty-seven one sentence-long situations were developed for this experiment using some of the materials designed by the social psychology research on the emotions of jealousy and envy (Galovs & Rodin, 1986). The situations were of three kinds: jealousy-evoking (e.g. "Your boyfriend dances with someone else at a dance"), envy-evoking (e.g. "Your boyfriend buys something you want but cannot afford"), and controls that evoked generally negative feelings (e.g. "Your boyfriend lost your dog"). For a complete list of all situations in English see Appendix C. All situations involved a boyfriend or a girlfriend to avoid the possibility that subjects use the differences in the kind of person involved to guide their reasoning in the tasks.

As in Experiment 1, these situations were pre-tested by asking 25 English speakers to assign them to one of the three categories: (1) a category that contained a standard definition of envy; (2) a category that contained a standard definition of jealousy; (3) a category for situations that were not consistent with any of the definitions. Again, the actual words jealous or envious were not mentioned either in definitions or instructions given to subjects. All envy, control, and five out of nine jealousy situations were unanimously assigned to the expected category. The remaining four jealousy situations were assigned to the expected category by the majority of the participants (all $\chi^2(2) > 18.47, p < 0.001$).

All situations were translated into Russian and back-translated into English. The final English translation was virtually identical to the original copy. The Russian version of the situations is provided in Appendix D. Each situation was written on a small (8 cm x 3 cm) card.

Procedure

Task 1: Trials. Subjects were presented with 12 trials of the following types: Type JJ, 2 jealousy and 1 envy situation; Type EE, 2 envy and
1. jealousy situation; Type JJE, 2. jealousy and 1 control situation; Type EEB, 2. envy and 1 control situation; Type EJ, 1. envy, 1. jealousy, and 1 control situation. There were three triads of type JJE and EEB, and two triads of types JBB and EJ. Three different sets of triads were created, each set made up of different combinations of the same situations. All subjects were randomly assigned to one of the three sets. The order of presentation of triads in a set was randomized as well. Participants were presented with each triad and asked to 'pick any 2 situations that go together'. After the completion of the task, subjects were asked to provide an explanation for each of their selections.

**Task 2: Free sort.** Subjects were given all 27 cards with situations, asked to read them carefully and to 'sort them into as many groups as they liked according to the kind of emotion they would be likely to experience in such situations'. After the sorting had been completed, subjects were asked to explain what emotion united the situations in each group that they had formed.

Because the same group of subjects was used in Experiment 1 and both tasks of Experiment 2, the order of presentation of all three tasks was completely counterbalanced across subjects to avoid systematic effects of tasks on each other. Subjects' responses and sorts were recorded by the experimenter on a data sheet.

**Results and discussion**

**Triad sorting task**

Subjects' sorts were analyzed by calculating the proportion of times they selected two envy situations in EJ and EEB triads, two jealousy situations in JBB and JJE triads, and the envy and jealousy situations in EJ triads (see Table 8.2).

<table>
<thead>
<tr>
<th>triad sorting task showing the percentage of times different groups of subjects separated jealousy and envy situations from each other and from control 'bad' situations</th>
</tr>
</thead>
<tbody>
<tr>
<td>JJE Triad</td>
</tr>
<tr>
<td>MR</td>
</tr>
<tr>
<td>BR</td>
</tr>
<tr>
<td>BE</td>
</tr>
<tr>
<td>ME</td>
</tr>
<tr>
<td>Mean</td>
</tr>
</tbody>
</table>

Triads where jealousy and envy situations were pitted against each other or against controls were sorted in a very similar way by all subjects. Separate ANOVAs run for each type of triad showed no difference between subject groups. On average, subjects in all groups separated envy and jealousy situations from each other and from control situations 78% of the time. This pattern shows clear differentiation of jealousy and envy situations. Already at this point we have evidence against the 'strong' prediction regarding conceptual representation of emotion terms in Russian and English. All groups of subjects reliably distinguished between envy and jealousy situations.

The only triad where the difference between subject groups was found was the EJ triad where all three kinds of situations were combined - envy, jealousy, and controls. Monolingual Russian speakers were less likely to pick envy and jealousy situations from this triad than any other group of subjects (F(3, 62) = 4.26, p < 0.01). They did it only 21% of the time. In fact, the most common response that monolingual Russian speakers gave when presented with an EJ triad was that all situations looked very different to them and they couldn't pick any two that go together. They gave this response about 50% of the time. In contrast, bilinguals tested in Russian, bilinguals tested in English, and English monolinguals picked envy and jealousy situations from the EJ triad 59%, 50%, and 52% of the time, respectively (these groups did not differ reliably from each other).

Overall, we can conclude from the triad sorting task that all groups of subjects were able to distinguish between envy and jealousy situations, and did so to similar degrees. This shows remarkable convergence, and suggests that linguistic differences documented in Experiment 1 do not lead English speakers to conflate envy and jealousy situations.

However, monolingual English speakers and bilinguals were more likely than monolingual Russian speakers to group envy and jealousy situations together. This finding corresponds to the linguistic difference found in Experiment 1 - that English speakers use the word *jealous* to refer to both envy and jealousy situations and Russian speakers do not.

Perceiving greater similarity among envy and jealousy situations may be a cognitive consequence of the linguistic difference. Interestingly, bilinguals - regardless of whether they were tested in English or Russian - responded very much like English speakers on the EJ triads. Most strikingly, Russian-English bilinguals tested in Russian performed differently from Russian monolinguals. The only factor that can explain this difference is exposure to English - both groups were native Russian speakers tested in Russian. It may be that bilinguals' familiarity with the English way of labeling the emotions of jealousy and envy highlighted the similarity between them, thus altering bilinguals' conceptual representation of these emotions.
Free sorting task

Three kinds of analysis were performed on the data collected in the free sorting task. The first analysis was designed to examine overall agreement between subject groups in how they sorted envy, jealousy, and control situations. A procedure well-suited to address this question is the Cultural Consensus Model (Remmey et al., 1986). To perform this analysis, we scored each participant on each possible pair of situations (there were a total of 81 possible pairs). Each pair was coded as 1 if the situations were sorted into the same group and 0 if they were not. The resulting matrix consisted of subjects (the horizontal axis) x pairs of situations (the vertical axis). It was subjected to the principal component factor analysis. Using this procedure, consensus is indicated if:

1. The first factor eigenvalue is much greater than subsequent eigenvalues;
2. The first factor accounts for much more variance than the following factors;
3. All subjects load positively on the first factor.

All these criteria were met by the results of the analysis:

1. The first eigenvalue was 22.41, which is greater than subsequent eigenvalues 3.28, 2.68, 2.03;
2. The first factor accounted for 34% of the variance with subsequent factors accounting only for 5%, 2.68%, and 2.05%;
3. All subjects loaded positively on the first factor.

There was no difference between subject groups in the amount of agreement with the first factor, F(3, 62) = 1.327, p = 0.27, We can conclude from this analysis that a strong consensus exists among all participant groups in how they sorted envy, jealousy, and control situations.

The second analysis was an attempt to follow up the findings of the triad sorting task, suggesting that English speakers and bilinguals perceived envy and jealousy situations as more similar than Russian bilinguals. If so, those exposed to English might be more likely to form groups in the free-sorting task that mix envy and jealousy situations than Russian monolinguals. The groups formed by each subject were analyzed by calculating a proportion of mixed jealousy/envy groups out of all groups formed by each subject. Any group that had one or more situations of each kind was considered a mixed jealousy/envy group. Overall, the number of such groups was low. On average, 19% of all groups formed by Russian monolinguals, 18% by English monolinguals, 15% by bilinguals tested in Russian, and 22% by bilinguals tested in English were mixed. There was no difference between the groups (F(3, 62) = 0.294, p = 0.83). In spite of the linguistic difference seen in

Experiment 1, groups did not differ in the frequency of combining envy and jealousy situations in a free-sorting task.

In the third analysis we looked at the groups formed by subjects with two specific questions in mind:

1. Do Russian and English speakers differ in how many separate envy and jealousy groups they formed in their sorting?
2. Do Russian and English speakers differ in how they assigned labels to groups they had formed?

To examine this, groups formed by each subject were coded in the following way: the group was labeled 'Envoy group' if more than half the situations in it were envy situations; the group was labeled 'Jealousy group' if more than half the situations in it were jealousy situations. Groups made of control situations and groups made of only one situation were excluded from the analysis. Of interest is the number of each kind of group, and the way in which the group was labeled. The results of this coding procedure are presented in Table 8.3 along with the number of groups that were called jealousy and/or envy.

Two results of this analysis are of note. First, in line with the consensus analysis reported above, subject groups did not differ on the number of envy and jealousy groups formed (see Table 8.3). This was confirmed by a 2 (Situation Group: Envoy, Jealousy) x 4 (Participant Group)
Chi-square analysis ($x^2(3) = 0.93, p = 0.82$). Secondly, despite the strong agreement in how situations were sorted into groups, there were striking differences in how these groups were labeled (see Table 3.3). English speakers assigned the term *jealousy* to jealousy groups 31% of the time, but also used the term to describe envy groups 36% of the time. This fits with the results from Experiment 1, suggesting that English monolinguals apply *jealousy* to both jealousy and envy situations. Moreover, English monolinguals applied both *envy* and *jealousy* to a single group on three occasions. In striking contrast, native Russian speakers, whether mono- or bilingual, never described an envy group using the terms *zazhevat*/*zarazhvat*, nor did members of these groups ever use both words for a single group. Even bilinguals who were tested in English labeled the groups in a way that was consistent with their native language, and not the language in which they were tested. This is slightly at odds with the results from Experiment 1, in which bilinguals tested in English responded very similarly to English speakers.

In sum, the results of Experiment 2 provide little evidence for cross-linguistic differences in conceptualization of envy and jealousy. Few conceptual differences emerged; participants were remarkably similar in their patterns of grouping situations both in triads and in a free-sorting task. This outcome is very similar to the one reported by Romney et al. (1997), who found that 66% of the total semantic structure of Japanese and English emotion terms came from a common model shared by both English and Japanese speakers. Only 6% of that structure was due to Japanese and English culture-specific models. Despite the overwhelming conceptual universality that emerged from the ‘global picture’ in our study, there was, however, evidence for a very specific effect of language on conceptual structure. Participants who had learned English either as a first or second language saw envy and jealousy situations as more similar than participants who had never learned English. Finally, justifications for free-sort grouping clearly distinguished native English speakers from native Russian speakers. Thus, in contrast to Experiment 1, performance on the conceptual tasks in Experiment 2 reveals an influence of exposure to English, and also an influence of being a native speaker of Russian, but little effect of language being spoken at the moment.

**General Discussion**

The goal of this study was to investigate the possibility of cross-linguistic differences in conceptual representation of emotion terms, and to test monolinguals as well as monolinguals to help pinpoint the source of any differences. We sought first to document systematic differences in ways in which Russian and English speakers map the terms *reveniet/reenviet* and *zazhevat/zazhevat* onto situations designed to evoke emotions of envy.
Experiment 1. For the most part, bilinguals performed in a way that was consistent with the language in which they were tested. Bilinguals tested in Russian made the Russian distinction in labeling jealousy and envy stories, whereas bilinguals tested in English made no distinction for envy stories, just like native English speakers. However, analysis of difference scores revealed greater differentiation between Russian and envious for envy stories in Russian monolinguals than for bilinguals tested in Russian. Thus, bilinguals tested in their native language are affected by the knowledge of their second language: Advanced knowledge of English may have influenced their use of envious and envious. Otherwise, performance in Experiment 1 was completely consistent with the language being spoken.

In contrast, Experiment 2 reveals evidence for the effects of native language on how participants labeled the groups they formed. Specifically, despite forming comparable proportions of envy, jealousy, and mixed groups, English monolinguals were equally likely to label envy groups and jealousy groups with the term jealousy, but Russian monolinguals and both groups of bilinguals never used the word envious or envious to label envy groups. In this respect, all native speakers of Russian were similar, and contrasted with native speakers of English. For bilinguals tested in English, this seems to contrast with their willingness to apply the term jealous to envy stories in Experiment 1.

These results allow us to begin to paint a picture of the interaction between semantic and conceptual levels of representation in the domain of emotion terms. First, we found few conceptual differences between speakers of English and Russian; how one categorizes emotional situations appears to be largely independent of how emotional terms map onto those situations in one's language. However, becoming fluent in a language that shows a different mapping of labels onto emotions seems to have both the conceptual effect of increasing the perceived similarity between emotions, and the linguistic effect of influencing how labels are mapped onto situations in one's native language. Moreover, by examining bilingual as well as monolingual speakers, we were able to transcend correlations between language and thought and begin to understand more complex underlying relations. In sum, we have shown that despite clear linguistic differences in how emotion terms map onto situations, speakers of English and Russian for the most part share an underlying conceptual organization of these situations, but also that language can have local effects on that organization.

On a more general level, besides highlighting the benefits of using bilinguals for cross-linguistic research, our results suggest that a lot can be learned from examining specific cases where languages differ in how words map onto concepts. Identifying such cases and using them for investigating the relationship between linguistic and conceptual representations of emotions, as well as other domains of experience, offers exciting opportunities for further research.

Acknowledgements

We would like to thank members of the Categorization and Reasoning Lab and Fei Xu for helpful comments and discussions of this research: Anna Bratiene, Marina Vaks, and Jim Akutsu for their help in data collection; and Natalia Zabeida for translating experimental materials. We also thank the staff of the American Center, Moscow, for their assistance and all Russian speakers and bilinguals who participated in this study.

Note


References


Appendix A

Jealousy stories

Anthony and Julia have known each other since they first met in 8th grade. Now they are grownups and their friendship has developed into a romantic relationship. Anthony appreciates the mutual trust in their relationship, but the events of the last week made him doubt Julia's faithfulness. A few days ago when he called her late at night, a male voice he has never heard before answered the phone, and yesterday Anthony saw Julia at a café engaged in a conversation with an attractive man.

Marina and Andrew have been friends ever since they first met in 10th grade. Many years have passed and their friendship developed into a romantic relationship. Marina is very committed to Andrew, but she's beginning to doubt whether he feels the same way. She was unpleasantly surprised a few days ago when she saw Andrew not only dancing but also
flirting with one of her friends at a party, and yesterday Andrew mentioned that he is going away for a weekend to visit his former girlfriend.

Envy situations

Boris and Natasha are a married couple. They are very happy together and want to have a big family with a lot of kids. However, they found out that they’ll never be able to have their own children. The only option they have is adoption, which is a long and complicated process. Last weekend they went to visit their friends whom they’ve known since they were college students. These friends of Boris and Natasha just had their second baby, who is incredibly beautiful and looks a lot like her parents.

Paul and Max are friends. They are college seniors and they both dream of working for the same company – IBM. Having done equally well on their interviews, they were both offered three-month internships. After their internship was over, Paul and Max applied for the same job at IBM. However, despite them both being equally well qualified, Max got the job and Paul did not.

Anna and Maria are friends. It’s their last year of training in a theater/acting college and they both dream of playing Ophelia in their favorite play ‘Hamlet’. Unexpectedly, they get a chance to audition for this role in a theater. Anna and Maria’s instructors think that both women are very talented and are equally fit to play this role. However, after the audition, the role was offered to Maria, and not Anna.

Appendix B

Anton and Julia know each other from the 8th class, where they also had a romantic relationship. Anton is very close to Julia, and they continue to be friends even now. They are always available to each other, and whenever they meet, they always have a good time. Julia is a very beautiful girl, and Anton is very happy to have such a partner.

Envy and Jealousy in Russian and English

Afterwards, they decided to go for a walk in the park, and while they were walking, Anna and Maria decided to talk about their dreams for the future. Anna wants to become an actress, while Maria wants to become a bankers. They both enjoy each other’s company and often have fun together.

Appendix C

Envy situations

Your boyfriend has a better job than you.
Your boyfriend is more attractive than you.
Your boyfriend appears to have everything.
Your boyfriend buys something you wanted but could not afford.
Your boyfriend is more intelligent than you.
Your boyfriend is more talented than you.
You have to work while your boyfriend is out partying.
Your boyfriend gets a job that you want.
Your boyfriend has a more impressive resume than yours.

Jealousy situations

You phone your boyfriend and a voice you haven’t heard before answers.
Your steady date has lunch with an attractive opposite sex person.
Your date dances with someone else at a dance.
Control situations

Someone is gossiping about your boyfriend.
Your boyfriend died in a competition.
You are late for a date with your boyfriend.
A party you were going to with your boyfriend was cancelled.
Your computer crashed and you lost all of your boyfriend's documents.
Your boyfriend lost your dog.
Your boyfriend got a really bad haircut.
Your boyfriend is very sick.
Your boyfriend crashed your car.

Appendix D

У вашего парня работа лучше, чем у вас.
Ваш парень более привлекательный, чем вы.
Кажется, что у вашего парня есть абсолютно все.
Ваш парень покушает то, что вы хотите, но не может себе позволить.
Ваш парень умнее, чем вы.
Ваш парень талантливее, чем вы.
Вам приходится работать в то время, как ваш парень велосипед на вечеринке.
Ваш парень поучает работу, которую хотите вы.
У вашего парня более впечатляющее резюме, чем у вас.
Вы знаете своему парню и вам отвечает незнакомый голос.
Ваш парень обедает с привлекательным представителем противоположного пола.
Ваш парень танцует не с вашей дискотеке.
Кто-то играет с вашим парнем.
Ваш парень ведет встречаться с другими девушками.
Ваш парень ведет в гости к девушке, с которой он встречался раньше.
Вы узнаете, что у вашего парня роман с кем-то другим.
Ваш парень уезжает далеко без вас.
Ваш парень бросает вас.
Кто-то сплетничает о вашем парне.
Ваш парень проиграл на соревнованиях.