# Free-association test approach in error analysis in the process of foreign language acquisition within the same language family

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Every foreign language teacher has come across a certain type of errors of the learners that have become customary to refer to as interferencial. Experience shows that studying a language that is close to the source language is sure ground for such errors. A typical example in this respect is Russian studied by Bulgarians.

Many studies of linguists and methodists have been devoted to the interferencial influence of the source language. The approach in them is linguistic and methodistic, respectively. There are fewer psychological and psycholinguistic studies that would make the processes going in the semantic memory of the learners of a foreign language associated with different speech activities, active and receptive, more explicit.

In our opinion one of the most powerful means of making such processes explicit is error analysis and through it – the mechanism of erroneous semantisization of words of the target language. Theoretical conclusions to such a study lead directly to more effective work in Foreign language teaching.

The attitude that a Bulgarian would have towards Russian is the kind of attitude towards a language close to the source language – that is, easy to understand which sets in him a psychological mechanism that deserves the attention of the researcher. This attitude, together with creative imagination and naive sense, often lead to amateur etymology and inferring the meaning of Russian words in ways that deviate from the traditionally accepted. For instance, the results of the experiment for the semantisization of unrelated Russian words1, carried out with first-year students of Bulgarian philology show the following interpretations, indicative in this respect (from now on the first word in the examples in Cyrillic is in Russian and the second one is in Bulgarian):

болтовня (chatter) – 'склад за болтове' (a storehouse for bolts)
белокурый (fair-haired) – 'от бяла кокошка' (from a white hen)
черемуха (a wild cherry) – 'костенурка' (a tortoise)
знаток (somebody that knows a lot) – 'малко знания' (little knowledge)
пытка (torture) – 'ядене' (a meal)
мелочный (petty-minded) – 'тебеширен' (chalky)
поединок (duel) – 'по един' (one after the other)

This is only a small part of the answers in the experiment which, according to us, show convincingly the great variety of erroneous associative bonds in the semantisization of words. Here we would like to add that the experiment was anonymous and according to the instruction the informants had to choose between two possibilities: semantisization of the word, in case they know its meaning, or no answer, if they don't know the meaning.

A statistical analysis of the results shows that a great percentage of the reaction of the informants, 23%, choose a «third» possibility – semantisization of words without knowing their

meaning, that is, they «attach» a new meaning to them. Analysis of their reaction shows that they have as basis erroneous associative bonds which, in spite of their seeming variety, can be reduced to several basic types (for greater details refer to Kirova 1991).

I. Associative bonds based on direct sound similarity2. They are at the basis of the largest percentage of errors. The following examples are the most representative reactions:

**орать (shout) – 'оре' (to plough)**
**обыденный (ordinary) – 'обиден' (offended)**
**мелочный (petty-minded) – 'млечен' (milky)**
**нежели (than) – 'не щеш ли' (suddenly)**
**весьма (a lot) – 'везмо' (embroidery)**

II. Associative bonds based on sound similarity with a mediator word (Bulgarian, Russian, or a word from another language). This type of associative bond is second in terms of frequency.

Examples:

1. With a Bulgarian word as mediator:
**накладывать (to place) – 'set fire to' (through 'наклада' – make a fire)**
**захватить (seize, capture) – 'set about' (through 'захвана' – to begin)**
**уж (already) – 'as if' (through 'уж' – 'as if')**

2. With a Russian word as a mediator:
**однако (but) – 'once' (through 'однажды' – once)**
**погрузить (sink) – 'feel sad' (through 'гррустный' – sad)**
**черемуха (wild cherry) – 'tortoise' (through 'черепаха' – tortoise)**

3. With a word from another language as mediator:
**масть (the colour of an animal) – 'have to' (through 'must' – Engl.)**
**грань (border, edge) – 'big' (through 'grande' – Fr.)**

III. Associative bonds based on thematic similarity3:

**воровать (steal) – 'лъжа' (to lie (lied))**
**баран (ram) – 'агне' (lamb)**
**государрство (country) – 'правителство' (government)**
**башмак (shoe) – 'пантоф' (slipper)**
**блатной (of a thief) – 'затъващ' (sinking)**
**вранье (lie) – 'кражба' (theft)**

IV. Associative bonds based on contrast4.

They represent only a small percentage of the answers:

**небольшой (small) – 'немалък' (not small)**
**торопливый (hasty) – 'бавен' (slow)**
**вне (out of) – 'вътре' (inside)**

The associative bonds found in the experiment show that there are certain regular tendencies with the erroneous semantization of words from a closely related target language. The tendencies allow us to assume that when the system of the target language in the minds of the learners is still incomplete, the missing elements are replaced with elements from the system of the source language. As a result at any moment of communication there is a contaminated language system in the mind of the learner serving his or her speech activity from the level for beginners up to an advanced level.

It is evident that the results of the experiment whose aim was to find out whether students know the meaning of unrelated words led to the isolation of several groups of erroneous associative bonds that make explicit the ways in which words from a target language closely related to the source language are erroneously semantized. Such conclusions throw light at psychological processes that are inaccessible to direct observation and reveal important characteristics of the mechanism of source language interference.

To what extent are the results reliable? Will they be confirmed in a more purposeful and statistically more representative study?

To get an answer to these questions we resorted to the help of the free associative experiment. As it is well known the associative experiment is one of the oldest methods in experimental psychology. In modern psycholinguistics the method of the free associative experiment is used most of all in the field of semantics as an independent operational procedure in the experimental study of word sense similarity (Osgood 1963, Deese 1965, Gerganov 1987). Its universality makes it applicable in many other fields of psychology, psychiatry and psycholinguistics. It is known that Yung has used it in the study of pathological aberrations in the emotional state of his patients.

In our opinion the method of the free associative experiment can be used in error analysis in such an important field as the cognitive activity of man and foreign language acquisition in particular. In the present study the free associative experiment is used as an independent operational procedure to check the hypothesis of the presence of the enumerated types of associative bonds in the semantic memory of the learner of a target language closely related to the source language. Its results are expected to confirm or repudiate this hypothesis and at the same time: 1. Provide more research material through getting more reactions and fewer «no answers». The statistical reliability of the conclusions is increased in this way, too. 2. Answer the questions: a) is there a principle difference between the associations which are at the basis of the answers to the semantisization experiment and the reactions to the free associative experiment; b) do we have the same associative bonds and what are the relations among them; c) are there reactions that make explicit new types of associative bonds?

## METHOD

According to the method of free associative experiment, 50 first-year students of Bulgarian Philology, divided into groups of 15 up to 20, were given 200 Russian words, unrelated to Bulgarian lexis, which had received the highest percentage of erroneous answers with the semantisization experiment. Each word was shown on a screen for six seconds. Simultaneously it was pronounced by the person conducting the experiment. According to the instruction the informants had to write in numbered slots on a sheet of paper that they had ready in advance the first word that came to their mind. In case they didn't think of anything, they had to write a dash opposite the stimulus word and then go on. We gave several examples after the instruc-

tion to make sure the informants knew what the experiment was about.

## RESULTS

After analyzing the results of the experiment we found out the following:

1. There were fewer «no answers» (less than 10%) which met our expectations and more material for statistically representative conclusions.

2. There was no principled difference in the reactions of the informants compared to the first experiment whose task was semantisization of words. The same types of associative bonds were isolated that were the basis of erroneous semantisization, namely:

   I. Associations according to sound similarity.

   II. Associations according to sound similarity with a mediator word (Bulgarian, Russian or a word from another foreign language).

   III. Thematic associations.

   IV. Associations according to contrast.

The predominant majority of reactions is based on associations from types I and II, associations based on sound similarity have a greater percentage again. The reactions from the semantisization experiment are repeated in many cases. As a comparison we give examples of each type.

I.

**орать (shout)** –     'ора' (to plough)
                   'оран' (ploughing)
                   'изоравам' (to plough)

**обыденный (ordinary)** –
**'обиден' (offended) 'that gets offended easily'**

**желудок (stomach)** –    'жълъд' (acorn)
                        'жълъдче' (little acorn)
                        'жълъди' (acorns)
                        'жълтък' (yoke of egg)

**подлинник (original – n.) – 'подлец' (villain)**
**черемуха (wild cherry) – 'черна муха' (black fly)**
**колыбель (cradle) – 'бяла кола' (a white car)**
**ныть (to moan) – 'мыть' (wash)**
**брызги (splashes of water) – 'брынза' (cheese)**
**ссора (quarrel) – 'sorry'**
**сторонник (supporter) – 'strange'**

II.

**бокал (a wine glass) – 'магазинер' (through 'бакалин' – a grocer)**
**искажать (distort) – 'предавам' (through 'искажа' – to tell on sb.)**
**обыватель (a narrow-minded person) – 'борец' (through 'убивам' – to kill)**
**весьма (a lot) – 'пролет' (through 'весна' – spring)**

**жемчуг (a pearl) – 'жена' (through 'женщина' – a woman)**
**вряд ли (hardly) – 'лъже ли' (through 'врет ли' – is he lying)**
**масть (the colour of an animal) – 'трябва' (through 'must')**
**лад (agreement) – 'страна' (through 'land')**

**III.**
**столь – (so – adv.) – 'маса' (table)**
**воровать (steal) – 'лъжа' (to lie – lied)**

There are thematic associations in this group from genus to species and from species to genus.

Examples:

**бокал (a wine glass) – 'граал' (The Holy Grail – genus to species)**
**бокал (a wine glass) – 'чаша' (glass – species to genus)**

**IV.**
**казнить (punish) – 'обичам' (to love)**
**лихой (teasing) – 'тъжен' (sad)**
**ныне (now) – 'преди, отдавна' (a long time ago)**
**робко (timidly) – 'избухлив' (quick-tempered)**
**Finally, we have to comment on a type of associations that we haven't come across with the semantisization experiment – syntagmatic associations:**
**валить (throw down) – 'дъжд' (Bulg. 'вали' – to rain)**
**занять (take) – 'твое время' (your time)**

The point is that such examples are infrequent and don't have a statistical representativity and because of this we can not make any conclusions out of them.

Having in mind the comparison between the first and the second experiment, we can give the following answers to the questions, raised by the study. There is no principle difference between the results of the first and the second experiment. They confirmed the presence of three basic types of associative bonds that are at the basis of the interferencial errors in the acquisition of a target language, closely related to the source language: according to sound similarity (including a mediator word), thematic and contrasting errors, with the significant predominance of the first type over the second and the third one. The results can be used by teachers of a target language, closely related to the source language, Russian in particular, in their work in the classroom and in the publishing of textbooks and handbooks.

## NOTES

1. A methodological concept unifying Russian words whose sound form is different from the sound form of the Bulgarian words. For more details refer to Kirova 1984 and Toncheva 1978.

2. This type of associative bonds is part of many classifications, for instance the one by Wundt (according to Gerganov 1984), E. Gerganov (1984). A. Klimenko (1974)defines them as phonetical.

3. They are part of A.Klimenko's (1974) classification.

4. This type of association is included in G.Miller's classifications (according to Slobin 1971, E.Gerganov

1984).

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