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## **BILINGUALISM AND ACCESS TO THE SPANISH LANGUAGE BY RUSSIAN-ROMANIAN BILINGUALS**

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**Summary.** Bilingualism is a complex process involving a variety of characteristics, among which we can distinguish a particular system of a language, as well as the ability to use it in communication. Apart from the mere fact of acquiring the knowledge of a second language, bilingualism also implies the development of specific linguistic structuring and brain functioning different from those of a monolingual individual. This fact is crucial at the time of comprehension and, consequently, learning of a third language and this is why it has been studied by analysing the understanding ability of bilingual informants to refer to a third language without the prior learning of this language and the comparison of the results with those obtained for monolingual individuals presenting each language. Thus, the hypothesis involved considers individuals presenting bilingualism between two different language families (on the example of Russian-Romanian bilingualism) manifesting better understanding of a language from one of the language families they speak natively (on the example of the Spanish language) in comparison with monolingual people presenting one of the languages considered in bilingual individuals (i.e. Russian and Romanian monolinguals). This difference between bilingual and monolingual people in the access to a third language mainly involves the difference in the way of thinking and analysing the acquired linguistic data, resulting in a more effective capacity for understanding. The specification of brain organization and the analysis of linguistic data are due to the creation of specific psycholinguistic strategies by the bilingual individual.

**Keywords:** bilingualism; multilingualism; psycholinguistics; third language; language acquisition; Russian-Romanian bilingualism.

### **Introduction**

In modern society bilingualism and multilingualism have become an absolute necessity, manifesting relations to multiple spheres of the present-day life. "It is a fruitful area for the study of language contact; it is intriguing for the way that it relates to human mind; it reflects social behaviour and the organization of society; and it can shape educational systems" (Morris Jones & Singh Ghuman, 1995, p. 1). A further significant point to bear in mind is the evident beneficial nature of bilingualism and, subsequently, multilingualism. Since the advantage of bilingualism for an individual has long been acknowledged, it is vital to indicate another important feature of bilingualism, which can play an important role in

many fields of society, be it educational, social or cultural. This aspect is connected specifically with the neuroanatomical organization in bilinguals and, particularly, cognition processes and results. Thus, bilingualism implies greater cognitive flexibility and heightened sensitivity in a bilingual individual.

Many studies on bilingualism are based on the distinction in the brain functioning between L1 and L2 in a bilingual individual, arguing various explanations of the phenomenon "bilingualism" and diverse neurological connections between conceptual and linguistic worlds. Thus, one of the theories considers bilingual individuals presenting two independent language systems, implying the existence of a kind of mental lexicon, or the representation of conceptual world, related to both L1 and L2 at the same time. But the question arisen here must be whether these are two independent lexicons connected to each of the operated languages separately or whether there is one lexicon representing a single unified system. Notwithstanding the existence of these two theories and multiple studies on the subject, it is still not fully clear which approach is completely accurate. On the other hand, a lot of studies on bilingualism focus also on the second language acquisition and its connection to L1, arguing the existence of a completely balanced type of bilingualism in the modern world.<sup>2</sup>

Nonetheless, there is one extremely significant notion to be considered, namely the one referring to the access and following acquisition of a third language. Bilingualism, therefore, implies greater cognitive plasticity and increased sensitivity in bilingual people. This results in the creation of specific strategies contributing to a possible particular development of brain functioning in reference to the comprehension of a third language. However, it is important to state that this is primarily applied to the comprehension of a third language from one of language families presenting bilingual's L1 or L2. Thus, considering bilingualism between two different language families, as in our case of Russian-Romanian bilingualism between Slavic and Romance language families, among all other presented advantages we can see that it has an even greater benefit for an

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<sup>2</sup> The bibliography used for this section is listed in references at the end of the article.

individual, considering and resulting in certain facility to comprehend a language from the same language family as the one presented by a bilingual individual without its prior learning, and that is the exact basis for our hypothesis in this study. Also, along with the fact that this aspect is vital in access to a third language and its subsequent acquisition, it can also be significant in various aspects of our lives, for example, in education.

Consequently, the main subject of consideration of the present paper is the Russian-Romanian bilingualism, i.e. the bilingualism between two different families of languages in respect of the comprehension of the Spanish language (a language from the same language family as Romanian) without its prior learning. The objective is, therefore, the analysis of informants' ability to understand a language they do not know proceeding from the "language baggage" acquired during their lives, implying the difference in the way of thinking and analysing the acquired language data resulting in more successful understanding capacity.

In order to perform our investigation, we had to complete the following tasks:

- To create a general corpus, and divide it into 3 corpuses (texts, statements and word forms) and their subsequent data categorization;
- To transform the corpuses into questionnaires for the experiment;
- To reveal comprehension grade in each of the groups of informants using the designed questionnaires;
- To compare the acquired results and identify the group of informants with the highest comprehension results;
- To confirm or refute the conclusions and hypothesis.

It is important to note that this is a socio-cultural investigation, having as the result confirmation or refutation of the established hypothesis, defined in the following way:

Bilingual people, presenting bilingualism between two different families of languages (on the example of the Russian-Romanian bilingualism) comprehend and then acquire better, that is to say more efficiently, a language from any of the families of languages they speak natively (on the example of the Spanish language) in comparison with the monolingual individuals presenting any of the

languages considered in the bilingual individuals (that is the Russian and the Romanian monolinguals).

Following the statement of our hypothesis, we can observe that three different groups of informants have been considered here – Russian-Romanian bilinguals, Russian monolinguals and Romanian monolinguals:

**1. Russian-Romanian bilinguals** (Moldova):

- Native language: Russian, Romanian. No knowledge of Spanish.
- Russian-Romanian bilinguals were born in Moldova, but are proceeding from Russian families or representing one side of this origin, be it their mother's or father's. As the official language in Moldova is Romanian, therefore, such individuals present a natural or balanced type of bilingualism with two languages acquired due to different social, economical or political reasons.

- This group contains four individuals (3 men and 1 woman from the 1<sup>st</sup> age group).

**2. Russian monolinguals** (Russia, Saint-Petersburg):

- For the Russian monolinguals the requirement was to speak Russian natively, but not to speak and not to have any contact with either Romanian or Spanish.

- This group consists of the total number of 5 individuals (1 man from the 2<sup>nd</sup> age group and 3 women).

**3. Romanian monolinguals** (Romania):

- For Romanian informants we required not to speak and not to have any contact with Russian or Spanish.

- This group contains two representatives – natives from Romania (1 man from the 1<sup>st</sup> age and 1 woman from the 2<sup>nd</sup> age group).

After having determined the existing sample groups, it is important to state that all the informants have similar social, cultural and educational backgrounds. Particularly, to refer to the socio-economic background presented by the informants involved, all of them have vocational or higher education implying a number of professions represented among which we can find architects, a painter, a secretary, an IT specialist, an economist, a call-centre coordinator, a teacher, a dentist and a shop assistant. Finally, to refer to the background knowledge of other languages, there were no limitations.

In addition, all informants presented in our sample group were divided into two groups according to their age. Thus, we have the first group of individuals between the ages of 20 and 30 and the second group, represented by the respondents aged in the interval between 35 and 50 years old. This is primarily a structural organization for a more comfortable process of result interpretation at the final stage of our investigation.

## **Methodology**

### **Definition of the field**

The field to be investigated was lexical and communicative represented by public writings of urban transport of Barcelona. All these public writings considered transport security, administration and orientation and were written in the Spanish language. This field was chosen primarily for its representative geo-economical, social and cultural aspects. Barcelona is a city where we can see all the communicative examples as well as problems. Here a vast majority of communication arise between passengers and service staff, tourists and services of transport orientation and administration.

### **Creation of corpus**

The next stage of the investigation was the creation of a general corpus. It was a written corpus with the material consisting of public writings taken in the urban transport of the city of Barcelona. Furthermore, the general corpus was divided into three different corpuses with the following material: one presenting words or word forms, the second presenting phrases or sentences and the third presenting texts. People can acquire words differently according to a specified context, that is the words presented isolated can be viewed and understood with less grade of correctness probability than those shown within a context. Apart from that, it was important to see the function of the context and whether the morphology helped or complicated the process of comprehension. Besides that, it was also of great

interest to check how anaphoric and cataphoric relations, the notion of transparency and so on would be manifested there.

### **Categorization of obtained data**

All the obtained data in the three corpuses have been categorized for the further analysis. Unlike the following line of investigation considering the development of questionnaires based on the present corpus, the creation of word forms corpus was the first step in this stage of the study, since it represented the most detailed approach to the analysis. Furthermore, we took our characterization scheme for word forms as the example for our further investigation and subsequent description of statements and texts.

### **Word forms**

For the categorization of word forms there was used a morphological analyzer that applied a set of labels to represent the morphological information of words. This set of tags is based on the labels proposed by the group EAGLES for the morphosyntactic annotation of lexicons and corpus (see Table 1):

*Table 1.*

#### **Morphosyntactic annotation of lexicons and corpus**

<b>ETIQUETTES</b>			
<b>Position</b>	<b>Attribute</b>	<b>Value</b>	<b>Code</b>
<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>	<i>Column 4</i>

Furthermore, due to the fact that there was no representation of some grammatical notions, for example, comparative forms of adjectives, among others, some new additional elements were introduced (see Table 2):

*Table 2.*

#### **Morphosyntactic annotation of lexicons and corpus**

<b>ADJECTIVES</b>			
<b>Position</b>	<b>Attribute</b>	<b>Value</b>	<b>Code</b>
1	Category	Adjective	A

<b>ADJECTIVES</b>			
<b>Position</b>	<b>Attribute</b>	<b>Value</b>	<b>Code</b>
2	Type	Qualificatory	Q
3	Grade	Appreciative	A
4	Gender	Masculine	M
		Feminine	F
		Common	C
5	Number	Singular	S
		Plural	P
		Invariable	N
6	Case	-	0
7	Function	Participle	P
		Comparative	C

All in all, the total number of word forms in our corpus was 969. All of these were categorized and presented in the alphabetical order. The following table represents a section of the resulted corpus with the proposed categorization tagging (see Table 3):

Table 3.

**Section of the resulted corpus with the proposed categorization tagging**

<b>Nº</b>	<b>Word form</b>	<b>Lemma1</b>	<b>TAG1</b>	<b>Lemma2 (optional)</b>	<b>TAG2 (optional)</b>
109	bicicleta	bicicleta	NCFS000	-	-
110	bienes	bienes	NCMI000	-	-
111	billete	billete	NCMS000	-	-
112	billetes	billete	NCMP000	-	-
113	boca	boca	NCFS000	-	-
114	bordo	bordo	NCMS000	-	-
115	borde	borde	NCMS000	-	-
116	botón	botón	NCMS000	-	-
117	botones	botón	NCMP000	-	-
118	brazos	brazo	NCMP000	-	-
119	buen	buen	AQ0MS00	-	-
120	busque	buscar	VMMP3S000	-	-
121	cabinas	cabina	NCFP000	-	-
122	cables	cable	NCMSP000	-	-
123	cada	cada	DI3CS00	-	-
124	caídos	caer	VMP00PM00	-	-
125	caja	caja	NCFS000	-	-

## **Statements**

Following the tagging annotation model applied to the corpus of word forms, a model concerning different types of them has been created for the categorization of statements:

- Sentential Sentences (O)
- According to the number of personal verbal forms
- According to syntactical relations between members
- According to speaker's behaviour
- Non-sentential Phrases (F)

The first aspect, which is important to note to refer to sentences, is the number of personal verbal forms. It implies three categories: simple, compound and complex sentences. The second aspect, which is important to take into account while characterizing sentences, is a syntactical relation between members of a sentence. As in case of the number of personal verbal forms, here we can distinguish several sub-categories. Thus, according to the relation between its members, a sentence can be personal or impersonal, attributive or predicative, active or passive, transitive or intransitive, and, finally, pronominal or non-pronominal. Pronominal sentences in their turn can be non-reflexive, reflexive, reciprocal, with ethic dative (or dative of interest), with causative verbs and pseudo-reflexive. The final category that must be taken into account while analysing the characteristics of sentences is speaker's behaviour, according to which sentences can be of the following types: declarative, interrogative, imperative, exclamatory, desiderative, doubtful.

All things considered, the total number of statements in this corpus was 322. They were presented in the alphabetical order by the first word. Below there is an extract from the statements corpus with created tagging annotations (see Table 4):

*Table 4.*

### **Extract from the statements corpus with created tagging annotations**

<b>Nº</b>	<b>Statement</b>	<b>Code</b>
105	Estación de Ferrocarril	F
106	Estación Marítima	F



Nº	Statement	Code
107	Estación terminal	F
108	Este colectivo tiene preferencia en el uso de los ascensores.	OSPPreActTrNproA
109	Evacúe con rapidez, pero no corra	OAdvsiPre0IntrNproExh
110	Existe un ejemplar del Reglamento de viajeros a disposición de los usuarios en todas las estaciones.	OSPPreActIntrNproA
111	Extracto de las disposiciones contenidas en el reglamento de la ley de ordenación de los transportes terrestres.	F
112	Familias monoparentales y numerosas	F
113	Facilita el trabajo de los inspectores	OSIPre0TrNproExh
114	Facilite el trabajo a los inspectores	OSIPre0TrNproExh

### **Texts**

As well as in the case of statements inspired by the word forms annotation presented by the group EAGLES and concerning word forms corpus, for this purpose there has been created a scheme representing possible types of texts in the Spanish language and providing the creation of all possible combinations for the identification of a particular text. The main criteria for the identification of a text were: the channel, i.e. the way the text was communicated; the register, i.e. "a variety of a language or a level of usage, as determined by degree of formality and choice of vocabulary, pronunciation, and syntax, according to the communicative purpose, social context, and standing of the user" (Oxford Dictionary of English); the modality and the subject. Due to the fact that our corpus of texts consisted mainly of administrative and legal information data, in terms of modality distinction, all texts samples corresponded to either normativity (E) or description (D) labels sharing all other tagging annotations:

- Channel
- Written (E)
- Register
- Formal (F)
- Subject
- Legal and administrative (J)

The total number of texts in this corpus is 32. The following section considers a fragment from the obtained corpus of texts with implied tagging annotations (see Table 5):

*Table 5.*

**Extract from the obtained corpus of texts with implied tagging annotations**

<b>Nº</b>	<b>Text</b>	<b>Code</b>
1	10 desplazamientos integrados en todos los modos de transporte según las zonas a atravesar (de 1 a 6 zonas). Título multipersonal y horario.	EFEExJ
2	50 desplazamientos integrados en todos los modos de transporte según las zonas a atravesar (de 1 a 6 zonas). Validez: 30 días consecutivos desde la primera cancelación. Título unipersonal y horario.	EFEExJ
3	70 desplazamientos integrados en todos los modos de transporte según las zonas a atravesar (de 1 a 6 zonas). Validez: 30 días consecutivos desde la primera cancelación. Título multipersonal y horario.	EFEExJ
4	Aparato de alarma paro de escalera. El uso indebido será castigado por la ley art. 11.2 APT. C) del reglamento de viajeros de este ferrocarril.	EFEExJ
5	Apertura de puerta en caso de emergencia: 1. Romper el vidrio de la caja de la maneta. 2. Accionar la maneta. 3. Abrir la puerta manualmente. Terminantemente prohibido el uso indebido.	EFDJ
6	¡Atención! Con luz roja, puerta fuera de servicio. Utilice las otras puertas. No entrar ni salir con luz amarilla intermitente.	EFDJ

***Experiment***

After having created and categorized the corpuses of texts, statements and word forms, they were to be transformed into questionnaires for the subsequent experiment with informants. All three corpuses were transformed in different ways. In addition, due to the fact that we concerned two different language groups (Russian and Romanian), all the questionnaires had to be created in each of these languages.

Russian and Romanian monolinguals were asked to complete questionnaires in their own language, whereas Russian-Romanian bilinguals were due to complete both sets of questionnaires in Russian and in Romanian correspondingly.

### **Personal data questionnaire**

Personal data questionnaire represented the preliminary stage of the experiment and aimed to help us categorize the established group of informants for the investigation. Thus, it included basic information of personal type regarding age, linguistic background and socio-economic status.

### ***Texts***

This was the first questionnaire to be completed by informants. It was crucial to start our process of the experiment with questionnaire texts since they represented the most general approach to the study of the given linguistic forms and, at the same time, proposed the analyses of linguistic data within their context, which was of great interest to analyse in order to compare with the results of subsequent statements and later word forms questionnaires, which corresponded to different approaches and were analysed and interpreted in different ways.

Thus, in the questionnaire texts, three different questions were proposed for each entry with three answer options to choose the correct one. The first question considered the corresponding type of a given message (i.e. the text), the following question referred to the addressee and the last question dealt with tasks and aims of a given message.

### ***Statements***

This questionnaire presented a distinct structure. In order to assess the informants' comprehension capacity of the forms under consideration, the informants were proposed to choose between 6 options of the understanding degree that most described their understanding of the sentence or phrase in

question, aiming at comprehending the general overview and the essential idea of the form and being able to select the most appropriate description of this. Considering this aspect, it is important to note that the main idea was to propose an even number with no "middle" integer that could be chosen easily over other options. Thus, the informants had to pay close attention to understanding degree descriptions in case of doubt which one to choose between the mid-options. The marginal options in case of any understanding degree quantity selected for the case were the same, i.e. very clear and did not represent a problem for informants. These are the understanding degree options proposed:

1. I do not understand either the sentence on the whole or its constituents.

2. I only understand separate words in the sentence, but I cannot understand the meaning of the whole sentence.

3. I understand only the general sense of the sentence, although many words are unclear to me.

4. I understand the meaning of the sentence, although some words are unclear to me.

5. I understand completely the whole sentence, although I am not sure about the meaning of one (two) words.

6. I understand the whole sentence and its constituents completely.

In addition, in reference to the existing informants' groups, we must note that this questionnaire represented an identical structure for both languages with understanding degree options being translated into Russian and Romanian.

### ***Word forms***

This was the last questionnaire of our investigation to be completed by the informants. It consisted of word forms composing all the texts and statements of our corpus. In this questionnaire word forms were presented in the alphabetical order and in their original, unmodified form. Furthermore, this questionnaire was not simply translated into Russian and Romanian according to the established groups of informants, but, in fact, it represented a different and separate questionnaire for each language.

Principally, for the word forms questionnaire three different translation variants were proposed with the correct one to be chosen. In order to complete the questionnaire, the informant was asked to choose the most appropriate translation in the corresponding language, be it Russian or Romanian. There were different kinds of strategies used to compose the options in the questionnaire:

- *Part of speech enquiring:*

304	el	Что это?		
		а. предлог	б. артикль <b>x</b>	с. наречие

This structure was used with the structural parts of speech, i.e. prepositions and articles, whose meaning is difficult to derive without a context or whose meaning is closely related to notional parts of speech linked to them; or auxiliary verbs, which represent a totally structural unit with no semantic value.

- *Different translation options within the same part of speech and form:*

160	civil	а. цивилильный	б. гражданский <b>x</b>	с. городской
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This question consisted in presenting three different options, all following the main rule "incorrect-transparent and correct-opaque". However, the particularity of this structure was the fact that the options proposed to choose did not only constitute the same part of speech, but moreover the identical grammatical form. Thus, for example, in case of verbs it could be the structure of the third person singular, or the second person plural, and etc.; for nouns it could be all singular forms and so on. Thus, the main idea of this option was to focus primarily on the semantic aspect of the structure not confusing the informant by making them choose the correct form or part of speech as well.

- *Different translation options within the same part of speech but a different form:*

379	fichero	а. файл <b>x</b>	б. зажигалка	с. фишка
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This form was very similar to the one described above with the main difference in the aspect considering the form of the word. The options, therefore, applied to

the same part of speech. However, the grammatical form was different. It is important to state that this option primarily implied the verb since other parts of speech cannot exhibit the same variety of forms as this one. The main objective of this structure of options consisted not so much of the semantic interpretation of the word form, but rather of involving the notion of grammatical understanding, having to pay attention to the original form of the word.

- *Different translation options from different parts of speech:*

414	gratis	а. гранит	б. бесплатно ✕	с. гравировать
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The present option might be considered to be most complicated and confusing for the informant, since not only did the informants have to choose the correct semantic option, but they also had to select a correct part of speech and form from the presented ones. The main difference consisted in including the grammatical notion of the word form, apart from its semantic interpretation. The main aim in this case was to evaluate the capacity of informants to identify the correct option from the cross-selected ones based on both semantic and grammatical aspects of the structure.

- *Identical translation options for different parts of speech:*

509	línea	а. линия ✕	б. линейка	с. линейный
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This was the last proposed structure of option making presenting an opposite to the first structure. In this case the informant was asked to choose the correct option between three semantically similar structures but representing different parts of speech. The main target of this structure was to exclude the semantic aspect from the basis, paying attention to structural and grammatical aspects and seeking the correct option mainly from the grammatical point of view. The idea was also to analyse the analytical aspect of the informant, evaluation the logical capacity of deducing the meaning based on the structural units, such as prefixes, suffixes, and etc.

## Evaluation and interpretation of results

### Texts

There were 32 texts presented in this questionnaire. These were divided into 3 sections of 10 texts and the last section with the remaining 2 texts respectively. We are going to analyse the results obtained for each section for a more compact and clear data interpretation.

Table 6.

### Russian-Romanian bilinguals, the Russian language, 1<sup>st</sup> age group

Table part 1															
-	1			2			3			4			5		
	c	c	b	b	a	c	a	c	a	a	c	c	a	a	c
TX1RUSROM11	c	c	b	b	a	c	a	c	a	a	c	c	a	a	c
TX1RUSROM12	a	c	b	c	a	c	b	c	a	a	c	c	a	a	c

Table part 2															
-	6			7			8			9			#		
	c	c	b	b	c	b	a	a	b	a	b	c	a	c	b
TX1RUSROM11	c	c	a	b	c	b	a	b	b	a	a	b	a	c	b
TX1RUSROM12	c	c	b	b	c	b	a	a	a	a	b	c	a	c	b

Table 7.

### Russian monolinguals, the Russian language, 1<sup>st</sup> age group

Table part 1															
-	1			2			3			4			5		
	c	c	b	b	a	c	a	c	a	a	c	c	a	a	c
TXRUS11	a	b	c	c	a	c	b	b	b	b	a	c	a	a	c
TXRUS12	c	b	c	b	b	c	a	a	a	a	c	c	a	a	c

Table part 2															
-	6			7			8			9			#		
	c	c	b	b	c	b	a	a	b	a	b	c	a	c	b
TXRUS11	c	c	c	c	c	c	a	b	a	b	b	b	a	c	b
TXRUS12	c	c	c	b	c	b	c	a	a	c	a	c	a	c	b

Regarding the Russian language and two groups of informants representing them, the bilingual group of informants showed higher results in reference to all the aspects: the percentage of correct answers, the total number of correct

answers, the percentage of correct sets of questions and the total number of correct sets of questions for a specific text.

Table 8.

**Russian-Romanian bilinguals, the Romanian language, 1<sup>st</sup> age group**

Table part 1															
-	1			2			3			4			5		
	b	c	a	a	c	c	c	c	a	b	b	a	c	b	b
TX2RUSROM11	a	c	b	b	a	c	c	c	c	b	b	c	c	b	b
TX2RUSROM12	b	c	a	a	c	c	c	c	a	c	b	b	a	b	a
Table part 2															
-	6			7			8			9			#		
	a	b	c	a	c	b	c	b	a	a	c	c	a	b	c
TX2RUSROM11	a	b	b	c	b	a	b	b	a	a	c	b	a	b	c
TX2RUSROM12	a	b	c	c	c	b	c	b	b	a	c	c	a	b	c

Table 9.

**Romanian monolinguals, the Romanian language, 1<sup>st</sup> age group**

Table part 1															
-	1			2			3			4			5		
	b	c	a	a	c	c	c	c	a	b	b	a	c	b	b
TXROM11	a	a	b	b	c	b	c	b	b	c	b	a	c	b	b
Table part 2															
-	6			7			8			9			#		
	a	b	c	a	c	b	c	b	a	a	c	c	a	b	c
TXROM11	a	b	b	c	c	b	a	b	c	b	a	b	b	c	b

Referring to the results obtained for the Romanian language and by both groups of informants involved we can also see higher results of bilingual individuals in comparison to those obtained by the Romanian monolinguals regarding all aspects listed.

Analysing the results obtained for both Russian and Romanian languages and by three groups of informants involved, the average results were as follows (see table 10):

Table 10.

**Average results of the responses**

		Correct answers (%)	Correct answers	Correct sets of questions (%)	Correct sets of questions
<b>Russian monolinguals</b>	<i>1<sup>st</sup> age group</i>	65.1%	62.5	43.75%	14



		Correct answers (%)	Correct answers	Correct sets of questions (%)	Correct sets of questions
	<i>2<sup>nd</sup> age group</i>	65.28%	62.7	33%	11
<b>TOTAL</b>		65.19%	62.6	38.37%	12.5
<b>Romanian monolinguals</b>	<i>1<sup>st</sup> age group</i>	34.37%	33	3.12%	1
	<i>2<sup>nd</sup> age group</i>	72.91%	70	53.12%	17
<b>TOTAL</b>		53.64%	51.5	28.12%	9
<b>Russian-Romanian bilinguals</b>	<i>1<sup>st</sup> age group</i>	78.64%	75.5	77%	18
<b>The Russian language</b>	<i>2<sup>nd</sup> age group</i>	71,35%	68.5	35.93%	11.5
<b>TOTAL</b>		74.99%	72	56.46%	14.75
<b>Russian-Romanian bilinguals</b>	<i>1<sup>st</sup> age group</i>	80.18%	77	56.24%	18
<b>the Romanian language</b>	<i>2<sup>nd</sup> age group</i>	75%	72	56.24%	18
<b>TOTAL</b>		<b>77.59%</b>	<b>74.5</b>	<b>56.24%</b>	<b>18</b>

1. On average, bilingual individuals obtained significantly higher results in comparison with those obtained by both groups of monolingual individuals, i.e. Russian and Romanian respectively.

2. Within the same group of informants, the bilingual individuals belonging to the first age group manifested higher score than those acquired by the second age group representatives.

3. Regarding the differentiation of the obtained results in relation to the Russian monolingual sample, we can state that the results are almost identical.

4. In reference to the same aspect observed in the Romanian monolinguals' results, we could see that the second age group representatives manifested higher results than those obtained by the first age group informants.

5. The previous points lead us to the conclusion that, on the whole, the fact of belonging to a particular age group does not necessarily influence the understanding capacity of informants in relation to a third unknown to them language. In addition, this differentiation according to the age of informants was a structural criterion so as to be able to present results in a more comprehensive



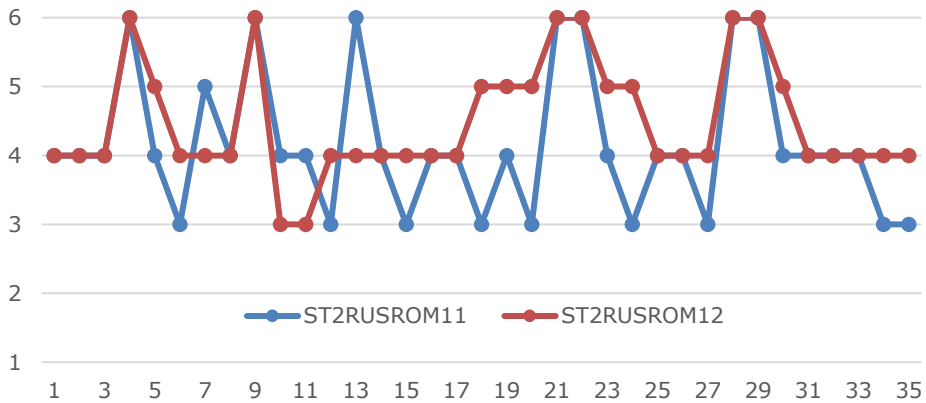


Fig. 2. **Russian-Romanian bilinguals, the Romanian language, 1<sup>st</sup> age group**

Regarding the results obtained by the bilingual group, we can observe that there are no statements with the lowest degrees marked (1 and 2) corresponding to a total and major lack of understanding of the meaning of the whole construction or its constituents. A very different situation was observed in case of monolingual individuals regarding both languages implied:

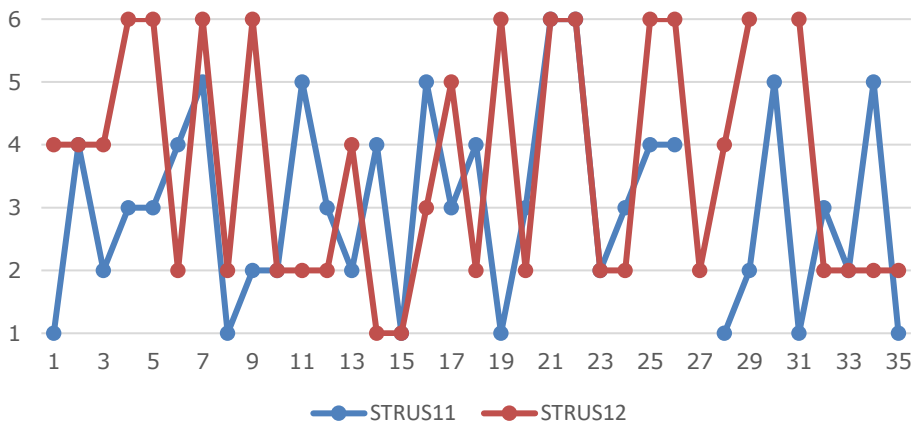
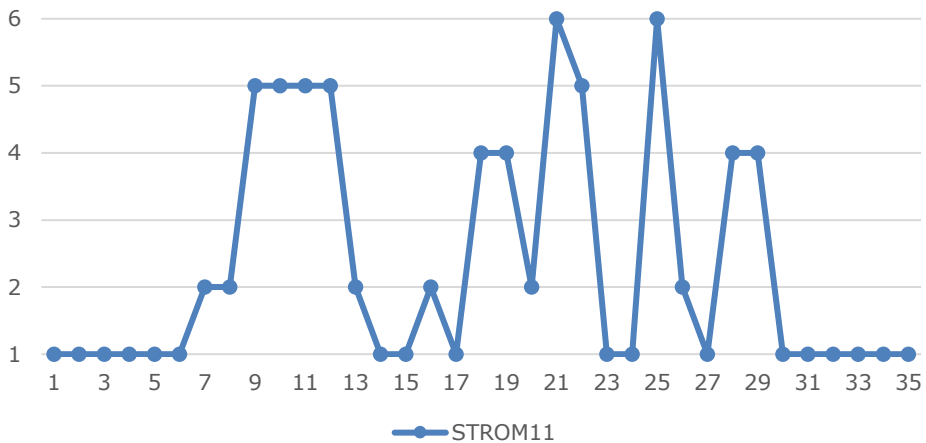


Fig. 3. **Russian monolinguals, the Russian language, 1<sup>st</sup> age group**



*Fig. 4. Romanian monolinguals, the Romanian language, 1<sup>st</sup> age group*

Thus, we can see in these graphs that the answers are quite dispersed for both groups of informants generally ranking from 1 to 6. In addition, the average results are focused among the degrees 2 and 3, representing much lower understanding capacity than those manifested by bilingual sample groups.

In relation to the highest-scored statements presented by both groups of bilingual informants, we can draw some general conclusions: the vast majority of these constructions represented simple phrases with a low number of components with an average number of five words and highly transparent vocabulary. Rather interestingly, we could indicate that our informants manifested very similar results in reference to the highest-scored statements for both languages considered. It shows that their understanding capacity is very high and rather established and not arbitrary. Moreover, another interesting discovery was the fact that many of the highest-ranked statements appeared also in reference to two other sample groups: Russian and Romanian monolinguals, what can indicate, in its turn, that these common highest-ranked statements represent a combination of factors which helped to comprehend them perfectly independently of the language of the origin of our informants. We can assume that the key factor was a simple grammatical construction, implying a very low number of words used, in addition to the most important aspect regarding the universally transparent lexicon implied (see Fig. 5):

21	¡Atención!	F
9	Acceso a Metro	F
13	Actuación en caso de emergencia	F
22	Autobuses de la zona	F
28	Billetes y tarjetas	F
29	Buen viaje	F
4	20:30H - finalización del servicio	F
5	A partir del 1 de septiembre de 2012 nuevas tarifas de transporte público	F
7	Abrir la puerta manualmente	F
25	Ayuda a la evacuación	F
19	Asientos reservados	F

Fig. 5. Key factors

In reference to the general results obtained for the statements questionnaire the following average scores with subsequent general conclusions were derived (see Table 11):

Table 11.

**General results of the responses**

Criteria		Average understanding degree (out of 6)
Russian monolinguals	1 <sup>st</sup> age group	2.81
	2 <sup>nd</sup> age group	2.14

Criteria		Average understanding degree (out of 6)
<b>TOTAL</b>		<b>2.47</b>
<b>Romanian monolinguals</b>	<i>1<sup>st</sup> age group</i>	1.6
	<i>2<sup>nd</sup> age group</i>	2.5
<b>TOTAL</b>		<b>2.05</b>
<b>Russian-Romanian bilinguals The Russian language</b>	<i>1<sup>st</sup> age group</i>	4.34
	<i>2<sup>nd</sup> age group</i>	4.02
<b>TOTAL</b>		<b>4.09</b>
<b>Russian-Romanian bilinguals The Romanian language</b>	<i>1<sup>st</sup> age group</i>	4.08
	<i>2<sup>nd</sup> age group</i>	4.05
<b>TOTAL</b>		<b>4.06</b>

1. Russian-Romanian bilingual individuals presented significantly higher scores in reference to those obtained by the representatives of both monolingual sample groups, i.e. Russian and Romanian.

2. As regards the average score obtained by all the three groups of informants, we can say that the Romanian monolingual sample group manifested the lowest score in respect to those obtained by two other groups of informants presented. Furthermore, the second age group of Romanian informants presented almost equal average result to the average result obtained by the Russian monolingual group (2.5 and 2.47).

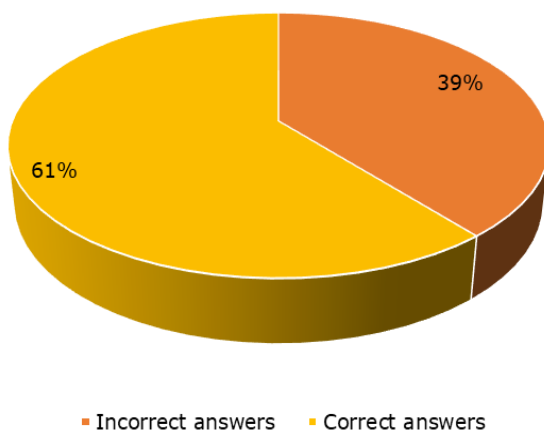
3. In relation to the age groups involved, we cannot state any significant influence of those on the results obtained in the given questionnaire. The same tendency has been established in relation to the questionnaire "Text" and has been characterized as a mere structural division rather than a significant aspect to analyse.

4. The average results obtained in reference to the present questionnaire are similar to those obtained for the questionnaire "Text" with the bilingual individuals having scored the highest points. This can mean that the bilingual individuals do present a significant facility in the understanding process

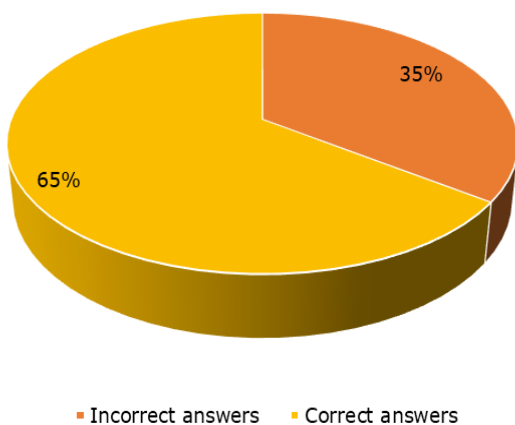
of isolated statements, as well as complete texts, as in the case of the previous questionnaire.

### **Word forms**

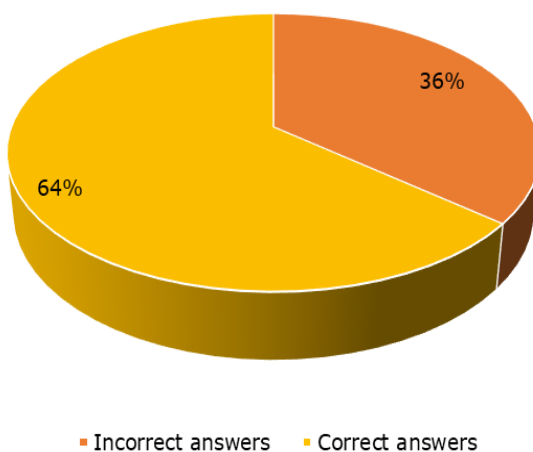
General results on the subject of correctly acquired options presented by each informant were manifested in the format of charts (see Fig. 6–9) for more visual interpretation:



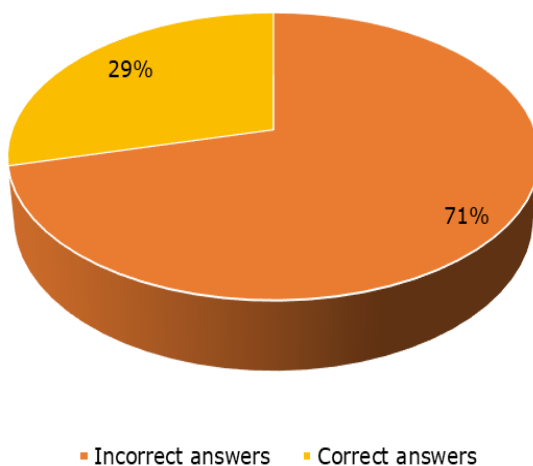
**Fig. 6. Russian-Romanian bilinguals (Russian WF1RUSROM11)**



**Fig. 7. Russian monolinguals**



*Fig.8. Russian-Romanian bilinguals (Romanian WF2RUSROM11)*



*Fig. 9. Romanian monolinguals (WFROM11)*

Considering the results obtained for the Russian questionnaire “Word form” we can see that on average the percentages attained by the bilingual sample group are lower than those proposed by the Russian monolingual group of informants. In addition, considering each informant’s score individually, we can note that two scores presented by both age groups involved in the Russian monolingual samples are significantly higher than the result provided by the Russian-



Romanian bilingual informant with those scores being arranged as follows: 61% for the bilingual individual versus 80% proposed by the first age group representative and 70% given by the second age group representative respectively. On the other hand, the two remaining informants involved in the Russian monolingual sample group manifested much lower results in comparison to those expressed in the bilingual informant's score.

As regards the results proposed for the Romanian questionnaire "Word form", we can note that the only representative of the Romanian monolingual group of informants showed much lower results in comparison to those obtained for the bilingual individual, with their average percentage arranged in the following way: 64% for the Russian-Romanian bilingual individual and 29% for the Romanian monolingual individual. This allows us to draw the following conclusions (see Table 12):

Table 12.

### Conclusions of the responses

		Correct answers	Correct answers %
<b>Russian monolinguals</b>	<b>1<sup>st</sup> age group</b>	783	80%
	<b>2<sup>nd</sup> age group</b>	358	37%
		686	70%
		440	45%
<b>TOTAL %</b>		51%	
<b>TOTAL GROUP %</b>			65 %
<b>Romanian monolinguals</b>		281	29 %
<b>Russian-Romanian bilinguals The Russian language</b>		594	61 %
<b>Russian-Romanian bilinguals The Romanian language</b>		621	64 %

1. The bilingual sample group did present a higher score in respect to that obtained by the Romanian monolingual individual. This aspect is very important to us since in both cases we refer to individuals with the Romanian native language, which is from the same language family as Spanish. Thus, the fact that the bilingual individual obtained higher results determined the understanding advantage of a bilingual individual in respect to a monolingual person. This key factor is explained not only by the fact that the bilingual individual has two native languages presented, but by the idea that the existence of these two native languages influences and, perhaps, creates a specific way of

thinking and interpreting linguistic data, thus, leading to a possibility to understand a language they do not know based on their language baggage and specially developed brain functioning.

2. The bilingual individual did not present higher average score in reference to that of Russian monolingual sample group. This result can be interpreted and, hence, explained in different ways. Firstly, the number of informants involved in this stage of questionnaire completion is not the same as referring to other two questionnaires. Thus, average results vary significantly. On the other hand, in terms of the Russian monolingual group, the number is different as well, with only one informant remaining in the first age group. Also, we can see that the Russian informant from the first age group and the second Russian informant for the second age group obtained high results equal to 80% and 70%. This fact must be analysed attentively. Thus, considering the personal data questionnaires completed by both informants, we can see that the first one presented a very advanced linguistic background with high knowledge of the English, French and German languages. The second informant, nevertheless, presented only the knowledge of the English language, which is also presented by all other informants of the groups. Thus, we can state that the knowledge of English might have influenced the results regarding at least the notion of transparency. Nonetheless, we are not going to take it into account since other informants also presented high knowledge of English. Hence, we could deduce that the French and German languages might have contributed positively to the first informant's understanding capacity. At the same time, this aspect is not so clear since the representative of the Romanian monolingual group also manifested the knowledge of German, for instance. And bilingual informants manifested the knowledge of French and so did the third informant of the Russian monolingual group. On the other side, considering the results by the other two informants of the Russian monolingual group, we can see low results equal to 37% and 45%, whilst the bilingual individuals obtained 61% and 64% respectively. We might suggest at this juncture that there were some extra-linguistic aspects involved, which influenced the two highest-scored Russian monolingual informants to obtain such high results. For example, considering their profession, we can see that the first informant's one is related to the language, having studied French philology, whilst the second informant's one is artistic referring to a vocational

training course. Considering the notion of creativity, it is important to state that the first informant has previously applied to an artistic degree too, having as a hobby drawing and painting. Thus, might we suggest that the artistic abilities could have helped in understanding? It is not clear, as the two other informants of the same group also have professions related with arts and creativity, namely a designer and an architect. So, this aspect remains unclear. It is probably the combination of all the aspects considered, altogether with individual language facility and analytical way of thinking.

3. The lowest score encountered in this questionnaire completion belongs to the Romanian monolingual individual. This aspect is very important to note, although it does not contradict the results obtained for the previous two questionnaires. We have already tried to analyse the possible reasons for such a low result and have indicated that it must be explained by a combination of facts and circumstances, including dominant hemisphere, linguistic capacities, language background, way of thinking and perceiving things, and, perhaps, other factors which are still unknown to us. Nevertheless, the fact is that in all three questionnaires this informant presented very low scores, which confirms the idea that this is not a coincidence but a systematic result.

### **Research limitations**

After having presented the methodology and results of the present work, it is important to indicate the study limitations. Primarily, it concerns the bilingualism between Russian and Romanian, being examples of languages from different language families. We assume that the results obtained must also refer to bilingualism between other languages as well on condition that they belong to different language families. In addition, the target language considered was Spanish, being a representative of a language from the same language family as Romanian. Similarly, the idea implied corresponds to the fact that the hypothesis analysed must also deal with the access to any other representative of the Romance language family, be it Italian or Catalan, for example, as well as the Slavic language family too. Finally, due to the extensive size of the corpus implied and, subsequently, the big size of questionnaires created, the number of informants, who participated in the questionnaire completion, had to be reduced

to the implied one. Nonetheless, the most important issue to investigate was analysed correctly showing the beneficial effect of bilingualism on the comprehension of another language in comparison with a monolingual representative of the same language family. Ideally, due to the novelty of the study, the idea behind this work is to continue investigating this particular kind of bilingualism between different language families with reference to other language families as well and with the creation of shorter data corpuses and questionnaires.

### **Conclusions**

On average, bilingual individuals manifested significantly higher results in respect to other two groups of informants as regards the questionnaires "Text" and "Statement". This aspect shows that they present a higher facility in understanding a third language owing to the fact that the native-like competence in two languages has influenced their brain functioning and way of interpreting linguistic data, contributing significantly to their comprehension capacities.

In relation to the questionnaire "Word form", the Russian-Romanian bilingual informant manifested higher results in comparison to those acquired by the Romanian monolingual individual and two individuals from the Russian monolingual group.

The Russian monolingual group presented high scores in respect to two individuals, one of whom presented a very rich linguistic background that can explain the fact that all the questionnaires completed by this individual yielded high results, and another - average linguistic background and the existence of an artistic profession. Nonetheless, the performed analysis allows drawing the conclusion that there should be a combination of various factors which have led to such high results: a dominant hemisphere; a creative job, profession or hobby; a rich linguistic background; or other extra-linguistic reasons.

Considering the results obtained in the course of questionnaires "Text" and "Statement" completion, we could observe the same data tendency in respect to all the language groups and their representatives, i.e. Russian-Romanian bilingual individuals presented higher results in understanding a third language as regards complete texts of different sizes, isolated statements of various types (non-sentential phrases, simple, complex and compound sentences), and word

forms given without their context and in their original form, including notional and structural parts of speech in diverse structures.

Finally, we can state that our hypothesis, implying the assumption that bilingual individuals show a higher understanding facility in respect to an unknown language belonging to any of the language families related to the languages they speak natively, proved to be correct in relation to the questionnaires "Text" and "Statement", since both monolingual age groups presented much lower results in comparison to those acquired by bilingual individuals as regards both languages involved. What concerns the questionnaire "Word form", bilingual individuals showed higher results than the Romanian monolingual individual. This situation is very important to indicate since it indicates that apart from a simple knowledge of one more language at a native level, bilingualism implies a difference in the way of thinking and analyzing acquired language data, thus, resulting in a more successful understanding capacity despite not having learnt the language considered. This statement is to be emphasized since it can define future educational methodology leading to a successful apprehension of foreign languages based on the acquired bilingualism by means of providing stronger methods of bilingual education based on bilingualism between different language families, thus, supplying the child with the possibility to benefit from it by developing specific psycholinguistic strategies contributing to a significant facility in access and subsequent acquisition of a third (and other) languages.

As an experimental study, this work presents a new angle on analyzing bilingualism with a practical application of natural language processing by means of the created corpuses characterization in terms of tagging annotations. Nowadays, bilingualism represents a very popular line of investigation from different perspectives. However, the specific study of bilingualism between different language families in terms of the access to, rather than acquisition of, another language represents an original perspective of the problem, which has to be developed further. Ideally, there must be other studies conducted on this subject with the implementation of other language families and target languages with possible neuroanatomical interpretations of brain functioning in bilingual versus monolingual individuals in reference to their access to a third language without its prior learning.

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**DVIKALBYSTĖ IR TREČIOJI KALBA: RUSŲ – RUMUNŲ KALBŲ  
INDIVIDŲ SANTYKIS SU ISPANŲ KALBA**

**Santrauka.** Dvikalbystė – tai sudėtingas procesas, kuriam būdingos tokios charakteristikos: konkreti kalbos sistema ir gebėjimas ją vartoti komunikacijos procese. Be antrosios kalbos išmokimo fakto, dvikalbystė taip pat reiškia konkrečios lingvistinės struktūros vystymąsi bei smegenų veiklą, kuri skiriasi nuo vienakalbių individų. Šis faktas yra lemiamas trečiosios kalbos suvokimo ir mokymosi procese, todėl yra nagrinėjamas, analizuojant tų dvikalbių tiriamųjų santykį su trečiaja kalba, kurie anksčiau nesimokė trečiosios kalbos, gautus rezultatus lyginant su vienakalbių atskiros kalbos atstovų rezultatais. Pateikiama hipotezė yra grindžiama individų, atstovaujančių dvikalbystei tarp dviejų skirtingų kalbinių šeimų (rusų-rumunų dvikalbystės pavyzdys) ir demonstruojančių geresnį mokėjimą tos kalbos, kuri yra jų gimtųjų kalbų šeimų grupėje (ispanų kalbos pavyzdys), lyginimu su vienakalbiais individais (t. y., rusų ir rumunų kalbų vienakalbiais). Šis dvikalbių ir vienakalbių individų skirtumas trečiosios kalbos kontekste labiausiai yra susijęs su skirtingu mąstymu, įgytų kalbinių duomenų analize ir atitinkamai efektyvesniu pajėgumu suprasti. Mąstymo organizavimo išskirtinumas ir lingvistinių duomenų analizė yra konkrečių dvikalbio individo psicholingvistinių strategijų kūrimo rezultatas.

**Pagrindinės sąvokos :** dvikalbystė; daugiakalbystė; psicholingvistika; trečioji kalba; kalbos išmokimas; rusų – rumunų kalbų dvikalbystė.