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OF
PSYCHOLINGUISTICS

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ЕТИЧНІ ПОЛОЖЕННЯ

Автори, які подають статтю до цього журналу, засвідчують, що стаття представляє стислий, точний звіт про проведене дослідження, а також об'єктивне обговорення його значення. Праця містить достатньо деталей та покликань на публічні джерела інформації. Фальсифікація даних, їхнє неповне висвітлення із метою введення в оману читачів, а також крадіжка даних або результатів досліджень у інших – це грубе порушення очікуваних етичних норм поведінки науковця. До подання статті в журнал автори повинні одержати дозвіл на використання будь-яких раніше опублікованих матеріалів від оригінального видавця. Плагіат представляє неетичну наукову поведінку і є категорично неприйнятним.

Усі співавтори статті мають однаковий ступінь відповідальності за неї. Одночасне подання одного й того самого рукопису до кількох журналів є неетичним і неприйнятним.

Визнаючи викладені вище факти, автори несуть персональну відповідальність за точність, вірогідність та автентичність результатів досліджень, викладених й описаних у своїх статтях.

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GENESIS OF UNDERSTANDING INTERNET TEXTS BY UKRAINIAN ADOLESCENTS DEPENDING ON THEIR INTERNET USING EXPERIENCE

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Abstract. The article presents the results of studying the genesis of the Internet text understanding by young readers depending on the level of their Internet user experience. The investigation reveals the regularities of the dynamics of successful understanding with the growth of the level of the Internet user experience at each stage of the comprehension process. For this purpose, the following methods were used: theoretical (deduction, induction, analysis, synthesis, generalization, systematization), empirical (experiment, method of semantic and pragmatic interpretations, content analysis, subjective scaling), and statistical (primary statistics, correlation analysis). The sample of the experiment consisted of 122 Ukrainian undergraduate students, including 14.8% men and 85.2% women. The study was conducted according to the author's methods "Success of understanding the texts of the Internet" and "Experience and focus of the Internet user". The understanding of Internet texts by adolescents is characterized by the activity of reception (indicating their significant interest in cyberspace), superficial assessment of the text complexity, and the tendency to predict the content by title and illustration. Meanwhile, it represents that the quality of rational and emotional text interpretation is quite low. Young people interpret only a quarter of the content of the message since their emotional understanding is usually inconsistent. However, a rational assessment is more accurate than an emotional one at this age. It is concluded that adolescents' genesis of Internet text understanding depends on their Internet user experience. Under the influence of the Internet user experience, the activity of the reception, the accuracy of expectations according to the illustration, and the consistency of emotional attitudes increase. However, the accumulation of experience sometimes has a negative effect on the dynamics of understanding, in particular on the interpretation of Internet news texts that seem unreasonably simple to young users. It is also recorded that at the stage of emotional identification, the rational evaluation of Internet texts with the accumulation of experience deteriorates. This feature is determined by the effect of unjustified confidence of Internet users.

Keywords: Internet text, interpretation, emotional identification, rational evaluation, Internet user experience, adolescent, genesis of understanding

Акімова Наталія. Ґенеза розуміння інтернет-текстів українськими підлітками залежно від їхнього досвіду використання Інтернету.

Анотація. У статті наведено результати дослідження ґенези розуміння інтернет-тексту українськими підлітками залежно від їх досвіду інтернет-користувача. Дослідження виявляє закономірності динаміки успішного розуміння із зростанням рівня досвіду користування інтернетом на кожному етапі процесу розуміння. Для цього використовувалися такі методи: теоретичні (дедукція, індукція, аналіз, синтез, узагальнення, систематизація), емпіричні (експеримент, метод семантичних і прагматичних інтерпретацій, контент-аналіз, суб'єктивне шкалування) та статистичні (первинна статистика, кореляційний аналіз). Вибірку експерименту склали 122 українських студенти, з них 14,8% чоловічої і 85,2% жіночої статі. Дослідження проводилось за авторськими методиками «Успішність розуміння текстів інтернету» та «Досвіченість і спрямованість інтернет-користувача». Розуміння підлітками інтернет-текстів характеризується активністю рецепції (що свідчить про їх значний інтерес до кіберпростору), поверховою оцінкою складності тексту, точністю прогнозування змісту за заголовком та ілюстрацією. Водночас також свідчить про те, що якість раціональної та емоційної інтерпретації тексту досить низька. Молоді люди інтерпретують лише чверть змісту повідомлення, оскільки їхнє емоційне розуміння зазвичай непослідовне. Однак у цьому віці раціональна оцінка точніша, ніж емоційна. Зроблено висновок, що ґенеза розуміння інтернет-тексту підлітками залежить від їхнього досвіду користування інтернетом. Під впливом досвіду користувача інтернету підвищується активність рецепції, точність очікувань за ілюстрацією, узгодженість емоційних ставлень до тексту. Однак накопичення досвіду іноді негативно впливає на динаміку розуміння, зокрема на інтерпретацію текстів інтернет-новин, які здаються молодим користувачам невиправдано простими. Також зафіксовано, що на етапі емоційної ідентифікації погіршується оцінка інтернет-текстів із накопиченням досвіду. Цю особливість називаємо ефектом невиправданої впевненості користувачів інтернету.

Ключові слова: інтернет-текст, інтерпретація, емоційна ідентифікація, раціональна оцінка, досвід користувача інтернетом, підліток, ґенеза розуміння.

Introduction

Modern young men and women spend too much time on the Internet. They literally live their lives online. People communicate study, play, and work there. They receive information from the Internet that shapes their perception of the world and themselves. They form cyberspace, while cyberspace shapes them. The Internet influence on the psyche has been proven in modern psychological researches (Mantovani, 1996; Riva & Galimberti, 2001; Yerokhin, 2011; Small & Vorgan, 2011; Karr, 2013). The main features of communication on the Web and its difference from communication in the real world as well as spam, flood, and trolling were identified and proved in the scientific research by Ferrara et al. (1991), Crystal (2004), Dresner (2005), Herring (2010), Goroshko (2009), Kompantseva (2009), Shchipitsyna (2011), Lukina (2013) and others. The personality in the Internet, their manifestations, changes in the cyberspace, self-presentation, gender, internet addiction are presented in the works of Dresner (2005), Young (1998), Karr (2013), Small & Vorgan (2011), Shpittser (2014), Voyskunskiy (2013), Goroshko (2009), Lutovinova (2013), Posokhova (2006), Turets′ka (2011), Van Shilu (2013), Naumova (2008), Shevchenko (2002), Meleshnikov (2010) and others. These works are mostly concentrated on the psychological specifics of cyberspace, the phenomena of addiction and online communities. Meanwhile, activities on the Internet are

implemented mainly through the Internet texts; however, their impact on the psyche has not been studied thoroughly. An empirical study of the specifics of the Internet texts understanding by young users became the basis for writing this article.

The purpose of this study is scientific analysis of the genesis of Internet texts understanding in adolescence under the influence of such factor as Internet using experience.

Methods

The following theoretical methods and techniques were used to achieve the purpose: a) deductive as a path from the abstract to the concrete; b) inductive as a generalization of facts; c) analysis as a path from whole to parts; d) synthesis as a path from parts to the whole; e) generalization as a transition to a higher degree of abstraction by identifying common features (properties, relationships, development trends, etc.) of objects; g) systematization as the consolidation of disparate knowledge into a single scientific system. Empirical research was conducted using such psychological and psycholinguistic methods as a) experiment (semantizing and receptive experiments); b) the method of semantic and pragmatic interpretations (complex interpretation of the meaning of statements based on the broad context of the electronic situation, conceptual analysis of the text (definition of content structure, separation of dominants, keywords); c) content analysis; d) the procedure of subjective scaling (method of absolute estimates). Mathematical data processing was realized using primary statistics, statistical inference as well as such statistical indicators as mode and scope of variation, correlation analysis (based on the Pearson coefficient). Interpretive methods based on specific principles of systemic, activity, cognitive, psycholinguistic, genetic approaches were also used.

The author's method "Success of Internet texts understanding" was developed to determine the specifics of Internet texts understanding. This approach was tested for validity and reliability. It includes 10 Internet texts of different genres, thematic focus, scope and level of complexity. In particular, the following texts of the Internet were examined:

Figure 1
Text A

Figure 2
Text B

Figure 3
Text C

Figure 4
Text D

Figure 5
Text E

Text F

Пост-бумеранг: як одна публікація може зробити диво?
Жив собі невеличкий сайт про київський мікрорайон Відрадний. Збирав на день по 50–70 відвідувачів, які без особливого ентузіазму читали публікації про новини з життя у цій місцевості. Та одного разу я (адмін сайту) вирішила поєднати в одному пості пораду писати про те, що цікаво самому автору, з простим маркетинговим ходом. Лінк за лінк – за таким принципом почала діяти розкрутка нової публікації.

Text G

НГ: "Смерчі" за східною ціною
17 серпня 2012, 09:34
Україна все ж могла постачати зброю Вірменії, вважають у Баку. Офіційні особи України спростували інформацію про прихований продаж зброї Вірменії через Молдову, про що днями повідомили українські ЗМІ. Проте експертне співтовариство Азербайджану дотримується думки, що спроба вчинення подібної угоди могла мати місце, – пишуть Сохбет Мамедов і Світлана Гамова в російській Независимой газете.

Text I

Суханова Вика. *Получили соковыжималку, уже успели протестировать и спешу написать отзыв. Очень много читала о пользе сока именно со шнековой соковыжималки. Поэтому выбрала эту! Делали сок из морковки, яблок, сельдерея, тапинамбура, апельсин, грейфрут. Все очень хорошо передаваться. Жмых достаточно сухой (я с него ещё иногда что-то делаю), по сравнению с центробежной соковыжималку. Очень рекомендую.*
Достоинства: Сок потрясающе вкусный
Недостатки: нет

Text H

Їхали козаки чоловік 120...Продовжіть далі..
(33 коментаря на 5.10.18 Учасники · 185 883)

Кротевич Василь Станіславович Ой підманули,ой підманули Галю)

Yura Nechiporyk Підманули Галю стаття 117

Галина Небор Таак,ану швидко розясніть,шо то за статті такі)))

Oksana Baranyuk Та най їдуть далі)))

Люда Рахимова Підманули Галю стаття 117

Володимир Володимир Всім дівчатам у селі тепер не до танців

Олексій Кузик Чого тільки Галя фігурує в цих дурнуватих цитатах? Тим більше написаних абсолютно безграмотно?

Olek Hal верталися до дому бо в галі прищ на сраці)

Наташа Брюханова і доїхали на війну, і війну прикінчили, – і вернулись до своїх Галь. а юристам пора шукати номер статті "про укладення шлюбу"

Леонид Сидоренко і стали шоб на захарченка посрать))

Іванна Козак Випили горілки, літрів 11н

Text J

Петро Порошенко був (була) в ефірі. 20 вересня о 10:35
Перша реакція світу на окупацію Криму виявилася напрочуд млявою та беззубою. Та навіть тепер – після тисяч спричинених Росією жертв на Донбасі, після МН17, після

Сирії, після Солсбері – на Заході чимало охочих зазирнути Путіну в душу, чи ще не знаю куди. Глибоко помиляється той, хто думає, ніби російська агресія забезпечує нам автоматичну підтримку на Заході. За підтримку треба боротися щодня.

За чотири з половиною роки нам вдалося не просто створити і зберегти потужну трансатлантичну коаліцію на підтримку України, а й значно розширити і зміцнити її.

1,6 тис. коментарів
818 Shares
81 тис. переглядів

Vlad Svidlo · 15:22 Порох умница, если б еще "простые люди" чаще мозг включали чтоб понять что он делает для страны

Larissa Ziaziun · 9:49 Пора вже обирати нормальний Парламент! А тих, хто виходить з залу під час виступу Президента, в зал більше не впускати, а гнати звідтам! Пора вже зняти з тих негідників недоторканість!

The same tasks are proposed for each of these texts:
1. *What is this text about? Explain.*
2. *What is the subject of the discussion?*
3. *Emphasize unintelligible words, write words-replacements.*
4. *Put 1–3 questions to this text.*
5. *Assess the degree of understanding complexity (from 1 to 5: 1 – completely unclear – 5 – clear without options), emphasize the words that complicate understanding.*
6. *Assess the level of objectivity of information transfer (O-objective, SC – subjectively critical, SS – subjectively approving).*
7. *Write a review of this text.*
8. *Does the picture help in understanding this text?*

The specifics of understanding these texts were studied at each stage of understanding using criteria for successful understanding. The concept of "successful comprehension of Internet texts" is defined as the formation of new secondary meanings, assessments and connotations. They have to adequately and fully reflect the content of the original Internet text and allow to predict them correctly based on the title or the illustration. The criteria for successful understanding at the stage of reception are the reception activity (diagnostic indicator is the number of interpreted texts) and the accuracy of expectations by title and illustration (diagnostic indicator is the number of correct predictions by title or image); b) at the stage of interpretation, the qualitative criterion is the interpretation adequacy and the quantitative criterion is the completeness of the Internet texts interpretation (diagnostic indicator is the percentage of presented semantic dominants in the secondary text); c) the first criterion at the stage of emotional identification is adequacy of assessment of Internet texts understanding (diagnostic indicator is the difference between assessment of Internet texts understanding and actual results of interpretation). The next criterion at this stage is consistency of emotional attitude to Internet texts (diagnostic indicator is coincidence of connotations in secondary texts of some respondent). More detailed

description of the methods used, in particular the author's method "Success of Internet texts understanding" is presented in the monography (Akimova, 2020).

Participants

The sample of the experiment consisted of 122 Ukrainian undergraduate students, including 14.8% men and 85.2% women. This sample of respondents was based on their age (18 y.o. and younger) and social status that determined a similar level of Internet activity, speech, social and Internet competence. Gender unevenness of the sample is explained by the fact that the task of this experiment was not to analyze gender specificity, so volunteers were involved regardless of their gender. The study was organized in groups during 2017–2020. All study participants received informed consent to data collection. Relevant ethical norms and rules were observed in the course of the research; no moral pressure was exerted on the participants of the experiment. No funds, grants, or other support was received for the study. The authors do not have a potential conflict of interest that could influence the decision to publish this article.

It was assumed that the results of Internet texts understanding would depend on the level of Internet using experience. The level of Internet using experience was studied by the method of "Experience and orientation of the Internet user" that assesses Internet using experience by six criteria: frequency of Internet use, activity, self-representation, diversity of Internet use, Internet competence (skills of using of different browses (see more in: Akimova, 2020), creativity.

Table 1
The Criterion of Internet Using Experience

Criterion	The level of Internet using experience		
	High (3 points)	Medium (2 points)	Low (1 point)
1.Frequency of Internet use (days in week)	7	6	5 and less
2. Activity (hours in day)	9 and more	5–8	4 and less
3. Self-representation (Internet profile)		yes	no
4. Diversity of Internet use (forms of activity):	4	2–3	1
5. Internet competence (using of different browses)	3 and more	2	1
6. Creativity (create the content)		yes	no

The grouped evaluation of the results allowed establishing the user's experience to a high (more than 15 points – "experienced Internet users"), medium (10–14

points), or low level of Internet using experience (less than 9 points). Thus, the sample of young men included 24.1% of respondents with high, 75.5% with medium, 0.4% with low level of Internet using experience.

Then, the results of understanding of users with high, medium, and low levels of Internet using experience were compared by comparison and correlation analysis for the criterion of successful understanding, considering the specifics of each type of Internet text presented in the study, and correlations between experience and success.

Results and Discussion

The following indicators of the successful understanding of the Internet texts in adolescence were recorded as a result of experimental research.

Table 2
Correlation Between the Level of Internet Using Experience and the Successful Reception in Adolescents

The level of Internet using experience	Reception activity	Accuracy of expectations	
		title	illustration
high	$93.4^1 \pm 15.99^2$	38.2^1 $\pm 20.47^2$	45.6^1 $\pm 43.44^2$
medium	$84.7^1 \pm 21.49^2$	45.6^1 $\pm 24.98^2$	35.7^1 $\pm 42.86^2$
low	$80.0^1 \pm 0^2$	$0^1 \pm 0^2$	$0^1 \pm 0^2$
The difference between the successful understanding of readers with high and low levels of Internet using experience	13.4	38.2	45.6
Correlation coefficient	**$.28 > .14^3$**	**$.01 < .14^3$**	**$.24 > .14^3$**

Note: 1 – average in percentage; 2 – standard deviation (Sd); 3 – critical value r = .14 when n = 244 at the accepted significance level p = .05

These calculations show that there is a direct relationship between the Internet using experience and the quality of understanding at the reception stage in adolescence. Note that this relationship is quite strong. If the young people spend more time on the Internet, they read texts more actively and can predict the content of the text by illustration and not by title more accurately. As you can see from the table, even experienced Internet users at this age can correctly predict the content of only less than half of the texts. The strongest correlation between the Internet using experience and the reception activity shows that if the young people spend more time on the Internet, the Internet texts become more interesting and meaningful for them.

This conclusion is based on the fact that experienced users read more than 90% of the online texts, as opposed to users with medium and low experience level who ignore up to 20% of the texts. While the Internet using experience is accumulating, the individual gets used to the Internet format, improves the recipient's ability to predict the content of Internet texts, and, consequently, improves his or her orientation skills in the virtual world.

The stage of interpretation. The following statistical relationships between the Internet using experience and the specifics of understanding at the stage of interpretation are presented in the table using the generalized average indicators of adequacy and completeness of interpretation of Internet texts, indicators of variation and correlation analysis.

Table 3

Correlation Between the Level of Internet Using Experience and the Successful Interpretation in Adolescents

The level of Internet using experience	Internet text										Average
	A	B	C	D	E	F	G	I	H	J	
high	30	40	50	21	30	18	21	26	14	14	$24.4^1 \pm 9.74^2$
medium	40	43	48	20	23	20	20	24	12	13	$2.5^1 \pm 9.97^2$
low	20	0	50	0	25	17	63	20	0	13	$20.0^1 \pm 0^2$
Correlation coefficient											$.14 = .14^3$

Note: 1 – average in percentage; 2 – standard deviation (Sd); 3 – critical value of Pearson correlation for a sample of more than 100 respondents, n = 244 values

According to the results of correlation analysis, it can be stated that there is a direct relationship between the Internet using experience and the quality and completeness of the interpretation of Internet texts. However, the type of text was also important. The experience is useful for young people in interpreting messages on economic forums, reviews, political posts, genres that require additional knowledge for correct interpretation. Active readers compensate lack of the life experience by Internet using experience. Internet using experience is less useful in understanding Internet advertising. Probably, the prevalence of this genre on the Internet leads to the fact that respondents form a stereotype about the understanding of advertising texts, which facilitates success of their interpretation. Still, the Internet using experience does not impact the understanding of technical chats, posts, and memes. Interpretation of these complex and specific genres, apparently, requires certain non-textual knowledge and competencies that have not yet been formed in adolescence. So, correct interpretation of these texts is possible only with special training. In addition, an inverse relationship was found between experience and the success of interpretation of Internet news. Possibly, experienced Internet users are accustomed to these texts. Such texts seem unreasonably simple. Hence, experienced Internet users interpret them stereotypically; they do not make an effort to understand them.

As a result, the success of their interpretation is quite low. Internet news is an effective way to manipulate young people's minds. In general, there is a strong direct tendency to change the understanding dynamics towards improving the adequacy and completeness of interpretation of up to 30% of texts with the accumulation of Internet experience (experienced Internet users interpreted all 10 internet texts, while users with low level only 7 of 10 proposed texts).

The stage of emotional identification. There is a direct correlation between the Internet using experience and the inadequacy of the assessment of Internet texts understanding. If the young people spend more time on the Internet, their assessment of Internet texts understanding becomes less adequate. Over time, the texts of the Web seem simpler and clearer, when in fact the quality of their interpretation improves only slightly (within 5–6% in this age group). We note a phenomenon that could be called the effect of unjustified confidence of Internet users.

The relationship between the Internet using experience and the consistency of the emotional attitude to the Internet texts is shown in Table 4.

Table 4
Correlation between the level of Internet texts understanding and the consistency of emotional attitude to the Internet texts in adolescents

The level of Internet using experience	Internet text										Average
	A	B	C	D	E	F	G	I	H	J	
high	30	20	10	4	10	20	10	20	10	10	**.19**[1]±.08[2]
medium	20	20	10	20	10	20	20	10	20	10	**.18**[1]±.05[2]
low	20	10	20	10	10	10	10	4	10	10	**.11**[1]±.05[2]
Correlation coefficient											**.20 >.14**[3]

Note: 1 – average in percentage; 2 – standard deviation (Sd); 3 – critical value of Pearson correlation for a sample of more than 100 respondents, n = 244 values

The consistency of the emotional attitude to the Internet texts (critical, neutral, or approving) directly correlates with the level of user experience. Active users are more consistent in their attitude to Internet texts; probably, this component of understanding is formed automatically with the increase of Internet using experience. Such improvement occurs within 8%. However, inconsistent attitudes dominate in all user groups for any type of Internet text. Additionally, users with a low level of Internet using experience can hardly determine their own attitude to the text in general.

Integrated indicators of the success of Internet text understanding (in %) in the sample of young respondents depending on the level of Internet user experience are given in Table 5.

Table 5
Indicators of the Successful Internet Text Understanding in the Sample of Young Respondents Depending on Their Internet User Experience

The level of Internet using experience	The stage of reception			The stage of interpretation	The stage of emotional identification	
	reception activity	accuracy of expectations		adequacy and completeness of interpretation	adequacy of assessment of Internet texts understanding	consistency of emotional attitude
		title	illustration			
high	93.4[1] ±15.99[2]	38.2[1] ±20.47[2]	45.6[1] ±43.44[2]	24.4[1] ±9.74[2]	59.2[1] ±22.69[2]	18.4[1] ±20.99[2]
medium	84.7[1] ±21.49[2]	45.6[1] ±24.98[2]	35.7[1] ±42.86[2]	23.5[1] ±9.97[2]	68.7[1] ±17.53[2]	14.3[1] ±16.32[2]
low	80.0[1]±0[2]	0[1]±0[2]	0[1]±0[2]	20.0[1] ±0[2]	97.8[1] ±.07[2]	0[1]±0[2]
The difference between the successful understanding of readers with high and low levels of Internet using experience	13.4	38.2	45.6	4.4	-38.6	18.4
Correlation coefficient	**.28>.14[3]**	**.01<.14[3]**	**.24>.14[3]**	**.14=.14[3]**	**-.29>.14[3]**	**.20>.14[3]**

Note: 1 – arithmetic mean as a percentage; 2 – standard deviation (Sd); 3 – critical value r = .14 when n = 244 at the accepted level of significance p = .05

The calculations in the table show that there are the following patterns of genesis of Internet texts understanding in adolescents. The reception stage: a direct relationship between the successful understanding and the Internet using experience was found. The young people can read texts more actively and can predict the content of the text by illustration and not by title more accurately if they spend more time on the Internet. But even experienced Internet users at this age can correctly predict the content of only less than half of the texts (the accuracy of expectations by title is

38.2% on average, and the accuracy of expectations by illustration - 45.6%. The strongest correlation is between the reception activity and Internet using experience (r = .28). This statistics means that if the young people spend more time on the Internet, they perceive the Internet texts as more interesting and meaningful. While the Internet using experience is accumulating, the individual gets used to the Internet format, improves the recipient's ability to predict the content of Internet texts by illustration (r = .24). The users get used to the specific multimedia of the Internet, and thus, they improve their orientation skills in the virtual world. The skills of prediction of the content by titles do not improve (r = .01). Hyperlink titles are quite complex in structure and often deviant, so they are difficult to interpret correctly without careful reading. We associate the lack of correlations between the accuracy of the recipients' expectations by title and Internet using experience with browsing, which is especially popular among experienced users. Thus, there is the tendency of the genesis of understanding in adolescence towards the expansion of reception with the accumulation of Internet using experience.

The stage of interpretation. The quality of understanding is weakly correlated with the level of Internet using experience (r = .14), but the type of text is important. The experience is more useful for young respondents in interpreting of messages on economic forums, reviews, political posts, Internet specific genres. Internet using experience less effective in understanding online advertising. The prevalence of this genre on the Internet leads to formation of stereotypes about the understanding of advertising texts, which facilitates their interpretation. Though, the Internet using experience does not help in understanding of technical chats, posts, and memes. Interpretation of these complex and specific genres requires certain non-textual knowledge and competencies that have not yet been formed in adolescence. So, correct interpretation of these texts is possible only with special training. In addition, an inverse relationship between Internet using experience and the quality of interpretation of Internet news was found. Internet users are accustomed to these texts. Such texts seem unreasonably simple. So, experienced Internet users interpreted them stereotypically; they do not make an effort to understand them. As a result, the success of their interpretation is quite low.

The stage of emotional identification. An inverse correlation between the Internet using experience and the adequacy of the assessment of Internet texts understanding was found (r = -.29). Over time, the texts of the Web seem simpler and clearer, when in fact the quality of their interpretation improves only slightly (by 4.4% in this age group). We determine the phenomenon of the unjustified confidence of Internet users. Consistency of emotional attitude to Internet texts directly correlates with the level of user experience (r = .2). Active users are more consistent in their attitude to Internet texts. Probably, this component of understanding is formed automatically with the increase of Internet using experience. However, inconsistent attitudes dominate in all user groups for any type of Internet text. Additionally, users with a low level of Internet using experience face difficulty in determining their own attitude to the text. In general, the process of Internet texts

understanding at the stage of emotional identification is ambiguous depending on the Internet using experience.

Conclusions

In general, it is determined that the Internet texts understanding in adolescence is characterized by the reception activity (indicating their significant interest in the cyber environment), superficial assessment of the complexity of texts and the tendency to predict content by illustration. Meanwhile, the quality of rational and emotional interpretation of texts is quite low. Young people interpret only a quarter of the content of the Internet message, their emotional understanding is usually inconsistent. However, a rational assessment at this age is more accurate (up to 24.4% of the content of the message) than emotional (up to 18.4% of agreed emotional attitudes).As a result of the analysis of generalized indicators of successful understanding, it was found that in adolescence, Internet using experience increases reception activity, accuracy of expectations for illustration and consistency of emotional attitude. At the same time, the accumulation of experience sometimes has a negative effect on the dynamics of understanding, in particular on the interpretation of Internet news texts that seem unreasonably simple for young users. It is also recorded that the experienced users' rational assessment of Internet texts complexity decreases at the stage of emotional identification, which is determined by the effect of unjustified confidence of Internet users.

References

Акімова Н. Психологія розуміння текстів Інтернету: Монографія. Вінниця: LLC "WORKS", 2020.

Ван Шилу. Интернет-зависимость у участников компьютерных игр. (Дисс. канд. психол. наук). Москва, 2013. 216 с.

Войскунский, А.Е. Актуальность психологии Интернета. Идеи О.К. Тихомирова и А.В. Брушлинского и фундаментальные проб лемы психологии (к 80-летию со дня рождения). Мат-лы Всеросс. науч. конф. (с иностранным участием). (30.05.2013-1.06.2013). Москва: МГУ имени М.В. Ломоносова. С. 50–52.

Горошко, Е. И. Интернет-жанр и функционирование языка в Интернете: попытка рефлексии. Жанры речи, 2009, 6, 11–27.

Ерохин, Д.О. Информационная среда как фактор формирования ценностей молодежи. (Дисс. канд. психол. наук). Москва, 2011. 288 с.

Карр, Н. Пустышка. Что Интернет делает с нашими мозгами (Пер. с англ. П. Миронова). Санкт-Петербург : BestBusinessBooks, 2013. 253 с

Компанцева, Л. Ф. Інтернет-лінгвістика. Київ: Наук.-вид. відділ НА СБ України, 2009. 275 с.

Лукина, Н. А. Психологические особенности опосредованного Интернетом межличностного общения студентов. (Дисс. канд. психол. наук). Самара, 2013. 180 с.

Лутовинова, О.В. Языковая личность в виртуальном дискурсе (Автореф. дисс. докт. филол. наук). Волгоград, 2013. 42 с.

Мелешников, А. А. Восприятие личности по фотографии при общении в Интернет: на материале сайтов знакомств. (Дисс. канд. психол. наук). Ярославль, 2010. 187 с.

Наумова, Т. А. Образ "Я" Интернет-зависимых и Интернет-независимых социальных агентов в виртуальном пространстве. (Дисс. канд. психол. наук). Ярославль, 2008. 138 с.

Посохова, В.В. Соціально-психологічні особливості формування життєвих планів Інтернет-залежної молоді. (Автореф. дисс. канд. психол. наук). Київ : Ін-т соц. та політ. психології АПН України, 2006. 20 с.

Смолл Г., Ворган Г. Мозг онлайн. Человек в эпоху интернета (Пер. с английского Б. Козловского). Москва : Колибри, Азбука-Атикус, 2011. 352 с.

Турецька Х. І. Особистісна ідентичність схильних до Інтернет-залежності осіб. (Автореф. дисс. Канд..психол. наук). Київ : НАПН України ; Ін-т соц. та політ. психології, 2011. 20 с.

Шевченко, И.С. Вариативность самопрезентации личности в Интернет-общении (Автореф. дисс. канд. психол. наук). Казань, 2002. 20 с.

Шпитцер, М. Антимозг: цифровые технологии и мозг (Пер. с немецкого А. Г. Гришина). Москва: АСТ, 2014. 288 с.

Щипицина, Л. Ю. Комплексная лингвистическая характеристика компьютерно-опосредованной коммуникации (на материале немецкого языка). (Автореф. дисс. докт. филол. наук). Воронеж, 2011. 40 с.

Cyberpsychology: Mind, cognition and society in the Internet age (2001). G. Riva, C. Galimberti (eds.). Amsterdam: IOS Press.

Dresner, E. (2005). The Topology of Auditory and Visual Perception, Linguistic Communication, and Interactive Written Discourse. Language@Internet.
 http://www.languageatinternet.de/articles/2005/161/index_html/

Ferrara, K., Brunner H, Whittemore, G. (1991). Interactive written discourse as an emergent register. Written Communication, 8(1), 8–
34. https://doi.org/10.1177%2F0741088391008001002

Herring, S. (2010). Computer-Mediated Conversation: Introduction and Overview. Language@Internet. http://www.languageatinternet.de/articles/2010/2801/index_htm

Mantovani, G. (1996). New communication environments: from everyday to virtual. London: Taylor&Francis.

Young, K. S. (1998). Caught in the Net: How to Recognize the Signs of Internet Addiction — and a Winning Strategy for Recovery. New York: John Wiley & Sons.

References (translated and transliterated)

Akimova, N. V. (2020). Psykholohiya rozuminnya tekstiv internetu: monohrafiya [Psychology of understanding the texts of the Internet: a monograph].Vinnytsia: LLC "WORKS".

Cyberpsychology: Mind, cognition and society in the Internet age (2001). G. Riva, C. Galimberti (eds.). Amsterdam: IOS Press.

Dresner, E. (2005). The Topology of Auditory and Visual Perception, Linguistic Communication, and Interactive Written Discourse. Language@Internet.
 http://www.languageatinternet.de/articles/2005/161/index_html/

Ferrara, K., Brunner H, Whittemore, G. (1991). Interactive written discourse as an emergent register. Written Communication, 8(1), 8–
34. https://doi.org/10.1177%2F0741088391008001002

Herring, S. (2010). Computer-Mediated Conversation: Introduction and Overview. Language@Internet. http://www.languageatinternet.de/articles/2010/2801/index_htm

Mantovani, G. (1996). New communication environments: from everyday to virtual. London: Taylor&Francis.

Young, K. S. (1998). Caught in the Net: How to Recognize the Signs of Internet Addiction — and a Winning Strategy for Recovery. New York: John Wiley & Sons.

Van Shilu (2013). Internet-zavisimost' u uchastnikov komp'yuternykh igr. [Participants in computer games have Internet addiction]. Doctor's thesis. Moscow.

Voyskunskiy, A. (2013). Aktual'nost' psikhologii Interneta [The relevance of the psychology of the Internet].

Idei O. K. Tikhomirovai A. V. Brushlinskogo i fundamental'nyye problemy psikhologii (k 80-letiyu so dnyarozhdeniya) [Ideas by O. K. Tikhomirova and A. V. Brushlinsky and the fundamental problems of psychology (on the 80th anniversary of his birth)]: Proceedings of the All-Russian Scientific Conference (with foreign participation). Moscow: Lomonosov Moscow State University. (50–52).

Goroshko, Ye. I. (2009). Internet-zhanr i funktsionirovaniye yazyka v Internete: popytka refleksii [The Internet genre and the functioning of a language on the Internet: an attempt at reflection]. Zhanryrechi - Speech Genres, 6, 11–27.

Yerokhin, D. O. (2011). Informatsionnaya sreda kak faktor formirovaniya tsennostey molodezhi [Information environment as a factor in the formation of youth values]. Unpublished DSc thesis. Moscow.

Karr, N. (2013). Pustyshka. Chto Internet delayet s nashimimozgami [Soother. What the Internet does with our brains]. St. Petersburg: BestBusinessBooks].

Kompantseva, L. F. (2009). Internet-linhvistyka [Internet linguistics]. Kyiv: Nauk.-vyd. viddil NA SB Ukraïny].

Lukina, N. A. (2013). Psikhologicheskiye osobennosti oposredovannogo Internetom mezhlichnostnogo obshcheniya studentov [Psychological features of the Internet-mediated interpersonal communication of students].Unpublished DSc thesis. Samara.

Lutovinova, O. V. (2013). Yazykovayalichnost' v virtual'nomdiskurse [Linguistic personality in virtual discourse]. Extended abstract of DSc thesis. Volgograd.

Meleshnikov, A. A. (2010). Vospriyatiyelichnosti po fotografiipriobshchenii v Internet: namateri ale saytovznakomstv. [Perception of personality by photography while communicating on the Internet: on the material of dating sites].Unpublished DSc thesis. Yaroslavl.

Naumova, T. A. (2008). Obraz "Ya" Internet-zavisimykh i Internet-nezavisimykh sotsial'nykh agentov v virtual'nom prostranstve [The image of the "I" of Internet-dependent and Internet-independent social agents in the virtual space]. Unpublished DSc thesis. Yaroslavl.

Posokhova, V. V. (2006). Sotsial′no-psykholohichni osoblyvosti formuvannya zhyttyevykh planiv Internet-zalezhnoyi molodi [Socio-psychological features of the formation of life plans of Internet-addicted youth]. Extended abstract of DSc thesis. Kyiv.

Small, G., Vorgan, G. (2011). Mozgonlayn. Chelovek v epokhuinterneta [The brain is online. Man in the era of the Internet]. Moscow: Kolibri, Azbuka-Atikus.

Turets′ka, Kh. I. (2011). Osobystisna identychnist′ skhyl′nykh do Internet-zalezhnosti osib [Personal identity of people prone to Internet addiction]. Extended abstract of DSc thesis. Kyiv.

Shevchenko, I. S. (2002). Variativnost' samoprezentatsii lichnosti v Internet-obshchenii [Variability of personal self-presentation in Internet communication]. Extended abstract of DSc thesis. Kazan.

Shpittser, M. (2014). Antimozg: tsifrovyye tekhnologii i mozg [Anti-brain: digital technologies and the brain]. Moscow: AST.

Shchipitsyna, L. Ju. (2011). Kompleksnaja lingvisticheskaja harakteristika komp'juterno-oposredovannoj kommunikacii (namaterialenemeckogojazyka) [Complex linguistic characteristics of computer-mediated communication (German language)]. Extended abstract of DSc thesis. Voronezh.

PSYCHOLINGUISTIC ASPECTS OF THE DEVELOPMENT OF STUDENTS' CRITICAL APPROACH TO THE SOLUTION OF TERMINOLOGICAL PROBLEMS IN ONLINE TRANSLATION LEARNING

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Abstract. The research is aimed at exploring the approaches to increase the efficiency of the development of the future translators' critical approach to the solution of terminological problems, as well as the specialized bilingual (English and Ukrainian) terminology acquisition, in online teaching and learning. The method of research is based on the assumption that the said increase can be achieved through the intensification of the students' analytical and thinking activity in their independent work by means of post-editing the machine-translated target texts combined with the simultaneous written explanation of the reasons for the respective corrections. This assumption was tested in the pilot experimental online teaching of specialised (in the domain of Psychology) translation to the first-year MA students majoring in Translation. The participants' performance assessment took into account the amount of the independent work done by them, the level of their critical approach, as well as the specialised terminology usage accuracy in the final translation test. The results of the analysis proved the apparent dependence of the participants' critical approach to the solution of terminological problems and the efficiency of specialised terminology acquisition on the intensity of their analytical and thinking activity in their independent work. The advantage of the participants with the highest level of the said intensity over those with the average one amounted to 16%, and 40% – over those with the lowest intensity. The efficiency of the development of students' critical approach to the solution of terminological problems and the specialised terminology acquisition in online translation teaching and learning may be increased by intensification of their analytical and thinking activity in the process of meaningful post-editing of machine-translated target texts.

Keywords: online teaching, critical approach, machine translation, analytical and thinking activity, post-editing, decision-making, problem solution, specialised translation, terminology.

Черноватий Леонід, Ковальчук Наталя. Психологічні аспекти розвитку критичного ставлення студентів до розв'язанням термінологічних проблем у дистанційному навчанні перекладу.

Метою роботи є пошук шляхів підвищення ефективності формування критичного ставлення до розв'язання термінологічних проблем і засвоєння двомовної (англійської та української) вузькоспеціальної термінології у дистанційному навчанні майбутніх перекладачів.

Методика дослідження виходила з припущення, що згаданого підвищення ефективності в дистанційному навчанні можна досягти шляхом активізації мисленнєво-аналітичної діяльності студентів під час самостійної роботи за рахунок виконання завдань з пост-редагування текстів, перекладених за допомогою машинного перекладу, з одночасним письмовим поясненням причин відповідних виправлень. Це припущення перевірялося впродовж пілотного експериментального дистанційного навчання спеціалізованого перекладу в галузі психології за участі студентів рівня магістра (спеціалізація «Переклад»). Оцінювання роботи студентів здійснювалося за такими критеріями як обсяг виконаних самостійних завдань, ступінь неформальності їх виконання, а також правильність вживання спеціалізованої термінології у підсумковій контрольній роботі. Результати аналізу засвідчили очевидну залежність сформованості критичного ставлення випробуваних до розв'язання термінологічних проблем і ефективності засвоєння спеціальної термінології від інтенсивності мисленнєво-аналітичної діяльності випробуваних під час самостійної роботи. Перевага випробуваних з найвищим рівнем згаданої інтенсивності склала 16% над випробуваними середнього рівня і 40% – над випробуваними з низьким його рівнем. Ефективність формування критичного ставлення до розв'язання термінологічних проблем у процесі перекладу, а також засвоєння спеціальної термінології у дистанційному навчанні можна підвищити за рахунок інтенсифікації мисленнєво-аналітичної активності студентів в процесі осмисленого пост-редагування текстів, перекладених машиною.

Ключові слова: *дистанційне навчання, критичний підхід, машинний переклад, мисленнєво-аналітична діяльність, пост-редагування, прийняття рішень, розв'язання проблем, спеціалізований переклад, термінологія.*

Introduction

The issue of the critical approach to the solution of terminological problems in translation is closely related to its process, which has been studied for decades. Many authors have been engaged in its research, for example, Wolfgang Lörscher has been doing it since the early 1980s (Lörscher, 2008). The psychologists and psycholinguists have been active as well, which is reflected, among other works, in the collective monograph (Schwieter & Ferreira, 2017), whose issues range from the relationship of translation and cognition in general, its theoretical perspectives, methodological innovations, workplace characteristics, competences, training and interpreting to outlining evolution, problems and prospects of research into the cognitive aspects of translation. Of particular interest, among other contributions, are the review of translation process research in general (Jakobsen, 2017) and the retrospective overview of its models from the late 1949s to the beginning of the new millenium (Carl & Schaeffer, 2017).

In its most general meaning, translation may be regarded as the process of decision-making and solution of problems (Englund Dimitrova, 2010; Nord, 2016), including terminological ones. This process is based on the combination of automatized and conscious operations. According to the research (Lörscher, 2008), experienced translators solve their problems on the basis of the intricate neural network, which provide for the optimal selection of the proper variant of such solution from a range of available options through the critical analysis of the context. The said network is gradually developed as the result of a considerable amount of translation activity in the course of doing appropriate tasks in the process of formal learning and/or beyond it. Because the translation problems may be classified into types, which the learner

inevitably comes across within the same text, as well as within other texts, the neural configurations, which serve as the basis for the solution of the specific types of problems, gradually develop in the learner's mind. On the other hand, in most cases, the said problems may fall into subtypes and thus there may be more than one way to solve the monotypical problems. Therefore, in the process of translation practice, the said neural configurations get more intricate, developing into ever more complicated network, which is the basis of the individual's professional activity. The degree of the said network intricateness, and thus the efficiency of translation problems solution, depends, among other factors, on the amount of translation practice and the intensity of the learners' thinking and analytical activity in their independent work, the bulk of which falls on their independent work.

Thus, in the most general sense, we may assume that the development of the translator's competence in general and the critical approach to the terminological problems solution in particular, requires a proper intensity of the learners' thinking and analytical activity in their independent work. However, in the online learning, which became extremely widespread because of the COVID-19 restrictions, meeting this seemingly simple requirement ran into serious problems.

In the course of their independent work, the students acquired an ability to immediately translate any text by means of MT engines by just touching a button, while the teachers lost any control over the development of their students' translation competence. It caused unprecedented euphoria among students and unparalleled confusion among teachers. The latter clearly realized that as the result of this MT revolution, neither the amount of the students' translation practice nor the intensity of their thinking and analytical activity met the requirements. Moreover, in the course of such 'activity' the students' mind remained passive, which resulted in the fact that the development of the said neural network just did not happen.

It is worth mentioning that there are conflicting opinions concerning the MT application in teaching future transltors. In some authors' view (Pym, 2013), the new systems of neural MT (see, e.g., O'Brien et al., 2020) may eventually oust human translators, at least in some domains. Thus, it is suggested (Pym, 2013; Mellinger, 2017) to fundamentally change the content of teaching future translators by introducing MT into all appropriate disciplines of the curriculum. However, not all authors share this view (see, e.g. Esqueda, 2021). In addition, some studies (Moorkens, 2018) on the comparative efficiency of neural and statistical MT systems cast some doubt concerning the undisputed advantage of the former.

In any case, in practice, the online transition and the negative (in the teachers' view) students' MP experience displayed the problems within traditional approaches to translator training and teaching in the new circumstances. It may partially be explained by suddenness of the said transition, which caught the teachers unprepared (see, e.g., Wu & Wei, 2021).

Some authors cherished hopes that post-editing might be the answer; it was expected to compensate for the loss in the intensity of the students' thinking and analytical activity. Generally, there are conflicting opinions concerning the post-editing efficiency. One research (Yang et al., 2021) established its significant advantage over human translation while another one (Lee, 2018), on the contrary, found it to be

inefficient, which made the author to be skeptical about the necessity to waste time for the development of students' post-editing skills, calling to take care of their basic translator competence instead. In any case, the high hopes some authors entertained concerning the role of post-editing as a compensatory mechanism, seldom come true. Most students (at best) usually limit themselves to symbolic editing without even getting close to the desired level of thinking and analytical intensity.

The attempts to officially prohibit the MT application in the students' independent work usually do not succeed either as they possess a wide range of means to overcome it, which the teachers have neither time nor desire to look for.

Thus, to provide for the full-fledged development of the future translators' competence, specifically of their critical approach to the solution of terminological problems, it is necessary to look for the ways to boost the students' thinking and analytical activity, which would take into account the specifics of the online learning and teaching – and that was the aim of our research. To achieve this aim, we had to work out the appropriate methodology and verify its efficiency in a pilot experiment. The fulfillment of those tasks is described in the following sections.

Methodology

Bearing in mind the said aim, the hypothetical teaching procedure had to take into account two factors: (1) because the complete ban on MT application in the online learning and teaching turned out to be ineffective, it had to be allowed, but we had to find the ways of its transformation into a productive learning and teaching tool; (2) the possible means of the said transformation could be the post-editing of the machine-translated text but only on condition the students edit it thoroughly, which theoretically could provide for the required intensity of their thinking and analytical activity.

As an instrument to provide for the said thoroughness, we chose the introspective research procedure 'Think Aloud Protocol' (TAP) adapted for the needs of written translation. This procedure has been successfully employed in the translation process research, for example, to study decision-making, creative thinking and attitude toward the task (Kussmaul & Tirkkonen-Condit, 1995), as well as the linguistic (Künzli, 2009) and cognitive (Cifuentes-Ferez et al., 2015) aspects of translation.

TAP is mostly used to study interpreting when the subjects analyse their own deliberation process verbalizing their decision-making in dealing with a translation problem. Those deliberations are recorded and then analysed. Because, in our case, we studied the written translation process, the TAP procedure was adapted according to the aim of our research. It had the form of a verbal written commentary provided immediately after a specific fragment (usually a sentence) of the MT target text (MT TT) had been edited. That is, the students translated the specific English text into Ukrainian by means of the MT (*Google Translate*) engine, and then they post-edited it providing a detailed written commentary with the explanation of the reasons for each correction made in the MT TT. It was assumed that this manner of post-editing in combination with the said commentaries would provide for the sufficient intensity of the students' thinking and analytical activity contributing to the development of relevant neural network in ther mind. In its turn, it was expected to positively affect the development of their general

translator competence, including the critical approach to the solution of terminological problems, even in translating without MT application.

Basing on these assumptions, we formulated the following hypothesis of our research.

In online translation teaching, the efficiency of the development of critical approach to the solution of terminological problems in translation, as well as of the specialized bilingual (English and Ukrainian) terminology acquisition, may be increased by means of intensifying the students' thinking and analytical activity in their independent work. The said intensification may be provided for by post-editing machine-translated texts in combination with detailed verbal written explanations of all corrections made in the MT TT,

The testing of this hypothesis was carried out in a pilot experiment with a duration of 38 academic hours (8 contact hours and 30 hours of independent work). The experiment dealt with online teaching specialised translation in the domain of Psychology, specifically oriented toward the acquisition of appropriate psychological terminology.

The said teaching involved 21 participants, first-year MA students majoring in English and Translation at V. N. Karazin National University of Kharkiv (Ukraine). Their command of General English corresponded to level C1 in the CEFR classification (CEFR, 2018). The students also had had some experience in translation in social-political and some other domains. The participants had instrumental motivation as the results of their learning were taken into account in assessing their progress within the semester.

The 80-minute weekly online contact classes involved the work with appropriately oriented English texts that included preparatory exercises (acquaintance with the new English terminology and its Ukrainian equivalents in parallel texts, consolidation of associations between the equivalents at the word and collocation levels, etc.), as well as translation tasks at the passage and text levels. For the sake of time economy, all tasks within contact classes were completed orally.

The independent work tasks, however, were all done in writing according to the procedure described above. The post-edited machine- translated texts together with the detailed commentary concerning the reasons for the corrections were weekly sent to the teachers who analysed them and assessed according to a number of criteria. The teachers took into account the amount of reasonable corrections made by the participants and the persuasiveness of their argumentation. Those criteria were assumed to be the indicators of the intensity of the participants' thinking and analytical activity.

Following the analysis of a specific participant's work, the latter was assigned to one of the four levels: level A – non-formal post-editing, grounded corrections, convincing argumentation; level B – mainly non-formal post-editing, mostly acceptable corrections, sporadic lack of convincing argumentation; level C – largely formal post-editing, insignificant amount of minor corrections, commonly deficient in convincing argumentation; level D – completely formal post-editing, exclusively minor corrections without convincing argumentation, omission of obvious errors in the MT TT.

For the sake of convenience, we developed an algorithm of converting the said levels into numeric values (10-point scale) taking into account the possible variations

within the same level. For example, the teachers assigned the value of 10 if they had no doubt that the specific work belonged to level A. If they had some doubts but ultimately gave preference to level A, they assigned it the mark of 9, but if they preferred level B, they gave it the mark of 8. Conversely, if, from the very beginning, they assigned it to level B – the specific work got the mark of 7. In a similar way, the marks were given within the lower levels (C or D).

Following the analysis of the students' works, the participants were arbitrarily subdivided into three groups – A (9–10 points), B (6–8 points) and C (below 6 points).

To establish the hypothetical impact of the intensity of students' analytical and thinking activity upon the development of their critical approach to the solution of terminological problems, the efficiency of specialized terminology acquisition and its use in the process of independent (without MT) translation, we conducted a special test at the end of our experiment. The participants were asked to translate the 248-word original text (see the Appendix) in 45 minutes. The text comprised 31 terms whose acquisition and use were controlled in the analysis.

Formally, the students were not allowed to use MT engines during the test, but there were no technical means to exclude this possibility, so the students' translations were assessed by comparing them with the MT TT on the basis of the 10-point scale (see above) to verify the degree of their independence (see table 1 further).

Results and Discussion

In this section, we present our results concerning the impact of the students' post-editing intensity in their weekly home tasks on the development of their critical approach to terminological problems, the efficiency of specialized terminology acquisition and its use in the process of independent (without MT) translation.

The analysis of the MT TT proved that the machine made 23 errors in translating the 31 terms controlled in the test, i.e. its terminological accuracy amounted to 26%. If our hypothesis is valid, we can expect the highest degree of literally coincidences with the MT TT among the subjects with the lowest thinking and analytical activity in their homework (group C), while the share of such coincidences in group A should be the least significant with the group B subjects' results somewhere in between. On the other hand, the efficiency of the specialized terminology acquisition and the accuracy of its use in the independent translation should be directly proportional to the said intensity, i.e. it should be highest in group A and lowest – in group C.

Following the test analysis, it was established that in cases when the machine suggested acceptable equivalents, the coincidences with the MT TT were observed in all groups, though there is a considerable variation concerning their shares. In group A, the coincidence rate ranged from 67% (terms 14 (*input devices – пристрої введення*) and 22 (*longitudinal studies – лонгітюдні дослідження*), to 56% (terms 6 (*processor – процесор*) and 24 (*subjects – випробувані*), while in other cases, it varied from zero to 33%. The same rate in group B amounted to 75% (term 21: *abstraction – абстракція*), 50% (terms 6, 8 (*transform – перетворювати*) and 24) and 0–25% regarding the remaining terms. In group C, the coincidence rate is much higher– from 28% (terms 21 and 24) to 43% (terms 8, 15 (*output – вихідні дані*) and 22), 72% (terms 6 and 13

(*information processing tasks – завдання з обробки інформації*) and 86% – terms 14, 24, 30 (*transcranial magnetic stimulations – транскраніальна магнітна стимуляція*) and 31 (*stochastic modelling – стохастичне моделювання*).

Thus, though the fact of the formal coincidence with the MT variant in each particular case cannot in itself be regarded as a convincing proof of MT use, the correlation of coincidence rates in different groups lets us assume a greater reliance on MT in group C. In its turn, it may be related to their less critical attitude to terminological problems, as well as the less effective acquisition of terminology because of insufficient intensity of their thinking and analytical activity.

This assumption is corroborated by the groups' coincidence rate in cases where the machine suggested unacceptable variants. In group A, the said share considerably decreases ranging from zero to 22%, while in group C it remains significant – from 100% (term 18: *thought – мислення*) to 86% (term 17: *perception – сприймання*), 72% (terms 3 (*computation – комп'ютеризація*), 2, 5, 9 and 20 (*mind – психіка*)), 57% (terms 1 (*cognitive science – когнітивна психологія*) and 10 (*mental representation – ментальна репрезентація*), etc. It is worth mentioning that the insufficient intensity of group C subjects' thinking and analytical activity affected their general ability to solve terminological problems. Even when they selected a variant different from the one suggested by the machine, it often was unacceptable. Thus, the terminological accuracy in this group was rather low.

The results of the analysis are presented in table 1.

Table 1
Terminological Accuracy and the Share of Coincidences with the MT Variants in the Test.

Group	HWI	TI	Average accuracy (%)			Average share of coincidences with MT (%)		
			general	MT (a)	MT (u)	general	MT (a)	MT (u)
A	9.6	7.5	70.7	87.9	63.0	21.2	31.5	15.5
B	7.0	4.8	50.8	77.3	46.6	33.6	36.4	22.5
C	1.7	1.6	46.1	85.9	22.7	52.9	83.2	49.1

Legend: HWI – degree of homework independence (out of 10); TI – degree of test independence (out of 10); MT (a) – MT acceptable variants; MT (u) – MT unacceptable variants

In table 1, we can see a clear interdependence between the amount and intensity of students' homework, and presumably the degree of their thinking and analytical activity, on the one hand, and their critical approach to terminological problems, as well as the efficiency of specialized terminology acquisition and use.

The subjects of group A completed the full amount of the planned independent work, which is mostly devoid of any signs of formal approach, i.e. we can assume a high intensity of their thinking and analytical activity.

The group B subjects also completed all planned independent work, but there are some indicators of formal approach in their translations – sporadic coincidence of shorter text fragments with the MT TT, non-systematic repetition of the MT errors, infrequent preservation of the MT unnatural word order, etc. Hence, though the intensity of their thinking and analytical activity was lower as compared to the group A subjects, its general level is sufficiently high.

The subjects of group C completed only half of the planned independent work. In addition, their homework translations contained a large amount of complete or partial coincidences with the MT TT. Thus, it seems logical to assume that the intensity of their thinking and analytical activity was considerably lower as compared with the subjects of the other groups.

The level of the subjects' homework independence strongly correlates with the quality of their test translations. Though the said levels in the test decreased as compared to their homework, it may be explained by the time limit in the test. It might make some students, especially closer to the deadline, occasionally consult the MT variant. However, the correlation between the groups remains stable.

The group A subjects' test translations had some indicators of formal approach inherent in the group B subjects' homework: irregular coincidences of shorter text fragments with the MT TT, occasional repetition of the MT errors, unnatural word order, etc.

The characteristics of the group B subjects' test translations slightly deteriorated as well – the share of MT edited fragments increased. No matter how substantial their transformations of the MT text were, the relationship to the latter was quite obvious. However, the difference between groups A and B remained stable – 2.6 points in their homework and 2.7 points in the test translation.

The group C subjects' rate of independence in their test translations as compared to the one in their homework did not change and remained low – 1.6 and 1.7 points respectively.

The subjects' level of critical approach to terminological problems correlates well with the efficiency of their solution in the test translation. The group A subjects, who displayed the highest independence rate in their homework and test translations (9.6 and 7.5 points respectively), have the highest index of terminological accuracy as well (70.7%). Similarly, the group B subjects, who go second by their independence rate (7.0 and 4.8 points respectively), have the second terminological accuracy index as well – 50.8%.

Bearing in mind the group C subjects' low independence rate in both their homework and the translation test (1.6 and 1.7 points respectively), their average terminological accuracy (46.1%) looks surprising as it lags behind the similar group B index only by 4.7%. Taking into account the substantial difference of independence rates in those groups, one could expect a more substantial disparity concerning their terminological accuracy as well. However, this paradox has a simple reason – a relatively high terminological accuracy index in group C is explained by their predominant reliance on the MT variants. Because the MT variant was acceptable in

every fourth case, it artificially improved the accuracy index of group C subjects who predominantly gave preference to the MT options.

It becomes evident if we compare the terminological accuracy rate in the cases where the MT options were acceptable versus the cases when they were not. As it follows from table 1, the group C subjects' accuracy rate (85.9%) in the first case (acceptable MT options) is almost equal to the similar rate in group A (87.9%) and even exceeds the one in group B (77.3%). However, it can be accounted for by the fact that the group C subjects nearly always copy the MT option in general, and if this option is acceptable, it improves their overall accuracy rate. For example, in relation to the acceptable MT options, the group C subjects copied them in 83.2% of cases, i.e. they used alternative acceptable variants only in 2.7% of them. In contrast, the group A subjects' variants coincided with the MT options only in 31.5% (out of 87.9%) of cases, with a similar picture in group B (36.4% out of 77.3%). In the remaining cases, the subjects of groups A and B used alternative acceptable variants.

This conclusion is corroborated by the subjects' performance when the MT suggested unacceptable options. Here, the subjects' terminological accuracy variance in different groups is closer to the expectations: group A – 63.0%, group B – 46.6% and group C – 22.7%, i.e. the difference between groups A i B amounts to 16.4%, between B and C – 23.9%, and between A and C – 40.3%. The advantage of groups A i B subjects in the critical approach to terminological problems is even clearer if we look at the coincidence rate with unacceptable MT options among the subjects of different groups. The said rate is 15.5% in group A, 22.5% – in group B, and 49.1% – in group C. Thus, the group C subjects, even in the situation of the machine options' doubtful acceptability, rely on MT in translating every second term, while in groups B and A, it may be assumed only in every fifth and seventh terms respectively.

In general, the said coincidence rate analysis proves an unquestionable advantage of the students who demonstrated a higher intensity of their thinking and analytical activity throughout the entire period of study. The average rate of coincidences with the MT options constituted 21.2% in group A, 33.6% – in group B, and 52.9% – in group C. A considerable difference in the subjects' independence in terminological problems solution, as well as its efficiency among the students of various groups allows assuming that the said difference is caused by the dissimilarity in the intensity of the subjects' thinking and analytical activity.

Conclusions

The main objective of this study was to test the assumption that it is possible to enhance the development of the critical approach to the solution of terminological problems in translation, as well as of the specialized bilingual (English and Ukrainian) terminology acquisition by intensifying the students' thinking and analytical activity in their independent work. Our pilot experiment has confirmed that the said intensification may be provided for by post-editing machine-translated texts in combination with detailed verbal written explanations of all corrections made in the MT TT.

The intensity of the students' analytical and thinking activity compares well with their independence in the terminological problems solution in translation – the correlation of the students' independence rate with the various indices of the said activity remains stable irrespective of the translation environment (homework or translation test). The students with insufficient intensity of their analytical and thinking activity throughout the course of study have a tendency to excessively rely on MT terminological options giving the preference to them in over half of the cases, while the dependence on the MT options of students with a high intensity of their analytical and thinking activity is substantially lower.

There is also a good correlation between the intensity of the students' analytical and thinking activity with their success in the solution of terminological problems in translation. The higher is the said intensity, the better is the students' success rate, especially when the problems get more complicated. Under such conditions, the lack of the sufficient amount of independent work experience, as well as the absence of the required equivalents in their lexicon, encourage the students' excessive trust to MT options and results in a considerable deterioration of their specialized terminology recall accuracy.

The study has certain limitations. Those include a relatively small amount of participants and terminology, which were involved in the experimental teaching and learning. Further studies in this area could use more subjects representing a greater variety of educational levels, as well as a wider range of terminology from diverse domains. It could be considered the prospect of the further research.

References

Carl, M. & Schaeffer, M. J. (2017). Models of the Translation Process. In J. W. Schwieter & A. Ferreira (Eds.), The Handbook of Translation and Cognition (pp. 50–70). John Wiley & Sons, Inc. https://doi.org/10.1002/9781119241485.ch3

CEFR: The Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Companion volume with new descriptors. (2018). Cambridge : Cambridge University Press.

Cifuentes-Ferez P. & Rojo, A. (2015). Thinking for Translating. Think-aloud Protocol on the translation of manner-of-motion verbs. Target, 27(2), 273–300. https://doi.org/10.1075/target.27.2.05cif

Englund Dimitrova, T. (2016). Translation process. In Y. Gambier & L. van Doorslaer (Eds.). Handbook of Translation Studies (Vol. 1) (pp. 406–411). Amsterdam : John Benjamins. https://doi.org/10.1075/hts.2016.tra6

Esqueda, M. D. (2021). Machine translation: teaching and learning issues. Trabalhos em Linguística Aplicada, 60(1), 282–299.

Jakobsen, A. L. (2017). Translation Process Research. In J. W. Schwieter & A. Ferreira (Eds.), The Handbook of Translation and Cognition (pp. 19-49). John Wiley & Sons, Inc. https://doi.org/10.1002/9781119241485.ch2

Künzli, A. (2009). Think-aloud Protocols – A Useful Tool for Investigating the Linguistic Aspect of Translation. Meta, 54(2), 326–341. https://doi.org/10.7202/037684ar

Kussmaul, P. & Tirkkonen-Condit, S. (1995). Think-Aloud Protocol Analysis in Translation Studies. TTR, 8(1), 177–199. https://doi.org/10.7202/037201ar

Lee, S. B. (2018). Process research into post-editing: How do undergraduate students post-edit the output of Google Translate? The Journal of Translation Studies, 19(3), 259-286. https://doi.org/10.15749/jts.2018.19.3.010

Lörscher, W. (2008). A Model for the Analysis of Translation Processes within a Framework of Systemic Linguistics. Cadernos de Tradução, 2(10), 97–112. DOI: 10.5007/6146

Mellinger, Ch. D. (2017). Translators and machine translation: knowledge and skills gaps in translator pedagogy. The Interpreter and Translator Trainer, 11(4). 280–293. https://doi.org/10.1080/1750399X.2017.1359760

Moorkens, J. (2018). What to expect from Neural Machine Translation: a practical in-class translation evaluation exercise. The Interpreter and Translator Trainer, 12(4), 375–387. https://doi.org/10.1080/1750399X.2018.1501639

Nord, C. (2016). Skopos and (Un)certainty: How Functional Translators Deal with Doubt. Meta, 61(1), 29–41. https://doi.org/10.7202/1036981ar

O'Brien, Sh., Rossetti, A. (2020). Neural machine translation and the evolution of the localisation sector. The Journal of Internationalization and Localization, 7(1-2), 95–121. https://doi.org/10.1075/jial.20005.obr

Pym, A. (2013). Translation Skill-Sets in a Machine-Translation Age. Meta, 58(3), 487–503. https://doi.org/10.7202/1025047ar

Schwieter, J. W. & Ferreira, A. (Eds). (2017). The Handbook of Translation and Cognition. John Wiley & Sons, Inc. https://doi.org/10.1002/9781119241485

Wu, D. & Wei, L. (2021). Online teaching as the new normal: Understanding translator trainers' self-efficacy beliefs. The Journal of Specialised Translation, 36b, 301–326.

Yang, Y., Wang, X. & Yuan, Q. (2021). Measuring the usability of machine translation in the classroom context. Translation and Interpreting Studies, 16(1), 101–123. https://doi.org/10.1075/tis.18047.yan

Appendix

The text of the translation test.

In order to understand what cognitive science is all about we need to know what its theoretical perspective on the mind is. This perspective centers on the idea of computation, which may alternatively be called information processing. Cognitive scientists view the mind as an information processor that must both represent and transform information. That is, a mind, according to this perspective, must incorporate some form of mental representation and processes that act on and manipulate that information. Cognitive science is often credited with being influenced by the rise of the computer. Computers are of course information processors. They perform a variety of information processing tasks. Information gets into the computer via input devices and can be stored there. The information can be processed using software. The results of this processing may next serve as output. In like fashion, we may think of people performing similar tasks. Information is "input" into our minds through perception. It is stored in the memory and processed in the form of thought. Our thoughts can then serve as the basis of "outputs," such as language or physical behavior. Of course, this analogy between the human mind and computers is at a very high level of abstraction as the former is difficult to investigate, especially in longitudinal studies, which can suffer from attrition due to the subjects' dropout. It concerns language impairment cases, brain injuries, mental illnesses, etc. To investigate neural nets, the researchers use, among other methods, transcranial magnetic stimulations and stochastic modelling.

IMPACT OF FORMATIVE ASSESSMENT ON STUDENTS' MOTIVATION IN FOREIGN LANGUAGE ACQUISITION

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Abstract. The article focuses on introducing formative assessment to the educational process of professionally oriented English communication and the impact of assessment on students' motivation to learn English. In the article, various types of motivation are discussed; high and low levels of formative assessment are presented; the relationship between motivation and assessment in learning English is studied. The model of high and low levels of formative assessment implementation in learning English for professional communication is tested. The levels of students' motivation to English acquisition in the conditions of low and high levels of formative assessment are compared. Special attention is paid to specific pedagogical conditions under which formative assessment has a greater impact on students' motivation. Experimental training was conducted among students of the pedagogical university who study English for professional communication. The authors compare and analyze the results of the motivation tests and diagnostic tests of language proficiency at the pre- and post- stages of experimental training. The study supports the idea about the relationship between students' motivation and their English language proficiency assessment. The results show that a high level of formative assessment can be beneficial for overcoming students' low motivation if students receive immediate feedback, evaluation of their work, teachers' recommendations and support. It is observed that the reasonable integration of

students' self-assessment into teachers' formative assessment plays a vital role in increasing students' motivation to English acquisition. According to the study, regular practical implementation of high-level formative assessment methods in English acquisition increases the level of students' motivation and, consequently, the level of students' achievements in mastering professionally oriented English communication.

Keywords: English language acquisition, motivation, English language proficiency, high level of formative assessment, low level of formative assessment, feedback, self-assessment.

Дмітренко Наталя, Будас Юлія, Колядич Юлія, Поляруш Ніна. Вплив формуючого оцінювання на мотивацію студентів у процесі оволодіння англійською мовою.

Анотація. Стаття присвячена проблемі застосування формуючого оцінювання у процесі навчання професійно орієнтованого англомовного спілкування і впливу оцінювання на мотивацію студентів до вивчення англійської мови. У статті розглядається різні види мотивації, високий і низький рівні формуючого оцінювання та взаємозв'язок між мотивацією і оцінюванням у процесі вивчення англійської мови. Авторами перевіряється модель застосування високого і низького рівня формуючого оцінювання у процесі вивчення англійської мови для професійного спілкування і порівнюються рівні мотивації до вивчення англійської мови у студентів, які навчалися за низьким і високим рівнем формуючого оцінювання. Особлива увага звертається на конкретні педагогічні умови, за яких формуюче оцінювання має більший вплив на мотивацію студентів. Експериментальне навчання проводилося серед студентів педагогічного університету, які вивчають англійську мову для професійного спілкування. У статті порівняно і проаналізовано результати мотиваційного тесту і зрізу знань студентів з професійно орієнтованого англомовного спілкування, які проводилися на початку і в кінці експериментального навчання. Дослідження підтвердило взаємозв'язок між мотивацією студентів та оцінкою рівня їх знань англійської мови. Доведено, що високий рівень формуючого оцінювання може бути корисним для подолання низької мотивації студентів, якщо студенти отримують своєчасний зворотний зв'язок, оцінку своєї роботи, рекомендації і підтримку викладачів. Поступова інтеграція самооцінки студентів в формуюче оцінювання викладачів також відіграє важливу роль у підвищенні рівня мотивації студентів до вивчення англійської мови. Згідно з опитуванням, регулярне практичне застосування методів високого рівня формуючого оцінювання у процесі вивчення англійської мови підвищують мотивацію студентів, в результаті чого підвищується рівень досягнень студентів в оволодінні професійно орієнтованим англомовним спілкуванням.

Ключові слова: оволодіння англійською мовою, мотивація, англомовна компетентність, високий рівень формуючого оцінювання, низький рівень формуючого оцінювання, зворотній зв'язок, самооцінювання.

Introduction

Learning habits of students are explained by a complex of motives. Multiple strategies are used for increasing students' motivation while learning foreign languages. Assessment is among those which are the most powerful tools. It is viewed as a significant trigger of motivation for learning. Being widely discussed, it is still an ambiguous issue for those who are involved in the process. Investigating obvious and hidden challenges of assessment is important for understanding the processes which influence students' motivation. It helps address the problems a teacher may experience while introducing formative assessment in class. So, no wonder that formative assessment is viewed as the top priority nowadays.

It is presumed that high-level formative assessment can influence students' motivation and subsequently their foreign language proficiency. So, our primary objectives are to trace the influence of high-level formative assessment on students' motivation while learning a foreign language and to suggest the most beneficial high-level formative assessment characteristics used during the study for increasing students' motivation to achieve foreign language proficiency.

Theoretical Analysis

Motivation is defined in psychology as a process "that initiates, directs, and sustains behaviour to satisfy physiological or psychological needs" (Wood & Wood, 1999, p. 358). As a complex phenomenon, motivation involves a number of entities, such as interest, confidence, self-esteem, effort, efficacy, and others. Geen (1995) pointed out activation (determination to start doing something), persistence (the decision not to give up and continue doing what you have begun), and intensity (the focused energy and attention to complete the thing) as the most relevant characteristics of motivation, though some scientists (Crowl, 1997) consider persistence and focused behaviour as its most important features.

Intrinsic motivation happens when activities are pursued as "ends in itself, simply because they are enjoyable, not because any external reward is attached. On the other hand, when we act in order to gain some external reward or to avoid some undesirable consequence, we are pulled by extrinsic motivation" (Wood, 1999, p. 359). Reasons for mastering a foreign language vary greatly and may include the desire to integrate into a new community, love or a passionate interest, self-development, career opportunities or others. If students consider learning the language important and it coincides with their personal goals, they will treat learning the language as worth the effort. Thus, motivation for learning is viewed as a form of "energy which is experienced by learners and which drives their capacity to learn, adapt and change in response to internal and external stimuli" (A systematic review of the impact of summative assessment, 2002).

Researchers also point out the need for achievement as another social motive that influences learning habits even more powerfully and efficiently. Achievement motivation (McClelland et al., 1958) can be interpreted as a person's desire to achieve some goals, experience a sense of accomplishment. Students low in achievement motivation slack or cease learning a foreign language when they meet any serious obstacles but they consider their failure as a result of their inability. Weiner (1972) describes people low in achievement motivation as those who do not realize that effort influences outcome, whereas people with high achievement motivation, according to Kukla (1972), regard their abilities, determination and hard work as the factors which influence their outcomes and success. Moreover, students high in achievement motivation will not give up easily. They will continue working to learn a language, and enjoy testing their abilities.

Cauley and McMillan (2010) differentiate achievement goals as performance goals and mastery goals. Public evaluations of individual abilities and rewarding the

best performance are stressed in a performance-goal orientation, while the assessment of students' progress, improvement, developing new skills is emphasized when mastery goals are supported.

Many researchers, who concentrate on the impact of assessment on the motivation for learning, have different ideas as for its value. Though they subscribe to the "central role assessment plays in promoting intrinsic or extrinsic motivation" (A systematic review of the impact of summative assessment and tests on students' motivation for learning, 2002, p. 14), their opinions differ greatly concerning the effect of tests and exams on learners' motivation to master the language. Whereas adherents of the unfavourable role of exams on motivation to learning express their negativity, naming exam anxiety (Crooks, 1988), inability to demonstrate the students' on-going growth (Tsagari, 2004), narrowing the curriculum (Gipps, 1994) and others, their opponents contradict the harmful role of assessment, and give their proofs.

Assessment begins with teachers' educational values, and the target of the language learning surely affects the assessment. What is more, the personality of the evaluator, learners' age, reasons for assessing, types of assessment and time chosen for it correlate and influence both the assessment and the motivation. "Assessment practices have increasingly moved away from objective mastery testing of instructional syllabus content to on-going assessment of effort and contribution learners make to the process of learning." (Ross, 2005, p. 318).

The definition of assessment largely depends on the researcher's vision of the matter. The overwhelming majority share the common view of assessment as an on-going process with a variety of participants and techniques used. This process is considered to be crucial in effective instruction. Assessment is a term that "covers any activity in which evidence of learning is collected in a planned and systematic way, and is used to make a judgment about learning" (Assessment and Learning Research Synthesis Group, 2002, p. 1).

However, scholars have various perceptions of what assessment involves. It is a wide-spread vision of assessment nowadays as "a combination of all formal and informal judgments and findings that occur inside and outside the classroom" (Florin, 2010, p. 24).

Bachman (1990) wrote about measurement, test, and evaluation as three main concepts of the assessment process. Considering measurement to be synonymous with assessment, he presented it as the process of "quantifying the characteristics of persons according to explicit procedures and rules" (Bachman, 1990, p. 18). For Bachman, test is a measurement instrument that presents "a specific sample of an individual behaviour" (Bachman, 1990, p. 20). And evaluation is viewed as an amount of "reliable and relevant information" (Bachman, 1990, p. 22).

Witt, Elliotte, Kramer, and Gresham presume that the activities and decisions occurring "during assessment can be thought of as a process components, while the information collected represents content components" (Witt et al., 1994, p. 8).

Florin shares Herrera's opinion of assessment as a wide range of procedures to get the information about students' knowledge and performance. He also points out

that assessment is "a combination of all formal and informal judgments and findings that occur inside and outside a classroom" (Florin, 2010, p. 24). The researcher indicates that assessment is a sum of testing points and a variety of other measurements.

Simultaneously, many opponents (Gipps, 1994; Tsagari, 2004; Hosseini & Ghonsooly, 2017) feel rather sceptical about standardised language tests. They doubt the validity of these tests, their effects, and reasoning. Tests are criticized for evaluating foreign language proficiency at a certain point of time ignoring students' attitudes, interests, goals, and involvement. This scepticism has resulted in new approaches to assessment. Scientists believe assessment can be a tool that helps solve learners' problems. Its practices "can and should vary according to the type of problem that precipitated assessment" (Witt et al., 1994, p. 6). Dylan (2017) talks about assessment as a bridge between learning and teaching. He states that assessment makes it possible for a teacher to see whether the methods achieved the target of learning, and help learners overcome their problems.

Among the most significant recommended principles to assessment National Committee on Science Education Standards and Assessment (1996) names the fairness, the consistency of assessment with its purpose, equity of assessment with students' opportunities and its soundness, the definite correspondence between the data collected and the consequences of assessment results.

Though Bachman (1990) connected measurement with assessment, he put forward the idea of the reasoning behind the information about learner's level of knowledge. "Evaluation does not have to rely exclusively on test scores, and test scores are not always evaluative. Tests should be used to motivate students to study more or to help identify gaps in their knowledge base" (Bachman, 1990 as cited in Florin, 2010).

Formative assessment can be interpreted as a data accumulating process of collecting information about students' learning and adjusting the instruction to improve their learning. Ideally, it is "a planned process to the extent that the teacher consciously and constantly absorbs evidence of student performance and then uses this information productively, resulting in increased student motivation and engagement" (Cauley & McMillan, 2010). It is reported that "formative assessment shows students that underperformance is not innate and that improvements can be made through targeted changes" (Hanover Research, 2014).

Cauley and McMillan (2010) list several possible formative assessment characteristics. Firstly, they differentiate low-level and high-level formative assessment. Low-level formative assessment (LFA) is mostly standardized, formal, with teachers who are decision-makers. Feedback is usually delayed in time, after instruction and assessment. Instructional tasks are chosen only by a teacher, and they are created on formal base. Students' self-assessment is not taken into account. Motivation is mostly extrinsic. Students consider their success or failure as attributable to external factors. In contrast, high-level formative assessment (HFA), characterized by these scholars, is spontaneous, informal, with varied assessment conducted by teachers and students. Mostly immediate feedback is specific for low

achieving students and delayed for higher achieving ones. Tasks are settled by students too and adjustments may be flexible. Interactions between teachers and students are more extensive. Much attention is given to students' self-assessment and it is an integral part of the evaluation. Intrinsic motivation is a typical type. Students consider internal factors, their efforts as responsible for their results.

Methods

Participants

Eighty students of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (VSPU), majoring in Mathematics, Psychology, and the Ukrainian Language were involved in the research process. The participants were heterogeneous in terms of their foreign language proficiency, age, and gender. The study took place during 2018–2019, they had been learning English (discipline "Foreign Language for Specific Purposes") for 1.5 years as a foreign language in this particular university. Lessons were conducted twice a week (first year of study) and once a week (second year of study) for 4 terms. Both groups consisted of 40 students, who were randomly assigned. But the high-level formative assessment was applied in the experimental group (high-level formative assessment group or HFA group), whereas the control group (low-level formative assessment group or LFA group) was taught with the same intake of concepts using the low-level formative assessment.

The participants of the experimental study were informed about the purpose and the structure of research and assured that their names would not be used in the study result reports.

Instruments

To gauge the motivation towards ESP learning, 30 statements about students' preferences and habits of learning English were offered. They were modified from the Attitude / Motivation Test Battery (Gardner, 1985). The original version of the questionnaire includes 6 sections with 12 sub-tests (104 items). We have chosen the shortened form of the test which includes only the "Motivation" section (motivation tendency to foreign learning) with 3 sub-tests which consider motivational intensity (11 items), desire to learn English (9 items), and attitudes toward learning English (10 items).

The validity and reliability of Gardner's test is widely established (Hashwani, 2008; Kristmanson, 2000; Williams et al.,2002). According to Gardner and MacIntyre (1993) the validity of the Attitude / Motivation Test Battery has been supported. The internal consistence reliability was reported to be .91 (Gardner, 2005). The mean reliability of the section 'Motivation' was calculated as .92 (motivational intensity: .80, attitude toward learning the target language: .91, desire to learn the target language: 0.84) (Masgoret & Gardner, 1994). In our study the reliability coefficient (Cronbach Alpha) value for the test "Motivation" was also computed to

estimate the internal consistency. It was found to be quite high: 0.88. The minimum and maximum possible score on this test range from 30 to 150.

In the instruction, the students of both groups were asked to estimate the degree of their agreement with the test statements, assessing them from one to five points (a five-point Likert scale): 5 – means completely true (strongly agree); 4 – means usually true (agree); 3 – means sometimes true (uncertain/neutral); 2 – means not usually true (disagree); 1 – means never true (strongly disagree). The score range of the questionnaire is the following: 5.00-4.51 means that the level of motivation is very high, 4.50-3.51 – high, 3.50-2.51 – average, 2.50-1.51 – low, 1.50-1.00 – very low.

In the study, the preliminary and final English tests of reading comprehension, taken from Preliminary English Test (PET) (reading comprehension online prepared tests by Cambridge), were given to the students to witness the initial and final level of students' reading comprehension skill. The total maximum practice test score is 30 (30-20 – high level, 19-13 – average level, 12-1 – low level).

The self-assessment scales from Common European Framework of Reference for Languages (CEFR) as a source for students' self-assessment of English skills were used as well as the following learning materials: "Educational Psychology", "English for Mathematics" (Dmitrenko, 2011; 2018).

Research Design

To better tackle the issue, the test of English proficiency, the pre- and post-"Motivaion" survey, the self-assessment scales, the observation, interviewing, and the experimental study were conducted.

The process of the study can be presented as the following scheme: *Two-part Questionnaire* (Part 1 – Personal Data, Self-Assessment of English Skills, Interview; Part 2 – The Attitude / Motivation Test Battery) → *Preliminary English Test* (PET Reading Comprehension) → *Sandwich Model* → *Final Test* (PET Reading Comprehension) → *The Attitude / Motivation Test Battery*.

At the initial phase of the study the students were given a two-part questionnaire, which included personal information, scales of English skills self-assessment, and the section "Motivation" from the Attitude / Motivation Test Battery. To obtain some information about students' English learning background, they were also interviewed about any opportunities to speak English in their everyday life outside the classroom, possibilities to use English in their future workplace, the reasons that forced them to study English or supported them in learning, the influence of teachers' attitude over their desire to learn English, the necessity to get more feedback from their teacher of English. The next step was to do the reading comprehension part of PET.

The mediation (experimental) phase of the study was designed as *the Sandwich model* originally introduced by Sternberg and Grigorenko (as cited in Poehner, 2008). It was intended to allocate 30 minutes of the HFA group's time to reading

comprehension using the high-level formative assessment during the mediation phase. The following stages were used:

> 1: after reading the text the students did various grammar and vocabulary tasks to test their reading comprehension. In LFA groups it was the tutor who checked and scored the test results, giving individual comments of errors and recommendations in written form after a prolonged period. He returned the papers to the learners during the next lesson, whereas in the HFA groups the immediate post-test discussion on students' doubts was welcomed. The tutor gave a chance to the students to find the correct answer by themselves. For this purpose, the teacher shared a blank response sheet and grouped students to discuss the test and present the agreed paper. Any person, interested in the subsequent to the test feedback, received it. The mediator's task was to offer immediate feedback; to brainstorm the problem points, give explanations, hints, prompts, suggestions; to ask for students' arguments over their choice; to provide different learning methods mostly with critical thinking aloud. The students' self-assessment was taken into account while marking the papers. The students were encouraged to contribute their individual tasks and write similar tests at home.
>
> 2: in a week the learners were given a reading comprehension test at the lesson and the mediator checked and scored the test results, but the discussion of results and errors was omitted during that lesson.

The procedure was rerun 5 times in the HFA group. The students of the LFA group were also given reading comprehension tests but only some elements, such as delayed feedback, of the low-level formative assessment were observed. Students' self-assessment was not taken into account.

At the final phase of the study, the students were given the final test (PET Reading Comprehension) and the same 30 items from the section "Motivation" of the Attitude / Motivation Test Battery.

Results

The results of students' self-assessment scales (CEFR) showed that 55 students consider themselves as basic users of language (A1, A2) and 25 of students estimate themselves as independent users (B1, B2).

The informal interview results demonstrated that students had never used English as a means of communication outside the classroom and disregarded the benefits of its learning. The majority (65 students) also indicated that they had never been abroad. For 30 students, the possibilities of using English in their future workplace were rather obscure, though all participants agreed that in the modern society a person without working knowledge of at least one foreign language is at a disadvantage. Only the threat of a final test or exam failure encouraged 67 students to learn a foreign language continuously during the course. Interviews with the students demonstrated that constant teachers' support influenced their desire to learn English greatly (20 students) and 72 students wanted to get more feedback from their teacher of English.

A comparison of the preliminary and final test (PET reading comprehension) results in two groups showed that at the initial phase the results of two groups differ insignificantly but at the final phase the students of the experimental HFA group obtained higher scores (Table 1).

Table 1
Results of Preliminary and Final English Tests

Test	Level	Control LFA Group N (40)	Experimental HFA Group N (40)
Preliminary English Test	High level	4	3
	Average level	22	21
	Low level	14	16
		M=14.8 SD=8.33	M=14.25 SD=8.15
Final English Test	High level	3	5
	Average level	22	25
	Low level	15	10
		M=14.32 SD=8.45	M=16.78 SD=9.84

Also, the students were asked to respond to the questionnaire (The Attitude/Motivation Test Battery) once again to juxtapose changes in the level of their motivation toward ESL learning if there were any. The data of the questionnaire were quantified by coding the answers into data in a scale of 1 – 5 and downloaded into the statistical programme package (Table 2).

Table 2
Mean Scores and Standard Deviation of the Motivational Scales

Scales	Control LFA Group				Experimental HFA Group			
	Pre-Test		Post-Test		Pre-Test		Post-Test	
	M	SD	M	SD	M	SD	M	SD
Motivational intensity	2.14	.72	2.15	.67	2.13	.73	2.38	.54
Desire to learn English	2.13	.69	2.14	.65	2.17	.70	2.56	.48
Attitudes toward learning English	2.41	.65	2.43	.56	2.39	.74	2.59	.46

Table 2 shows that in the control LFA group the mean scores and standard deviation of the motivational scales changed fairly in the observed period. The increasing results in the experimental HFA group could be attributed to the formative assessment scheme developed among students during the study.

The final results of descriptive statistics of the experimental HFA and control LFA groups are presented in Table 3.

Table 3
The Results of Descriptive Statistics

Group	N	M	SD
Control LFA	40	2.24	.63
Experimental HFA	40	2.51	.49

The students of the experimental HFA group reported being more motivated to nglish acquisition in obtained the average level of motivation in comparison with the lower level of the students in the control LFA group. In the HFA group, the smaller standard deviation shows that the values are more concentrated around the mean.

To ascertain whether the obtained results in the HFA group are obvious statistically and how variables (grades of English test and scores of motivational test) are correlated, we applied Pearson's correlation coefficient: $r = .9780$. The positive correlation shows a strong relationship between the two variables. The *p*-value is .01494 that signifies a noticeable correlation between variables. The results suggest that high-level formative assessment procedure could be helpful in predicting motivation toward professionally oriented English communication.

Discussion

The survey results can be related to regular high-level formative assessment in the process of English learning. It helped students achieve better results in their language proficiency which subsequently affected their motivation to learn a foreign language. It has been found out that implemented high-level formative assessment practices such as immediate brainstorming of students' doubts about their mistakes, their self-assessment, extensive interactions with the tutor have increased students' level of English achievements and of their certitude that efforts are responsible for their outcomes. The same results of positive effects of formative assessment on students' proficiency were proved by other studies (Chauncey, 2009; Clark, 2013; Ross, 2005; Yin, 2005).

The findings of the study showed that after introducing high-level formative assessment the experimental (HFA) group students' desire to learn English increased to the average level; their attitudes toward learning English were on the increase; they got closer to the average level of motivational intensity. At the same time, the results

of three motivational subscales of the control group students didn't change significantly.

The students' good achievement in English is reported to have a significant correlation with the motivation shown by statistical data. The correlation value between two variables is considered rather strong and might be understood as motivated individuals would be goal-directed and persistent in their effort for achieving learning goals that gives support for the arguments of Gardner (2001). The relationship is significant and was at average level. The findings of empirical studies conducted by Cauley and McMillan (2010), Gardner, Lalonde, Moorcroft and Evers (1987), Gardner (2001) agree with the findings in this study that the variable of achievement was strongly related with motivation.

At the same time, the analysis of students' self-assessment scales results demonstrates that 54 second year students have not reached the B1 level of English proficiency. Some students have so poor knowledge of the language that they experience extreme difficulties even in reading. The majority of them come from rural areas of Ukraine where English is poorly taught or neglected. These students find learning English especially tedious, useless and difficult. Being in the same group with students, already possessing B1 or A2 level, is extremely discouraging for them. It is arduous for an educator to motivate these students and properly assess them as incorrect assessment can ruin even these students' weak desire to learn English. Inappropriate evaluation of such students' efforts makes them feel like failures.

The results of the informal interview indicated that students use English in their everyday life outside the classroom very rarely. Most of them have no plans to use English in their future workplace and the main motive to learn English is to pass an exam at the end of the course. It may be sorrowfully concluded that Ukrainian students are mostly pulled by extrinsic motivation. The determination of students to master the language immensely subsides if there is no high-level formative assessment in the educational process.

The same ordeal is with the students who demonstrate higher level of the language proficiency. The educator should be very careful while assessing such learners because there is an ample possibility for these students to slack and be dissuaded. If the teacher follows the pattern of formative assessment and evaluates students' on-going progress, learners' achievement in mastering the language, it may cause misunderstanding in assessment. Some students may tend to juxtapose their level of knowledge with that of their peers. Misinterpreting tutors' evaluation, they may protest against its unfairness. The research study has made it clear that the main principles of formative assessment should be introduced to students at the beginning of the course, and clarified later again if it is necessary. Students should be explained that not their level of English proficiency is taken into account, but their achievements and improvement in mastering the language matter. Such kind of assessment gives hope to those students who lack the necessary knowledge and motivates to go on working harder those who are called independent users.

Thus, one more thing is of great importance for the beneficial use of formative assessment. The study supported the idea of creating a positive atmosphere for promoting formative assessment. A supportive, friendly atmosphere is essential for using high-level formative assessment for the sake of increasing students' motivation, and therefore their foreign language proficiency.

In our opinion, the high-level formative assessment of foreign language proficiency can stir learners' motivation if teachers make evident for students that their on-going growth is relevant and encouraged.

Teachers, creating a positive atmosphere of support in class, should explain the role of assessment for learning, promote students' interest in learning, and accentuate the importance of on-going progress instead of grade significance. The feedback is more beneficial if the information obtained during the assessment is used by the teacher to reschedule or re-teach the material, and if the student is willing to hear it and take into account. Teachers explain tricky grammar but the same should be done concerning the assessment. A lively discussion about using assessment for learning may diminish the impact of grades on students. If they know the exact rules, time and system of it, they are more likely to follow and respond to it. It is useful to emphasize students' achievement, stressing that it is impossible to master the language without making mistakes.

Comparing study results, it should be mentioned that students of the experimental groups, who had high-level formative assessment during the periods of English lessons, have manifested the higher level of motivation while being tested and interviewed. Our observation shows that some of students have become more hard-working, diligent, and responsible. They tend towards attending classes more regularly, being more inquisitive, doing their home assignments on time, and participating in discussions, regular reflection, and self-assessment. Students of control groups, who are faced with low-level formative assessment, might be more relaxed, unpunctual and irresponsible.

As a result, the implementation of interaction entailed hints, prompts, questions, suggestions, explanations, and elements of problem-based learning during the high-level formative assessment enhance students' motivation for English learning.

Study Limitations

As the size of the sample is rather small, the survey results cannot be generalized as the sample (n=80) selected cannot exemplify the entire population at large. Rather, this study should be considered as an exploratory investigation that has the goal of identifying possible issues and trends for further research.

Conclusions

Our survey focused on formative assessment aspects which we considered to be beneficial for increasing motivation and developing foreign language proficiency.

The principal findings of the present study have provided support for the idea that high-level formative assessment plays a meaningful role in developing students' achievement motivation which has a noticeable impact on improving their foreign language proficiency. Learners' foreign language proficiency and their motivation are interrelated and can be enhanced not only with efforts students are ready to invest in mastering the language but with tutor's assessment proceedings. Students' helplessness and demotivating feelings can be overcome with such characteristics of high-level formative assessment as namely teachers' support, immediate spontaneous feedback (whenever possible), appreciation of students' efforts, guidance about what should be done to achieve expected level of foreign language proficiency, the incorporation of students' self-assessment into the tutor's evaluation. To motivate students, assessment of foreign language proficiency should recognize the diversity of learners, direct them in their efforts to master the language, provide positive feedback and appreciation of work done. While assessing students' foreign language proficiency it is necessary to ponder over the positive and negative impact of it on their motivation, and modify its type. Though being beneficial such types as self-assessment and interactive feedback may sometimes embarrass students who are too sensitive to criticism.

Thus, according to the results of the study, the students, who underwent the high-level formative assessment procedure, showed the higher level of motivation toward ESL learning than the students who were not taught with the same procedure. The implementation of the high-level formative assessment demonstrates a significant difference in students' motivation and a positive interrelationship between having high-level formative assessment procedure and motivated learners.

References

A systematic review of the impact of summative assessment and tests on students' motivation for learning. (2002). Review conducted by the Assessment and Learning Research Synthesis Group. http://www.storre.stir.ac.uk/bitstream/1893/19607/1/SysRevImpSummativeAssessment2002.pdf.

Bachman, L. F. (1990). *Fundamental considerations in language testing.* Oxford: Oxford University Press.

Cauley, K. M., & McMillan, J. H. (2010). Formative assessment Techniques to Support Student Motivation and Achievement. *The Clearing House, 83 (1),* 1-6.

Chauncey, P. D. (2009). *Perceptions and attitudes of formative assessments in middle-school science classes* (Unpublished doctoral dissertation). https://adsabs.harvard.edu

Clark, K. P. (2013). *The effects of formative assessment instructional practices on student academic growth and achievement* (Unpublished doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3562119)

Council of Europe. (2001). *A Common European Framework of Reference for Languages Learning, Teaching, Assessment.* Cambridge: Cambridge University Press.

Crooks, T. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research*, 58, 438-481.

Crowl, T., Kaminsky, S., Podell, D. (1997). *Educational Psychology.* Windowson Teaching. Brown and Benchmark publishers.

Dmitrenko, N. (2011). *Educational Psychology.* Vinnytsia: Vinnytsia State Pedagogical University.

Dmitrenko, N. (2016). The implementation of problem-based learning in Ukrainian higher educational institutions. *Advanced Education*, *5,* 28-35. https://doi.org/10.20535/2410-8286.61834

Dmitrenko, N. (2018). *English for Mathematics.* Vinnytsia: Vinnytsia State Pedagogical University.

Dmitrenko, N. Ye. (Ed.). (2017). *Problem-based learning in teaching English as a foreign language: theoretical and practical issues*. Vinnytsia: FOP T. P. Baranovs'ka.

Dylan, W. (2017). Assessment: the Bridge between Teaching and Learning. *Voices from the Middle*, *21* (2), 15-20.

Earl, L. M. (2012). *Assessment as Learning: Using Classroom Assessment to Maximize Student Learning.* (2nd ed.) Corwin Press.

Florin, M. M. (2010). *Assessing English Language Learners in the Content Areas: a research-into-practice guide.* Ann Arbor: University of Michigan Press. https://doi.org/10.3998/mpub.8912915.

Gardner, R. C. (1985). *The Attitude Motivation Test Battery: Technical Report 1.*University of Western Ontario: London.

Gardner, R. C. (1985). *Social Psychology and Second Language Learning: The Role of Attitudes and Motivation.* London, UK: Edward Arnold Publishers.

Gardner, R. C. (2001). Language Learning Motivation: The Student, the Teacher, and the Researcher. *Texas Papers in Foreign Language Education, 6*(1), 1-18.

Gardner, R. C. (2005). *Integrative motivation and second language acquisition*. Canadian Association of Applied Linguistics. London and Ontario. http://publish.uwo.ca/~gardner/

Gardner, R. C., Lalonde, R. N., Moorcroft, R., & Evers, F. T. (1987). Second language attrition: The role of motivation and use. *Journal of Language and Social Psychology*, *6*(1), 29-47.

Gardner, R. C., & McIntyre, P. D. (1993). On the measurement of affective variables in second language learning. *Language Learning, 43*(2), 157-194.

Geen, R. G. (1995). *Human motivation: a social psychological approach.* Pacific Grove, Calif: Brooks / Cole Pub.

Gipps, C. V. (1994). *Beyond testing: Towards a theory of educational assessment*. London: Falmer Press. https://doi.org/10.4324/9780203486009.

Hanover Research. (2014). *The Impact of Formative Assessment and Learning Intentions on Student Achievement*. http://www.hanoverresearch.com/media/The-Impact-of-Formative-Assessment-and-Learning-Intentions-on-Student-Achievement.pdf.

Harmer, J. (2010). *How to Teach English*. Sixth impression, Pearson Education Limited.

Hashwani, M. S. (2008). Students' attitudes, motivation and anxiety towards English language learning. *Journal of Research and Reflections in Education, 2*(2), 121-144.

Herrera, G. H., Murry, K. G., & Cabral, R. M. (2007). *Assessment Accommodations for Classroom Teachers of Culturally and Linguistically Diverse Students.* Boston: Pearson.

Hosseini, H., & Ghonsooly, B. (2017). Integrating assessment and instruction: dynamic assessment and its criticisms examined. *Advanced Education, 7,* 9-16. http://dx.doi.org/10.20535/2410-8286.84207

Kincal, R. Y., & Ozan, C. (2018). Effects of Formative Assessment on Prospective Teachers' Achievement, Attitude and Self-Regulation Skills. *International Journal of Progressive Education, 14*(2), 77-92. https://doi.org/10.29329/ijpe.2018.139.6

Kristmanson, P. (2000). Affect in the second language classroom: How to create an emotional climate. *Reflexions, 19*(2), 1-5. https://doi.org/10.12691/education-2-11-8

Kukla, A. (1972). Foundations of an Attributional Theory of Performance. *Psychological Review, 79,* 454-470.

Lavrysh, Yu. (2016). Peer and self-assessment at ESP classes: case study. *Advances Education, 6,* 60-68 https://doi.org/10.20535/2410-8286.85351.

Masgoret, A. M., & Gardner, R. C. (1994). Attitudes, *motivation and second language learning:* A meta-analysis of studies conducted by Gardner and Associates. University of Western Ontario.

McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1958). *A scoring manual for the achievement motive*. In J. W. Atkinson (Ed.), *Motives in fantasy, action, and society* (pp. 179-204). Princeton, NJ: D. Van Nostrand Company, Inc.

Measuring What Counts. A Conceptual Guide for Mathematics Assessment. (1993). National Research Council; Mathematical Sciences Education Board. Washington, DC. https://doi.org/10.17226/2235.

National Science Education Standards (1996). National Committee on Science Education Standards and Assessment, National Research Council. Washington, DC. http://www.csun.edu/science/ref/curriculum/reforms/nses/nses-complete.pdf.

Poehner, M. E., & Lantolf, J. P. (2005). Dynamic assessment in the language classroom. *Language Teaching Research*, *9,* 1-33. https://doi.org/10.1191/1362168805lr166oa

Popham, J. (2006). Defining and Enhancing Formative Assessment. *Paper presented at the Annual Large-Scale Assessment Conference, Council of Chief State School Officers, San Francisco, C A.* http://www.cpre.org/ccii/images/stories/ccii_pdfs/defining%20formative%20assessment_popham.pdf.

Ross, S. J. (2005). The Impact of Assessment Method on Foreign Language Proficiency Growth. *Applied Linguistics 26*(3), 317-342.

Scriven, M. S. (1967). *The Methodology of Evaluation.* In Ralph Tyler, Robert Gagne, and Michael Scriven (Eds.). *Perspectives of Curriculum Evaluation (39-83).* Chicago: Rand McNally.

Tomak, T., & Šendula-Pavelić, M. (2017). Motivation towards studying English for specific purpose among students of medical and healthcare studies. *JAHR, 8/2*(16), 151-170.

Tsagari, D. (2004). Is here life beyond language testing? An introduction to alternative language testing. Centre for Research in Language Education, *CRILE Working Papers*, *58,* 1-23.

Weiner, B. (1972). Attribution theory, Achievement Motivation, and the Educational Process. *Review of Educational Research, 42*(2), 203-215. https://doi.org/10.3102/00346543042002203.

Williams, M., Burden, R., & Lanvers, U. (2002). French is the language of love and stuff: Student perceptions of issues related to motivation in learning a foreign language. *British Educational Research Journal, 28*(4), 503-528.

Witt, J. C., Elliott, S. N., Kramer, J. J., & Gresham, F. M. (1994). *Assessment of Children. Fundamental Methods and Practices*. Dubuque, Iowa: Brown and Benchmark Publishers.

Wood, S. E., & Wood, E. G. (1999). *The World of Psychology*. Boston: Allyn and Bacon.

Yin, Y. (2005). *The influence of formative assessments on student motivation, achievement, and conceptual change.* Unpublished PhD dissertation. Available from ProQuest Dissertations and Theses database. (UMI No. 3186430)

Zoghi, M., & Malmeer, E. (2013). The Effect of Dynamic Assessment a EFL Learners' Intrinsic Motivation. *Journal of Language Teaching and Research, 4*(3), 584-594. https://doi.org/10.4304/jltr.4.3.584-591

A PSYCHOLINGUISTIC CROSS-CULTURAL STUDY
OF THE CONCEPT 'CONFLICT' IN INDIA AND UKRAINE

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Abstract. The paper presents a comparative study of the semantic field of the concept of conflict in Ukrainian and Indian cultures. The literature review has shown that there has not been any discussion on the abstract general concept of *conflict*. However, we consider such data exceptionally important for a better understanding of the worldview and cultural differences in diverse countries. Our study aimed to identify cultural features, similarities, and differences in the perception of the concept of conflict by representatives of various cultures. To investigate the way the concept of conflict is perceived, we used a set of methods, including speech activity analysis, free-listing for data gathering and processing, mathematical calculation, systematization, and generalization of results We conducted our study in three phases: at the first stage we gathered data, at the second we processed them, and at the third phase we generalized the findings and drawing conclusions. The students from Kyiv-Mohyla Academy (Ukraine) and Indian Institute of Technology Bombay (India) participated in the research (19–24 years old). In general, we got 292 questionnaires. The experiment revealed that the common semantic core of the concept of conflict in Ukrainian and Indian cultures contains seven words: fight, misunderstanding, war, disagreement, quarrel, struggle, aggression. But in contrast to the Ukrainian culture, in India, the associations with the given concept predominantly depict the person's emotional state (sadness, anger, fear,

confusion, and misunderstanding). Participants from India also mention caste discrimination and religious diversity. In Ukraine, the word conflict is much associated with negative interaction (quarrel, aggression, argument, dispute, etc.). Besides, in contrast to the Indian culture, there are no associations with social discrimination and religious diversity. The importance of our findings cannot be stressed too much since they can potentially be used in mediation, social advertising, and international negotiations.

Keywords: conflict, cultures, semantic field, similarity, difference, India, Ukraine

Гірник Андрій, Крилова-Грек Юлія, Хан Азізуддин. **Психолінгвістичне крос-культурне дослідженні поняття конфлікту в Україні та Індії.**

Анотація. У статті представлено порівняльне дослідження семантичного поля поняття «конфлікт» в українській та індійській культурах. Аналіз джерел показав, що порівняльні дослідження абстрактного загального поняття «конфлікт» не були предметом розгляду у наукових працях. Між тим, такі дані є важливою інформацією для розуміння світогляду та культурних відмінностей у різних країнах. Метою нашого дослідження було виявити культурні особливості, спільності та відмінності у сприйняття поняття «конфлікт» представниками різних культур. Для дослідження використано методи дослідження продуктів мовленнєвої діяльності: для збору та обробки даних ми використали метод фрі-лістингу, для обробки – метод математичного підрахунку, систематизації та узагальнення результатів. Дослідження складалося з трьох етапів: на першому проведено опитування та зібрали дані, на другому етапі оброблено отримані дані, на третьому узагальнено результати та зроблено висновки. У дослідженні взяли участь студенти Києво-Могилянської Академії (Україна) та студенти Індійського технологічного інституту Бомбей (Індія). Загальна кількість опитаних склала 292 респонденти віком від 19–24 років. У результаті аналізу слів-асоціацій семантичного поля, з'ясовано, що до спільного семантичного ядра поняття «конфлікт» в українському та індійському культурному просторі входять сім слів: бійка, непорозуміння, війна, незгода, сварка, боротьба, агресія. Водночас, на відміну від українського культурного простору, в Індії слова-асоціації поняття «конфлікт», здебільшого пов'язані із емоційно-чуттєвою сферою (сум, злість, страх, розгубленість, непорозуміння). Також серед слів-асоціацій були слова, пов'язані із кастовою нерівністю та релігійним різноманіттям. В українському культурному просторі слово «конфлікт» в основному асоціюється з негативно забарвленою взаємодією (сварка, агресія, спір, суперечка тощо), і на відміну від індійського культурного простору відсутні асоціації з соціальною нерівністю та релігійним різноманіттям. Результати дослідження стануть у нагоді при побудові стратегії медіації у конфліктних ситуаціях, соціальній рекламі, міжнародних перемовинах.

Ключові слова: *конфлікт, культури, семантичне поле, спільність, відмінність, Індія, Україна.*

Introduction

In recent years there has been considerable interest in the interdependence and relationship between language and thought as the given issue has not lost its relevance since the emergence of the Sapir-Whorf hypothesis (Literary Encyclopedia, p. 229). There are many ways to examine cultural differences, one of them is to study oral and written speech. Indeed, culture influences the words that we speak, and the words that we speak have an impact on culture and society. Problems of speech, thinking, and culture are increasingly becoming the subject of interdisciplinary studies, including psychology, linguistics, philosophy, social and cultural sciences, which provide a better understanding of the laws of human nature. Comparative

interdisciplinary and cross-cultural researches are a powerful tool for studying the characteristics of various cultures to become aware of similarities and differences between them.

Language reflects our perception of the world that is greatly affected by a wide array of external factors like education, society, and culture. Expanded opportunities for remote communication and virtual collaboration, information exchange, free access to information and communication channels create favorable grounds for the formation of differences and similarities that incorporate a body of words and concepts that have a common semantic field in different cultures. Such knowledge may have many practical applications in comparative and computational linguistics, as well as in ethnopsychology and psychological anthropology. Besides, a better understanding of cultural similarities and differences can be used as a strategy for conflict resolution and mediation or advertising campaign for social effect (social advertising), products, and services.

Levinson and Gumper (1996), Dashieva (1998), Wierzbicka (2001), Ertelt-Vieth& Denisova-Schmidt (2007), Borgoyakova (2002), Goddard et al. (2016), Savvinova (2018) have addressed the cross-cultural issues of consciousness on the example of different semantic units. The core problem of their studies was the peculiarities of thinking, worldview, concepts, and phenomena in different cultures. For example, Levinson and Gumper (1996) distinguish between languages that describe spatial relations in terms of the body (like English 'right/left', 'front/back') and those that orient to fixed points in the environment (like 'north/south/east/west') in some aboriginal Australian languages (Levinson & Gumper,1996, as cited in Comrie, 2021).

Alongside confirming the interdependence of language, consciousness, and culture, they highlight the unique and genuine features of each culture. Despite their findings appear to be well-founded, they are lacking considerations about the existence of points of similarity in the language image of the world in different cultures.

Vygotsky (1982), Karaulov and Philipovich (2009), Melnikov (1998; 2000), Kiss (1968), DeDeyne et al. (2012) consider the relationship between language, culture, and thought; they have suggested that the system of person's speech meanings presents their worldview and consists of elements containing universal and culture-specific knowledge.

Vygotsky (1982) strongly believed that conceptual thinking is the key type of thinking that is characterized by the use of logical constructions, induction and deduction, ability to draw distinctions between basic and non-basic features, etc. He pointed out the verbality of language and speech-based conceptual thinking. We will explore Vygotsky's theory and try to prove that the analysis of the semantic field of a concept can provide information on the peculiarities of the language image of the world in diverse cultures.

Potebnya (2019), Dridze (1984), Zalevskaya (1998; 2003), Popova and Sternin (2003), Kubryakova (2012) have examined the conceptual picture of the world observed as a reflection of the worldview at the mental level. However, the main

limitation of these studies is researching a monolingual environment, united by a common territory, political system, and certain cultural characteristics, which does not allow establishing similarities and differences between representatives of different cultural groups. Each concept that makes up the picture of the world reflects a system of particular values that prevail in a given culture, as well as has a specific representation in the individual's inner world.

According to the systematic approach in linguistics, proposed by Melnikov (1998), language is a sign system that significantly depends on the conditions of the communication environment, where this system is formed. The conditions of the communication environment stand for the living conditions, type of economic activity, population, geographical location, and other factors that greatly affect the communication. Being a true supporter of Potebnian and Humboldtian ideas, Melnikov drew attention to the internal form of language as a determinant of lexical diversity, which defines the peculiarities of the language picture of the world shared by representatives of the same speech group (Melnikov, 1998; 2000).

Based on the aforementioned, we will consider how the meaning of the concept of *conflict* is manifested in the collective national consciousness in different cultures and what associative fields construct the semantic field of the given concept.

Zalevskaya (2003) put forward the psycholinguistic model of the word, which emphasizes that the word in the individual consciousness is included in a wide network of multilateral relationships. The scholar highlights that words and relationships between words, sensory experience, and background are the objects of the process of differentiation and integration. Zalevskaya (1998) states that a word as a unit and a tool for communication reflects the individual picture of the world as well as tends to correlate those of the individuals in the same social setting.

The relationships between culture and thinking within one language family and country were examined by Nguyen Thi Huong (2000), Anisimova (2004), Ufimtseva (2005), while Dashiyeva (1998), Borgoyakova (2002), Goddard et al. (2016) conducted cross-cultural studies on the example of different languages and countries.

A growing body of comparative analysis by Wierzbicka (2001), Cliff et al. (2008), Goddard et al. (2016), Krylova-Grek (2007), Bloom and Keil (2001), Wolf and Holmes (2011) examined the relationships between language and thought in different cultures.

In her seminal paper, Wierzbicka (2011) demonstrated that every language has key concepts, like friendship and freedom, expressed in keywords that reflect the fundamental values of a certain culture. Moreover, these key concepts differ from those of the other culture. For her, the relationships between language, thought, and culture are indisputable since the vocabulary reflects the persons' values, ideas, attitudes, and thoughts about being (Wierzbicka, 2001, p.15). The researcher comes to the conclusion that revealing the essence and meaning of the concept implies taking into account a particular set of elementary meanings, "Semantics can have an explanatory value only if it manages to "define" (or explicate) complex and obscure meanings in terms of simple and self-explanatory ones" (Wierzbicka, 2001, p. 51).

Krylova-Grek (2007) investigated the peculiarities of translation of words-concepts based on Ukrainian and English. It was found that the formation of the concept is much affected by a plethora of civilizational phenomena, including culture, history, social development, and so on. Alongside experience and individual characteristics, the abovementioned factors lead to the formation of the word-concept meaning hosted in the individuals' minds. At the same time, the psycholinguistic approach in translation is grounded on the generalized features of perception widespread in a certain culture. The system of abstract concepts constructs a picture of the world of both an individual and an entire society with a common language, culture, legal and political organization, and heritage shared by the people of this society. A set of such concepts reflects and mentally represents the principal features of an object, ability, or phenomenon. Hence, the study of the key concepts that exist in a given society makes it possible to explore the picture of the world of a particular community (Krylova-Grek, 2007).

In this paper, we will examine the way the representatives of diverse cultures with different experiences and backgrounds perceive and understand the word-concept *conflict*.

Despite a distinction between abstract and general concepts, we have combined them into the same group since they reflect the intangible items and core values of each society. Therefore, we believe that the analysis of such concepts is an important tool for understanding the picture of the world that exists at the current moment of the cultural consciousness. We will focus on the perception of the abstract concept of *conflict* by representatives of Indian and Ukrainian cultures in order to compare and find out its similarities and difference in both cultures.

Notwithstanding the fact that each person has their own story and experience, we are convinced that individuals belonging to the same cultural group perceive certain concepts identically as they are affected by the same factors, including territorial, legal, political, cultural, and historical ones, as well as the media, which has the power to influence individuals' beliefs, attitudes, behaviors, and concepts. We strongly believe (Krylova-Grek, 2016) that the media have a huge impact on the general picture of the world in the same culture, in particular, on such abstract general concepts as *conflict*

Thus, following Zalevskaya (1998; 2003), Wierzbicka (2001) we define the word-concept as a unit of an individual's memory and mental lexicon, which reflects their knowledge, personal and cultural experience, and worldview perception.

There is no controversy surrounding the fact that language is one of the major factors to determine the uniqueness of each culture. Besides, language is the main means of reproducing the picture of the world. The system of concepts constructs a picture of the world, which reflects an individual understanding of reality. Though people are living in a very material world, the way they organize their living space much depends on the worldview formed by the perception of the world around them. The system of concepts is a multidimensional issue, serving the spiritual, intellectual, and social needs of an individual and a society.

A number of interdependent external and internal factors influence the development of the concept, changes, or clarifications in its meaning. Historically, the concept of *conflict* was affected by historical, social, cultural (perception and verbalization by a particular society), psychological (speech-reflected thoughts about a concept). In our paper, of fundamental interest are the common and distinctive features of the way the abstract general concepts of *love, conflict, happiness,* and *freedom* are perceived. We intend to trace the connection between cultural traditions and the meaning of word *conflict*. We also investigate how the meaning of the concept of *conflict* differs in various cultures. Furthermore, we try to find out the common associations in the semantic field of the concept and define the relevance of their meaning (in order in the list of associations).

Thus, the present cross-cultural study focuses on the concept of *conflict* as a psycholinguistic phenomenon. We explicate concept as a way to understand the worldview of other cultures, which generates a number of images, associations, ideas that are based on cognitive, cultural, historical, and social experience at the age of globalization and single information space.

The aim of our research is to analyze the semantic field of the concept of *conflict* and identify cultural peculiarities, similarities, and differences in the perception of the aforementioned concept by representatives of Ukrainian and Indian cultures. In this context, we tried to examine the way the representatives of different cultures perceive the same abstract concept and single out identical and contrasting in the semantic field of the concept, its core, and periphery.

It can be conceivably hypothesized that cultural peculiarities and social structure affect the consciousness of representatives of the same cultural space and form the semantic field of the concept of 'conflict'.

Methods

The interdependence and relationship between language, thought, and the views on the world around, i.e. picture of the world, can be detected by observing how means of language represent an understanding of the world acquired by members of a certain group. In an attempt to study the relationship between language and thought, we use analysis of speech activity, in particular, the free listing method to collect and process data.

The study was conducted in three phases: data gathering and processing were carried out in the first and second phases, respectively; the third phase was dedicated to the generalization of the findings and drawing conclusions.

The initial step of data collection implied gaining first-hand information, so we used the free-listing, a well-established ethnographic method that serves to identify cultural domains (a common set of beliefs, patterns of behaviour, values, meanings, etc. that people belonging to a particular culture share). We asked subjects to write down the most salient words that they think are associated with the concept of conflict. It is considered that it is enough to interview 20–30 respondents to obtain the

required data (Weller & Romney, 1988). The larger the sample is, the more reliable the results.

An essential feature of cultural domains is that they refer to the way the individuals of a certain group perceive the world around them. Besides, they are intrinsic to all members of the group. Nevertheless, members of the same cultural group may not completely agree on the elements, which this domain consists of (Borgatti, 1998).

As stated by Girnyk (2016), the more important is the frequency of each word specified by respondents. Some words will be frequently-used; some will be mentioned less commonly, while unusual or unexpected associations will be listed by only a few participants. Thus, we can get a core-periphery concept structure, where the core is made up of the most frequently mentioned words. One of the approaches to reducing the number of items in the studied area is to find a natural gap in the frequency distribution (Girnyk, 2016). The data processing phase includes systematizing and generalizing subjective and objective indicators, identifying the core and periphery of the semantic field, and obtaining quantitative and qualitative results.

During the third phase, we made conclusions, based on quantitative and qualitative results obtained.

Procedure

Speaking of concepts in cross-cultural studies, we divide them into three groups: 1) unique concepts, whose meaning is determined by the peculiar features of language and culture. For example, such concepts include non-equivalent words that are considered to be untranslatable. Among the best strategies are transliteration and descriptive translation; 2) concepts with a partial coincidence of the semantic field. For instance, in different concepts that refer to objects and phenomena may be equivalent or have certain differences due to national and cultural specifics (e.g., *table, rain, bread*); 3) abstract general concepts that can't be physically perceived or measured, like *happiness, conflict, joy*, etc.

In our paper, we focus on the third type of concept, namely, the word-concept *conflict*.

The initial cohort was composed of 292 respondents from Kyiv-Mohyla Academy, Ukraine (101 participants), and Indian Institute of Technology Bombay, India (91 respondents). All of the participants were aged 19–24. In general, we got 292 questionnaires; however, 22 of them were filled in incorrectly, so they were not processed. Thus, a total of 170 questionnaires were used for the survey. The margin of statistical error was 5%.

During the first phase of the experiment, the respondents had eight minutes to write on a separate sheet of paper all the words they think relate to the concept of *conflict*. The task duration was determined in our pilot study, which showed that even the most diligent Ukrainian students stop completing the task at the 7th or beginning of the 8th minute as they had nothing to add to the list of associations.

Then, the research team analysed and processed the data to compare the findings with the hypothesis. We examined the first 15 most commonly used words-associations since the rest of the words were used occasionally (1–2 times) and did not affect the overall result.

Results

India

As reported before, of the 91 questionnaires, 22 were not processed as instead of associations the answers contained descriptions of the conflict, personal attitudes and examples, etc. Hence, we analyzed 69 questionnaires.

In general, the participants used 161 word-associations. The first 15 words were mentioned 27 to 6 times (Table 1).

Table 1
The first 15 most commonly used words-associations (India)

No	Word in English	Ukrainian equivalent	Number of mentions	% of the total
1	anger	злість	27	16.8
2	*difference	відмінності, (інші погляди, ідеологія тощо)	24	14.9
3	fight	бійка	19	11.8
4	confusion	розгубленість	14	8.7
5	sadness	сум	12	7.6
6	misunderstanding	непорозуміння	12	7.6
7	war	війна	11	6.8
8	disagreement	незгода	11	6.8
9	opposite	протилежний	9	5.6
10	fear	страх	8	5
11	aggression (aggressiveness)	агресивність, агресія	6	3.7
12	to argue (argument)	сварка	6	3.7
13	struggle	боротьба	6	3.7

*Word *difference* was used both independently and in word combinations that clarified the cause of the conflict, such as *a difference of opinion*.

In the context of the conflict, the subjects hinted at the cultural and historical features of India and its people: caste as a cause of conflict, religion, nationality. The

concept of conflict was associated with the name of B. R. Ambedkar, a politician who campaigned against caste discrimination (two times). The questionnaires also mentioned family and international conflicts.

Summarizing the data of all questionnaires (91), it is worth noting that Indian students alluded to the Indian fictional films, which showcased the conflict. Some respondents made clear what conflicts they think of, for example, Kashmir conflict, India's independence from Britain, conflicts related to inequality: between rich and poor, resource distribution, conflicts in a family between siblings, parents, in society, or international conflicts between the USA, Pakistan, and India. Besides, there were six associations related to self-analysis and reflection: Self, self-watching, self-supremacy, self-respect, self-righteousness, self-made. At the same time, such responses were sporadic and therefore did not influence the overall results of the experiment.

Ukraine

The sample consisted of 101 respondents, who generated 940 associations. The first 15 were mentioned 74 to 24 times (Table 2).

Table 2
The first 15 most commonly used words-associations (Ukraine)

No	Word in Ukrainian	English equivalent	Number of mentions	% of the total
1	сварка	argument	74	7.9
2	суперечка	quarrel	68	7.2
3	непорозуміння	misunderstanding	62	6.6
4	війна	war	49	5.2
5	сутичка	collision	42	4.5
6	бійка	fight	42	4.5
7	протистояння	confrontation	36	3.8
8	спір	dispute	27	2.9
19	образа	resentment	24	2.6
10	незгода	disagreement	24	2.6
11	протиріччя	contradiction	22	2.3
12	боротьба	struggle	22	2.3
13	агресія	aggression (aggressiveness)	18	1.9
14	зіткнення	clash	16	1.7
15	розбірка	showdown	13	1.4

After analysing the data, we noticed that Indian students demonstrate a higher consistency in the words that form the core of the concept of *conflict*. Most often they associate conflict with *anger, differences*, and *fight*, which make up 43.5% of the entire list of words. The three most popular words among Ukrainian students are *quarrel, dispute*, and *misunderstanding* that make up only 21.7% of the total.

At the same time, it should be noted that Indian students mentioned an average of 2.3 words associated with the concept of *conflict*, while Ukrainian students named 9.3 words. Besides, the first three words of the semantic core in Ukrainian and Indian cultures have nothing in common. However, when we compare ≤ 4 % of words mentioned by Ukrainian and Indian students (the first 6 words), we will notice that two words (*бійка – fight* and *непорозуміння – misunderstanding*) out of six (i.e. a third) coincide. When drawing an analogy between the first 15 words, we can see seven coincided associations (*бійка – fight, непорозуміння – misunderstanding, війна – war, незгода – disagreement, сварка – argument, боротьба – struggle, агресія – aggression*).

Discussion

The comparison of data obtained on the basis of two languages allowed identifying similar and different cultural components in the semantic field of the concept of *conflict*, its core, and periphery in two extremely different cultures. The first 15 words belong to the core, while the rest forms the periphery. The study showed that the peripheral words had different meanings and were used occasionally (one or two times) and therefore could not affect the results.

Based on the data analysis, the difference in the words of the core can be explained by the fact that the top 15 words mentioned by Ukrainians are mostly associated with verbal and physical interaction, only *insult* (meaning feelings of bitterness and annoyance) refers to a person's emotional state. On the contrary, Indian students named five times more words to denote an emotional state (*anger, confusion, sadness, fear, tension*). It is interesting to note that *anger* and *difference* (in thoughts, views) take the first and second places in the Indian respondents' list of words and the twenty-first and twenty-fifth places, i.e. outside the main semantic core, in the list of associations written down by Ukrainians, respectively.

The analysis of the words of the semantic core showed obvious differences between the two cultures. In contrast to Ukraine, in India, the problems associated with the concept of *conflict* and included in the core are mainly related to the sensory and emotional perception of conflict (*anger, fear, confusion, misunderstanding*) and its physical manifestation (*fight, struggle*). As for the periphery of the concept, it contained words, which referred to caste discrimination and religious diversity. At the same time, in the Ukrainian culture, conflict is mainly associated with negative interactions (*сварка, агресія, спір, суперечка*, etc.). The semantic core included only one word (*образа*), which depicts the person's emotional state. Besides, Ukrainian students had no associations related to social discrimination or religious diversity.

The common semantic core of the concept of *conflict* in the Ukrainian and Indian cultures included the words as follows fight, misunderstanding, war, disagreement, quarrel, struggle, aggression (Fig. 1).

Figure 1
The Comparative Analysis of the Semantic Core of the Concept 'Conflict' in the Ukrainian and Indian Cultures
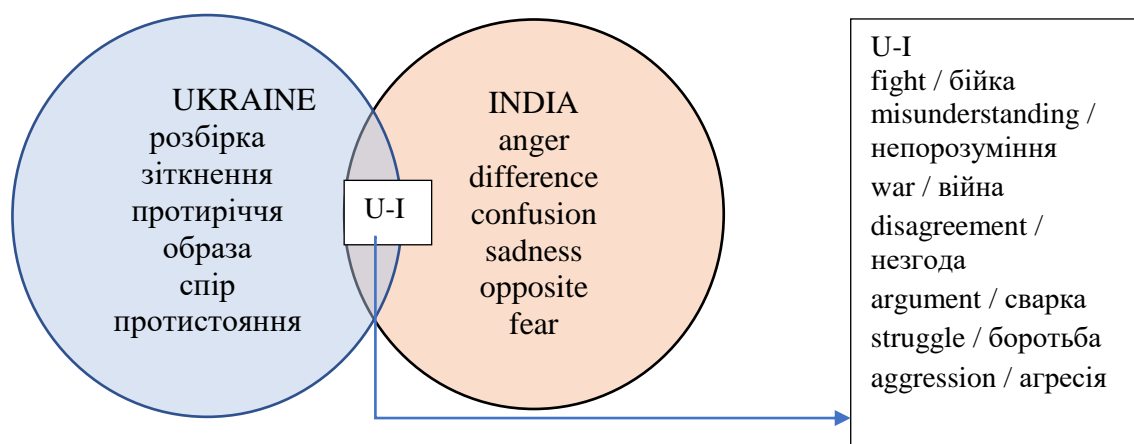
Conclusions

We have described the general abstract concept of *conflict*. The evidence from this study suggests that cultural differences significantly affect the worldview and the semantic field of the concept. At the same time, certain similarities can be used to facilitate dialogue and mediation, for example, for conflict resolution, to develop reconciliation strategies based on a common understanding of basic concepts.

Thus, cultural features and social structure influence the consciousness of representatives of the same culture and form the semantic field of the concept of *conflict*. Awareness of differences will also help to get to know another culture better. Understanding similarities and differences in the perception of the concept of *conflict* can be employed to build an effective strategy for mediation and negotiation in international relations, etc. The present findings have important implications for solving the problem of misinformation and propaganda in the media, which when covering the conflicts appeal to the person's emotional and sensory sphere. For instance, journalists tend to divide the sides of the conflict into in-group and out-group members, dehumanize the opponent, and present the situation as lose-win (in contrast to the mediation aimed at the win-win position).

In addition, the findings have the potential in arranging the multicultural public space, based on commonly shared values. Thus, in our view, these results are an

excellent initial step toward further studies on cultural differences of such abstract general concepts as *conflict*.

Future work will concentrate on the meaning of the concept of *conflict* in other cultures. We will try to define a common semantic core of the given concept as universal and independent from ethnic and cultural specifics.

References

Анисимова А.Т. Лингвистические проекции конфликта (дескриптивный аспект): дис. канд. филол. наук. Краснодар, 2004. 212 с.

Балясникова О.В., Уфимцева Н.В., Черкасова Г.А., Чулкина Н.Л. Языковое сознание: региональный аспект. Вестник Российского университета дружбы народов. Серия: Лингвистика, 2018. Т. 22, № 2. С. 232—250. https://doi.org/10.22363/2312-9182-2018-22-2-232-250

Боргоякова А.П. Национальнокультурная специфика языкового сознания хакасов, русских и англичан (на материале ядра языкового сознания): дисс. канд.филол.наук. Москва, 2002. 179 с.

Вежбицкая А. Понимание культур через посредство ключевых слов. Монография. Москва: Языки славянской культуры, 2001. 288 с.

Гірник А. М. Теоретичні засади і процедура фрілістингу. Наукові записки НаУКМА. Педагогічні, психологічні науки та соціальна робота, 2016. Т. 188, 50-55.

Дашиева Б.В. Образ мира в культурах русских, бурят и англичан. Языковое сознание: формирование и функционирование. Сб. статей. Москва, 1998. С. 200-211.

Дридзе Т.М. Текстовая деятельность в структуре социальной коммуникации. Проблемы семиосоциопсихологии. Москва: Издательство «Наука», 1984. 232 с.

Залевкая А.А. Языковое сознание: вопросы теории. Вопросы психолингвистики. 2003. №1. С. 30–34.

Залевская А.А. Значение слова и возможности его описания. Языковое сознание: формирование и функционирование. Сб. статей. Москва, 1998. С. 35-54

Караулов Ю.Н., Филиппович Ю.Н. Лингвокультурное сознание русской языковой личности. Моделирование состояния и функционирования. Москва: Изд. центр «Азбуковник», 2009. 336 с.

Крилова-Грек Ю.М. Психолінгвістичні особливості перекладу семантичних одиниць іншомовних текстів: дис. канд. психол. наук: 19.00.01. К.: Інститут психології ім. Г.С.Костюка АПН України, 2007.

Кубрякова Е.С. В поисках сущности языка: Когнитивные исследования. Ин-т. языкознания РАН. Москва: Знак, 2012. 208 с.

Літературознавча енциклопедія: у 2 т., авт.-уклад. Ю. І. Ковалів. Київ : ВЦ «Академія», 2007. Т. 1. С. 229.

Мельников Г.П. Системная типология языков: Синтез морфологической классификации языков со стадиальной. Москва: Изд-во РУДН, 2000. 78 с.

Мельников Г.П. Внутренняя форма русского языка — ключ к пониманию его особенностей на всех уровнях, ОРЛС, 1998. URL: http://philologos.narod.ru/melnikov-vf.htm

Нгуен Тхи Хыонг. Мир в образах сознания вьетнамцев. Языковое сознание и образ мира. Сб. статей. Москва, 2000, URL: https://iling-ran.ru/library/psylingva/sborniki/Book2000/html_204/4-3.html.

Потебня А. А. Мысль и язык. Избранные работы. Москва: Издательство Юрайт, 2019. 238 с.

Попова З. Д., Стернин И. А. Язык и национальная картина мира. Воронеж: Истоки, 2003. 60 с.

Уфимцева Н.В. Этнопсихолингвистика: вчера и сегодня. Вопросы психолингвистики. 2006, №4. С. 92-100.

Эртельт-Фит А, Денисова-Шмидт Е. Лакуны и их классификационная сетка. Вопросы психолингвистики, 2007. Т. 6. С. 39-51.

Bloom, P., Keil, F. C. (2001). Thinking through language. Mind & Language, 16(4), 351–367. https://doi.org/10.1111/1468-0017.00175

Borgatti, S.P. (1998). Elicitation Methods for Cultural Domain Analysis. In: J.Schensul& M. LeCompte (Eds.). The Ethnographer's Toolkit, V. 3. Walnut Creek: Altamira Press

Comrie, B. (2021, March 21) Language and Thought. Linguistic Society of America. https://www.linguisticsociety.org/resource/language-and-thought

Cliff, G. (ed.). Wierzbicka, A., Amberber, M. at al. (2008). Cross-linguistic semantics. Amsterdam: Benjamins: Studies in Language Companion Series. https://doi.org/10.1075/slcs.102

De Deyne, S., Navarro, D., and Storms, G. (2012). Better explanations of lexical and semantic cognition using networks derived from continued rather than single word associations. Behavior Research Methods, 45, 480—498.

Kiss, G. (1968). Words, associations, and networks. Journal of Verbal Learning and Verbal Behavior, 7, 707—713.

Kiss, G., Armstrong, C., Milroy, R. (1972). The Associative Thesaurus of English. Edinburg: Univ. of Edinb., MRC Speech and Communication Unit.

Krylova-Grek Yu. (2016) The Psycholinguistic Aspects of Influence of the Symbol Used in Media. Psycholinguistics, 20(1), 136-145.

Goddard, C., Wierzbicka, A., and Wong, J. (2016). "Walking" and "running" in English and German: The conceptual semantics of verbs of human locomotion. Review of Cognitive Linguistics, 14(2), 303–336. https://doi.org/10.1075/rcl.14.2

Gumperz, J. J., and Levinson, S. C. (1996). Rethinking linguistic relativity. Cambridge, UK: Cambridge University Press.

Savvinova, G. (2018). Special Features in Expressing the 'Homeland' Concept in the Yakut Heroic Epic Olonkho. Journal of History Culture and Art Research, 7(5), 168-179. http://dx.doi.org/10.7596/taksad.v7i5.1910

Vygotsky, L. S. (1986). Thought and language (translated and edited by Alex Kozulin). Cambridge, MA: The MIT Press.

Weller, S. C., & Romney, A. K. (1988). Systematic data collection. SAGE Publications, Inc. https://www.doi.org/10.4135/9781412986069

Wolff, P., & Holmes, K. J. (2011). Linguistic relativity. Wiley Interdisciplinary Reviews: Cognitive Science, 2(3), 253-265.

References (translated and transliterated)

Anisimova, A.T. (2004). Lingvisticheskiye proyektsii konflikta (deskriptivnyy aspekt) [Linguistic projections of the conflict (descriptive aspect)]. Doctoral dissertation, Krasnodar: Kuban State University,.

Balyasnikova, O., Ufimtseva, N., Cherkasova, G. and Chulkina N. (2018). Yazykovoye soznaniye: regionalnyy aspekt [Language and Cognition: Regional perspective]. Vestnik Rossiyskogo universiteta druzhby narodov. Seriya: Lingvistika, 22(2), 232-250. http://10.22363/2312-9182-2018-22-2-232-250

Borgoyakova, A.P. (2002). Natsionalnokulturnaya spetsifika yazykovogo soznaniya khakasov. russkikh i anglichan (na materiale yadra yazykovogo soznaniya) [National and cultural specifics of the linguistic consciousness of the Khakassians, Russians and Englishmen (based on the material of the core of linguistic consciousness)]. Doctoral dissertation. Moscow: Moscow State Linguistic University.

Wierzbicka, A. (2001). Understanding Cultures through Their Key Words. [Ponimaniye kultur cherez posredstvo klyuchevykh slov]. Moscow: Yazyki Slavyanskoy Kultury.

Girnik, A. M. (2016). Teoretichni zasadi i protsedura frilistingu [Theoretical principles and freeling procedure]. Naukovi zapiski NaUKMA. Pedagogichni. psikhologichni nauki ta sotsialna robota, 188, 50-55.

Dashiyeva, B.V. (1998). Obraz mira v kulturakh russkikh. buryat i anglichan [The image of the world in the cultures of the Russians, Buryats and English]. Yazykovoye soznaniye: formirovaniye i funktsionirovaniye, 200-211.

Dridze, T.M. (1984). Tekstovaya deyatelnost v strukture sotsialnoy kommunikatsii. Problemy semiosotsiopsikhologii [Text activity in the structure of social communication. Problems of semiosociopsychology]. Moscow: Nauka.

Zalevkaya, A.A. (2003). Yazykovoye soznaniye: voprosy teorii [Linguistic consciousness: theoretical questions]. Voprosy psikholingvistiki, 1, 30–34.

Zalevskaya, A.A.(1998).Znacheniye slova i vozmozhnosti ego opisaniya [The meaning of the word and the possibility of its description]. Yazykovoye soznaniye: formirovaniye i funktsionirovanie, 35-54.

Karaulov, Yu.N., Filippovich, Yu.N.(2009). Lingvokulturnoye soznaniye russkoy yazykovoy lichnosti. Modelirovaniye sostoyaniya i funktsionirovaniya [Linguocultural consciousness of the Russian language personality. Modeling state and functioning]. Moscow: "Azbukovnik".

Krylova-Grek, Yu. (2007). Psykholinhvistychni osoblyvosti perekladu semantychnykh odynyts inshomovnykh tekstiv [Psycholinguistic features of translation of semantic units of foreign language texts]. Doctoral dissertation, Institute of Psychology. Kyiv: The Academy of Pedagogical Sciences of Ukraine.

Kubryakova, E.S. (2012). V poiskakh sushchnosti yazyka: Kognitivnyye issledovaniya [In Search of the Essence of Language: Cognitive Research]. Institute of Linguistics of the Russian Academy of Sciences. Moscow: Znak.

Literaturoznavcha entsiklopediya [Literary Studies Encyclopedia] (2007). In 2 Volumes. Yu. Kovaliv, Ed. Vol. 1. Kyiv: Akademiya, 229.

Melnikov, G.P.(2000). Sistemnaya tipologiya yazykov: Sintez morfologicheskoy klassifikatsii yazykov so stadialnoy [Systemic typology of languages: Synthesis of morphological classification of languages from stadial.]. Moscow: RUDN.

Melnikov, G.P. (1998). Vnutrennyaya forma russkogo yazyka — klyuch k ponimaniyu ego osobennostey na vsekh urovnyakh [The internal form of the Russian language is the key to understanding its features at all levels]. ORLS. http://philologos.narod.ru/melnikov-vf.htm

Nguyen, Tkhi Khyong (2000). Mir v obrazakh soznaniya vyetnamtsev [The world in the images of the consciousness of the Vietnamese]. Yazykovoye soznaniye i obraz mira, collection of articles. https://iling-ran.ru/library/psylingva/sborniki/Book2000/html_204/4-3.html

Potebnya, A. A.(2019) Mysl i yazyk. Izbrannyye raboty [Thought and language. Selected works]. Moscow: Yurayt.

Popova, Z. D.. Sternin I. A.(2003). Yazyk i natsionalnaya kartina mira [Language and national picture of the world]. Voronezh: Istoki.

Ufimtseva, N.V.(2006). Etnopsikholingvistika: vchera i segodnya [Ethnopsycholinguistics: yesterday and today]. Voprosy Psikholingvistiki, 92-100.

Ertelt-Vieth, A., Denisova- Schmidt, E. (2007). Lakuny i ikh klassifikatsionnaya setka [Gaps and their classification grid]. Voprosy Psikholingvistiki, 6, 39-51.

Bloom, P., Keil, F. C. (2001). Thinking through language. Mind & Language, 16(4), 351–367. https://doi.org/10.1111/1468-0017.00175

Borgatti, S.P. (1998). Elicitation Methods for Cultural Domain Analysis. In: J.Schensul& M. LeCompte (Eds.). The Ethnographer's Toolkit, V. 3. Walnut Creek: Altamira Press

Comrie, B. (2021, March 21) Language and Thought. Linguistic Society of America. https://www.linguisticsociety.org/resource/language-and-thought

Cliff, G. (ed.). Wierzbicka, A., Amberber, M. at al. (2008). Cross-linguistic semantics. Amsterdam: Benjamins: Studies in Language Companion Series. https://doi.org/10.1075/slcs.102

De Deyne, S., Navarro, D., and Storms, G. (2012). Better explanations of lexical and semantic cognition using networks derived from continued rather than single word associations. Behavior Research Methods, 45, 480-498.

Kiss, G. (1968). Words, associations, and networks. Journal of Verbal Learning and Verbal Behavior, 7, 707—713.

Kiss, G., Armstrong, C., Milroy, R. (1972). The Associative Thesaurus of English. Edinburg: Univ. of Edinb., MRC Speech and Communication Unit.

Krylova-Grek Yu. (2016) The Psycholinguistic Aspects of Influence of the Symbol Used in Media. Psycholinguistics, 20(1), 136-145.

Goddard, C., Wierzbicka, A., and Wong, J. (2016). "Walking" and "running" in English and German: The conceptual semantics of verbs of human locomotion. Review of Cognitive Linguistics, 14(2), 303–336. https://doi.org/10.1075/rcl.14.2

Gumperz, J. J., and Levinson, S. C. (1996). Rethinking linguistic relativity. Cambridge, UK: Cambridge University Press.

Savvinova, G. (2018). Special Features in Expressing the 'Homeland' Concept in the Yakut Heroic Epic Olonkho. Journal of History Culture and Art Research, 7(5), 168-179. http://dx.doi.org/10.7596/taksad.v7i5.1910

Vygotsky, L. S. (1986). Thought and language (translated and edited by Alex Kozulin). Cambridge, MA: The MIT Press.

Weller, S. C., & Romney, A. K. (1988). Systematic data collection. SAGE Publications, Inc. https://www.doi.org/10.4135/9781412986069

Wolff, P., & Holmes, K. J. (2011). Linguistic relativity. Wiley Interdisciplinary Reviews: Cognitive Science, 2(3), 253-265.

PARA-ROMANI IN SCANDINAVIA

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Abstract. The study of 'language contact' has come very much to the fore in sociolinguistics in recent years, and it is not surprising that Romani, a diaspora language, should receive a good share of attention. Since its very departure from India a millennium ago, its speakers have encountered and interacted with speakers of dozens of other languages, all of which have left their mark. The most extreme cases are the so-called Para-Romani varieties, which have demanded the question, are they Romani with massive non-Romani intrusion, or are they non-Romani languages with more or less Romani intrusion? This is addressed in the present article, which deals with one such para-language, called here Scandoromani. Other para-Romani languages are Angloromani, Scottish Romani, Spanish Romani (Caló), Finish Romani (Kále). Paralanguages are used for communication between members of different language and cultural communities. The paralanguages of Romani are not so well-investigated and described, and the present study brings a new light to the field of Romani linguistics. Para-Romani languages are divided into two big groups: based on Indo-European and based on non-Indo-European languages. In this case, the Scandoromani is based on Indo-European languages and the Crimean-Romani (in Ukraine based on Crimean Tatar) and Kurbetcha (in Cyprus based on Turkish) are based on non-Indo-European languages. The Para-Romani varieties in Europe are preserved through communication between elder generations and children and thousands of children around Europe learn their mother tongue – the variety of Para-Romani through the transmission from parents to children. This gives the hope that those varieties will not despair.

Keywords: Romani, language contact, Scandinavia, identity, cryptolect.

Генкок Іан. Параромська мова в Скандинавії.

Анотація. Дослідження «мовного контакту» в останні роки вийшло на перший план у соціолінгвістиці, тому й не дивно, що ромській мові, мові діаспори, належить приділяти значну увагу. Відтоді, як вона покинула Індію тисячоліття тому, її носії стикалися та спілкувалися з носіями десятків інших мов, усі з яких залишили в ній свій відбиток. Найбільшою незвичністю вирізняються так звані параромські різновиди, які вимагають питання, чи є вони ромською мовою з великою часткою неромських домішок, чи це неромська мова з більшим чи меншим ступенем домішок ромської? Про це йдеться в цій статті, де висвітлюються проблеми однієї такої парамови, яку місцеві називають скандо-ромською. Інші параромські мови – це англоромська, шотландська ромська, іспанська ромська (Кало), фінська ромська (Кале). Парамови використовують у своєму спілкуванні представники різних мовних та культурних спільнот. Параромські мови не так добре досліджені та описані, і це дослідження висвітлює нові аспекти ромської лінгвістики. Параромські мови поділяються на дві великі групи: похідні від індоєвропейських і від неіндоєвропейських мов. У цьому випадку скандоромська мова заснована на

індоєвропейських мовах, а кримсько-ромська (в Україні на основі кримськотатарської) та курбетча (на Кіпрі на основі турецької) — на неіндоєвропейських мовах. Параромські різновиди в Європі збереглися завдяки спілкуванню між старшими поколіннями та дітьми, і тисячі дітей по всій Європі вивчають свою рідну мову – різновид параромської мови шляхом її передавання від батьків. Це вселяє надію, що на ці різновиди не чекає занепад.

Ключові слова: ромська мова, мовний контакт, Скандинавія, ідентичність, криптолект.
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Introduction

Since an earlier version of this paper appeared some thirty years ago (Hancock 1992), considerably more interest has been shown in the so-called *Para*-varieties of Romani (*e.g.* Boretzky & Igla, 1994; Sechidou, 2005; Bakker & Matras, 2013; Carling et al., 2014; Krinkova, 2015). These are not, in fact varieties of Romani despite their names, but are various regional or national languages with more or less Romani-derived (mostly lexical) content. Yet, there is an evident anomaly here; while in his review of Iversen's *Secret languages of Norway*, Einar Haugen concludes that it is "just a dialect of Norwegian" he goes on to say that the core of its vocabulary goes back to India (1949, p. 391). being of North Germanic descent, no Scandinavian dialect can be shown to have a core of direct lexical retention of Indic origin, yet when we examine Scandoromani[1], it does indeed appear to have just that. In the normal course of linguistic evolution, we cannot expect a language to start as (in this case, for example) Indo-Aryan, spoken in Asia, to become Germanic and spoken in northern Europe. This apparent shift in genetic affiliation is itself sufficiently aberrant to warrant closer investigation.

The Scandinavian perception of our language has not always been benevolent; an 18th-century Swedish commentary by the Reverend Christfrid Ganander claimed that to be able to speak it, it is necessary to "twitch," and that the Romani

... mouth and lips [be] big, wide and thick, convenient for the pronunciation of their language, which is rather aspirated and full of "schz" or "Sclawoniska" words, which call for a strong aspiration and a lot of spittle before they can be pronounced. Their pronunciation or sounds and voices are peculiar, loud, sharp, rough and harsh, and also demand twitches of the body and gestures with the hands, before they can be articulated.

And as for our social development, Unn Jørstadt, *Director of the then Norwegian School for Gypsies* concluded her 1972 report entitled "Norway's Gypsy minority" with the observation that "all of them are just like children. One thing is certain: they need help" (1972, p. 137).

Research background

Identity and language maintenance

There is no contemporary Romani population anywhere of solely Indic genetic ancestry. Because wherever Romanies have migrated, we have encountered, and

sometimes formed permanent alliances with, other, non-Romani peoples. This has given rise to newer, syncretic populations which, because of the pervasiveness of the core culture and language, have remained essentially Romani in terms of their own perceived identity; non-Romani groups have usually adjusted to the Roma rather than the reverse, although sufficient non-Romani elements have also been incorporated to affect the broader cultural and linguistic characteristics of each individual group.

In some instances, the Indic element has not been sufficient to keep the overall identity of the group Romani, so that while Romani elements are discernible in the speech of such peoples as the Jenisch in Germany or Switzerland, for example, or the Quinquis in Spain, other factors, both genetic and cultural, are insufficient either for them to think of themselves as Romani, or for them to be regarded as such by members of coexisting populations who do (Hancock, 1991, p. 91).

It is now generally accepted that our ancestors were a mixed population even before the *Teljaripen* (the exodus from northwestern India in our history), and that other peoples, Persians, Armenians, Greeks, &c. were incorporated even before crossing into Europe (the *Nakhipen*) and moving throughout the continent (the *Buxljaripen*), where Western peoples became a part of our genetic history.

Results and Discussion

Linguistic evidence suggests that there were three major migrations, the earliest travelling the furthest, reaching the northern and western fringes of Europe, including Britain and Scandinavia (and possibly Iberia). The second wave remained in central Europe, while the third were, for the most part, kept in slavery in the Balkans until abolition (*desrrobirèja*) in the mid 19th-century. These are the *Vlax* ("Wallachian") Roma.

In Scandinavia, as elsewhere in Europe today, the Romani populations consist of first, second and third diaspora immigrants.

Because of the very different historical situations distinguishing the migratory waves, and the resulting linguistic divergence, Vlax and non-Vlax today share little social interaction, even when they inhabit the same environment. Vlax Romanies in Norway numbered less than one hundred according to Unn Jørstad when she published her biased report seventeen years ago, a number which has at least tripled since that time; nevertheless, pedagogical materials have been produced in that country to teach literacy in Vlax Romani (*e.g.* Jansen & Heltveit, 1979; Syverud et al., 1979, Hagatun, 2021). Such publications in Sweden, with its larger Vlax population, are more numerous, and have been mainly produced by Skolöverstyrelsen in Stockholm. This discussion is concerned not with the Vlax Romani minority in Scandinavia, but with the descendants of the first diaspora, the population generally, though incorrectly, referred to as *Tattare*.

Norbert Boretzky has drawn attention to the fact that in the Romani lexicon, the indigenous (*i.e.* Indic) and the non-indigenous items adhere tenaciously to their respective grammatical paradigms, a characteristic "hardly found in any other

language" (1989, p. 357). While the majority of dialects do indeed retain their basically Indian structure, there are a number of varieties of the language which have survived lexically, but which demonstrate no, or almost no, indigenous grammar and phonology. These include *Lomavren*, the speech of the Armenian "Gypsies" (Finck 1903), *Caló*, spoken in Spain (Tudela 1985), *Angloromani* in England (Acton & Kenrick 1984; Hancock 1984a, 1984b), *Hellenoromani* in Greece (Triandaphyllidis 1923–24), *Tent Gypsy* in Yugoslavia (Uhlik 1941–43) and others. This phenomenon is not restricted simply to Romani; such languages as Mbugu (Goodman 1971), and Shelta (Hancock 1984c, Grant 1994) also appear to consist of lexicons couched in the framework of other languages. It is to this category that Scandoromani also belongs.

Documentation on the various Romani populations in Scandinavia is extensive.The question most frequently addressed in connection with the Tattare concerns their ultimate origins, and the extent to which they are in fact ethnic Romanies, if at all. Little has appeared on the linguistic classification of their speech, which has traditionally been viewed merely as a kind of slang consisting of cryptolectal vocabulary of mainly Romani origin in an entirely Scandinavian grammatical matrix.

Such languages have more relevance to linguistic theory, perhaps, than is at once apparent; first of all, they challenge the traditional genetic approach to language classification. Secondly, they provide useful insights into the maintenance of ethnic identity, as well as into contact phenomena and language attrition, both the focus of scholarly interest at the present time. The variety of Romani belonging to this category for which most theoretical work has been undertaken is Angloromani, which originated in England and which has subsequently spread to other parts of the English-speaking world (Hancock, 1986).[2] It is in fact possible that the origins of Scandoromani may also be traced to Britain, in the light of early contact between the British Isles and Scandinavia, although the processes yielding each possibly differ.

While Romanies may have entered Britain from southern Scandinavia in the first place, as the Jutes had done a thousand years before, the first record of their presence in Denmark indicates that they had been transported to that country by James IV of Scotland, in July, 1505. Their arrival in Sweden via Denmark is dated 1512, and they were being abandoned on the coast of Norway from British ships from 1544 onwards.

According to Bergman (1964, p. 13),

> . . . the Scottish and the Swedish Gypsies kept in touch during the 16th century . . . in the Swedish National Archives there are two passports for the Tattare, or as he is also called the Egyptian, Anders Faa . . . the name Faa is well-known in Scotland, and has been so (among Gypsies) for a long time. John Faa was the name of perhaps the most romantic Gypsy leader in Scotland, and he even had a poem written in his honour by our Swedish poet Orvar Odd.

Bergman (1964, p. 16) continues:

> Nowadays, a distinction is made between *Tattare* and *Zigenare*. This last term is used to refer to descendants of the Gypsies who immigrated in the latter part of the 19th century, mainly

between 1860 and 1880, and later. They are bilingual, and speak both a pure European Gypsy dialect, and Swedish . . . The term *Tattare* is reserved for a less well-defined group of people who live in the same way as the Gypsies, and who no doubt in certain cases are descendants of Gypsies who have mixed with Swedes, but who otherwise, and probably mainly, are descendants of the loose people from whom have come the (contemporary, non-Gypsy) significant group of loiterers.

Lastly, Bergman says (1964, p. 22)

Just as the Spanish Gypsies, after having settled down, mixed their language with the Spanish of the lower classes, with the *germanía* of the criminals, etc., so the Swedish Gypsies have also mixed their language with Swedish. Today's Tattare speak a mixture (rotvälska) in which, to be sure, the basis is old Romani, but where the inflectional system of the Gypsy language has been lost.

The language of the Swedish Zigenare, as referred to here, has been superbly described by Gjerdman and Ljungberg (1963); while no comparable grammar yet exists for the same language in Norway, that dialect is closely related to the one described for Sweden, and work on a linguistic description of Norwegian Vlax (which is the Lovari rather than the Kalderash or Churari dialect spoken in Sweden) is in progress by Lars Gjerde under the supervision of Dr. Knut Kristiansen at Oslo University's Indo-Iranian Institute. The speech of the Swedish Tattare has been recently dealt with in a book by Johansson (1977), while for the Norwegian situation, Iversen's three volume *Secret Languages in Norway* (1944-1950) remains the most comprehensive treatment. I am not dealing with Finland in this paper, but a number of linguistic works describing Fennoromani also exist, *e.g.* by Valtonen, Thesleff, and others.

While Bergman refers to the "mixing" of the Romani and the white populations, and of their languages, he makes no attempt to explain why such mixing should have taken place. No scholars seem yet to have attempted this from a linguistic perspective, although a number of ethnographic studies have been written such as those by Ethler, Heymowski, Bartels & Brun, Hansen, Takman, etc., which examine the ancestries of the Scandinavian Traveller population. The parallel situation in Britain has received more attention in this regard, and it is likely that what we have learned about this may equally apply in Scandinavia. There are two principal hypotheses for the British situation: firstly, that contemporary Angloromani is the result of progressive language attrition or decay—a position favoured by Romanologist Donald Kenrick, and secondly, that it is a deliberately contrived cryptolect dating from the sixteenth century, this being my own belief. I reject the possibility of language attrition because dying Romani dialects, such as that spoken in Wales, are not restructuring themselves; Welsh Romani has not slowly become Angloromani. Nor, in fact, is Angloromani dying, at least in North America, but appears to be spreading, numerically and geographically. I favor a sixteenth century origin for Angloromani because we have numerous references to a "secret language" in use among the Romani population from that time. The fact that no samples of

Angloromani occur in print until the nineteenth century attests only to its secret nature, although it has been used to support the attrition hypothesis; but absence of evidence is not evidence of absence; Shelta (*cf.* Hancock, 1984c) remained hidden from the outside world until the nineteenth century.

I will not repeat detailed arguments supporting my position here, since they have appeared in print elsewhere. But to summarize, it would seem that the newly-arrived Romanies found themselves thrown into the same social milieu as the British outlaws, and were obliged to interact with them for survival. The British outlaws already had a cryptolect of their own, known as Cant, evidence of which may be found in the still surviving speech of the Scottish Travellers (see Hancock, 1986), and, of course, the Roma had Romani as a means of private communication. Cant, which seems to date from the eleventh century, consists of cryptolectal items in an all-English grammatical and phonological framework. It has been used for poetry in the past, and some words, such as *booze*, *gear*, *hooker*, etc., have passed into general English slang. The Roma were not opposed to allowing Romani items to be incorporated into Cant, and no doubt learnt that speech themselves, but withheld inflected Romani from the non-Romani community, in order to be able to maintain their separateness within the larger separate population. The inflected language survived in England and America until the early twentieth century; by the mid-nineteenth century, Smart & Crofton (1875) were able to transcribe stories from British Romanies told first in inflected Romani and then in Angloromani.

The restructured language in Scandinavia appears to exist in several regional dialects; Johansson discusses two for Sweden, a Northern and a Skånish dialect, the differences between which appear to be mainly lexical. Phonologically and structurally, Scandoromani, or *Tattarespråk*, approximates almost completely to the Scandinavian host languages in the midst of which it exists. It is in its lexicon that it remains distinctively a Romani tongue. As with Angloromani, native morphology has undergone a process of collapse—taking the attritionist argument—or never existed in the first place, if Romani items were inserted into a co-existing Cant. We might still speak of reduction, however. For example, in Angloromani, the first-person personal pronominal forms all derive from the historical postpositional case *mande*, used following various prepositions (e.g. *mandi* 'I, me', *mandi's* 'my', etc.). The Scandoromani forms on the other hand have generalized equivalents based on the possessive singular masculine nominative in the inflected language, (*miro*), thus *miro* 'I, me', *miros* 'my', etc. Nearly all other morphology seems to be attributable to vernacular Scandinavian, for example reflecting their three-gender system rather than the two genders of the standard languages. Inflected forms appear to be frozen, e.g. *dakkri* 'mother', a genitive in historical Romani. Derivational morphemes are in the main non-productive, with the exception of the historical genitive, typically used in the inflected northern dialects such as Sinti or Welsh Romani as a means of lexical expansion. Examples from Scandoromani include *däkkaskiro* 'soldier', from *däkka* 'sword', *minnsjeskre* 'gonnorhea', from *minnsja* 'vulva', *bängerske* 'hell', from *bäng* 'devil', *dikkopaskro* 'mirror', from *dikka* 'to see', and so on. Calques on Scandinavian languages also account for some forms. Examples include *sapp-jakkad*

'wicked', literally 'snake-eyed', from *ormøgd*, ditto, or *ali-jakkar* 'spectacles, glasses', literally 'glass-eyes', cf. *glasøgon*, ditto. Other lexical items have been created by a process of incoining, i.e. combining existing morphemes into new lexical combinations. Examples include *krajjo-dikklo* 'flag', literally 'king cloth', *starrto-mossj* 'policeman', literally 'capture person', *randrar-mossj* 'secretary', literally 'write person', and *bassjar-mossj* 'musician', literally 'play person', *pilo-dukt* 'having a hangover', literally 'drunk-pained', *rubb-smitto* 'silversmith', is an example of a Romani and a Scandinavian derived morpheme in combination. Items from Scandinavian and Scandinavian Cant are also common in Scandoromani, usually in disguised form. Thus *fimmpus* 'five', *dustus* 'flour', *varsnos* 'our', *ersnos* 'your', *alonum* 'alone', (from *fern*, *dust*, *vur*, *er* and *alones*). This can even extend to Indian-derived items, e.g. j*ekkum* 'one' (from *jekh*) or *nakkus* 'nose' (from *nakh*).

Following are three sentences in Swedish Scandoromani with their Angloromani, inflected Romani, English, and Swedish equivalents:

Scandoromani:	*miro honkar alonum; mander honkar alonum*
English:	'I am alone'
Swedish:	*jag är ensam*
Angloromani:	*mandi's alonus; mandi's akonya*
Romani:	*me šom kokoro*

Scandoromani:	*vi tradrar to fåron en vaver divus*
English:	'we('ll) go to town another day'
Swedish:	*vi åker till stun en annan dag*
Angloromani:	*we'll tradder to the forus a wavver divvus*
Romani:	*džasa ka o foros vaver dives*

Scandoromani:	*ska vi puttja dålle mossj om han vill suta palla i ratti?*
English:	'shall we ask that fellow if he'll stay and sleep tonight?'
Swedish:	*ska vi fråga den där karlen om han vill ligga kvar i natt?*
Angloromani:	*will we putch the mush if he'll atch and suti to-rati?*
Romani:	*pučhas i muršeste te ačel te sovel akarat?*

Conclusion

The question has arisen whether languages of this type may be said to have undergone processes of pidginization or creolization (discussed in Hancock, 1971). Although Arnbjørnsdottir & Smith (1986) attempt an argument against this in their discussion of Russenorsk, there is in fact no incontrovertibly attested case of the kind of linguistic restructuring typifying these processes which has arisen from the contact of just two languages; nor has what Whinnom called "tertiary hybridization" occurred, i.e., when the speakers of the language supplying the lexicon subsequently withdraw from the contact environment, the pidgin then having to expand using its own internal grammaticalizing and lexicalizing resources rather than drawing upon its lexifier for these components. When two language communities come into contact, speakers of one usually just learn that of the other (e.g. Saami and Norwegian in

Norway, Spanish and English in Texas) with cross-interference, but generating no extensive structural or semantic innovations having no outside source. These processes have been discussed by the Scandinavian linguists Jespersen (1922) and Hjelmslev (1939); Reinecke (1937) tabulated at least ten social contexts which can yield contact languages, whether pidginized or not (discussed in Hancock, 1990), those of the Scandoromani type being most like his category of "foreigners' mixed speech", although he discusses restructured Romani in particular under the heading "dying minor languages" (Reinecke 1937, p. 76-79), thereby adhering to the attrition hypothesis.

Scandoromani, like Angloromani and probably other such varieties, does not appear, then, to have evolved in direct descent from historical inflected Romani by a process of linguistic decay, but instead is based upon sociolectal varieties of Scandinavian—Norwegian in Norway, Swedish in Sweden, Danish in Denmark, whose speakers drew upon an early (though now extinct) coexistent inflected Romani which served as a lexical reservoir for maintaining and enriching it as a cryptolectal register. In light of claims that have been made for both Angloromani and for Caló or Hispanoromani (Hancock, 1990a, p. 96-97), however, regarding the nature of the Romani element in each, this explanation may require elaboration.

Whatever its ultimate origins, in the course of time, Scandoromani came to replace inflected Romani as the ethnic language of the community, we might guess because of increasing intermarriage with gadje, but surviving because of the continuing identity of the group as Romani, and the resulting need for a linguistic means of reinforcing that identity, and to provide a protective insulation from the establishment—in this context functioning as an antilanguage (Halliday, 1968; Hancock, 2021). Language maintenance and choice as a factor of ethnic identity is discussed in Le Page and Tabouret-Keller (1985). For these reasons, as long as the Scandoromani population remains a distinct segment of the Scandinavian population, it is likely that their speech will survive in some form also.

Endnotes

[1]*Scandoromani*, like *Angloromani*, *Fennoromani*, *Hellenoromani*, *Hispanoromani*, etc., is an academic term, and not one used by its speakers themselves.

[2]The extent to which *Para*-forms may differ from the original Romani is exemplified with the Angloromani word for "eggs:" *yoras* ([ˈjɔrəz]), in Common Romani *anrre* ([ãːˈʁə]). The AR form has the accreted Northern Romani initial [j-], the 18th-century southern British *English*-language shift of [a]/[æ] to [ɒ]/[ɔ] (indicative of English dominance by this time), English stress-placement, and the English plural {-s}. The CR form reflects nasalization of the first vowel from an underlying [n].

I have retained the exonym *Gypsy/-ies* only where it occurs in published sources. I use the label *Romani(es)* as a collective, since not all Romani *endaja* (subgroups)

refer to themselves as *Roma*, and for whom it means "husbands." In Vlax, the plural endonym is both *Roma* and *Rom* (*Rroma*, *Rrom*).

References

Acton, T. & Dalphinis, M. (eds.), (1990). Language, Blacks and Gypsies. (pp. 17-31). London: Karia Publications.

Acton, T. & Kenrick D. (eds.), (1984). Romani Rokkeripen To-divvus [Speaking Romani today] London: Romanestan Publications.

Alladina, S. & Edwards, V. (eds.), (1991). Multilingualism in the British Isles. London: Longman.

Andersen, K. G., (1971). Sigøynere [Romanies]. Copenhagen: Munksgaard.

Arnbjørnsdottir, B. & Smith, C. S. (1986). Russenorsk. Unpublished paper. Creole Studies Seminar. The University of Texas at Austin.

Bakker, P. & Mous, M. eds., (1994). Mixed Languages: 15 Case Studies in Language Intertwining. Amsterdam: IFOTT.

Bakker, P. & Matras, Y. eds., (2013). Contact Languages: A Comprehensive Guide. Boston & Berlin: De Gruyter Mouton.

Bergman, G. (1964). Slang och hemlige språk: Rommani. Stockholm: Prisma Books.

Bergstrands, C.-M. (1943). Tattarplagan: Tattarna i svenskt folkliv ["Tattare" in Swedish folk-life]. Uppsala.

Boretzky, N. (1989). Zum Interferenzverhalten des Romani. Zeitschrift für Phonologie, Sprachwissenschaft und Kommunikationsforschung, 42, 357-374.
 https://doi.org/10.1515/stuf-1989-0310

Boretzky, N. & Igla, B. (1994). Romani mixed dialects. In Bakker & Mous, (pp. 35-68). Brynjolfsson, B.-B. (1987). Villtir, villtir, villtir: Sigauna i Bretland [The free ones: Romanies in Britain], Mannlif, 105-120.

Carling, G., Lindell, L. & Ambrazaitis, G. (2014). Scandoromani: Remnants of a Mixed Language. Amsterdam: Brill.

Dorpb, N. V. (1837). De judske Zigeunere og en Rolvelsk Ordbog [The Jutland Romanies and a Rotwelsh dictionary]. Copenhagen: Gleerup [republished in 1975 by Rosenkilde & Bagger, Copenhagen].

Ehrenborg, H. (1928). Djos Per Andersson's vocabulary. Journal of the Gypsy Lore Society, 7(2), 7-18.

Etzler, A. (1944). Zigenare och deras avkomlingar i Sverige [Romanies and their descendants in Sweden] Stockholm: Hugo Gebers Vörlag.

Etzler, A. (1959). Svenskt tattarspråk [Swedish "Tattare" language]. Svenska Landsmål och Svenskt Folkliv, 17(3): 130-151.

Faraclas, N. G. & Delgado, S., eds., (2021). Creoles, Revisited. Routledge.

Finck, F. N. (1907). Die Sprache der Armenischen Zigeuner. St. Petersburg: Imperial Academy of Sciences.

Ganander, C. (1780). Undersökning om de så kallade Tattare eller Zigeuner [An examination of the so-called "Tattare" or Romanies]. Stockholm: Kongl. Svenska Vitterhetsakademien.

Gjerdman, I. (1945). Tattarna och deras språk. Svenska Landsmal och Svenskt Folkliv, 3(4), 1-55.

Gjerdman, O. & Ljungberg, E. (1963). The Dialect of the Swedish Coppersmith Gypsy Johan Dimitri Taikon. Uppsala: Lundqvista.

Goodman, M. (1971). The strange case of Mbugu. In Hymes, D. (ed.), *Pidginization and creolization of languages*, (pp. 243–254). Cambridge: Cambridge University Press.

Grant, A, (1994). Shelta: the secret language of Irish Travellers viewed as a mixed language. In Bakker & Mous, (pp. 123-150).

Grellmann, H. (1783). Die Zigeuner: Ein historischer Versuch uber die Lebensart und Verfassung, Sitten und Schicksale dieses Volkes in Europa, nebst ihrem Ursprunge. Dessau.

Hagatun, K. (2021). The Educartional Situation for Roma Pupils in Norway. Unpublished Doctoral thesis. University of Bergen.

Halliday, M. A. K. (1969). Antilanguages, Language and Social Structure, Chapter 9, 164-182.

Hancock, I. (1971). Is Angloromani a Creole? *Journal of the Gypsy Lore Society, 3rd series, 49*(1), 41-44.

Hancock, I. (1984a). The social and linguistic development of Angloromani, In Acton, T. A., & Kenrick, D. (Eds.). *Romani Rokkeripen To-Divvus: The English Romani dialect and its contemporary social, educational and linguistic standing.* (pp. 89-122). London: Romanestan Publications.

Hancock, I. (1984b). Romani and Angloromani, In P. Trudgill, (pp. 367-383). Language in the British Isles. Cambridge: Cambridge University Press.

Hancock, I. (1984c). Shelta and Polari. In P. Trudgill, ed., (pp. 384-403). Language in the British Isles. Cambridge: Cambridge University Press.

Hancock, I. (1986). The cryptolectal speech of the American roads: Traveler Cant and Angloromani. *American Speech, 61*(3), 206-220.

Hancock, I. (1988). The development of Romani linguistics, In Jazayery & Winter, (Eds.). Languages and Cultures: Studies in Honor of Edgar C. Polomé. Trends in Linguistics. Studies and Monographs, 36. (pp. 183-223). Berlin: Mouton de Gruyter.

Hancock, I. (1990).Creolization and language change, In E. Polomé, Ed. Research Guide on Language Change. (pp. 507-525). Berlin, New York: Mouton de Gruyter.

Hancock, I. (1991). The Romani speech community. In Alladina & Edwards, (Eds.). Multilingualism in the British Isles: Africa, the Middle East and Asia v. 2. (pp. 89-106). London: Longman.

Hancock, I. (1992). The Social and Linguistic Development of Scandoromani, In E. H. Jahr, ed. (pp. 37-52). Language contact: theoretical and empirical studies. Berlin: Mouton de Gruyter.

Hancock, I. (2021). Jamaican Maroon Spirit Language, Krio and Cryptolect, In N. Faraclas & S. Delgado, (Eds.). Creoles, Revisited. Language Contact, Language Change, and Postcolonial Linguistics. (pp. 143-184). New York: Routledge.

Hansen, H. (1917). Chapter entitled "Kjæltringsproget". *Festskrift til Evald Kristensen,* 70-94.

Hansen, H. (1952). Jyske Skøyere og Rakkere [Jutlandish tramps and vagabonds]. Copenhagen: Hansens Bogtrykkeri.

Haugen, E. (1949). A note on the Romany 'language', Norsk Tidsskrift for Sprogvidenskap, 15, 388-391.

Heymowski, A. (1987). Resende eller 'Tattare': en gammal minoritet på väg att försvinna ["Travellers or Tattare': An ancient, minority on the way to extinction"], In Svanberg, (pp. 13-22).

Hjelmslev, L. (1939). Etudes sur la notion de parenté linguistique: Relations de parenté des langues créoles", *Revue des Etudes Indo-Européennes 2,* 271-286.

Hymes, D. (ed.) (1971). Pidginization and Creolization of Languages. Cambridge: Cambridge University Press.

Huttunen, K. (1972). Raportti Suomen Mustalaisista [A report on Finnish Romanies]. Jyväskylä: Gummerus Publishers.

Huttunen, K. (1976). Gypsies in Finland, Past and Present. Helsinki; Privately-circulated monograph.

Iversen, R. (1944). The Secret Languages in Norway: Vol. 1, Romany. Oslo: Dybwad.

Iversen, R. (1945). The Secret Languages in Norway: Vol. 2, Rotwelsch. Oslo: Dybwad.

Iversen, R. (1950). The Secret Languages in Norway: Vol. 3, Månsing. Oslo: Dybwad.

Jahr, E. (ed.) (1992). Language Contact: Theoretical and Empirical Studies. Berlin: Mouton de Gruyter.

Jansen, R. & Heltveit, B. L. (1979). Gadi i rakli kaj bušol Mimi [This is the girl called Mimi]. Oslo: Undervisningen av Fremmedspråklige Elever, Oslo Kommune Skolesjefen.

Jazayery, M. & Winter, W. (eds.). (1988). Languages and Cultures, Papers in Honor of Edgar C. Polomé. Berlin & New York: Mouton de Gruyter.

Jespersen, I. (1922). Language, its Nature, Development and Origin. London: George Allen & Unwin.

Johansson, R. (1977). Svenskt Rommani [Swedish Romani]. Uppsala: Acta Acad. Reg.Gustavi Adolphi LV.

Jørstad, U. (1972). Norway's Gypsy minority. *American Scandinavian Review, 58*(2), 129-137.

Kumm, E. (1965). Zigenare och Vanlige Svenskar [Romanies and the general (Swedish) population]. Örebro: Quintus Tryckeri.

Le Page, R. B. & Tabouret-Keller, A. (1985). Acts of Identity. Cambridge: Cambridge University Press.

Miskow, J. (1904). Rejsende [Travellers], *Danske Studier,* 129-140.

Miskow, J. (1909). Mere om Romanier og Rejsende [More on Romanies and Travellers], *Danske Studier,* 104-108.

Miskow, J. & Brøndal, V. (1923). Sigøynersprog i Danmark, *Danske Studier,* 99-145.

Nyrop, K. (1914). Natmaendene og deres sprog ["Nightmen" (i.e. Romanies) and their language], Politiken, January 1st, 4, 6, 8.

Polomé, E. C. (ed.). (1990). Research Guide on Language Change. Berlin & New York: Mouton de Gruyter.

Refsum, H. (1945). Tatermål i Norge ['Tattare' language in Norway]. *Maal og Minne, 1-2,* 83-92.

Reinecke, J. (1937). Marginal languages: A Sociological Survey of the Creole Languages and Trade Jargons. Yale University: Doctoral dissertation, available from University Microfilms, Ann Arbor, order number 68-546.

Ribsskog, Ø. (1941). Sjargong, forbrytersprå k og rommani. *Maal og Minne,* 142-146.

Sampson, J. (1926). The Dialect of the Gypsies of Wales. Oxford: The University Press.

Scherp, L. & Wiming, K. (1980). Min bok om Zigenarna. Stockholm: Skoloverstyrelsen.

Sechidou, I. (2005). Finikas Romani: a Greek Para-Romani variety. *Romani Studies, 15*(1), 51-79.

Smart, B. C. & Crofton, H. T. (1875). The Dialect of the English Gypsies. London: Asher & Co.

Smith, H. (1873). Tent Life with English Gypsies in Norway. London: King & Co.

Sundt, E. (1852). Beretning om Faille eller Landstrygerfolket i Norge [An account of the Fante or Travellers in Norway]. Christiania.

Svanberg, I. (ed.). (1987). I Samhällats Utkanler om 'Tattare' i Sverige [In the fringe society of 'Tattare' in Sweden]. *Uppsala Multiethnic Papers, 11,* Uppsala University.

Syverud, A.-M., Heltveit, B.L. & Gaardner, J. (1979). Me Ǧinavav Romanes [I read Romani], Parts I & II. Oslo: Undervisningen av Fremmedspråklige Elever, Oslo Kommune-Skolesjefen.

Takman, J. (1976). The Gypsies in Sweden. Stockholm: Liber Vörlag.

Thesleff, A. (1901). Wörterbuch des Dialekts der Finnländischen Zigeuner. Helsinki: Drukerei der Finnischen Literatur-Gesellschaft.

Triandaphyllidis, M.A. (1923-24). Eine zigeunerisch-griechische Geheimsprache, *Zeitschrift für Vergleichende Sprachforschung, 52,* 1-42.

Trudgill, P. (ed.). (1984). Languages in the British Isles. Cambridge: The University Press.

Tudela, J.-L. (1985). Trejiní e Caló: Cours de Caló. Montferrand: Chez 1'auteur.

Uhlik, R. (1941-43). Bosnian Romani. *Journal of the Gypsy Lore Society*, *3rd series, 20,* 100-141, 21, 24-55, 22, 110-141.

Valtonen, P. (1972). Suomen Mustalaikielen Etymologinen Sanakirja [Etymological dictionary of Finnish Romani]. Helsinki: Suomolaisen Kirjallisuuden Seura.

Whinnom, K. (1971). Linguistic hybridization and the 'special case' of pidgins and Creoles, Hymes, 91-115.

VOWEL PRODUCTION IN APHASIA:
PRELIMINARY ACOUSTIC FINDINGS FROM ARABIC

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Abstract. The present study examined the temporal and spectral characteristics of vowels produced by Palestinian Arabic- speaking individuals with Broca's aphasia compared to healthy speakers. Specifically, vowel duration and formant frequency measures (F1&F2) were made. Eight speakers with Broca's aphasia and eight healthy speakers participated in the study. Repetition was used to elicit the target vowels to minimize language comprehension or reading difficulties by the individuals with Broca's aphasia. The speech sample contains the long vowels (/a:,u:,i:/) embedded in CVC words with nasal initials. Statistical analysis was used to determine any significant differences concerning the formant values (F1/F2) between the speaker groups. Findings showed that speakers with Broca's aphasia produced vowel categories with more variability than healthy speakers. For some, formant frequencies were comparable with those of the healthy speakers, and yet others showed an overlap of phonetic categories. Specifically, F1 and F2 for the vowel /u:/ were higher for individuals with Broca's aphasia compared to normal-speaking individuals, but they were not statistically significant. Furthermore, although speakers with Broca's aphasia produced longer vowel durations than the healthy speakers, they were not significantly different between speaker groups except for the vowel /i:/. Reduced vowel space was also observed in speakers with Broca's aphasia. The vowel ellipses as shown by speakers with Broca's aphasia were larger than those of healthy speakers. Results support previous studies showing abnormal temporal durations and spectral patterns in Broca's aphasia. Findings can contribute to cross-linguistic research on vowel production in aphasia, mainly in understudied languages such as Arabic.
Keywords: Palestinian Arabic-speaking Broca's aphasics, formants of Arabic vowels, vowel duration, acoustic analysis, Broca's aphasia.

Гішам Адам. Породження голосних під час афазії: попередні результати досліджень звуків у носіїв арабської мови.

Анотація. У цьому дослідженні порівнювалися темпоральні й спектральні характеристики голосних, що породжувалися носіями палестинської арабської з афазією Брока, та здоровими носіями цієї мови. Зокрема, було зроблено вимірювання тривалості голосних і формантної частоти (F1&F2). У дослідженні взяли участь вісім осіб з афазією Брока та вісім здорових осіб. Повторення використовувалося для виявлення цільових голосних, щоб звести до мінімуму труднощі розуміння мови або читанням особами з афазією Брока. Фрагмент мовлення містив довгі голосні (/a:,u:,i:/) у словах, побудованих за принципом приглосний-голосний-приголосний із початковим носовим звуком. Для визначення будь-яких істотних відмінностей щодо значень формант (F1/F2) між групами мовців використовувався статистичний аналіз. Результати засвідчили, що мовці з афазією Брока породжували голосні з більшою варіативністю, ніж здорові мовці. Для деяких формантні частоти були відповідними з частотами здорових мовців, а в інших виявилося взаємонакладення фонетичних категорій. Зокрема, F1 і F2 для голосних /u:/ були вищими, але статистично не значущими в осіб із афазією Брока в порівнянні зі здоровими мовцями. Більше того, хоча у мовців з афазією Брока була довша тривалість голосних, ніж у

здорових мовців, вони не відрізнялися суттєво між групами мовців, за винятком голосного /i:/. Зменшений простір між голосними також спостережено в осіб з афазією. Еліпси голосних, у них були більшими, ніж у здорових мовців. Результати підтверджують попередні дослідження, які показують аномальну часову тривалість і спектральні моделі афазії Брока. Одержані висновки можуть сприяти міжлінгвістичним дослідженням щодо породження голосних під час афазії, головним чином у маловивчених мовах, зокрема арабській.

Ключові слова: *носії палестинської арабської з афазією Брока, форманти арабських голосних, тривалість голосних, голосовий аналіз, афазія Брока.*

Introduction

Aphasia is a language disorder affecting all language modalities, such as using, speaking, understanding, reading, and writing. Aphasia can be categorized into different types and sub-types, depending on symptom or site of lesion (Garraffa & Fyndanis, 2020).). Table 1. presents the main types of aphasia according to neoclassical and functional system theories. Broca's aphasic speech is widely investigated compared to other types of aphasia (Matchin, 2018).

Substitutions, omissions, deletions, and morphosyntactic impairments are mainly characterized by agrammatic speech (Menn & Obler, 1990; Caramazza, 1997; Haley, Ohde & Wertz, 2011; Boye & Bastiaanse, 2018; Ouden et al., 2019; Martínez-Ferreiro et al, 2020). Deficits in the articulatory implementation of the phonetic features were also observed in speakers with Broca's aphasia (Kurowski & Blumstein, 2016; Verhaegen et al., 2019) reflecting timing deficits and articulatory coordination and laryngeal motor control impairments.

Table 1

Classification of Aphasia According to Neo-Classical (Boston) and Functional System (Luria) Theories Adapted from Johansson (2012, p. 15)

Dichotomisation	Neo-classical (Boston)	Functional systems (Luria)
Anterior / non-fluent / expressive	Broca's aphasia	Efferent motor aphasia
	Transcortical motor aphasia Global aphasia	Dynamic aphasia
Posterior / fluent / Receptive	Conduction aphasia (subcortical	Afferent motor aphasia
		Acoustic-gnostic
	Wernicke's aphasia	(Sensory) aphasia
	Transcortical sensory aphasia	Acoustic-mnestic aphasia
		Semantic (amnestic)
	Anomic aphasia	aphasia

Arabic vowel system

Modern Standard Arabic (MSA) vowel system has three short vowels (/a, i, u,/) and three long counterparts (/a:, i:, u:/) . Vowel duration in Arabic is phonemic. That is, vowel quantity results in meaning differences such as in the following minimal pair: [mal] bored [ma:l] moved. English vowel system has been extensively studied compared to Arabic. Several acoustic studies on English vowels have established normative data for formant frequencies. Formant frequencies of standard Arabic vowels, in contrast, were generally less studied and documented.

A very few acoustic studies on Arabic vowels in standard Arabic and Arabic dialects have been carried out (Belkaid 1984; Abou Haidar 1994; Al-Anani, 1999; Newman & Verhoeven, 2002; Alotaibi & Hussain, 2009). It must be noted that these acoustic studies generally did not establish a database for standardized formant frequencies of the Arabic vowels due to research methodologies differences and dialectal and regional linguistic features. Furthermore, these studies were not aiming to study Arabic vowels' acoustic characteristics in individuals with impaired speech and for clinical purposes generally. The current study is thus a step towards filling this gap.

The purpose of the present study was to examine acoustic characteristics of vowels in Palestinian Arabic-speaking individuals with Broca's aphasia compared to healthy speakers. This study has two main research questions:

1. What are the temporal features of vowels produced by speakers with Broca's aphasia compared to healthy speakers?
2. What are the spectral characteristics (F1&F2) of vowels produced by speakers with Broca's aphasia compared to healthy speakers?

We hypothesized that some, if not all, of the acoustic measures of vowel duration and formant frequencies (F1& F2) will be significantly different between the speaker groups.

Temporal and spectral studies

Several studies have addressed the consonantal errors in speakers with Broca's aphasia (Menn & Obler, 1990; Fyndanis et al., 2018; Aziz et al., 2020), assuming that the vowel system is relatively intact in Broca's aphasia. However, the literature on vowel production in aphasia has reported several findings. Haley, Ohde, and Wertz (2001) documented a high frequency of vowel errors in speakers with apraxia of speech with coexisting aphasia. The authors reported distortion and substitution vowel errors.

Keller (1978) examined in a detailed study vowel production and substitution patterns in the speech of five English-speaking Broca's aphasics. The analysis revealed that Broca's aphasics selectively impaired vowel height, and the substituted vowels closely matched the target vowels with the tendency of tongue body lowering.

In investigating vowel durations in speakers with Broca's aphasia, Schirmer (2004) found that those durations were significantly longer for speakers with Broca's aphasia than healthy speakers. In contrast, Gandour and Dardarananda (1984) found that Broca's aphasics' durational patterns are comparable to those of the healthy speakers.

Some acoustic studies showed that vowel formant frequency and the related vowel space measures are crucial to vowel discrimination tasks for healthy speakers and individuals with impaired speech (Liu et al, 2005; Tsao et. al., 2006) as they provide reliable acoustic clues about vowels accuracy production (Chodroff & Wilson, 2020). The vowel space is traditionally plotted as the triangular organization showing the first two formants F1 and F2. The acoustic investigations use the vowel space to quantify the articulatory configuration and function (Ferguson & Kewley-Port, 2007).

Haley, Bays and Ohde (2001) examined the acoustic and perceptual correlates of vowel quality in speakers with aphasia and apraxia of speech (AOS). Twenty speakers with and without apraxia of speech and ten healthy speakers participated in the study. F1 and F2 were measured at the midpoint of the vowel segment. Their acoustic analysis showed that the formant patterns of speakers with Broca's aphasia were deviated from those of the healthy speakers and varied across the aphasic and apraxic speakers. The results also showed that F1 and F2 values were abnormally variable across the groups. The authors generally documented vowel articulation impairments in many aphasic and apraxic participants, reflecting articulatory positioning deficits for vowel production.

In a repetition task, Ziegler and Hoole (1989) reported F1 and F2 measures in an acoustic and perceptual analysis for the vowels [i] and [i:]. Two aphasic patients, one has Broca's aphasia, and the second has Wernicke's aphasia, together with a healthy speaker and a dysarthric control, participated in the study. The aphasic group demonstrated a higher degree of spectral overlap between the target vowels compared to the healthy speakers. Additionally, the formant frequencies for the vowels produced by the speaker with Broca's aphasia were distributed relatively in a greater range compared to the speaker with Wernicke's aphasia.

Method

Participants

Eight Arabic-Palestinian speakers diagnosed with Broca's aphasia participated in the present study (6 male speakers and two female speakers). They were native speakers of Palestinian Arabic and all diagnosed with mild to moderate Broca's aphasia (Paradis & Libben, 1987). Each participant underwent a standardized aphasia assessment based on both formal and informal tests and clinical reports. The selected subjects were right-handed and had been suffering from a single left hemisphere lesion for at least six months before testing. They showed typical effortful, non-

fluent, telegraphic speech features, producing simplified and short utterances. They also had problems with free and bound grammatical morphemes.

The age of the participants ranged from 47 to 70 years. The time post-onset ranged from 13 to 210 months, and their number of years of education ranged from 5 to 14 years. Hearing was normal with no evidence of dysarthria or visual impairments. Table 2 presents the details of Broca's participants. Eight healthy speakers of Palestinian Arabic matching the speakers with Broca's aphasia for age and gender served as the control group.

Table 2
Data of the Participants with Agrammatism

Subject	Gender	Age	Education (years)	Handedness Hemiplegia	m.p.o		Handedness
A1	M	69	12	Right	112	Right	Right
A2	M	76	9	Right	30	Right	Right
A3	M	48	13	Right	42	Right	Right
A4	M	47	8	Right	34	Right	Right
A5	M	53	14	Right	120	Right	Right
A6	M	66	10	Right	13	Right	Right
A7	F	69	11	Right	210	Right	Right
A8	F	70	5	Right	70	Right	Right
Means		60.25	10.25		78.87		

Participant data: (A: agrammatic speaker; CVA: Cerebro vascular accident; L: left hemisphere; MPO: months post onset; M: male, Edu: Education).

Speech sample

The speech sample includes the target long vowels (/a:/, /u:/, /i:/) embedded in CV disyllabic words with nasal initials (/m, n/). Acoustically, vowels can be easily determined by using nasals, and the coarticulatory effects can be minimized. The stimuli include real words whenever possible; otherwise, nonsense words matching the same structure of the given real words were provided, as shown in table 2. For the target vowel initiation, a carrier sentence has been used. The stimuli have been written on a card and presented to the participants.

Each participant was asked to repeat after the examiner the token 3 times at normal pitch and loudness as much as possible. The aphasic subjects have produced 144 vowel tokens (6 words x 3 repetitions x 8 subjects). Methodologically, the study uses repetition to elicit the target vowels to minimize possible language comprehension, and reading difficulties may occur by the aphasic speakers (Kempler & Van Lancker, 2002).

The recordings were done in a quiet room using a high-quality microphone positioned around 15 centimeters from the participants' mouth. PRAAT program was used to extract the formant frequencies (F1, F2) automatically (Boersma & Weenink, 2020) and manually corrected at the midpoint of the vowels, using Phono-Lab (Metoui, 1995). Formants were measured 10 times in each vowel, and the data were recorded using a sampling rate of 16 Hz at 16 bits. The formants' values of the healthy speakers served as a point of reference. ANOVA statistical analysis was conducted to determine possible significant differences in the formant values (F1/F2) between the speaker groups. The correlation between the vowel formants F1 and F2 was tested using independent sample t-tests.

Table 3
The Stimuli in a Nasal Context

Target Vowels	Target consonant /m/	Target consonant /n/
/a:/	/ma:l/	/na:l/
/u:/	/mu:l/	/nu:l/
/i:/	/mi:l/	/ni:l/

Results

Formant frequencies. Tables 4 and 5 present the mean F1 and F2 values of the long vowels (/a:, u:, i:/) across the nasal consonants /m/ and /n/ and between the speaker groups (Speakers with Broca's aphasia vs. Healthy speakers). Mann-Whitney U-test was used to compare F1 and F2 values across and within the groups (Speakers with Broca's aphasia vs. Healthy speakers).

Table 4
Mean F1 and F2 (Hz) Values of Both the Groups Across Different Nasal Consonants /m/ and /n/

Vowels	/m/				/n/			
	Group I (Healthy speakers)		Group 2 (Broca's aphasics)		Group I (Healthy speakers)		Group 2 (Broca's aphasics)	
	F1	F2	F1	F2	F1	F2	F1	F2
/a:/	760.70	1212.31	838.07	1271.75	762.72	1339.97	819.51	1318.72
/u:/	366.75	823.94	432.12	930.66	365.33	1047.53	391.79	1048.71
/i:/	414.72	2584.37	415.18	2126.97	321.59	2256.28	345.70	2334.37

Table 5

Mean F1 and F2 (Hz) of Vowels Between the Speaker Groups

Vowels	Group 1 (Healthy speakers)		Group 2 (Broca's aphasics)	
	F1	F2	F1	F2
/a:/	761.71	1276.14	828.79	1295.235
/u:/	366.04	935.735	411.955	989.685
/i:/	368.155	2420.325	380.44	2230.67

The speaker groups displayed a statistically significant distinction between vowel targets. Tests of fixed effects showed that F1, $(F(1.14)= 8.52, p=.001)$, but not F2, $(F(1.14) = 1.12, p=.33)$ was significantly different for (/a:,u:, i:/) targets among healthy speakers. The same result was observed in the Broca's aphasic group, where a significant difference between /a:/, /u:/ and /i:/ was found for F1, $(F(1.14)=5.31, p= .004)$, but not F2, $(F(1.14)= 1.07, p= .38)$.

As shown in table 6, the Mann-Whitney U-test results revealed that the F1 values of vowel /a:/ in individuals with Broca's aphasia were statistically significant $(Z=-3.267, p=.001)$ than normal speaking subjects. In contrast, there was no significant difference between speakers with Broca's aphasics and normal speaking individuals for F2. i.e., F2 values were similar between both the groups. For the vowel /u:/, both F1 and F2 were higher in individuals with Broca's aphasia than normal-speaking individuals. But these findings were not statistically significant. The F1 of vowel /i:/ was similar between Broca's aphasics and normal speaking subjects, i.e., no significant difference between the groups on F1 values. However, for F2, it was higher in normal speaking subjects than in individuals with Broca's aphasia, which was statistically significant at .05 level $(Z=-3.126, p= .012)$.

Table 6

The Values of Mann-Whitney U-test for the Vowels /a:, u:,i:) Following the Nasals /m/ and /n/

Vowels	Group I (Normal)		Group 2 (Broca's aphasics)	
	F1	F2	F1	F2
/a:/	-2.894	-.714	-3.267	-.672
	(p= .037)	(p= .627)	(p=.001)	(p= .664)
/u:/	-1.156	-1.548	-2.351	-2.232
	(p= .139)	(p= .097)	(p=.056)	(p= .054)
/i:/	-1.956	-3.126	-1.864	-2.945
	(p= .063)	(p= .012)	(p=.078)	(p= .023)

* Significant difference between means at P <.05 or less utilizing the Mann-Whitney U-test (z -store correction for tied ranks).

Vowel duration. Figure 1 presents the average durations (ms) of the three long vowels (/a:,u:,i:/) for speakers with Broca's aphasia and healthy speakers. Although Broca's aphasics produced longer durations for all three vowels than the healthy speakers, the ANOVA analysis showed no significant differences among the speaker groups for the vowels /a:/ and /u:/ except for the vowel /i:/ being significantly longer for speakers with Broca's aphasia relative to the healthy speakers.

Figure 1

Box Plot of Mean Vowel Duration (Ms) for the Vowels /A:, U:,I:/ As Produced by the Healthy Speakers and Speakers with Broca's Aphasia

Vowel space. Figure 2 illustrates the acoustic vowel space of Broca's aphasics and healthy speakers. When comparing Boca's aphasics' finings to healthy speakers, differences between the groups were observed. More specifically, the front vowel /i:/ is more backed in Broca's aphasics than healthy speakers. Vowel backness is associated with F2 lowering, indicating reduced tongue advancement. Interestingly, Boca's aphasics produced /u:/ more fronted compared to the healthy speakers. Also, the acoustic vowel space showed that Broca's aphasics had the vowel categories approximately in the same regions of the vowel space in healthy speakers. Furthermore, unlike the healthy speakers, /a:/ was lower in the acoustic space in Boca's aphasics speech. Furthermore, speakers with Boca's aphasia produced (/i:, u:/) lower in the acoustic space than the healthy speakers whose (/i:, u:/) were located much higher.

As shown in Fig. 2, Broca's aphasics demonstrated a relatively reduced acoustic area compared to healthy speakers. The vowel ellipses of all vowel understudies in Broca's aphasics were noticeably larger than the healthy speakers, as can be seen in Fig. 3. Among the three vowels, Broca's aphasics produced the vowel /u:/ with the

largest ellipse areas relative to the healthy speakers, suggesting tongue positioning deviations.

Figure 2
The Acoustic Vowel Space of Broca's Aphasics and the Healthy Speakers
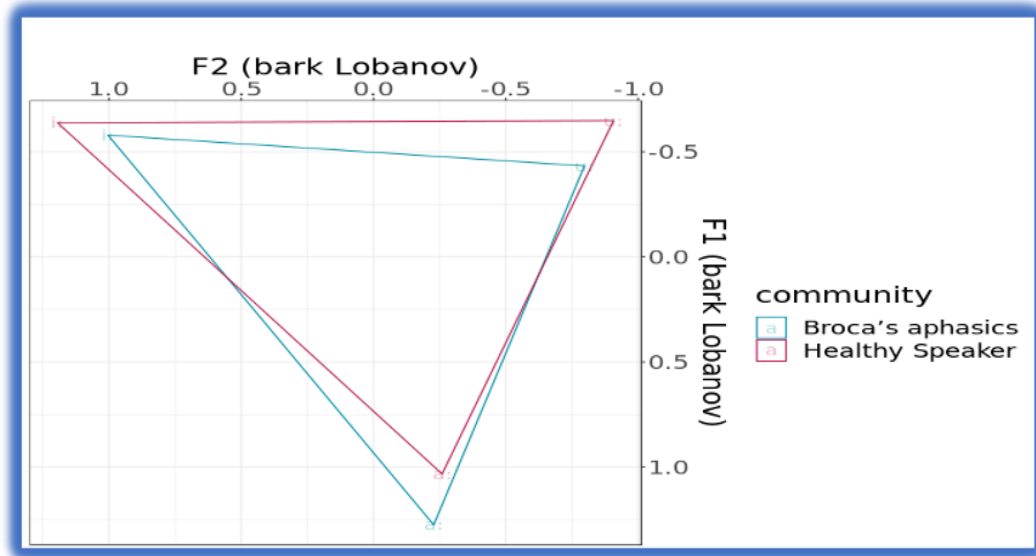
Figure 3
The Acoustic Vowel Space of Broca's Aphasics and the Healthy Speakers
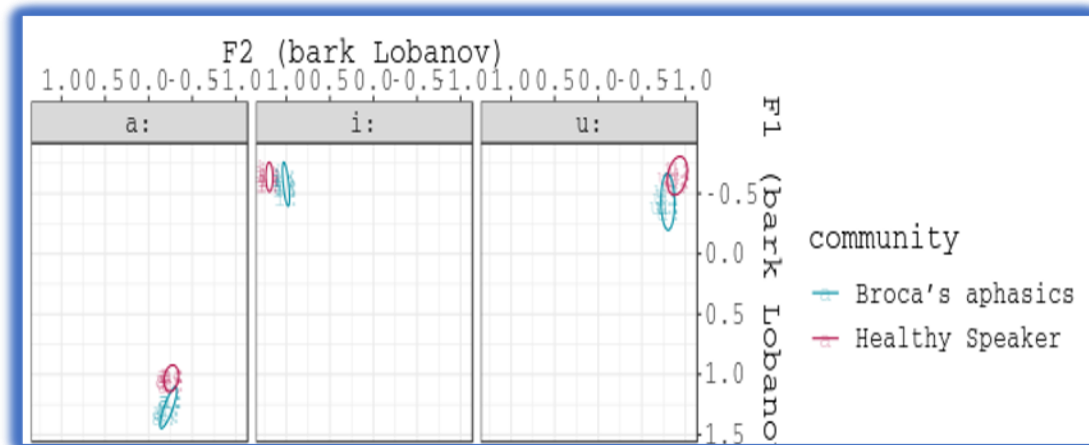
Furthermore, individual formant spaces showed notable variations regarding vowel placement patterns with most vowel distribution variability and overlap for all speakers with Broca's aphasia except for the participant APH6, as shown in Fig. 4. In contrast, the healthy speakers showed no overlap while producing the target vowel categories, as presented in Fig. 4. The findings generally revealed differences between Broca's aphasics and the healthy speakers concerning vowel height and vowel frontness/backness.

Figure 4
F1 and F2 Frequencies for Normal Speakers (NOR)
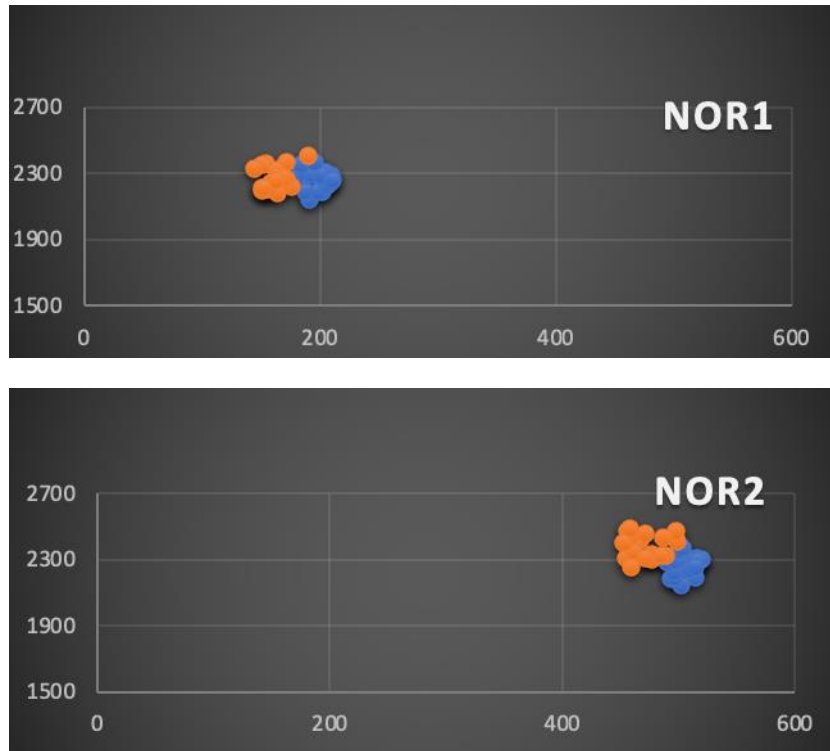
Colored diamonds and circles represent the target vowels. There is no distribution overlap for healthy speakers NOR1 and NOR2.

Figure 5
F1 and F2 Frequencies for Speakers Diagnosed with Aphasia (APH)
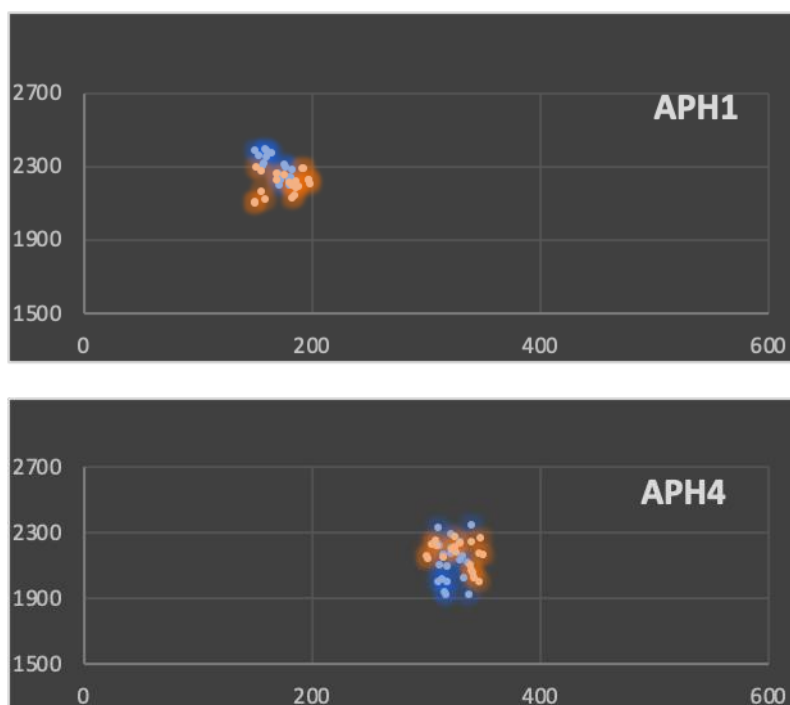
Colored diamonds and circles represent the target vowels. There is a distribution overlap for the speakers with Broca's aphasia APH1, APH4 and APH7 with the exception of APH6.

Discussion

The present study was aimed to examine vowel production in Arabic-speaking individuals with Broca's aphasics compared to healthy speakers, focusing on vowel duration and formant frequencies. The findings showed that speakers with Broca's aphasia had longer vowel durations compared to healthy speakers, but no statistically significant differences were observed, except /i:/ being longer by speakers with Broca's aphasia. These results are consistent with previous studies (Baum & Pell, 1997; Baum & Boyczuk, 1999; Schirmer, 2004; Seddoh, 2008).

Such excessive prolongations indicate temporal impairments and motor planning deficits. They may also suggest inadequate tactile feedback during vowel production compared to consonants. Therefore, this may make Broca's aphasics are uncertain about the articulatory configurations and tongue movements required for producing vowels accurately and intelligibly (Williams & Seaver, 1986). The fact that slow speech also characterized Broca's aphasia supports such abnormal temporal durations, indicating self-monitoring problems and motor speech planning deficits. It is also interesting to note that our speakers with Broca's aphasia successfully followed the same durational pattern demonstrated by the control group, namely by producing the high vowels with shorter durations than the low vowels. Similar findings were also reported by Gandour and Dardarananda (1984).

The results also showed that speakers with Broca's aphasia had significantly higher F1 values than healthy speakers. The present study results are consistent with previous studies reporting deviated formant patterns in speakers with Broca's aphasics compared to healthy speakers (Keller, 1975; Ziegler & Hoole, 1989; Haley at al., 2001). Additionally, our findings generally support the common consensus that formant frequencies can predict severity and variability among speakers with Broca's aphasia (Ryalls, 1986; Liu et al, 2005; Tsao et al., 2006).

Some studies have found a positive correlation between F1 values and gender, with F1 values being higher in female speakers than male speakers (Kim et al., 2011; Lee et al., 2016). However, gender distribution between our Broca's aphasics was not equal, where only two females participated in the study (2/8 females, see table 2). So, it is unlikely that this asymmetric gender distribution drives high F1 values. Therefore, although we view this gender imbalance as a limitation of the current study, there is no substantial evidence that this may have affected the results introduced here. However, higher F1 values generally suggest an articulatory setting with more oral cavity opening and lowered mandible (Lee et al., 2016).

The vowel acoustic spaces and ellipses areas (Figures 2 and 3) showed that speakers with Broca's aphasia displayed more dispersions in the back vowels than the front vowels (Figures 2 and 3). As mentioned earlier, the acoustic features of vowel formant frequencies indicate tongue placement. The results suggest that speakers with Broca's aphasia showed imprecise articulatory positioning of tongue height and advancement, indicating vowel fronting and backing.

The inspection of the acoustic vowel space in our speakers with Broca's aphasics showed a reduced vowel acoustic area and more centralized vowels than the healthy speakers, indicating tongue positioning constraints, confirming previous findings (Ryalls, 1986). The acoustic analysis also suggests that Broca's aphasics in the present study are less intelligible due to their relatively rescued size of vowel space as compared to the healthy speakers. Such results provide strong evidence to previous findings indicating that the acoustic vowel space can serve as an index for vowel accuracy and speech intelligibility (Kim et al., 2011; Karlsson & van Doorn, 2012).

Speakers with aphasia in the present study also reported variability of formant frequencies. The results also revealed acoustic overlaps between the vowels categories in Broca's aphasics, as shown in figure 5. These findings are consistent with those reported by Haley et al. (2010). Acoustic overlap may suggest a relative lack of formant differentiation, imprecise articulatory configurations, and more vowel centralization (Mefferd & Green, 2010; Karlsson & van Doorn, 2012). A closer inspection of the vowel ellipses areas also showed that our participants with Broca's aphasia demonstrate greater dispersions in the high vowels /u:/ and /i:/ than in the low vowel /a:/ (Figures 2 and 5).

Taken together, the results of the present study would give more insight into the vowel acoustic characteristics of individuals with Broca's aphasia and expand our understanding of the underlying nature of Broca's aphasia. The results also suggest that vowels should become an integral part of speech therapy approaches and design.

For example, a speech therapist should include those vowels with more remarkable acoustic overlaps in their training and therapy activities to help patients to identify the differences between vowel pair affected by this acoustic overlap.

Limitations of the Study

The present study is limited by several aspects, including the number of participants, stimuli, and analysis scope. First, the sample size, which included eight individuals (six males and two females) with Broca's aphasia, was relatively small. Including more female speakers can also help determine the gender effect on formant frequencies and vowel durations, allowing for more comparisons between speaker groups.

Secondly, the speech stimuli are relatively small as it includes three vowels (/a:,u:,i). This number of vowels may not allow for general conclusions regarding vowel production in Arabic-speaking individuals with Boca's aphasics. However, the present study's findings are preliminary, and further research is needed to gain better understanding of vowel deficits in Broca's aphasia. Finally, the analysis did not address the formant trajectory and how formants change in time, which was found to be crucial for vowel duration (Liss & Weismer, 1992).

Conclusion

The present paper examined the acoustic features of vowel production in Palestinian Arabic-speakers with Broca's aphasics compared to healthy speakers. The findings showed speakers with Broca's aphasia produced all vowel categories with more variability compared to the healthy speakers. The results also revealed significantly higher F1 values for speakers with Broca's aphasics than the healthy speakers. Reduced vowel acoustic spaces and overlaps were noted in the speakers with Broca's aphasia. Such acoustic variability might reflect articulatory inconsistency and tongue positioning constraints.

Furthermore, although speakers with Broca's aphasia produced longer vowel durations than the healthy speakers, they were not significantly different between speaker groups. The present findings support previous studies concerning abnormal temporal and spectral patterns in Broca's aphasia. Acoustic measures of vowels can help speech therapists develop speech training programs to enhance speakers' speech intelligibility with Broca's aphasia.

References

Al-Ani, S. (1970). Arabic phonology; an acoustical and physiological investigation. The Hague: Mouton.

Abou Haidar, L. (1994). Norme linguistique et variabilité dialectale: analyse formantique du système vocalique de la langue arabe. *Revue de honétique Appliquée, 110,* 1-15.

Alotaibi, Y. & Hussain, A. (2009). Formant based analysis of spoken Arabic vowels. *Lecture Notes Computer Science, 5707,* 162-169.

Aziz, M. A. , Hassan, M. , Razak, R. , & Garraffa, M. (2020). Syntactic abilities in Malay adult speakers with aphasia: A study on passive sentences and argument structures. *Aphasiology, 34*(7)*,* 886–904. https://doi.org/10.1080/02687038.2020.1742283

Baum, S., & Boyczuk, J. (1999). Speech timing subsequent to brain damage: Effects of utterance length and complexity. *Brain and Language, 67*(1)*,* 30-45. https://doi.org/10.1006/brln.1999.2047

Baum, S., & Pell, M. (1997). Production of affective and linguistic prosody by brain-damaged patients. *Aphasiology, 11*(2)*,* 177-198. https://doi.org/10.1080/02687039708248463

Belkaid, Y. (1984). Les voyelles de l'arabe littéraire moderne. Analyse spectrographique. *Travaux de l'Institut de Phonétique de Strasbourg, 16,* 217-240.

Boersma, P. & Weenink, D. (2020). Praat: Doing phonetics by computer (version 1.43) [computer program]. http://www.praat.org.

Boye, K., & Bastiaanse, R. (2018). Grammatical versus lexical words in theory and aphasia: Integrating linguistics and neurolinguistics. *Glossa: A Journal of General Linguistics, 3,* 1–18.

Caramazza, A. (1997). How many levels of processing are there in lexical access? *Cognitive Neuropsychology, 14*(1)*,* 177-208. https://psycnet.apa.org/doi/10.1080/026432997381664

Chodroff, E., & Wilson, C. (2020). Acoustic–phonetic and auditory mechanisms of adaptation in the perception of sibilant fricatives. *Attention, Perception, & Psychophysics, 82*(4)*,* 2027–2048. https://doi.org/10.3758/s13414-019-01894-2

Ferguson, S., & Kewley-Port, D. (2007). Talker differences in clear and conversational speech: Acoustic characteristics of vowels. *Journal of Speech, Language, and Hearing Research, 50*(5)*,* 1241-1255. https://doi.org/10.1044/1092-4388(2007/087)

Fyndanis, V., Arcara, G., Christidou, P., & Caplan, D. (2018). Morphosyntactic production and verbal working memory: Evidence from Greek aphasia and healthy aging. *Journal of Speech, Language, and Hearing Research, 61*(5), 1171–1187. https://doi.org/10.1044/2018_jslhr-l-17-0103

Gandour, J., & Dardarananda, R. (1984). Prosodic Disturbance in Aphasia: Vowel Length in Thai. *Brain and Language, 23*(2)*,* 206-224. https://doi.org/10.1016/0093-934x(84)90064-6

Garraffa, M., & and Fyndanis, V. (2020). Linguistic theory and aphasia: an overview. *Aphasiology, 34*(2)*,* 905-926. https://doi.org/10.1080/02687038.2020.1770196

Haley, k., Bays, G. & Ohde, R. (2001). Phonetic properties of aphasic-apraxic speech: A modified narrow transcription analysis. *Aphasiology, 15*(12)*,* 1125-1142. https://doi.org/10.1080/02687040143000519

Haley, K., Ohde, R. Wertz, T. (2011). Vowel quality in aphasia and apraxia of speech: Phonetic transcription and formant analyses. *Aphasiology, 15,* 1107-1123.

Johansson, M. (2012). Aphasia and Communication in Everyday Life: Experiences of persons with aphasia, significant others, and speech and language pathologists. Doctoral thesis of Uppsala University.

Karlsson F, & van Doorn, J. (2012). Vowel formant dispersion as a measure of articulation proficiency. *Journal of the Acoustical Society of America, 132*(4)*,* 2633–2641. https://doi.org/10.1121/1.4746025

Keller, E. (1978). Parameters for vowel substitutions in Broca's aphasia. *Brain and Language, 5*(3)*,* 265-285. https://doi.org/10.1016/0093-934x(78)90026-3

Kempler, D. & Van Lancker, D. (2002). Effect of Speech Task on Intelligibility in Dysarthria: A Case Study of Parkinson's Disease. *Brain and Language, 80*(3)*,* 449-464. https://doi.org/10.1006/brln.2001.2602

Kurowski, K., Blumstein, S., Palumbo, C.,Waldstein, R., &Burton, M. (2007). Nasal Consonant Production in Broca's and Wernicke's Aphasics: Speech Deficits and Neuroanatomical

Correlates. *Brain and Language, 100*(3), 262-275. https://doi.org/10.1016/j.bandl.2006.10.002

Lee, J., Shaiman, S., & Weismer, G. (2016). Relationship between tongue positions and formant frequencies in female speakers. *Journal of the Acoustical Society of America, 139*(1), 426–440. https://doi.org/10.1121/1.4939894

Liu, H., Tsao, F., & Kuhl, P. (2005). The effect of reduced vowel working space on speech intelligibility in Mandarin-speaking young adults with cerebral palsy. *Journal of the Acoustical Society of America, 117*(6), 3879-3899. https://doi.org/10.1121/1.1898623

Martínez-Ferreiro, S., Bastiaanse, R., & Boye, K. (2020). Functional and usage-based approaches to aphasia: The grammatical-lexical distinction and the role of frequency. *Aphasiology, 34*(8), 927–942. https://doi.org/10.1080/02687038.2019.1615335

Matchin, W. (2018). A neuronal retuning hypothesis of sentence-specificity in Broca's area. *Psychonomic Bulletin & Review, 25*(5), 1682–1694. https://doi.org/10.3758/s13423-017-1377-6

Mefferd, A., & Green, J. (2010). The articulatory-to-acoustic relationship in response to speaking rate and loudness manipulations. *Journal of Speech, Language, and Hearing Research, 53*(5), 1206–1219. https://doi.org/10.1044/1092-4388(2010/09-0083)

Menn, L., & Obler, L. (1990). Agrammatic Aphasia: A Cross-Language Narrative Sourcebook. Amsterdam und Philadelphia: John Benjamins.

Metoui, M. (1995). Phono Lab: Computerprogramm zur Artikulatorisch-Akustischen Datenanalyse. *Arbeitsberichte des Instituts für Allgemeine und Vergleichende Sprachwissenschaft der Universität Mainz, 1,* 1-100.

Newman, D., & Verhoeven, J. (2002). Frequency analysis of Arabic in connected speech, *Antwerp Papers in Linguistics, 100,* 77-86.

Paradis, M. (1987). The assessment of bilingual aphasia. Hillsdale, NJ: Lawrence Erlbaum Associates.

Ouden, D., Malyutina, S., Basilakos, A., Bonilha, L., Gleichgerrcht, E., Yourganov, G., Hillis, A. E., Hickok, G., Rorden, C., & Fridriksson, J. (2019). Cortical and structural-connectivity damage correlated with impaired syntactic processing in aphasia. *Human Brain Mapping, 40*(7), 2153–2173. https://doi.org/10.1002/hbm.24514

Ryalls, J. (1986). An acoustic study of vowel production in aphasia. *Brain and Language, 29*(1), 48-67. https://doi.org/10.1016/0093-934x(86)90033-7

Schimer, A. (2004). Timing speech: a review of lesion and neuroimaging findings. *Cognitive Brain Research, 21*(2), 269-287. https://doi.org/10.1016/j.cogbrainres.2004.04.003

Seddoh, S. (2008). Conceptualisation of deviations in intonation production in aphasia. *Aphasiology, 22*(12), 1294-1312. https://doi.org/10.1080/02687030701640289

Tsao, Y., Weismer, G., & Iqubal, K. (2006). The effect of intertalker speech rate on acoustic vowel space. *Journal of the Acoustical Society of America, 119*(2), 1074-1082. https://doi.org/10.1121/1.2149774

Verhaegen, C., Delvaux, V., Fagniart, S., Huet, K., Piccaluga, M. (2020). Phonological and phonetic impairment in aphasic speech: an acoustic study of the voice onset time of six French-speaking aphasic patients. *Clinical Linguistics & Phonetics, 34(3),* 201-221. https://doi.org/10.1080/02699206.2019.1619095

Williams, S., & Seaver, J. (1986). A comparison of speech sound durations in three syndromes of aphasia. *Brain and Language, 29*(1), 171-182. https://doi.org/10.1016/0093-934X(86)90041-6

Ziegler, W., & Hoole, P. (1989). A combined acoustic and perceptual analysis of the tense-lax opposition in aphasic vowel production. *Aphasiology, 3,* 449-463.

TRANSLATION OF IMPLIED SENSE
AS A PSYCHOLINGUISTIC CATEGORY

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Abstract. The article aims to identify some implied sense markers in the poetic text to draw translators' attention to their reproduction and scholars of translation on their analysis. This paper pioneers the idea that poetic implied sense as a psycholinguistic category is interpreted as The study of the creation, decoding, and translation of implied sense as a constituent of a poem's macro-image structure in general, and with the untranslatable form of poetical implied sense based on Anglicism dispersion in the text of the American verse in particular, contributes to a better perception of the original poem and promotes finding ways of its adequate reconstruction in translation. making primary content of a poem and is considered a dominant image in poetic translation. Semantic context significance in poetic implied sense interpretation and translation are revealed. The presence of implied sense in poems is characterized by the text markers that help disclose it and direct translators. Poetical implied sense is determined as implied sense image functioning within a poem macro-image structure. Implied sense image decoding and rendering requires prior examination of the system of inner textual and extra-textual context relationships and psycholinguistic aspects of poetic discourse. Among the main tools applied in this study is the method of macro-analysis of a poetic work, which involves comparison of the original and translation at the level of autosemantic, synsemantic and subsemantic (implied sense) images and, in particular, text analysis to identify purely linguistic and psycholinguistic implied sense markers for its decoding and reproduction in translation, and factor analysis (principal components method) to determine the features of the semantics of the poetic original and translated texts. As a result of this research, it is discovered that signals-markers of the poetic implied sense are simultaneous actualization of the meanings of the same word and scattered inclusions of Anglicisms in American verse, which form an implied sense that is difficult to translate.

Keywords: poetic translation, psycholinguistics, implied sense, concepual implied sense image, sociolinguistic image, semantic complex, Anglicism

Кикоть Валерій. Переклад підтексту як психолінгвістичної категорії.

Анотація. Метою статті є виявлення окремих підтекстових маркерів у поетичному тексті з метою загострення уваги перекладачів щодо їх відтворення, а перекладознавців щодо їх аналізу. Дослідження окремих особливостей виникнення, декодування та перекладу підтексту як складника макрообразу поетичного твору, загалом, та неперекладної форми поетичного підтексту, що базується на вкрапленнях англіцизмів у тексті американського вірша, зокрема, спрямоване на поліпшення рецепції поетичного оригіналу та заохочення пошуку шляхів його адекватного відтворення в перекладі. У статті вперше поетичний підтекст як психолінгвістична категорія трактується як такий, що складає основний смисл поетичного твору, й розглядається як образна домінанта у віршовому перекладі,

розкривається значення семантичного контексту в інтерпретації та перекладі поетичного підтексту. Підтекст у поетичному творі характеризує наявність у тексті сигналів-маркерів, за допомогою яких виявляється підтекст, та на які повинен орієнтуватися інтерпретатор під час перекладу поетичного твору іншою мовою. Підтекст поетичного твору визначається як підтекстовий образ, який функціонує в рамках макрообразної структури твору. Для декодування та перекладу підтекстового образу необхідне дослідження системи внутрішніх текстових та позатекстових контекстуальних зв'язків, а також психолінгвістичних аспектів поетичного дискурсу. Серед основних методів залучених у цьому дослідженні є розроблений нами метод макрообразного аналізу поетичного твору, який передбачає порівняльне зіставлення оригіналу й перекладу на рівні автосемантичних, синсемантичних та субсемантичних (підтекстових) образів та, зокрема, аналіз тексту з метою виявлення наявності в ньому суто лінгвальних та психолінгвістичних маркерів підтексту для здійснення його декодування й відтворення у перекладі, а також такий метод психолінгвістичного аналізу як факторний аналіз (метод головних компонент) для визначення особливостей семантики оригінального поетичного тексту й тексту перекладу. У результаті дослідження виявлено такі сигнали-маркери поетичного підтексту: одночасна актуалізація значень одного й того самого слова, а також розосереджені вкраплення англіцизмів в американському вірші, які формують підтекст, що важко піддається перекладові.

Ключові слова: *поетичний переклад, психолінгвістика, підтекст, концептуально-підтекстовий образ, соціолінгвістичний образ, семантичний комплекс, англіцизм.*

Introduction

One of the major objects of psycholinguistics research is the study of cognitive processes motivating language comprehension and production, as well as the ways cultural environments interact with these two (Harley, 2005).

Sense capacity is one of the most distinctive properties of a poem as a language product: it often says more that it is said directly in it. It, sense capacity, suggests conclusions and associations that are not ingenuously formulated in its text, and it awakes the thought and causes the need to additionally tell yourself, or think to yourself the author's deliberate understatement. As such, poetry is a feature that is specific for the latter and detaches it from other types of book writing that are not a simple result of the readers' perception discrepancies: it is determined by a poem sense structure inherent in it since two or more senses may coexist within a verse.

The most frequent experimental research in the field of psycholinguistic literary sense investigation deals mainly with prose texts implications (Clark & Clark, 1977; Goodman & Stuhlmuller, 2013; Fodor et al., 1974; Hoek & Zufferey, 2015; Jaeger, 2010; Loman & Mayer, 1983; Torabi & Denberg, 2012), that is also true with psycholinguistic implications of bimodal bilingualism (Emorrey, 2016). Similar investigations have been observed as far as translation of implicitly are concerned (Hatzidaki, 2007; Jinyu, 2012; Lörscher, 1991; Venuti, 2001).

Reconstruction of literary work sense comprises an important practical task of literary translation and principal problem belonging to translation theory realm. And that is why while characterizing poem language nature specifics, in its broader understanding of the serious problem concerning poetical text double meaning can by no means be avoided.

To further explore this issue, we need not only to look at semantic and morphophonological properties of source and target languages, but also at extra-linguistic variables should be researched, as well as language behavior between prime and target texts are to be tested on what makes it evident that psycholinguistics and translation study are interrelated. Furthermore, since translation theory is mostly dealing with bilingual narrators' competency in the process of rendering and psycholinguistics – with language usage cognitive aspects, translation study may benefit by borrowing interdisciplinary approaches that enrich its theory and practice while applying psycholinguistic research methods for examining implied sense translation specifics.

Methodology

This work is based on the newly devised research methodology of poetical original and its translation by means of macro-image analysis (Kykot, 2020), as well as on methodology that includes psycholinguistic approaches such as a method of psycholinguistic analysis as factor analysis (principal components method) to determine the features of semantics of the poetic original and translated texts. The principle of preserving the harmony of content and form in translation is qualified as indispensable. Based on this, translation should be assessed as conceptual-esthetical form and content integrity exposing the relations between poem components as well as the harmony of their interaction organized by the concept idea.

Among the methodological principles, the macro-image analysis of original and translation is based on are historical and typological principles as well as various approaches to poetic translation analysis integrated into the devised method including topic, problem, semiotic, contextual-interpretation, structural, system and other approaches to the analysis of poetry and its translation that have positive mutually beneficial properties.

The basic method of the integral multi-aspect analysis aimed at the complex multiple aspects philological study of poetical text is text research through disclosing its image poetical structure together with its idea content, and the system of image lingual and psycholinguistic creation means. The category of image is the central concern of such synthesizing analysis.

The macro-image analysis method is performed by using the image poetical matrix of a poem that represents its common structure with all its levels and systems of images; these levels consist of the whole complex of their relationship. This method enables a full value analysis of original poem and its adequate reconstruction in other languages by applying the matrix on the ready-made translation that contributes to comprehensive analysis as far as translation equivalency is concerned.

The poem translation matrix is based on the idea of the comprehension of poetry translation matrix model that is a model that represents poetical piece as macro-image structure-system construction shaped by autosemantic, synsemantic and subsemantic image dimensions with their relationships within the integral poem structure, as well as within the system of relations of micro images on each dimension level and

outside it within the whole structure and all level images association bonds of the poem beyond its structure. This model helps to achieve equivalency and to reveal transformations in poetic translation.

Subsemantic image is a type of image that is formed within a poem general macro-image structure on its implied sense level. Subsemantic image has signals (markers) of material representation in poetical text which are conditioned by system linguistic potential of language element, correlation of its denotative and connotative plans, syntagmatic environment, interaction of linear and superlinear text levels. Markers of subsemantic image are differentiated by lexical and composition-architectonic levels.

Results and Discussion

As literary translation practice shows, in poetic translation in particular, it is often impossible to reconstruct all the properties of the original text and therefore it has to be decided which of them are more important, and which ones could be ignored. Specifying poem components principles aesthetical and image hierarchy enables to assess translation sufficiency.

A separate word in a poem quite often functions concurrently in several semantic contexts. Each translator may perceive it in his own way and it may sound entirely different for the reader. In the course of translation, one should preserve major sense component of the words bearing several semantic functions that is to render their most important functions in a semantic complex of higher order (context of phrase, stanza, entire poem, etc.), and only after that – their denotative meaning. The highest semantic complex that is sometimes reflected as "literary work idea," its philosophical concept, dominates in the course of resolving lower entities. For example, while choosing stylistic row, those in their turn dictate solutions on the level of paragraphs and phrases (Levý, 1974, p. 146). Translator's unawareness of the mechanism and "unseeing" the means of a poem main idea construction unavoidably causes its loss in translation.

Radchuk states that we should choose the element that we consider to be the most important in the work being translated is the aim of translation (Radchuk, 1982, p. 21). Verse translation requires differentiating accuracy degrees according to the level of artistic hierarchy (element rank in structure). The translator determines the order of priority of elements reconstruction as well as the gradation of assumed relations, revealed by the way of combinatory connections, structure specifics, artistic dominant feature (Radchuk, 1980, p. 17). He (translator) scrupulously saves the most important subordinating auxiliary to it, ignores less essential, varies insignificant, replaces relatively neutral. Following artistic dominant feature and differentiating accuracy, a translator reconstructs not simply accidental "something" from a work piece but its essence, normality of interactive components combination – each time another, original in each poet. Implied sense is undoubtedly one of such essential dominant features of poetic model.

Implied sense, "underwater stream", is a fact attested and analyzed as far back by the interpreters of antique epoch, Ancient India and Old China. A combination or

interchange of direct and allegorical speech, that is one meaning and multiple meaning speech, is always characteristic of creative writing in particular poetry text semantic structure. Hence, translation sufficiency without finding the means of expression of such contrasts of simple and "deep" work content is out of the question (Larin, 1959, p. 136).

If available poem implied sense is, as a rule, a poem's main thought, its deep idea and semantic-compositional image, whose essence may also be expressed as poem conceptual implied-sense image. And the language equality mark between perception of authors information by the readers of the original and translation texts may be used only in case when reconstruction of superficial unity of poetic text content and form is followed by the reconstruction of its deep structure that is implied sense image. Preserving implied sense in translation is compulsory in view of it dominant positioning within definite poem macro-image.

Currently, there have been only singular attempts to explore a poem implied sense actual linguistic implementation, for instance, based on quotation, and there have been observed no scientific works broadly investigating poetic implied sense problem from the translation theory point of view.

The author of this research has observed no work or research regarding poetic implied sense during the last fifteen years although there were several scientific papers concerning prose implied sense exploration. It is true fact that there appeared several scientific works concerning prose implied sense exploration by Matchuk (1992), Vetoshkin (1999), Golyakova (1996), Yermakova (1996).

As far as translation theory is concerned, this subject matter has not been thoroughly researched during the timeframe mentioned previously. System-contextual and structural approaches on the study of poetry implied sense functions, the ways of its creation, and the means of its discovery and reconstruction in translation are at the initial stage of their development what does not endorse earlier elaboration of full value poem macro-image model with the help of which a poem full value analysis could be performed and, in its turn, a poem adequate translation could be done.

Elaborating poetic implied sense is undoubtedly one of the important facets of such an integral model caused the topicality of the issue. The topicality of the problems considered is also conditioned by the growing attention of the translation study specialists to the text as a phenomenon, and by the need of all-round analysis of various types of information available in it and image-implied-sense information in particular.

It is necessary to clearly understand the difference between a direct allegory in the "ordinary image", and an implicit allegory hidden in the implied sense image. Sufficient concealment of those hints and conjectures that we identify with implied sense is a very important property that determines the nature of subsemantic image. The main difference between these two notions is that if the reader does not understand direct allegory, he will not understand the meaning of the poem. The poetic work will lose all meaning for him. If the reader does not "grasp" the meaning

of hidden, implicit hints, such a deprivation of meaning will not happen: the reader will understand the external plan, which will be the entire content of the poem for him. Here is a poem *A Minor Bird* by Robert Frost:

> I have wished a bird would fly away,
> And not sing by my house all day;
>
> Have clapped my hands at him from the door
> When it seemed as if I could bear no more.
>
> The fault must partly have been in me.
> The bird was not to blame for his key.
>
> And of course there must be something wrong
> In wanting to silence any song. (The Poetry, 1979, p. 267)

The external meaning of this poetry is quite clear. Its plot unfolds quite clearly. The images and the idea conclusion hardly need to be explained. But the inner meaning, the implied sense, is encoded here in a very original, sophisticated way.

Most readers, satisfied with a short but interesting plot and instructive humanistic pathos, may not notice the inner, deeper content. This can be done only by trying to draw a nexus between the *"minor"* in the title of the poem and the last word of the sixth line *"key"*. Identifying the common pragmatic field of these two lexical units, namely their belonging to the musical terminology, will help to understand that the bird here is not only "small" (the first meaning of the English word "minor"), but also sad (blue), which is the second dictionary meaning of the word "minor". And then, unfolding the logical chain, one can understand why the bird is sad: it grieves because of the fact that the lyrical hero in his daily work does not pay attention to the beauty and grandeur of nature. Waving his hand away from him, he does not want to see the main and eternal thing that is the source of life and true pleasure. And having revealed more fully the semantic spectrum of the word "key" ("key" means not only "octave" but also "important", "vital"), it is easy to see that it acquires the symbolic meaning of the key to the door of everlasting paradise, to the door of nature.

So, in this poetical work by Robert Frost we have a conceptual subsemantic image, an implied sense at the level of the whole poem, formed by the simultaneous actualization of several meanings of the same word.

Not understanding such a mechanism of the author's construction of hidden content, the translator of this poem, Valeriy Boychenko, could not reproduce the subsemantic image in his translation entitled *A Bird* («Пташка»). Compare:

> Забаглось, щоб далі летіла вона
> І щоб не співала побіля вікна.
>
> Я швидко підвівся і став на поріг,
> Плеснув у долоні, бо слухать не міг.

То сам я, напевне, у тім завинив,
Що став на заваді мені отой спів.

Бо, зрештою, є щось погане й зловісне
У прагненні змусити змовкнути пісню. (Frost, 1970, p. 72)

As we can see, the above-mentioned figurative marker words or any of their functional equivalents are not observed in the translated text, and therefore, as a consequence, there is no implied sense here.

Among the ways of creation of implied sense in poetry, though seldom, it still happens that in English language poetry one can still come across those implied sense image creation means that unfortunately cannot be so far translated in other language, at least in Ukrainian or Russian.

Such creation means can be demonstrated in the poem "Richard Cory" by the prominent American poet Edward Arlington Robinson:

Whenever Richard Cory went down town,
We people on the pavement looked at him:
He was a gentlemen from sole to crown,
Clean favored, and imperially slim.

And he was always quietly arrayed,
And he was always human as he talked;
But still he fluttered pulses when he said,
"Good-morning," and he glittered when he walked.

And he was rich – yes, richer than a king –
And admirably schooled in every grace:
In fine, we thought that he was everything
To make us wish that we were in his place.

So on we worked, and waited for the light,
And went without the meat, and cursed the bread;
And Richard Cory, one calm summer night,
Went home and put a bullet through his head. (Robinson, 2014, p. 497)

This poem tells us about the unsteadiness of material success, and the unreliability of comfort and welfare. Richard Cory has been "heroically" hiding his troubles and problems from other people. The author says nothing about the reasons for his unexpected suicide, but his selection of words depicting the hero elucidates the tragedy cores. The reader's attention is arrested by the great number of Anglicism in the poem about American province dweller: "from sole to crown" (an American would say "from head to foot"), "pavement" (instead of American "sidewalk"), "clean-favored" (instead of "shapely") and so on. There was something in Richard Cory from an old-fashioned English aristocrat. He was not only "richer than a king" (again it is more similar to an English comparison), but also "was always human

when he talked". Such people could not tolerate the inhuman tension imposed by the struggle for a place under the sun in modern society of "equal opportunities" which senseless material accumulation more and more deprives them from "archaic" spiritual and moral principles, warm virtuous relationship, lively human communication.

This very American poem also has wider aspect of interpretation: nobody deserves envy; each person is worthy only a sympathy. This verse may also be a sort of illustration to the Ukrainian saying of "Someone else's soul – dark woods".

Thus, as it becomes clear from the writing above, this sociolinguistic image cannot be translated in view of quite specific means of its creation the poem author resorted to. But it does not mean the static absence of translation versions of the poem. Indefatigable interpreters having even realized the hopelessness as for full value representation of the original dominant image in translation still try to bring the reader nearer to the unattainable original poem by their renditions:

Коли виходив Корі за поріг,
Вся вулиця збігалася дивитись
На джентльмена з голови до ніг,
То був шляхетний, благородний витязь.

Й здавалося, скромнішого нема,
На посмішку був щедрий і на милість,
Вітався першим чемно з усіма,
Як він ішов – усе довкіл світилось.

І був багатшим він від короля,
І мав всебічний розвиток і вишкіл,
Ми заздрили за все те, що земля
Йому дала і дав йому Всевишній.

З'їдала нас робота, біготня,
Кляли ми хліб черствий і спину гнули,
А Ричард якось сонячного дня,
Вернувшись в дім, пустив у серце кулю. (Kykot, 2020, p. 73)

Conclusion

This work in certain ways clarifies the significance of implied sense in a poem image structure in view of its reconstruction in translation as well as focusing translator's and translation study specialist's attention to some poetic implied sense creation means that are difficult to be reconstructed in the process of translation.

Implied sense as a system of word depicting-expressing means is inherent in certain poems. This system consists of indirect utterances of the narrator which have hidden sense that is revealed in context – not only in the nearest text surrounding, speech situation, but also in wider semantic context. Each implied sense detail serves as an element of the system of textual and extra textual bonds.

Implied sense may be called semantic-psychological category that is revealed as a result of literary text interpretation. Emerging implied sense polysemantics causes certain text perceiving, decoding and translating problems which are to be solved by means of context.

Implied sense and content-conceptual information make poem major gist. Adequate perception and translation of content-conceptual information that is a category of the whole text in general is not possible without implied sense understanding. Implied sense presence in a poem is characterized with text available signals (markers) by means of which implied sense is revealed, and which a translator should orient to in the course of translation.

The current stage of research enables one to identify poem implied sense as a special type of image – implied sense image that is poetic macro-image full value constituent. This image functions within poem macro-image structure and as a rule is a dominant feature for translation. Simultaneous actualization of several meanings of the same word is one of the means the poetical implied sense is created with. It also becomes clear that there are some untranslatable forms of poetical implied sense, namely, an implied sense based on Anglicism dispersion in the text of the American verse.

Scientific novelty of this article is the fact that poem translation adequacy is deepened on the basis of its implied sense dimension work out; the process of perception of implied sense image as a poetical macro-image constituent is analyzed as well as the influence of this process on the full value implied sense reconstruction in translation.

The theoretical worth of this article is that it makes certain contributions to the research of implied sense as an element of textual and image structure, to scientific elaboration of poem macro-image structure, adds to the development of translation theory, text linguistics, lingual stylistics, and the theory of text interpretation.

The practical value of this research lies in the fact that it focuses the translator's attention to some means of implied sense creation that are difficult to translate, that the results of the research may be used in translation practice, and in the course of all types of analysis of poetry and its translation, and the training of translators and critics of literary translation, linguists, and literature specialists in general.

The research perspective of poetry implied sense as a constituent part of poem macro-image structure is in investigating other means of poem implied sense creation and the ways of their reproduction in translation as well.

References

Ветошкин А. А. (1999). Подтекст как выразительное средство языка: (на материале английского языка): дис. … канд. филол. наук : 10.02.04 «Германские языки». Саранск.

Голякова Л. А. (1996). Подтекст и его экспликация в художественном тексте : [учеб. пособие по спецкурсу для 4-го курса филол. фак. ун-тов (специальность «Романо-герм. яз. и лит., нем. яз.»). Пермь : Перм. гос. ун-т.

Ермакова Е. В. (1996). Подтекст и средства его формирования (на материале современной англ. драмы): дис. … кандидата филол. наук : спец. 10.02.19 «Сравнительно-историческое, типологическое и сопоставительное языкознание». Саратов.

Ларин Б. А. (1959). О новых лингвистических исследованиях. Вестник ЛГУ. Серия истории языка и литературы. Ленинград: ЛГУ. Вып. 4. № 20, 135–139.

Кикоть В. М. (2020). Образна матриця та переклад поезії : монографія. Черкаси: Видавець Чабаненко Ю. А.

Левый И. (1974). Искусство перевода ; [пер. с чешского Вл. Россельса]. Москва: Прогресс.

Матчук А. Л. (1992). Подтекст литературного произведения : дис. ... кандидата филол. наук : спец. 10.01.08 «Теорія літератури» / АН Украины; Ин-т литературы. Киев,

Радчук В. Д. (1980). Проблемы верности художественного перевода : автореф. дис. на соискание уч. степени канд. филол. наук : спец. 10.02.04 «Германские языки». Київ.

Радчук В. (1982). На жертовнику мистецтва. «Хай слово мовлено інакше....» : [статті з теорії, критики та історії художнього перекладу / упоряд В. Коптілов]. Київ: Дніпро, 19–40.

Clark, H. H., Clark, E, V. (1977). Psychology and Language. New York: Harcourt Brace Jovanovich.

Emorrey K., Gifzen M., Gollan T. (2016). Psycholinguistic, cognitive, and neural implications of bimodal bilingualism. *Bilinguism: Language and Cognition, 19*(2), 223–242, https://doi.org/10.1017/S1366728915000085

Fodor J., Bever T. G., Garrett M. F. (1974). The Psychology of Language: An Introduction to Psycholinguistics and Generative Grammar, New York: McGraw-Hill.

Goodman D. N., Stuhlmuller A. (2013) Knowledge and implicature: modeling language understanding as social cognition. *Topics in Cognitive Science, 5*(1), 173–184. https://doi.org/10.1111/tops.12007

Harley, T. (2005). The Psychology of Language. From Data to Theory. New York: Psychology Press.

Hatzidaki A. (2007). The Process of Comprehension from a Psycholinguistic Approach. Implications for Translation. *Traductologie: Une Science Cognitive, 52*(1). https://doi.org/10.7202/014715ar

Hoek J., Zufferey S. (2015). Factors influencing the implicitation of discourse relations across languages. Proceedings the Joint ACL-ISO Workshop on Interoperable Semantic. Tilburg center for Cognition and Communication. (39–45).

Jaeger, T. F. (2010). Redundancy and reduction: Speakers manage syntactic information density. *Cognitive Psychology, 61*(1), 23–62. https://doi.org/10.1016/j.cogpsych.2010.02.002

Jinyu, L. (2012). Habitus of Translators as Socialized Individuals: Bourdieu's Account. *Theory and Practice in Language Studies, 2*(6), 1168–1173. https://doi.org/10.4304/tpls.2.6.1168-1173

Loman, N., Mayer, R. (1983). Signaling techniques that increase the understandability of expository prose. *Journal of Educational Psychology, 75*(3), 402-412.

Lörscher, W. (1991). Translation Performance, Translation Process and Translation Strategies: A Psychological Investigation. Tubingen: Gunter Narr Verlag. Pickering.

Torabi, A. F., Demberg, V. (2012). Implicitness of discourse relations. *Proceedings of the International Conference on Computational Linguistics Citeseer*. Mumbai. (2669–2684).

Venuti, L. (2001). Strategies of Translation. In M. Baker, Ed.. Routledge Encyclopedia of Translation Studies. (pp. 240–244). London & New York: Routledge.

References (translated and transliterated)

Vetoshkin, A. A.(1999). Podtekst kak vyrazitelnoye sredstvo yazyka: (na materiale angliyskogo yazyka) [Implied sense as language expressive means. English language]. Unpubished PhD. thesis. Saransk.

Golyakova, L. A. (1996). Podtekst I yego eksplikatsiya v hudozhestvennom tekste [Implied sense and its explication in belles-letters text]. Perm: Perm State University.

Yermakova, Ye. V. (1996). Podtekst I sredstva yego formirovaniya (na materiale sovrem. angl. dramy) [Implied sense and means of its formation. English drama]. Unpubished PhD. thesis. Saratov.

Larin, B. A. (1959). O novyh linguisticheskih issledovaniyah [On new linguistic researches]. *Vestnik of Leningrad State University. Series "History of Language and Literature", 4*(20), 135–139.

Levý, J. (1974). Iskusstvo perevoda [An art of translation]. Moscow: Progress.

Matchuk, A. L. (1992). Podtekst literaturnogo proizvedeniya [Implied sense of literature work]. Unpubished PhD. thesis. Kyiv: Institute of Literature.

Radchuk, V. (1980). Problemy vernosti hudozhestvennogo perevoda [The problem of faithfulness of artistic translation]. Extended summary of PhD thesis. Kyiv.

Radchuk, V. (1982). Na zhertovnyku mystetstva [On the sacrificial altar of art]. Kyiv: Dnipro.

Kykot, V. (2020). Obrazna matrytsya ta pereklad poeziyi [Image matrix and translation of poetry]. Cherkasy: Chabanenko Yu. A. Publisher.

Clark, H. H., Clark, E, V. (1977). Psychology and Language. New York: Harcourt Brace Jovanovich.

Emorrey K., Gifzen M., Gollan T. (2016). Psycholinguistic, cognitive, and neural implications of bimodal bilingualism. *Bilinguism: Language and Cognition, 19*(2), 223–242, https://doi.org/10.1017/S1366728915000085

Fodor J., Bever T. G., Garrett M. F. (1974). The Psychology of Language: An Introduction to Psycholinguistics and Generative Grammar, New York: McGraw-Hill.

Goodman D. N., Stuhlmuller A. (2013) Knowledge and implicature: modeling language understanding as social cognition. *Topics in Cognitive Science, 5*(1), 173–184. https://doi.org/10.1111/tops.12007

Harley, T. (2005). The Psychology of Language. From Data to Theory. New York: Psychology Press.

Hatzidaki A. (2007). The Process of Comprehension from a Psycholinguistic Approach. Implications for Translation. *Traductologie: Une Science Cognitive, 52*(1). https://doi.org/10.7202/014715ar

Hoek J., Zufferey S. (2015). Factors influencing the implicitation of discourse relations across languages. Proceedings the Joint ACL-ISO Workshop on Interoperable Semantic. Tilburg center for Cognition and Communication. (39–45).

Jaeger, T. F. (2010). Redundancy and reduction: Speakers manage syntactic information density. *Cognitive Psychology, 61*(1), 23–62. https://doi.org/10.1016/j.cogpsych.2010.02.002

Jinyu, L. (2012). Habitus of Translators as Socialized Individuals: Bourdieu's Account. *Theory and Practice in Language Studies, 2*(6), 1168–1173. https://doi.org/10.4304/tpls.2.6.1168-1173

Loman, N., Mayer, R. (1983). Signaling techniques that increase the understandability of expository prose. *Journal of Educational Psychology, 75*(3), 402-412.

Lörscher, W. (1991). Translation Performance, Translation Process and Translation Strategies: A Psychological Investigation. Tubingen: Gunter Narr Verlag. Pickering.

Torabi, A. F., Demberg, V. (2012). Implicitness of discourse relations. *Proceedings of the International Conference on Computational Linguistics Citeseer*. Mumbai. (2669–2684).

Venuti, L. (2001). Strategies of Translation. In M. Baker, Ed.. Routledge Encyclopedia of Translation Studies. (pp. 240–244). London & New York: Routledge.

Sources

Frost, R. (1970). Virshi u perekladi V. Boychenka [Poems translated by V. Boychenko]. Poeziya – 70. Kyiv: Rad. Pysmennyk,1, 67–74.

Kykot, V. (2020). Amerykanska Poeziya u Perekladah Valeriya Kykotya [American Poetry Translated by Valeriy Kykot]. Kyiv: Kondor.

Robinson, E. A. (2014). Poems. New York: Knopf Doubleday Publishing Group.

The Poetry of Robert Frost. (1979). The collected poems, complete and unabridged. E. C. Lathem, Ed. New York: Henry Holt and Company.

LITERACY DEVELOPMENT OF ROMA CHILDREN IN L2: A COMPARATIVE PSYCHOLINGUISTIC STUDY

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Abstract. The paper presents results from a comparative empirical L1 / L2 literacy study with first-grade Roma and non-Roma children, resident in Bulgaria and Slovakia. The Roma children growing up in traditional communities are socialized through the rich oral culture surrounding them. In the extended Roma families, the care of the children is responsibility of everyone. In such a rich speech environment, the children learn their mother tongue. However, the oral skills of Roma children acquired in the home environment are not used at all in the process of literacy development in their L2 at primary school, neither in Bulgaria nor in Slovakia. Bialystok (2007) says that the oral skills of bilingual children in their L1 and L2 play an important role in the preparation for literacy. The Roma children's oral skills in their L1 are not further developed at the primary school level and their L2 oral skills are initially often very limited. 60 first-grade children (20 Roma and 40 non-Roma children) were tested using the RAN Test at the end of the school year, in Bulgarian and Slovak. Various aspects, including comparative differences in literacy performance between Roma children tested in Bulgaria and Slovakia, are discussed in detail. The findings show that (1) the time for naming the RAN Test in L2 can be used as a predictor for the children's literacy level in L2; (2) A low level of language competence of the children in their L1 appears congruent with a low literacy proficiency in L2; (3) The place of residence of the children appears to be a factor influencing the performance by Roma children in the RAN Test. The Roma children from the village have better results than Roma children living in the city. The level of oral proficiency in L1 of Roma children influences the timing of the naming of the RAN Test in L2. The Roma children resident in town have a more isolated life and do not possess such a rich vocabulary in their mother tongue. The children living in a village have more daily contact with non-Roma Bulgarians, for example, and thus develop a richer vocabulary in their mother tongue as well.

Keywords: Roma, literacy, Language 1, Language 2, Rapid Automatized Naming Test, narrative.

Кючуков Хрісто. Розвиток писемної грамотності у другій мові в ромських дітей: зіставне психолінгвістичне дослідження.

Анотація. У статті представлено результати порівняльного емпіричного дослідження грамотності рідної та другої мов у першокласників ромських та неромських дітей, які проживають у Болгарії та Словаччині. Ромські діти, які виростають у традиційних громадах, соціалізуються через багату усну культуру, яка їх оточує. У великих ромських сім'ях турбота про дітей є обов'язковою для кожного. У такому насиченому мовленнєвому середовищі діти вивчають рідну мову. Проте навички усного мовлення ромських дітей, набуті в домашньому середовищі, взагалі не використовуються впродовж розвитку грамотності в їхній другій мові під час навчання в початковій школі ні в Болгарії, ні в Словаччині. Бялосток (2007)

стверджує, що вміння усного мовлення дітей-білінгвів рідною та другою мовами відіграють важливу роль у підготовці до навчання грамоті. Усні навички ромських дітей рідною мовою не розвиваються далі на рівні початкової школи, а їхні усні навички володіння другої мови спочатку часто дуже обмежені. 60 дітей першого класу (20 ромських і 40 неромських дітей) пройшли тестування за допомогою тесту RAN наприкінці навчального року болгарською та словацькою мовами. Детально обговорюються різні аспекти, включаючи порівняльні відмінності в успішності ромських дітей, які тестувалися в Болгарії та Словаччині. Результати показують, що (1) час для називання в тесті RAN на другій мові може слугувати предиктором рівня грамотності дітей у другій мові; (2) Низький рівень мовної компетенції дітей у рідній мові збігається з низьким рівнем володіння грамотністю в другій мові; (3) Місце проживання дітей є чинником, який впливає на результативність ромських дітей у тесті RAN. Ромські діти із сільської місцевості мають кращі результати, ніж ромські діти, які живуть у місті. Рівень усного мовлення рідною мовою дітей ромів впливає на швидкість називання в тесті RAN другою мовою. Ромські діти, які проживають у місті, живуть більш ізольованим і не володіють таким багатим словником рідною мовою. Наприклад, діти, які живуть у селі, мають більше щоденних контактів з болгарами-неромами, розвиваючи таким чином багатший словниковий запас рідною мовою.

Ключові слова: роми, грамотність, рідна мова, друга мова, тест на швидке автоматичне називання, наратив.

Introduction

Language development of Roma children

The social aspect

In different cultures the language socialization of the young children depends on the cultural rules and practices of the communities. According to Leaper (2014-2017), in western cultures where the nuclear family with mother-father-child is primary, the socialization depends on the modes and frequency of communication between the parents and their child. The parents are the role models for the socialization and the contacts with the community are limited. Here the younger children learn almost everything through reading books, playing with toys and they also acquire also their different gender roles from an early age from their parents as models.

In a study of 50 parents and 50 children, Baferani (2015) has shown that the family plays an important role in the language socialization of the children. The author finds that factors such as "amount of love", "warm-cold relationship" and "control" affect a child's socialization within a family.

According to Maccoby (1992), the parents play the role of "teachers". The non-symmetrical distribution of power and competence between adults and children imply that the parent-child relationship has a unique role in childhood socialization.

Everywhere in Europe, many Roma still lead a traditional life. They live in extended families, where the care of the children is something all family members and members of the community are concerned with. There are different strategies for language socialization of the Roma children. The development of Roma children's

speech is strictly determined by the Roma culture and traditions. As is known, Roma culture originates from India, and there are several parallels and close parallels with modern Indian culture. During my visits to India in 2001 and 2002 in observations and research among some Indian communities, whose lifestyle and culture have many common features with everyday life of European Roma, I had the impression that supervision and education of the children, and the ways they teach their native language (L1) have many similarities with Roma customs and practices (Kyuchukov, 2005).

Adult Roma in their linguistic relationship with children struggle in the same instinctive and spontaneous way and formulate linguistic samples, easy for children to understand, awakening and supporting their interest in the communication process. Both Indian and Roma communities use identical strategies. Conversations and language games with young children are part of the daily communication in traditional Roma communities and they obey the rules governing this kind of communication shaping Roma linguistic competence.

Traditional children's games, which are accompanied by comments addressed to children, are paid much attention in Roma culture. In the ethnographic literature, Popov (1988) has investigated the socializing function of children's games (1988). He analyzes socio-cultural factors in mastering the native language and gives examples, emphasizing the important role of the traditional game culture for children's speech development.

According to my observations, teaching language to young children is associated with cultural traditions and with some features defining their distinctively oral culture. Oral Roma folklore includes the following genres: fairy tales, songs, short poems, fictional stories in which a child is the protagonist. Such a story is 'language input", it serves to shape children's speech competence in a native language. The way of expressive performance of stories for children and babies is characterized by a slow tempo in pronunciation. The contours of exaggerated intonation, leading to melodiousness, indicate that a tale or a story are being addressed to a very young child.

The model of a story offered to a child is manifested in preference for a dialogue. In these cases, the adult (narrator) answers the questions posed himself, or any other family member (aside from another child) can do it. These two models of conversation with a child used by Roma adults can consist of many parts, a fact intriguing for psycholinguists. Another characteristic feature of such a story is that its plot reflects the events of future but not present or past. The type of a conversation most often encountered in a dialogue with a Roma child is really a question, a kind of "test". In some of our data collected, almost half of the sentences addressed by a mother to a 2-year-old child belong to this category. Using the questions an adult controls all the elements of the stock of a certain knowledge and ideas required by the community (Reger, n.d; 1991;1999; Reger & Berko-Gleason, 1999)

The predominance of question-tests is directly linked with features of Romani culture, as in certain oral folklore genres listeners ask the narrator the same kind of questions. Characteristic of oral replacement of an adult's and child's words shows

that in a traditional Romani community, a small child is considered to be a member of a society from the very beginning. The speech patterns addressed to him are characterized not only by the elements and rules of the native language, but also by the fact that a child is at the same time introduced to the traditional oral genres of Roma culture and their characteristic linguistic use.

Čvorovič (2005) stats that "these children [referring to Roma children -HK] not only don't know Serbian, they don't know their language either. Their parents are usually illiterate and the have absolutely no appreciation of education" (p. 39). According to the author, "in this settlement, Gypsy children acquire hardly any skills and knowledge based on written text. The sets of objects that surround these Gypsy children includes neither children's books (nor any books) nor usually any toys. Children are expected to help around the house, fetch water and look after their younger siblings" (p. 42).

For someone who is familiar with Roma culture, this could perhaps sound unserious. Roma parents often are criticized because the activities with their children are not taken seriously by the outside world as a learning process. Very often the role of other traditions, cultural peculiarities of the Roma are not understood and not considered as something serious; but in the traditional families these activities are important. Presenting Roma children and parents in such a humiliated way is absolutely incorrect and does not present the Roma culture in the right light. It is more than obvious that such an author does not have any idea about Roma culture and such a statement is a form of racism. One cannot trust it and cannot use it for any purpose.

According to Stoyanova (2009), children growing up in the conditions of bilingualism, as many Roma children do, develop language consciousness earlier and more intensively than children maturing as monolinguals. Mastering the language, children communicate with adults and thereby they learn the language of everyday communication. This language is the basis of information presented to a child. This is a special style of communication and it is termed "adult language with respect to children" in psycholinguistics (Stoyanova, 2009, p. 43).

Roma children, like any other children, follow psychological stages of development. In this case, it does not matter which speech community they grow up in. It is known that social and cognitive development of a child is adaptive and constructive (theory of J. Piaget), while Vygotskyan theory postulates that social and cognitive development is culturally shaped and grounded.

The Roma children grow up in a rich environment of oral tradition, hearing stories, songs, fairytales, proverbs, riddles and sayings in their mother tongue Romani. Romani is an orally used and transmitted language, although lately there have been attempts to develop a standard written norm of the language. Each Roma community around the world has its own oral traditions, but in general they are very similar to each other. The children learn the everyday language of communication from their parents, siblings and extended family members from a very early age. They follow the universal paths of language development of any language around the world. The way the parents introduce the words to the children (naming the objects,

repeating and correcting the errors of the children) are the same as the parents from any other culture introducing the mother tongue to their children.

The observations presented here have been partially collected in different parts of the world at different times, and partly have become the result of a long-term observation of one Roma boy from his birth to 6 months, a boy named Kotse from Sofia (Bulgaria). He was brought up in a traditional Roma family in a Roma settlement. He was carefully looked after during his first 6 months of his life. Interaction between *child - adult* was observed.

As has already been mentioned, Roma children go through all stages of language development like other normally developing children. They have a child's linguistic level typical for the first year of life, where 'moo" refers to a cow, a "gey-gey" to a horse, "woof - woof" to a dog. The Roma mother from Sofia talking to her daughter asks if she wants some water, using precisely this child register with the term "brum" as lexeme

> **Mother** *Manges li brum mi čhaj?*
> Want some water, daughter?

In reality, the word *water* in Sofia-Roma dialect is *pani*, but the mother doesn't use this word because she knows that her daughter hasn't acquired it yet in her vocabulary.

A Roma boy, (1;6), whose family emigrated from the former Yugoslavia to Amsterdam, answers his uncle's question:

> **Adult:** *Kaj si o papu?*
> Where's grandpa?
> **Child:** *Paš i papin.*
> Near grandma

The word *papin* is created by the child himself. There is such a word in the Roma language, and it means *goose*, but a child does not know this meaning and creates a word from the word grandpa *papu*, here adding the feminine suffix *-in*. In fact, a child follows the usual process of creation of new nouns of feminine gender in the Romani language, adding a specific ending to a noun of masculine gender.

Children from an early age have some notions about the verbs of mental state such as happiness, anger, fear, wish, etc. A boy (1;2) from a village in northwestern Bulgaria understands when an adult uses the verbs denoting mental state in order to ask him to do something:

> **Adult:** *De tut xoli!*
> Make an angry face!

The child expresses anger on his face. The same child understands all kinds of questions. He's just gotten his first teeth and his uncle checks whether the child knows where they are.

Adult: *Danda, danda te kaj?*
  Teeth, where are your teeth?

Another boy (8 months old) was asked by his grandpa to welcome the guests.

Adult: *Ker lenge "zdravey"!*
  Say "hello" to them

The child raises his hand for greetings and says *hallo.*

Oks (1983) reports that in some non-traditional societies, when a child is three years old, his elder brothers and sisters start looking after him and the communication between mother and a child is realized through the elder children. For example, if a child is thirsty and asks the mother to give him some water, she redirects his request to the elder son or daughter.

Mother: *De les pani mi čhaj!*
  Give him some water, my daughter!

Another important feature in the communication *adult — child* in the Romani language is that children are presented with a very complex language from early childhood on.

For example: grandmother tries to warn three-month-old Kotse about the danger that he can injure himself by putting different items in his mouth.

Adult: *Ma, ka pharaves te žlebinja be močho!*
  No, you're gonna hurt your gum, son!

The child hears negation and the verb in the future tense. It is not a simplified language because a child is small and can't understand the meaning of the sentence. Adult Roma often use sentences of this kind and even more syntactically complicated structures speaking with children.

All examples noted show that Roma children follow the stages of normal childhood development. The influence of Roma culture and traditions on language socialization of children is also obvious. A subsequent part of the study is focused on the aspects of communication within the Roma communities where oral folklore takes place in communication *adult-child* as a strategy of language development and socialization.

In various publications Kyuchukov (1994; 2000; 2002) has described the language socialization among Muslim Roma children from Bulgaria and the place of phenomena like code-switching and borrowing during the process of language socialization of Roma children acquiring simultaneously three languages – Romani, Turkish and Bulgarian.

In the literature on language acquisition and language socialization, one can find information on monolingual language socialization in illiterate, traditional societies. Schieffelin (1986) reported on language socialization of Kaluli children in Papua

New Guinea, using an ethnographic approach for her observations. Schieffelin reported that the Kaluli children learn the language when the adult utters the message and after that adds the word: "ɛlɛma" ("say like that").

In traditional Roma communities, the acquisition of linguistic and communicative competence by young speakers is a task of all members of the community who are competent in language use. According to Smith (1997), traditional Romani education is a community sort of education. Children learn to understand and read the verbal and non-verbal communication signals utilized by adults in their community at a much earlier age than their non-Roma counterparts. They participate in the day-to day activities of the community and it is here that through watching, listening and observing, they learn the economic, social, linguistic, political and moral codes of their society.

Everywhere around the world Roma children grow up as bilinguals. Crystal (1997) distinguishes 'societal bilingualism' from 'individual bilingualism', and the term 'bilingualism' is used for people who acquire two or more languages simultaneously. In many East and Central European countries Roma children grow up bilingually or multilingually. However, upon entering the school the bilingualism or multilingualism of Roma children is not considered to be an asset. The preschool institutions very often do not offer any possibilities for Roma children to develop their mother tongue. In primary classes in most countries the children are forbidden to use their mother tongue. Due to these actions, the children develop the phenomenon of semi-lingualism, a situation where they do not know their mother tongue well and they cannot learn the official language of the country either. Kyuchukov (2009) showed that the knowledge of children 10 years old in Romani and in Bulgarian is equal to the knowledge of 6-year-old Roma monolingual children and this deterioration in competence is the reason why many children do not understand the school subjects and they drop out of school at the end of primary classes.

According to Eckert (2017), recognizing the role of the home language leads to successful socialization. Being disadvantaged in the Czech society, Roma children do not get any support in their mother tongue at school. The author suggests that by not demanding the schools to consider the home language in the process of teaching, the Roma have implicitly agreed that knowing Czech is the only natural way through which children from different cultures can gain access to education. The author compares the situation of Roma in Czech Republic with the situation of Afro-Americans who must study Standard American English, without considering their ability to speak Black English as a common, oral vernacular among many Afro-Americans.

The educational aspect

Discussing the situation of Roma in East Europe, Miskovis (2009) concludes that Roma have suffered racial discrimination and exclusion ever since they migrated to Europe. The discrimination against Roma and their exclusion are also part of the

educational process nowadays. In a study with Czech teachers, Jarkovska et al. (2015) found out that the teachers are "blind" to Roma children's differences. They have the same expectations from them as from the Czech children. In order to justify their own behaviors, the teachers created lists with the cultural and genetic differences of Roma children in order to legitimize the differential treatment accorded Roma pupils at school.

A recent study in Poland (Grzymala-Moszczynska et al., 2019) showed that very often Roma children are placed in special schools after the children have initially been accepted in mainstream schools, because the teachers and headmasters put pressure on the parents, giving different "arguments" such as " the child is constantly crying", "it will be better for the child to be in special school", etc. A psychological study with Roma children in special schools in a comparison with Roma children in mainstream schools showed that the there are no intellectual disabilities involved comparing both groups of children, there are no IQ differences between the two groups and there are no differences in their knowledge of Polish. The parents of the Roma children in mainstream schools complain that they and their children are treated differently by the teachers, the teachers will not believe the parents if they send a written message that the child is sick, and there is no respect for their Roma ethnicity.

All these studies used tests which culturally are not suitable for use with Roma children and they are biased towards the Romani language and culture, a serious obstacle to literacy development. Moreover, the tests are conducted in languages which the children very often do not know well. Even today in Slovakia and in the Czech Republic the children are tested with psychological tests administered in the official national languages. Based on their weaker results, the Roma children are placed in special schools for children with mental disabilities. However, there are no developed tests in the mother tongue of Roma children which can measure their abilities and knowledge of grammatical categories in their mother tongue, or any other kind of tests in Romani.

Recently, Romani language assessment test developed by Kyuchukov and de Villiers was used for testing the pre-school Roma children's knowledge of Romani grammatical categories. Children from Bulgaria, Macedonia, Serbia, Croatia, Czech Republic, Slovakia and Sweden were given a test measuring 10 grammatical categories for children aged 3-6 in Romani. The test measures both perception and production: wh questions, wh compliments, passive verbs, possessiveness, tense, aspect, fast-mapping nouns, fast-mapping adjectives, sentence repetition and number repetition. 80 % of the children tested throughout Europe showed very high results in the knowledge of all grammatical categories. In all selected countries, the number in the Roma population is high, and the number of pre-school and school children is also large. Unfortunately, the governments and the education ministries in these countries do not have any adequate policies towards the proper education of Roma children (Kyuchukov et al., 2017)

The language of instruction, communication and learning dominant at the school is very often an obstacle for the successful education of indigenous, migrant, and

minority children. These children are significantly disadvantaged as a result of not growing up with the standard dialect of whatever language is valued by the dominant social group(s), and by the low status of whatever "foreign" language, or dialect of the standard language, serves as these children's mother tongue. We know from examples around the world that this is not simply a matter of competence, even though linguistic nationalists tend to insist that it is, but rather that even the smallest deviations in usage and pronunciation, deviations that have nothing to do with competence, are sufficient to stigmatize already stigmatized minority speakers (see May, 2011; Adesope et al. 2010; Skutnabb-Kangas, 2000). Additionally, the languages of ethnic minorities are very often also the languages of people in poverty, exacerbating the disadvantage that their speakers experience in mainstream institutions like schools. One such linguistic group in Europe, the Romani, constitutes an ideal case of educational injustice when encountering the multiple obstacles of linguistic difference, racism, social marginalization, and poverty.

Historically, and up to the present, Romani children have had limited access to formal schooling. In the second half of the 20th century, most European Romani lived in socialist countries, where children were routinely diagnosed as "deficient", i.e. mentally and socially retarded, and placed in special schools where they most often constituted the majority. Romani children were also placed in segregated, Romani-only catch-up classes in regular schools at the beginning of their primary education (Cahn & Petrova, 2004; Sokolová, 2008). Despite European Court of Human Rights (ECtHR) decisions in cases such as D.H. and others v. Czech Republic (2008), which determined that this system violated the rights of Romani students, and required change, these same students continue to be diagnosed in large numbers, peremptorily, as "mentally handicapped" and placed in segregated classrooms and schools, where their educational prospects are dim (for Slovakia, see New, 2011; Miškolci et al., 2017). In this context, Roma students' language ability in Romanes, the mother-tongue or heritage language of Roma is judged to be a liability rather than an asset, and their bilingualism is often interpreted as an inability to speak any language (Hübschmannová, 1979; Kyuchukov, 2014a, b; Kyuchukov & de Villiers, 2009; 2014a, b, c; New, 2014).

In 2010, the ECtHR (ECtHR) ruled in favor of Romani students, who claimed that their placement in special Romani-only classes because of purported deficiencies in Croatian language violated their human rights. This case originated in the late 1990s in two rural villages in Međimurje county in the northeastern corner of Croatia, adjacent to Slovenia and Hungary, only 30 kilometers from Austria. While the data concerning these fourteen students was typically bleak — none of them finished primary school and many were absent from school as much as they were present — the ECtHR decided only by the narrowest of margins that unequal treatment had occurred (ECtHR, 2010). While advocates of the Romani cause claimed that the decision made discrimination based on language difference illegal (e.g. Memedov, 2010), that seems a wishful representation of what the majority actually said. In fact, separation of students into separate classes on the basis of language difference or deficiency was not found to be illegitimate or discriminatory. Rather the Court found that two village schools in Croatia had not taken adequate measures to see that the

Romani children were given the opportunity to actually learn Croatian – and consequently the rest of the mainstream curriculum – in their segregated classes. Had the schools done a better job of teaching the Romani children how to speak good Croatian, their separation might have been justified, regardless of the educational outcome.

Literacy in the second language (L2)

In her early work, Gudschinsky (1968) gives a definition of the literacy process and tries to answer the question as to what a literate person is. In most countries, the ethnic minorities learn to read and write in the official language of the country. Even if the minority language is used in primary schools, it is used to master the literacy in the official language. There are different literacy methods but the most traditional one known everywhere around the world was developed by Frank Laubach in the 1930s in the Philippines. It is known as the "Laubach method" – "pictures are used to serve as keys to words and the words in turn serve as keys to their initial sounds" (Gudschinsky, 1982).

Another traditional method is the one developed by Townsend (1948; 1952 [cited in: Gudschinsky, 1982]), and this method consists of recognizing whole words by comparison with each other and eventually using these words in sentences and stories. It differs from a typical look-say method in that the words are very carefully controlled in terms of letters. The textbook starts with three- to five-letter words and adds new ones one at the time. It is expected that in the process of comparison and word recognition, the pupil will learn to associate the letters with the phonemes they represent (Gudschinsky, 1982).

A third method described by Guschinsky (1982) is the one developed by Beckman (1950). Beckman uses syllables in the process of teaching to read.

In most cases the minority children who are bilingual become literate through one of the above-mentioned methods, and often their mother tongue is not taken into account. The methods deal mainly with the pedagogical side of the literacy development process. There is no attention to the linguistic side of it. Guschinsky (1982) developed a linguistic literacy development method taking the differences in the cultures into account. "Different cultures apparently see different sets of letters as similar enough to be confused" (p. 56). Therefore, the author suggests that the literacy development process has to start with introducing the letters most distant from each other and sounds first in order to avoid their misuse. This method pays attention to comprehension. The introduced words and short sentences, which the students must read, have to be comprehensive.

In their classical work on psychology of literacy, Scribner and Cole (1981) stated that the "studies of the effects of schooling on cognitive development need guidance from developmental theories regarding what aspect of schooling will have what effect and why" (p.13). Schooling is a setting in which the children are exposed to large amounts of information and it does not rely only on the technology of reading. "Studies on the psychological effects of literacy converge with and can contribute to the broader area of interest on the effect of education obtained through

schooling" (p.13).

Goswami (2009) says that the act of reading is a linguistic act and it is important to be understood that the visual symbols must be learned, they represent a spoken language. "To become a fluent reader, therefore the cognitive skills involved in the proceeding spoken language may be expected to be important" (p.135), Bialystok (2007) identifies three prerequisites for acquisition of literacy: competence with the oral language, understanding of symbolic concepts of print, and establishment of metalinguistic awareness. The relationship between bilingualism and the development of each of the mentioned three skills is different, sometimes indicating an advantage (concept of print), sometimes a disadvantage (oral language competence).

The Socio-Cognitive Theory (SCT), based on the socio-cultural theory of Frawley and Lantolf, (1985) and Vygotsky's theory of cultural–historical psychology "focus on social and cultural factors in L2 learning and use" (Lantolf, 2006, p. 69). The human psychological process, as Pantolf notes, is organized by three fundamental cultural factors: activities, artifacts and concepts. Bruner (1966) (cit. in Lantolf, 2006) proposed that activities, artifacts and concepts function as cultural amplifiers and suggested that as with physical tools, symbolic artifacts (e.g. literacy) amplify memory and increase our capacity to organize and communicate knowledge.

The process of learning of the symbols in each culture from a very early age is important and plays a role in the cognitive development of the child. One such important symbol complex is the language and the way the children learn it from very early age. Being part of and integral to the culture, the language plays an important role in the process of literacy. In order to understand the literacy development process, one should study the whole environment of the child, and the opportunities which s/he has in order to become prepared for the literacy process. The environment includes not only the physical surroundings but also human relationships (McLane & McNamee, 1990). These relationships are the ones which introduce to the children the tools and materials used for the literacy development process. In different cultures, the relationships between children and adults differ and the cultural symbols used for preparation for literacy are different. All this forms the basis for the socio-cognitive theory – through the culture the child develops his/her cognition and that relates to the preparation for literacy and the process of literacy and its acquisition.

Roma children acquire literacy in their second language (L2), which is often their weaker language. Studies in the research literature shed light on the problems of bilingual children who are literate in a language at school which is different from their home language.

Bialystok (2007) says that there are sociolinguistic and cognitive factors which support the literacy in the L2 of bilingual children: these are knowledge of the oral first language and knowledge of the oral second language. The studies investigating children to read in a weak language highlight the importance of oral language proficiency.

However, in many countries in Europe, the Roma children's knowledge of their mother tongue orally is not taken as an advantage supporting the literacy development process in L2; rather, it is assumed to be precisely the opposite. Many

researchers, educators and psychologists think that the biggest problem the Roma children must cointend with is in fact their bilingualism. They suppose that the educational process and the literacy of Roma children will be more successful if the Roma children are monolingual.

In most European countries, there is no knowledge about how to organize the literacy development process with bilingual children. Consequently, in many countries Roma children are placed in special schools. There is no research focusing on Roma children examining in depth the literacy development process in their L2, the results from which could be used for changing the educational system with Roma children and particularly the literacy process. In this respect, the study presented here tries to bring new knowledge to bear, seeking to shed fresh empirical light on the literacy problems of Roma children when they must be educated in L2.

Research questions

In the study we take as a point of departure the idea of Bialystok (2007) about the importance of the oral knowledge of the mother tongue, and based on that the research questions are formulated:

Q1: How does the naming speed in the RAN Test in L2 predict children's literacy?
Q2: How do the levels of oral language competence in Romani influence literacy in L2?
Q3: Is there any difference between the performance of the RAN Test by Roma children depending on their residential locality, namely town or village?

Hypotheses

Our hypotheses are the following:

H1: Oral proficiency in L2 will influence the speed of the RAN Test in L2.
H2: The performance in the RAN Test in L2 will predict the level of literacy in L2.
H3: The level of oral proficiency in L1 of Roma children influences the speed of naming in the RAN Test in L2.
H4: Roma children from the city will perform better in the tests than the Roma children from the rural area.

Method

The Tests

The children in the study must perform the RAN (Rapid Automatized Naming) Test, which includes 6 subtests, each of them with 50 items:
- colors;
- numbers;
- letters;
- objects;
- combinations of letters and numbers
- combinations of colors, letters and numbers.

The second task, which only the Roma children have, is an oral narrative in Romani based on a picture story. The story contents 7 pictures, telling the story of a small dog which gets lost and meets different animals on the way, and finally finds his house.

The children in the comparative study

All children involved in the study were in 1st grade in Bulgaria and Slovakia.

Table 1
Number of the Children Involved in the Study

In Bulgaria		**Residence**
Experimental group	10 Roma children	Village
Control group	20 Bulgarian children	Town
In Slovakia		
Experimental group	10 Roma children	Town
Control group	20 Slovak children	Town

All together 60 children were tested with the RAN Test in the official languages of the countries, Bulgarian and Slovak. The Roma children were also tested in their mother tongue, asked to tell a narrative based on a picture story. All Roma children in both countries are in segregated classes.

The Roma children in the study belong to two different groups. The Roma in Slovakia are more conservative as a community. They are Lovara (Vlax group). The Roma group in Bulgaria belongs to a non-Vlax group. It used to be a Muslim community but over the last approx. 20 years many such Roma were converted to evangelical Christianity and they have a rich religious life together with the Bulgarians in the village. The children are also involved in all religious activities from an early age. They also attend kindergarten in the village, while the Roma children in Slovakia do not attend kindergarten.

Procedure

All children were tested in a separate room individually in the official language of the country where they live and their performance was measured in terms of time (in seconds) using a timer. The Roma children's narratives were audio-recorded and then transcribed and analyzed (using the TTR – Type Token Ratio) for each child and per group.

Results

The RAN Test

The results from the testing are given in tables, separately for the Slovak and for the Bulgarian children. Table 2 gives the results of the Slovak children. The ethnic Slovak children have much better performance than the ethnic Roma children. In most cases the differences between the groups are statistically significant. However, in naming the colors (battery 1: t=4.8; p<.001) and naming the numbers and letters (battery 5: t=3.7; p<.001), the results between the two groups are not statistically significant, although the Slovak children perform much better on those batteries. In all other batteries, the Roma children's performance in the tests is poorer than that of the Slovak children – they need much more time per group for performing a certain test than the non-Roma Slovak children do. All the results are shown in Table 2.

Table 2

Results from the Testing of the Slovak Children

Subtests	Slovak children (time in sec.)	Roma children (time in sec.)	Statistically significant differences
colors	62	90	t=4.8; p<.001
numbers	43	62	t=2.7; p>.01
letters	37	58	t=3.0; p>.001
objects	62	79	t=2.6; p>.001
numbers and letters	50	75	t=3.7; p<.001
colors, numbers and letters	62	81	t=3.0; p>.001

Let us look at the results of the Bulgarian children. The results are presented in Table 3. As is shown in the table, the two groups of children have large differences in their performance of the batteries. Only their performance on battery 6 – naming the colors, numbers and letters – shows no statistical differences between the groups (t=3, 4; p<.01). In all other batteries, the non-Roma Bulgarian children need less time as a group for performing the subtests than the Roma children, although when performing battery 2 (the numbers), the Roma children perform it in a shorter time

than the ethnic Bulgarian children. However, the differences are not statistically significant.

Table 3
Results from the Testing of the Bulgarian Children

Subtests	Bulgarian children (time in sec.)	Roma children (time in sec.)	Statistically significant differences
colors	50	62	t=1.7; p>.01
numbers	52	42	t=1.4; p>.01
letters	26	43	t=2.5; p>.001
objects	51	64	t=1.8; p>.01
numbers and letters	37	51	t=2.0; p>.01
colors, numbers and letters	44	67	t=3.4; p<.01

The results in both countries are similar - the children from the experimental groups (Roma children) show lower results than the children from the control groups (Bulgarian and Slovak children). Why is that so? It seems that in both countries that until the end of the first school year, the Roma children do not learn well enough the letters, numbers, names of the colors and objects in the official language of the country so that they can automatize them when they have to name them. However, looking at the results of the children from the experimental groups, one can see that the Roma children in Bulgaria have better results than Roma children in Slovakia and it is the same with the control groups - the ethnic Bulgarian children have much better results than the Slovak children. It seems the educational system in Bulgaria and particularly the literacy development process during the first school year is much better organized in Bulgaria than in Slovakia, although in both countries the literacy method used is the same, the Laubach method.

Is residence a factor for better performance in the RAN Test? The results between the Roma children from a village (in Bulgaria) and the Roma children from a town (in Slovakia) are given in Table 3.

Table 4
Results from the Testing of Slovak Roma and Bulgarian Roma Children

Subtests	Roma from Slovakia (time in sec.)	Roma from Bulgaria (time in sec.)	Statistically significant differences
colors	90	62	t=4.8; p<.001
numbers	62	42	t=2.8; p>.001
letters	58	43	t=2.3; p>.01
objects	79	64	t=2.3; p>.01
numbers and letters	75	51	t=3.6; p<.001
colors, numbers and letters	81	67	t=2.2; p>.01

As can be seen from Table 4, in general the Bulgarian Roma children, although they live in a village, perform most of the subtests much better than the Slovak Roma children. The differences between the groups are significant. In general, the Roma children from Bulgaria perform the Test better than the Slovak Roma children. Only in two subtests are there no significant differences – naming the colors and naming the combination of numbers and letters. It seems these two subtests are equally difficult for both groups. Our expectations were that the Slovak Roma children living in a town would have better results because the town gives more possibilities for communication from an early age in the official language. However, the Roma children in Slovakia belong to a group of so-called Vlax Roma, which is more conservative and traditional. By contrast, the Roma children from Bulgaria are more open, from less traditional families, and attend kindergarten from an early age. Moreover, the Roma in the village are more open and ready to engage in communication with non-Roma Bulgarians in the village, which helps the children to acquire some knowledge in the official language of the country. Consequently, it can be stated that the residential, locality is not a factor – but rather that the Roma community and its characteristics are what influences the children's knowledge.

The narratives

The second task performed only with the Roma children was the narrative task. The children had to tell a story in Romani language based on pictures. The stories were recorded and analyzed using the Type Token Ratio (TTR) method. This method shows in general the richness of vocabulary of the children involved in the study. The results from this task are presented in Figure 1.

Figure 1
TTR of Roma Children in Romanes
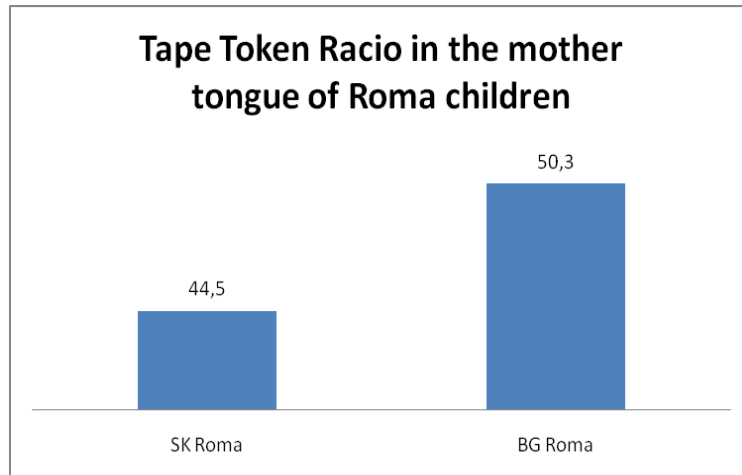
As one can see, the two groups have different TTR (vocabulary richness) in their mother tongue. Although the children are speakers of different Romani dialects, that does not influence the results. The Slovak Roma children have 44.5 words per story and the Bulgarian Roma children 50.3 words. The differences between the groups are statistically significant (t=.8; p=2.6 (p> .01). One of the problems of the Slovak Roma children is that poor performance in the narratives is due to the lack of knowledge to develop a cohesive narrative – rather they simply name the protagonists and their actions but don't narrate a coherent story.

Discussion

The first year in the school is extremely important for the children's cognitive development. How successful they are in learning the names of the colors, numbers, letters, objects and their combinations, as well as their automatized naming, serve to predict how successful their literacy development process during the second year will be and their success in school in the subsequent years in primary school. In both countries the Roma children show lower results than the children from the majority population. It seems that the level of knowledge of the mother tongue plays an important role in the process of preparation for literacy acquisition and development. The Roma children in Bulgaria achieve better results than the Roma children in Slovakia, because there are factors which influence their success, such as: the level of knowledge of the mother tongue, attendance at kindergarten and the type of community they live in. The Bulgarian Roma children attended kindergarten before entering primary school, they also participate in the evangelical church activities of their families. The Bulgarian Roma children live in a village where the communication with ethnic Bulgarians is more intense. The Slovak Roma children are living in an isolated community. They do not have any contacts with non-Roma Slovaks. And their Romani is not as developed as much as the Romani of the

Bulgarian Roma children.

The results of the majority children indicate that the ethnic Bulgarian children show better results in the RAN Test than the ethnic Slovak children. This has to do with the textbooks and with the methods used in the process of literacy, although in both countries the children become literate using the same method.

Conclusions

In conclusion, it is possible to say that the research questions were answered: (1) The time for naming the RAN Test in L2 predicts the children's literacy in L2; (2) The low level of language competence of the children in their mother tongue predicts the low literacy capacity in L2 (the Slovak Roma children); (3) The place of residence of the children appears to be a factor influencing the performance in the RAN Test by Roma children. The Roma children from the village have better results than the Roma children the children living in the town, locality an affordance here.

Regarding the hypothesis, H1 was confirmed. The children with low oral proficiency in L2 have lower results in timing (speed) in the performance of the RAN Test in L2. H2 is also confirmed. The performance of the RAN Test in L2 is a predictor for the level of literacy in L2. H3 is confirmed as well. The level of oral proficiency in L1 of Roma children influences the timing of the naming of the RAN Test in L2. H4, namely that the Roma children from the town will perform better in the tests than the Roma children from the village is not confirmed. The Roma children from the town have a more isolated life and do not possess such a rich vocabulary in their mother tongue. The children living in a village have more contact with non-Roma Bulgarians and thus develop a richer vocabulary in their mother tongue.

The poor performance in the RAN Test by Slovak Roma children predicts significant difficulties in acquisition of literacy in L2. The Roma children are far behind the non-Roma children because they do not have possibility to develop their mother tongue further in a kindergarten. In Bulgaria, it is even forbidden for teachers to use the mother tongue of their pupils in communication with the minority children. Moreover, non-attendance of kindergarten by Roma minority children and lack of communication with native majority children who are speakers of the official language of the country as L1 is also an important obstacle for learning the L2 in natural way. This predicts that the Roma children will become literate in the official language of the country at a slower pace of progress than the non-Roma children, because oral knowledge of the mother tongue and oral knowledge of the official language, as have been shown here, are predictors of good and fast literacy. This also confirms the theory of Bialystok (2007).

In conclusion it can be stressed that the state policies should create conditions to protect and implement the right of Roma children to receive literacy development education in Romani as a mother tongue, which is a prerequisite for better acquisition of literacy in the second language, as has been shown in this study.

References

Adesope, O. O., Lavin, T., Ungerleider, C. (2010). A systematic review and mata-analysis of the congnitive correlates of bilingualism. *Review of Educational Research, 80*(2), 207–245. https://doi.org/10.3102/0034654310368803

Baferani, M. (2015). The Role of the Family in the Socialization of Children. Mediterranean *Journal of Social Sciences, 6,* 417-423. http://doi.org/10.5901/mjss.2015.v6n6s6p417

Bialystok, E. (2007). Acquisition of Literacy in Bilingual Children: A Framework for Research. *Language Learning, 50*(1), 45-77. https://doi.org/10.1111/1467-9922.00180

Bruner, J. (1966). Toward a Theory of Instruction. Cambridge: Harvard University Press.

Cahn, C. and Petroa, D. (2004). Stigma. Segregated schooling of Romai in central and Eastern Europe. Budapest, Hungary: ERRC.

Crystal, D. (1992). An Encyclopedic Dictionary of Language and Languages. London: Penguin

Cvorovic, J. (2005). Gypsy Ethnic Socializaton in Serbia. *Glasnik Ethnografskog Instituta, LIII,* 35-49.

DeCasper, Anthony J. and Fifer, William P. (1980). Of Human Bonding: Newborns Prefer Their Mothers' Voices. *Science, 208*(4448), 1174–1176. http://doi.org/10.1126/science.7375928

Eckert, E. (2017). The Power of language, learning and socialization: Romani and Ebonics. *Journal of Language, Identity & Education, 16*(1), 45–58. https://doi.org/10.1080/15348458.2016.1265451

Goswami, U. (2009). The Basic Processes in Reading: Insights from Neuroscience. In D. Olson and N. Torrance (eds) The Cambridge Handbook of Literacy. Cambridge University Press.

Grzymala-Moszczynska et al. 2019. Discrimination or not? Romani children in Polish special schoolsand diagnoses of intellectual disability. *Romani Studies. Series 5, 1*(29), 51–83. https://www.muse.jhu.edu/article/728297.

Gudschinsky, S. (1982). Literacy: The Growing Influence of Linguistics. Berlin: Mouton Publishers.

Hübschmannová, M. (1979). Bilingualism among the Slovak Rom. *International Journal of the Sociology of Language, 19,* 33–49.

Jarkovska, L., Liskova, K. and Obrovska, J. (2015) .We treat them all the same but... Disappearing ethnic homogeneity in Czech classroom and teachers' responses. *Race, Ethnicity and Education, 18*(5), 632–654. http://doi.org/10.1080/13613324.2015.1013457

Kyuchukov, H. (1994) Bilingualism by Birth. *Dil Dergisi-Language Journal, 20,* 34-41.

Kyuchukov, H. (2000) The Romani language of Turkish speaking Roma children. Paper presented at the VII International Sociolinguistic Conference, Sofia.

Kyuchukov, H. (2002) Code-switching among trilingual Turkish speaking Roma children in Bulgaria. *Psychology of Language and Communication, 6*(1), 75-84.

Kyuchukov, H. (2001) Razvitie na detskiya romski i detskiyat turski bilingvizam v Bulgaria [Development of Roma and Turkish children bilingualism in Bulgaria]. Sofia: IKTUS, (in Bulgarian).

Kyuchukov, H. (2005) Ezikovata socializacia na romskite deca [Language socialization of Roma children]. *Pedagogicheski Almanah, 1-2.*

Kyuchukov, H. (2009) Kognitivniyat podhod v obuchenieto po romski ezik. Burgas: Science

Kyuchukov, H. (2010). Romani language competence. In J. Balvin and L. Kwadrants, (Eds.). Situation of Roma Minority in Czech, Hungary, Poland and Slovakia, (pp. 427–465). Wroclaw: Prom.

Kyuchukov, H. (2017) "Parno sar papin – white as a swan", or How metaphors help Roma children to acquire grammatical categories in Romani. *East European Journal of Psycholinguistics, 4*(1), 100-113. https://doi.org/10.29038/eejpl.2017.4.1.kyu

Kyuchukov, H. (2014a). Acquisition of Romani in a bilingual context. *Psychology of Language and Communication, 18,* 211–225. https://doi.org/10.2478/plc-2014-0015

Kyuchukov, H. (2014b). Romani language assessment of Roma children. *Journal of Language and Cultural Education, 2,* 52–64.

Kyuchukov, H. & de Villiers, J. (2014a). Roma children's knowledge on Romani. *Journal of Psycholinguistics, 19,* 58–65.

Kyuchukov, H. & de Villiers, J. (2014b) Addressing the rights of Roma children for a language assessment in their native language of Romani. Poster presented at the 35th Annual Symposium on Research in Child Language Disorders. Madison, Wisconsin June 12–14.

Kyuchukov, H. and de Villiers, J. (2009) Theory of Mind and Evidentiality in Romani-Bulgarian Bilingual children. *Psychology of Language and Communication, 13*(2), 21-34. http://doi.org/10.2478/v10057-009-0007-4

Kyuchukov, H., de Villiers, J., and Tabori, A. (2017) Why Roma children need language assessments in Romani? *Psychology of Language and Communication, 21*(1), 215-243. http://doi.org/10.1515/plc-2017-0011

Kyuchukov, H. and New, W. (2019). Roma school mediators and the bilingualism of Roma students. *Edukacija Medzukilturowa, 10*(1), 81-100. http://hdl.handle.net/20.500.12128/12455

Lakoff, G. & Johnson, M. (1980). Metaphors We Live By. Chicago: The University of Chicago Press.

Lantolf, J. (2006). Socio-cultural Theory and L2. *Studies in Second Language Acquisition, 28,* 67-109. http://doi.org/10.1017/S0272263106060037

Leaper, C. (2014-2017) Parents' Socialization of Gender in Children. Encyclopedia of Early Childhood Development. CEECD, 1-4.

Maccoby, M. (1992). The Role of Parents in the Socialization of Children: An Historical Overview. *Developmental Psychology, 28*(6), 1006-1017.

McLane, J. B. and McNamee, G. D. (1990). Early Literacy. Cambridge: Harvard University Press.

May, S. (2011). Language and minority rights: Ethnicity, Nationalism and politics of language (2nd ed.). New York, NY: Routledge.

Memedov, I. (2010). European court denounces segregated education again: oršuš and others v Croatia. Romani rights journal: implementation of judgments. Budapest, Hungary: European Romani Rights Center.

Miškolci, J., Kováčová, L. and Kubánová, M. (2017). Trying to include but supporting exclusion instead? Constructing the Roma in Slovak educational policies. *European Education, 49*(1), 71–88. https://doi.org/10.1080/10564934.2017.1280337

Miskovic, M. (2009). Roma education in Europe: in support f the discourse of the race. *Pedagogy, Culture and Society, 17*(2), 201–220. https://doi.org/10.1080/14681360902934442

New, W. (2011). Stigma and Roma Education policy reform in Slovakia. *European Education, 43*(4), 45–61. https://doi.org/10.2753/EUE1056-4934430403

New, W. (2014). Regulating Roma language and culture in Central Europe. *Journal of Language and Cultural Education, 2*(2), 165–181.

Ochs, E. (1983). Cultural dimentions of language acquisition. In E. Ochs & B. Schieffelin (Eds.), Acquiring conversational competence, (pp. 185–191). London: Routledge.

Ozcaliskan, S. (2014). Development of metaphor. In P. Brookse, V. Kempe, & G.J. Golson (Eds.). Encyclopedia of Language Development, (pp. 374–375). NY: Sage Publishers.

Popov, V. (1988). Detskite igri v socializaciyata na lichnostta v tradicionnata nardona kultura. [The children's games in the socialization of personality in the traditional folk culture] Bulgarska Etnografiya, 2.

Reger, Z. (n.d.). Language groups among the Gypsies in Hungary and some aspects of their oral culture. (n.p.)

Reger, Z. (1991). Socialisation des infants et pratique linguistique. Oralite Tzigane, 30.

Reger, Z. (1999). Teasing in the linguistic socialization of Gypsy children in Hungary. *Acta Linguistica Hungarica, 46*(3-4), 289–315.

Reger, Z. & Berko-Gleason, J. (1991). Romani child-directed speech and children's language among Gypsies in Hungary. *Language in Society, 20*(4), 601–617.

Schieffelin, B. (1986). The acquisition of Kaluli. In: Slobin, D.I. ed. The cross-linguistic study of language acquisition. (pp. 525–593.) Vol. I. Hillsdale, NJ: Lawrence Erlbaum Associates,

Smith, T. (1997). The Romani 'Gypsy' Child Socialization and Education Process. *British Journal of Sociology of Education, 18*(2), 243-256

Scribner, S. and Cole, M. (1981). The psychology of Literacy. Harvard University Press.

Skutnabb-Kangas, T. (2000). Linguistic genocide in education—or worldwide diversity and human rights. New York, NY: Routledge.

Sokolova, V. (2008). Cultural politics of ethnicity: discourses on Roma in Com¬munist Czechoslovakia. Stuttgart: Ibidem-Verlag.

Stoyanova, J. (2009). Ezikovo osaznavane: ranna ontogeneza [Language onciseness:early ontogeny]. *Bulgarska Rech, XV*(3), 43-58.

Yardley, A. (1973). Young Children Thinking. New York: Citation Press.

GENDERED EXISTENCE? EXISTENTIAL-*THERE* CONSTRUCTION
IN ENGLISH-POLISH TRANSLATION

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Abstract. This paper analyses a possible effect of the variable of gender on semantic enrichment of existential sentences translated from English to Polish. Existential-*there* clauses in English typically take the form *there* + be + indefinite NP (+place/time adverbial). Since *there*-constructions lack a structurally congruent counterpart in Polish, they can be rendered in Polish with several syntactic constructions ranging from the verb 'być' (E. to be) through 'mieć' (E. to have) to verbs semantically richer than 'być' (e.g., verbs of perception, verbs of location, etc). We ask the question of whether the gender factor is correlated with the factor of text type/genre. To this purpose, we compiled a corpus of English texts representing belles-lettres and popular science writing, male-authored, female-authored and multi-authored and translated by male and female translators. Our preliminary results show that the choice of Polish translations of English existentia*l-there* follows from the interplay of genre, narrative/descriptive modes of text, and the gender of the translator, with female translators tending to replace the simple copula 'be' with a full lexical verb more often than male translators in dialogic parts of belle-lettres.

Keywords: gender, existential there-clause, translation, English, Polish.

Ліда Анджей. Гендерна екзистенція? Екзистенційна конструкція з компонентом *there* в англійсько-польському перекладі.

Анотація. У цій роботі аналізується можливий вплив гендеру на семантичне збагачення речень з екзистенційною конструкцією, перекладених з англійської на польську. Речення з екзистенційним -there в англійській мові зазвичай мають форму there + be + indefinite NP (+place/time adverbial). Оскільки в польських конструкціях відсутній структурно конгруентний відповідник, вони можуть бути передані польською мовою за допомогою кількох синтаксичних конструкцій, наприклад, дієсловом "być" (англ. to be), "mieć" (англ. to have), а також дієсловами, семантично багатшими за 'być' (дієсловами на позначення сприйняття, місця тощо). Піднімається питання, чи співвідноситься гендерний чинник із чинником типу/жанру тексту. З цією метою було складено паралельний корпус англійської художньої та науково-популярної літератури авторів жіночої та чоловічої статей та їхніх перекладів у виконанні різностатевих тлумачів. Наші попередні результати свідчать, що на вибір перекладу польською екзистенційної конструкції із there впливають взаємодія жанру, оповідного/описового способів тексту та статі перекладача, причому перекладачки-жінки прагнули замінити просту зв'язку «бути» на повне лексичне дієслово частіше, ніж перекладачі-чоловіки в сегментах діалогічного дискусу художньої літератури.

Ключові слова: гендер, екзистенційна структура *-there*, переклад, англійська мова, польська мова.

Introduction

As observed by Magnifico (2020), gender-related differences in interpreting are not well researched. In spite of the fact that in the recent decades, a significant amount of research has been conducted in exploring the area of gender and translation, a similar claim can still be made about gender-related differences in translation in different language pairs and in respect of particular linguistic and stylistic features, reported to be related to the sex of the translator.

This paper focuses on possible gender-related trends in the translation of English existentia*l-there* construction, which, to the best of our knowledge, has received almost no attention in the literature. An incentive for the present study comes from the present author's observation concerning 154 students' in-class translation of an existential–*there* sentence in Dorris Lessing's short story *Among the Roses* in the years 2002-2004 and 2010-2010. The sentence 'There was no greater pleasure than wandering among roses and deciding…' was translated into Polish by 108 female translators (FT) and 46 male translators (MT) in several ways, of which the following were most common:

1. FT 32; MT 28
Nie było większej przyjemności niż spacerowanie między różami i decydowanie...
There was no greater pleasure than wandering among roses and deciding…
2. FT 24; MT 16
Nie istniała większa przyjemność niż spacerowanie między różami i decydowanie...
There did not exist a greater pleasure than walking between the roses and deciding…
3. FT 22; MT 2
Nic nie **sprawiało jej większej przyjemności** niż przechadzanie się pośród róż i decydowanie...
Nothing **gave her more pleasure** than walking between the roses and deciding…
4. FT 13; MT 0
Nic nie **sprawiało jej większej radości** niż przechadzanie się pośród róż i decydowanie...
Nothing **gave her more joy** than walking between the roses and deciding…
5. FT 6; MT 0
Odczuwała największą przyjemność przechadzając się wśród róż i decydując...
She **felt the greatest pleasure** walking between the roses and deciding…
6. FT 6; MT 0
Znajdowała największą przyjemność w przechadzaniu się pośród róż i decydowaniu...
She found the greatest pleasure in walking between the roses and deciding…
7. FT6; MT 0
Nie znajdowała większej przyjemności niż spacerowanie pośród róż i decydowanie...
She **found no greater pleasure** than walking between the roses and deciding…

The differences between FTs and MTs in the translation of the sentence are immediately striking. First, while MTs produced only three Polish versions of the source text (ST), FTs produced as many as seven. Secondly, although most common in both gender groups were translations using Polish 'być', i.e., instances of literal translation, they were observed in as much as 61% of MTs and only 22% of FTs.

Even when the cases of translation by means of Polish 'istnieć' (Eng. exist) were accounted for as 'existential', the figures still show that the literal 'existential' translation was almost an exclusive solution among MTs (95%), while for FTs the figure amounted to only 52% of all translations. The remaining translations of FTs resorted to notional verbs that replaced the English copula.

Given such discrepancies in rendering English existential-*there* sentences, which belong to a larger class of presentational constructions, this study has been launched to examine whether our preliminary observations find support in a larger and more varied corpus of translations.

Presentational Scale and existential sentences
Presentational scale

The notion of presentational (also known as presentative) scale was introduced by Firbas (1992) to reflect the distribution of communicative dynamism in a sentence. The presentational scale includes three basic functions: the setting (S), the presentation of a phenomenon by means of a verb (Pr), and the phenomenon (Ph) itself as in the following set of model sentences (Adam, 2013, p. 59)

(1) *All of a sudden, <u>there was</u> (Pr) **a picturesque castle** (Ph) on the hill (S).*
(2) *All of a sudden, on the hill <u>there was</u> **a picturesque castle**.*
(3) *All of a sudden, <u>there appeared</u> **a picturesque castle** on the hill.*
(4) *All of a sudden, **a picturesque castle** <u>appeared</u> on the hill.*
(5) *All of a sudden, **a picturesque castle** <u>could be seen</u> on the hill.*

All sentences employ the same recurring semantic pattern, yet in different syntactic configurations and with different presentational verbs ('be', 'appear', 'be seen'). Example (1) represents the most prototypical way of presenting a phenomenon in English: the existential–*there* construction. Actually, as Tárnyiková (2009, p. 96-97) argues, the existential-*there* performs two functions: first, its is existential as it "denotes mere 'hearer-new' existence of an entity" and secondly it is presentational "bringing something 'discourse-new' into sight." In the remaining sentences the existential verb 'to be' is replaced with other (semantically richer) presentational verbs. Among these richer verbs one can find 'arrive', 'be in sight', 'become plain', 'come forward', 'come into view', 'come up', 'emerge', 'exist', 'evolve', 'develop', 'grow out of', 'happen', 'issue', 'recur', 'rise', 'spring up', 'show up', 'take place' (Firbas, 1992) and 'appear', 'come out', 'come over', 'fall', 'happen' (Adam, 2013). Each of them can substitute for the existential 'to be', yet, as has been demonstrated, they usually represent approximately 5% of all presentational verbs in a text, whereas the existential 'to be' is ranked by far as the most frequent subtype (see, e.g., Dušková, 2005a; 2005b; Adam, 2011).

Existential sentences in English

Existential sentences, known also as 'existential there' (Jespersen, 1969) and 'existential construction with there' (Langacker, 2008) express the existence or

nonexistence, or the occurrence or nonoccurrence of a particular phenomenon. In English, existential sentences commonly involve the dummy subject construction with *there*. They are presentative structures that function to create end-focus: a subject that includes new information is set in a position after the verb and the common subject slot is completed by 'there'. This arrangement complies with the general information principle, the principle of end focus, appearing in Indo-European languages. According to this principle, the most natural way of presenting ideas is ordering elements in line with a gradual rise in communicative importance (Firbas, 1992, p. 7).

The process in the existential sentences is usually expressed by the verb 'be' (Petronienė, 2007). Apart from this verb, the verbs occurring in English *there*-sentences "must be intransitive [...], and of fairly general presentative meaning: verbs of motion (arrive, enter, pass, come, etc.), of inception (emerge, spring up, etc.), and of stance (live, remain, stand, lie, etc.)" (Quirk et al., 1985, p. 1408).

It is generally accepted in the literature (see, e.g., Brevik, 1981, 1983; Lumsden 1998, and Petronienė 2007) that the function of existential–*there* consists in introducing new entities into discourse. Breivik (1981, p. 15) argues that existential–*there* conveys 'signal information' and "functions as a signal to the addressee that he must be prepared to direct his attention toward an item of new information." A similar view is held by Lambrecht (1994, p. 179), for whom the pragmatic purpose of existential-*there* constructions is not normally to confirm the existence of some entity but "to introduce the NP referent into the discourse world of the interlocutors by asserting its presence in a given location." Within Fauconnier's (1985) theory of mental spaces 'the given location' would be a space where conceptual entities are located. A similar interpretation is also offered by Lakoff (1987), for whom "narratives create mental spaces of their own, and when an existential construction is used within a narrative, it is the mental space of the narrative that is designated by there" (1987, p. 570). In the context of the present research on 'semantic enrichment' of existential claims, it is worth repeating here what Lakoff (1987, p. 570) noted: "A good narrative is one that allows the hearer to vividly picture the events of the narrative as they are told. English has an existential construction that is specialized to narratives. It allows speakers to introduce a new narrative element, while simultaneously sketching a scene."

Existential sentences in Polish

In Polish, there is no formal construction parallel to the existential– *there*, as there is no empty subject in Polish in any counterpart of any type of English there-constructions (Grzegorek, 1984). The most common verbs used in existential sentences are the copula 'być' (Eng. to be) and 'istnieć' (Eng. to exist).

As existential sentences express the idea of existence and of nonexistence, it should be noted that Polish distinguishes between the expression of existence and of nonexistence not only with regard to negation but also by changing the copula *'być'* (to be) to the copula *mieć* (to have) in the present tense.'

Na biurku <u>jest</u> laptop.   Na biurku <u>nie ma</u> laptopa.
[On the desk **is** a laptop.]   [On the desk **not has** a laptop.]

English existential-there in Polish translation

Polish offers several ways in which English existential-there can be translated into Polish. The first group of these methods consists in using the copulas 'być' and 'mieć' or ellipted 'być' as in 1-3 below:

1. English 'to be' and Polish 'być' (Eng. 'to be')
There are other education loans. / **Są** jeszcze pożyczki edukacyjne. [**Are** other education loans]
2. English 'to be' and Polish ellipted verb
There is no news. / Żadnych wiadomości. [No news]
3. English 'to be' and Polish 'nie ma' (lit. Eng. 'not has')
There is no bread in the shop. / **Nie ma** chleba w sklepie. [**Not has** bread in the shop]
The second group includes notional verbs and consists of two types:
4. English 'to be' and Polish notional presentational verb other than 'być' (Eng. to be)
And then there was a scandal. / Wtedy **nastąpił** skandal. [Then **occurred** a scandal]
5. English 'to be' and Polish notional non-presentational verb
There is no door that opens automatically. / Nie **zainstalowali** jeszcze automatycznych drzwi. [Have not installed automatic doors yet]
Finally, the English existential-*there* can be expressed by a Polish nonverbal element, which is not to be analysed in the present study.
6. English 'to be' and Polish non-verbal element
There is a report that it was a bribe. / Według pewnego raportu to była łapówka.
[According to a report, it was a bribe]

Of prime importance for the present study is the second group (4-5) that includes notional non- presentational verbs and notional presentational verbs other than 'być', which may replace the lexically empty 'być''. The choice of a preferred verb is determined by the semantic features of the subject. Grzegorek (1984, p. 160) classifies the verbs in the following way:

1. Verbs of location, with two subtypes: a. synonyms of 'być': znajdować się ('be located'), 'odbyć się' ('take place') and b. verbs which depict the characteristic manner of spatial existence of the referent: 'słup – stoi' ('pillar – stands'); 'obraz –wisi' ('picture – hangs'), etc.
2. Verbs which describe the typical state or action of the referent of the subject NP: 'gwiazdy – świecą' ('stars – shine'), 'orkiestra –gra' '('band –plays'), etc.
3. Verbs expressing perception in impersonal forms: 'plamy – widać' ('patches – one can see'), 'mróz – czuć' ('frost – one can feel'), etc.
4. Verbs that are idiomatically linked to the subject noun, namely, in collocation with a particular noun the verb acts as a synonym of 'być': 'cisza – zapaść' ('silence– fall'), etc.

The choice of a lexical verb is predictable in the light of the meaning of the subject noun phrase and the fact that the sentence is existential. However, the very decision of the translator to resort to this mode of translation rather than to 'być' is

not. As we expect, a partial answer to the question can be found in analysing the factor of gender.

Gender and translation

Early studies on differences between male and female language production focused on its social and sociopsychological aspects, often in terms of stereotypization and power differential of gender roles. Since the launch of Lakoff's 'Deficit Theory' in 1975, the research has proceeded along different tracks by focusing not only on the language-and-power link but also on findings in other fields. Abundant scientific evidence brought forward from the field of neurology, psychology, or psycholinguistics (e.g., Harris, 1978; Benbow, 1988; McGuinees, 1985) points to several differences of qualitative type. Reporting on such frequent findings, Moir and Jessel (1989) claim that the fact that males are better than females in respect of the recognition of spatial relations, visualization of 3-D forms, and perception of analogies, but worse in the adaptation for receiving sensory impulses, is attributable to differences in the brain anatomy and function rather than different modes of socialization.

Irrespective of the source of the differences, as Gal (1991, p. 181-182) claims, differences in speech associated with men and women "have been found in every society studied; but the nature of the contrasts is staggeringly diverse, occurring in varying parts of the linguistic system: phonology, pragmatics, syntax, morphology, and lexicon." Shlesinger *et al.* (2009) provide a long of studies of such early studies list that seem to confirm Gal's claim (see e.g. Muchnik, 1997; Mulac et al.*,* 1990); Mulac & Lundell, 1994; Herring, 1996 or Argamon et al.*,* 2007; Łyda, 2003). Such studies on the variable of sex/gender in communication have now accumulated to the point where a complex of convergent results is apparent: females excel at verbal production and comprehension, make fewer grammatical errors, construct longer sentences, articulate more clearly, and achieve an impressive level of fluency (Thorne & Henlay, 1987). In the context of these findings, Leonardi (2007) hypothesizes that if men and women speak differently, they are also likely to translate differently. We take Leonardi's hypothesis as the starting point for the study of gender-related choices in rendering an English presentational structure known as existential–*there* in Polish.

Method

Research questions

The current study planned to investigate the problem of the gender factor in translation of existential-there focuses on the following research questions:

•How often are English existential–*there* constructions rendered by means of Polish existential 'być' / 'mieć' in two functional types of texts, i.e., aesthetic and informative?

•How often are English existential–*there* constructions rendered by means of Polish 'semantically richer' notional verbs in two functional types of texts, i.e., aesthetic and informative?

•Is there a relationship between translator gender and the use of 'semantically richer' notional verbs in Polish translations?

•Is there a relation between the mode of discourse, i.e., dialogic/narrative and a gender-related decision of the translator to use 'semantically richer' notional verbs?

Materials

This study draws on a corpus of English-to Polish translations and consists of seven English publications. Six of them can be classified as representing two genres: fiction and popular science. Fiction is represented by four novels authored by women writers, whereas two publications by two male authors represent popular science fiction. To control the variable of gender we have also included the seventh source, that is, one multi-authored and mix-genre publication of factual nature, i.e., a travel guide. The final parameter accounted for in this study is the gender of the translator. Table 1 displays the author–translator–genre interrelations.

Table 1
The Composition of the Corpus (M=male, F=female; MF= mix-genders)

Genre/ Function	Author	Author gender	English title	Polish	Translator gender
Fiction (aesthetic)	Tess Gerritsen	F	*The Surgeon*	*Chirurg*	M
		F	*The Silent Girl*	*Milcząca dziewczyna*	F
	Doris Lessing	F	*The Memoirs of a Survivor*	*Pamiętnik przetrwania*	M
		F	*The Fifth Child*	*Piąte dziecko*	F
Popular science (informative)	Jeremy Paxman	M	*The English. A Portrait of a People*	*Anglicy. Opis przypadku*	M
	Steven Pinker	M	*How the Mind Works*	*Jak działa umysł*	F
(highly informative)		MF	*DK Australia. Travel Guide*	*Australia. Przewodnik. DK*	MF

Methodology

For the purpose of this study a concordance list of existential-*there* in the English corpus was produced for each of the analysed texts with *Antconc3.2.4w* (Anthony, 2011). Due to the multitude of functions performed by *there*, manual identification of existential–*there* that met the definition proposed above had to be performed.

The first 100 existential-*there* sentences in each text were selected. This step was followed by manual identification of the corresponding Polish translations of the English sentences. Polish translations of existential-*there* sentences were classified into three types corresponding to the types discussed in Section 2.2:

(i) existential *'być'* and *mieć*

… but there was no end to the unaffectionate adjectives they earned.
… ale nie było też końca pejoratywnym przymiotnikom, jakie Harriet i Dawid sobie zaskarbiali.

(ii) notional verbs

There was a smell of cold rainy earth and sex.
Pachniało zimną, przesiąkniętą deszczem ziemią i seksem.

(iii) other.

For each Polish translation, a count of the three types was performed in terms of the gender of the translator, the genre, and the dialogic/narrative mode of discourse.

In the second step the analysis was narrowed down to the four novels in the corpus and concentrated on existential-*there* in the narration and dialogues. For each of the fiction books a search was performed to identify the first 50 existential-*there* constructions in the narrative and the first 50 ones in dialogues. As before, their Polish renditions were analyzed in terms of the three translation classes and the factor of the translator's gender.

Results

This section presents the results of the analysis of the distribution of the three translational types. Figure 1 shows the distribution of the types in terms of the total number of occurrences of each translation type in each of the texts in the corpus.

Figure 1
The Distribution of Polish Renditions of English Existential-There in the Corpus
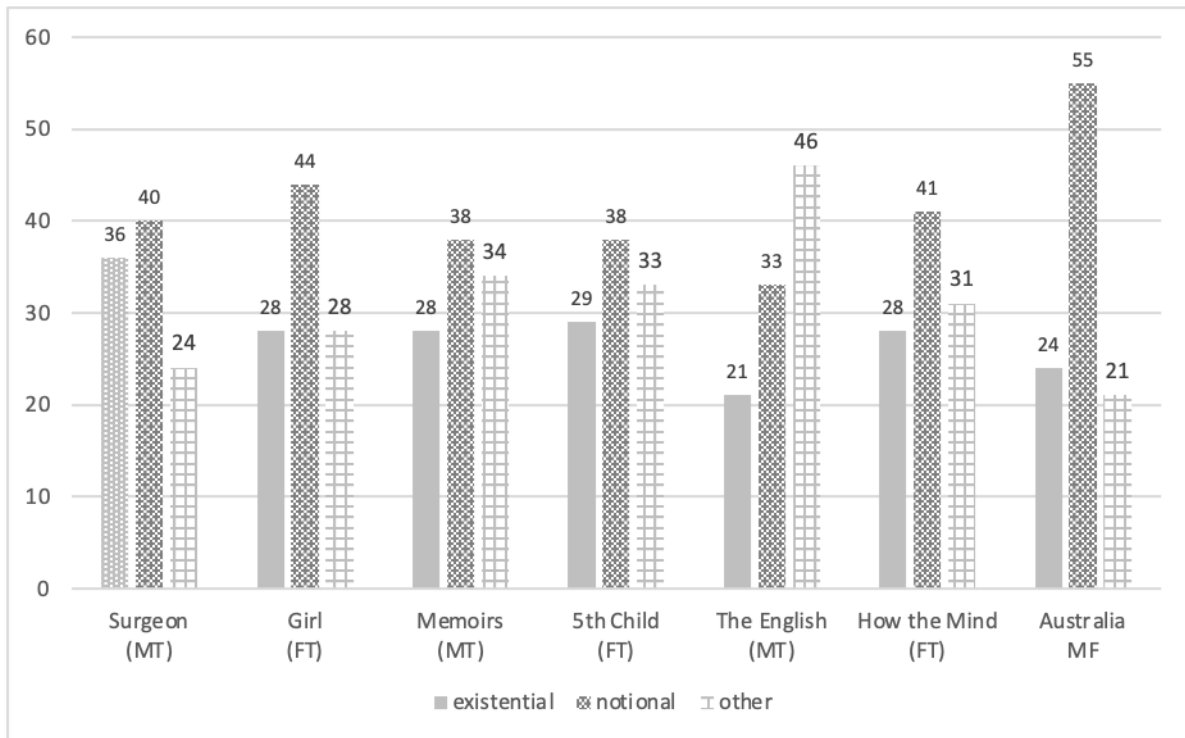
The frequency count with normalised frequencies does not reveal any significant differences in the distribution of the three translational methods. In seven of eight texts, the highest frequency (mean=39) is observed for translations with Polish notional verbs. It is the most common strategy in fiction translation, yet the highest figures have been recorded in the travel guide authored by a mixed-gender group of translators. This should not be surprising if we consider a very high number of verbs that depict the characteristic manner of spatial existence of the referent such as 'leżeć'(Eng. lie), 'rozciągać się' (Eng. stretch), 'stać (Eng. stand), 'znajdować się' (Eng. be situated), etc.

If the travel guide translations are excluded from the analysis, the second most common is the use of 'other' strategies (mean=31) and finally, existential 'być' and 'mieć' (mean=30). These strategies rank similarly with respect to the gender of translators, with no radical differences (variation ±4) between the two groups of translators in fiction and popular science texts. In the case of the notional verb class, the mean value in MTs is 37 and in FTs – 41. The figures for the existential verb class are identical for MTs and FTs (28.3).

In the second step, the analysis was narrowed down to the four novels in the corpus and concentrated on the occurrence of existential-*there* in narration and dialogues. The frequencies were normalised as the 50 occurrences threshold was not attained in two cases. Figure 2 shows the distribution of the three translation types.

Figure 2

The Distribution of Polish Renditions of English Existential-There in Narratives and Dialogues
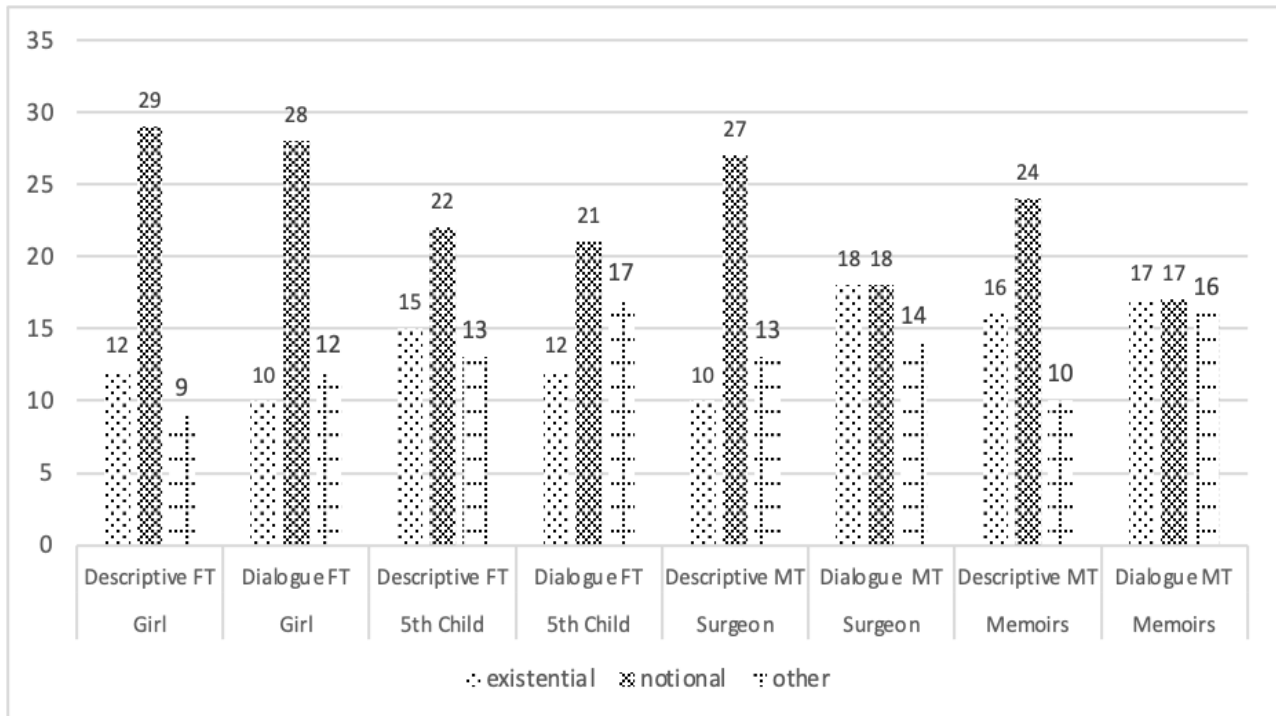
With respect to the distribution of the three translational classes, it is immediately evident that FTs favour notional verb solutions. For all the novels, the notional verb translations were most common (mean value=25) with the existential verb translations being the rarest and reaching only the mean value of 12.25. This shows that FTs resorted to semantically richer notional verbs twice as often than existential verbs.

The distribution of strategies in MTs follows a different pattern. Although notional verb strategies were most common in MTs, their mean frequency value was only 21.5 with existential verb renditions in Polish corresponding to 15.5. This the ratio notional verb/existential verb is much lower than in FTs and equals 1.38.

In the next step we eliminated the third category, that is, 'other', to calculate the share of the existential 'być'/'mieć' and notional verb strategies, as shown in Figure 3:

Figure 3

The share of Distribution of Polish Renditions of English Existential-There by Means of Existential 'Być' and 'Mieć' and Notional Verb in Narratives and Dialogues
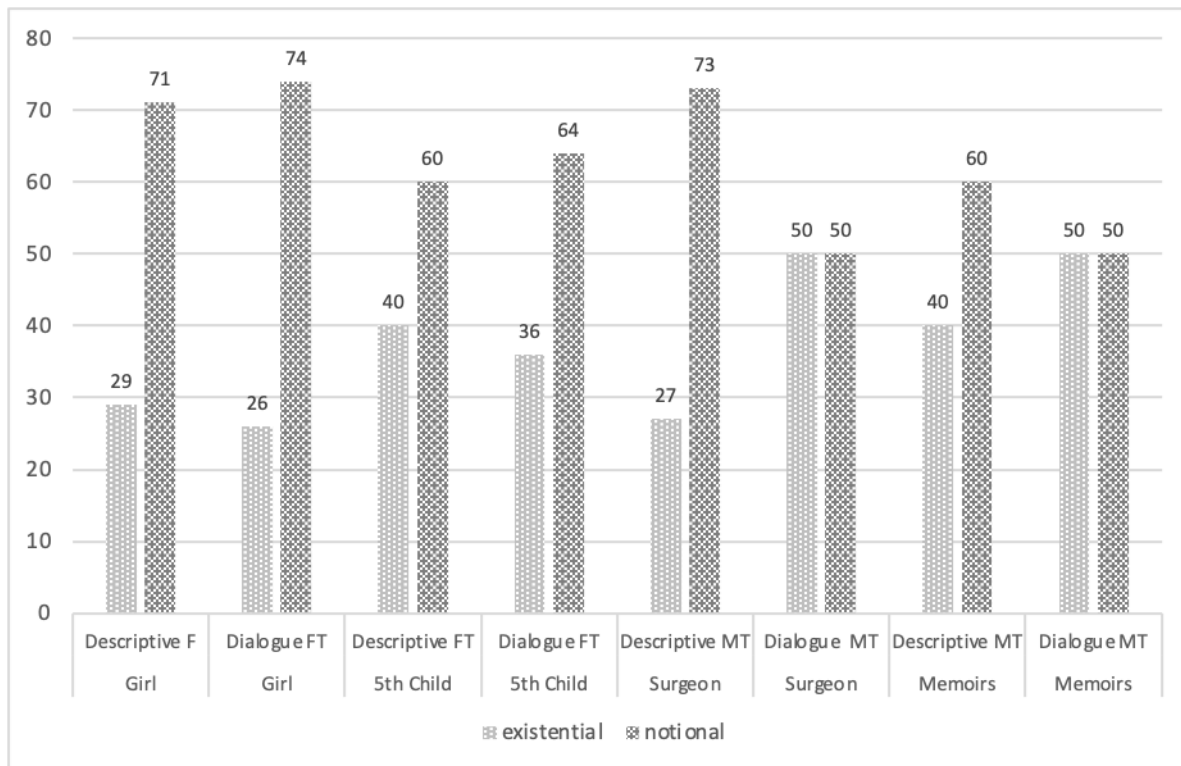
Again in six out of eight cases, the most common strategy rested on the use of Polish semantically richer notional verbs (FT mean value=67.25; MT mean value=58.25). The difference of 9 per cent between FTs and MTs is notable, yet statistically, it is insignificant at $p < .05$ (chi-square statistic is 1.728. The *p*-value is .188667). Notably, the two cases in which notional verb strategies did not outnumber the existential verb ones could be observed in MT's renditions of existential–*there* in dialogues, where the distribution of the two strategies was identical. To analyse the relation between the use of notional verbs and existential verbs on the one hand and dialogues/narratives on the other, we calculated the ratio shown in Table 2.

Table 2

Notional Verb / Existential Verb Ratio in Polish Translations of Existential–There in Narratives and Dialogues

	Notional/existential ratio			
	MT		FT	
Novel	narrative	dialogue	narrative	dialogue
Girl	2.45	2.84		
5th Child	1.5	1.77		
Surgeon			2.7	1
Memoirs			1.5	1

The figures presented above clearly show that there is a marked tendency among FTs to use notional verbs rather than existential 'być/mieć' in dialogues. No such tendency has been observed among MTs. If the figures for the use of the two strategies are comparably similar in rendering the narratives, then they are significantly different when the existential–*there* appears in the dialogic part of a novel (FT 2.84; 1.77 vs. MT 1; 1).

Discussion

In our study four research questions were formulated, and they concerned the frequency of use of existential 'być' / 'mieć' and notional verbs according to the translators' gender, and the mode of discourse.

As follows from Fig. 1, Polish FTs opted for the existential– *być/mieć* translations in about 29% of all instances, while the MTs decided to use the same solution in 25% of all cases. If the purely existential translations are combined with the 'richer' presentational verb translations, the number increases to approximately 70% irrespective of the translator's gender This is in agreement with findings in Rambousek and Chamonikolasová (2008) on the translation of existential–*there* into Czech.

The results exhibit a discernible pattern of translating *there*-constructions: for both gender groups, there could be observed a tendency to enrich the existential construction with other aspects of 'coming into being', both in narratives and dialogues. However, if the distribution of notional verbs in the narrative parts seems to be comparable for both men and women, a strong relation between the gender and the use of notional verbs in the translation of dialogues can be observed, as shown in Fig. 3 and Table 2. In the latter case there is a marked preference for verbs with the higher semantic load among FTs.

With the fairly limited data used in the present analysis it is probably too early to speculate on possible reasons for this strong predilection for semantically richer verbs. Yet, the fact that the increase is significant in the dialogic parts rather than narratives could be related to Tannen's theory of conversational styles, that is, report talk of men and rapport talk of women. According to Tannen (1992), rapport talk is a way of establishing connections, especially emotional one whereas report talk should be understood as a style relying on exchanging information with a little emotional import. Such a claim may meet criticism on the grounds that most of the notional verbs, such as those listed in Section 2.4, do not possess an emotive component. However, Tannen identifies also other functions of rapport talk, which is the interaction or at least producing a signal for interaction. Semantically 'poorer' be-constructions offer fewer possibilities for developing interaction than lexical verb versions, in which the lexical verb may function as a springboard for a more dynamic verbal exchange.

This is only one of numerous interpretations of the FTs translational behaviour in the case of presentational structures. Its motivation might be social, as Tannen believes, or it can be a socially motivated psycholinguistic behavior, reported, for example, by Moser (1996), who observes that women find accuracy more important

than men. A similar view is held also by Tannen (1992, p. 54), who observes that "many women value the recounting of subtle nuances in conversations" and adds "the exchange of relatively insignificant details about daily life sends a metamessage of rapport and caring'.

It is worth stressing that the substantial discrepancy between MTs and FTs stems also from the fact that the number of notional verb renderings remained on a similar level in FTs' translations of existential–*there* in dialogues. This is again in agreement with Tannen, who defines 'report talk', typical of men, as an exchange of information and not an attempt to establish and maintain an interpersonal relationship.

Concluding remarks

The present paper studied possible gender differences in rendering semantically 'poor' English existential–*there* constructions from English into Polish. We chose to compare source and target texts to determine the interpreters' handling of the construction and examine whether the translational choices implemented would show gender-related differences. It turned out that such differences were significant when the gender factor interacted with the factor of mode of discourse: an increase of notional verbs was observed among FTs I dialogic parts. This finding was interpreted here in terms of Tannen's hypothesis of report and rapport talk. We did not reject any alternative interpretations and we strongly believe that it would be worthwhile to further explore the impact of these parameters in a broader perspective of presentational structures, e.g., presentational structures related to auditory, tactile, visual, and spatial perception or cognitive styles and modal priorities of men and women (see, e.g., Zasiekin & Zasiekina, 2016).

References

Adam, M. (2011). Towards a Syntactic-Semantic Typology of Presentation Scale Sentences in Fiction Narratives. *Brno Studies in English 37*(1), 5-19. https://doi.org/10.5817/BSE2011-1-1

Adam, M. (2013). Presentation Sentences. Syntax, semantics and FSP. Brno: Masyryk University.

Benbow, C. (1988). Sex differences in mathematical reasoning ability in intellectually talented preadolescents. Their nature, effects, and possible causes. Behavioral and Brain Sciences, 11, 169-232. https://psycnet.apa.org/doi/10.1017/S0140525X00049244

Breivik, L. (1981). On the interpretation of existential there. *Language, 57,* 1-25.

Breivik, L. (1983). Existential There. A Synchronic and Diachronic Study. Bergen: University of Bergen.

Dušková, L. (2005a). Syntactic Constancy of the Subject Complement. Part 2: A Comparison between English and Czech. *Linguistica Pragensia, 15*(1), 1-17.

Dušková, L. (2005b). From the Heritage of Vilém Mathesius and Jan Firbas: Syntax in the Service of FSP. In Chovanec, J. (ed.) Theory and Practice in English Studies, 3: Proceedings form the 8th Brno Conference of English, American and Canadian Studies. Brno: Masaryk University. (7-23).

Fauconnier, G. (1985). Mental spaces. Cambridge, MA: MIT Press.

Firbas, J. (1992) Functional sentence perspective in written and spoken communication. Cambridge: Cambridge University Press

Jespersen, O. (1969). Analytic Syntax. New York: Holt, Rinehart and Winston

Gal, S. (1991. Between speech and silence: The problematics of research on language and gender. In M. di Leonardo (ed.), Gender at the (crossroads of knowledge: Feminist anthropology in the postmodern era. (pp. 175-203). Berkeley, CA: University of California Press,

Grzegorek, M. (1984). English sentences with introductory there and their Polish counterparts. In Fisiak, J. (ed.). (pp. 143-169). Contrastive Linguistics: Prospects and Problems. Berlin: Mouton Publishers,

Halpern, D. (2012). Sex Differences in Cognitive Abilities. New York: Psychology Press.

Harris, L. (1978). Sex differences in spatial ability: possible environmental, genetic and neurological factors. In M. Kinsbourne, (ed.), Asymmetrical Function of the Brain. (pp. 405-522). Cambridge: Cambridge University Press,

Langacker, R. (2008). Cognitive Grammar: A basic introduction. Oxford: Oxford.

Lakoff, G. (1987). Women, fire, and dangerous things: What categories reveal about the mind. Chicago and London: The University of Chicago Press.

Lakoff, R. (1975). Language and Women's Place. New York: Harper Colophon Books.

Lambrecht, K. (1994). Information Structure and Sentence Form. Cambridge: Cambridge University Press.

Lumsden, M. (1988). Existential sentences: their structure and meaning. London: Routledge.

Łyda, A. (2003). Emotive Markers: Gender Differences in Translation. In M. Gonçalves de Abreu and M. de Castro (eds.) Estudos de Tradução. Actas de Congresso Internacional de Estudos de Tradução. (pp. 183-194). Cascai: Principial Publicacoes Universitarias e Cientificas,

Magnifico, C., and B. Defrancq (2020). Norms and gender in simultaneous interpreting: a study of connective markers. *Translation & Interpreting-The International Journal of Translation and Interpreting, 12*(1), 1–17. https://doi.org/10.12807/ti.112201.2020.a01

McGuiness, D. (1985). When Children Don't Learn. New York: Basic Books.

Muchnik, M. (1997). Men vs. women – Different communication patterns. *Hebrew Linguistics 41–42,* 79–86.

Mulac, A. and T. Lundell (1994). Effects of gender-linked language differences in adults' written discourse: multivariate tests of language effects. *Language and Communication, 14,* 299–309.

Petronienė, E. (2007). The order of thought and the order of words. *Kalbotyra, 57,* 204-210.

Quirk, R., S. Greenbaum, G. Leech, J. Svartvik (1985). A comprehensive grammar of the English language. Harlow: Longman.

Rambousek, J., Chamonikolasová, J. (2008). The Existential There-Construction in Czech Translation. In G. Anderman and M Rogers (eds.) Incorporating Corpora: The Linguist and the Translator. Multilingual Matters.

Saldanha, G. (2003). Investigating gender-related linguistic features in translation. In J. Santaemilia (ed.) Género, lenguaje y traducción: actas del Primer Seminario Internacional sobre Género y Lenguaje (el género de la traducción - la traducción del género). (pp. 420–432). València: Universitat de València,

Shlesinger, M., M. Koppel, N. Ordan, & B. Malkie. (2009). Markers of translator gender: Do they really matter? *Copenhagen Studies in Language, 38,* 183-198.

Tannen, D. (1992). You Just Don't Understand. London, England: Virago Press.

Tárnyiková, J. (2009). From text to texture: an introduction to processing strategies. Olomouc: Palacký University.

Tannen, D. (1990). You Just Don't Understand: Women and Men in Conversation. New York: Balantine Books.

Thorne, B. & N. Henley (eds.) (1987). Language and Sex. Difference and Dominance. Massachusetts, Newbury House Publishers

Zasiekin, S. & D. Zasiekina (2016).Gender Cognitive and Behavioral Asymmetry in Translating. *East European Journal of Psycholinguistics, 3*(2), 122-131. https://doi.org/10.29038/eejpl.2016.3.2.zas

REPRESENTATION OF THE RULES FOR LIVING IN PERSONAL NARRATIVES OF ADOLESCENTS WITH HEARING IMPAIRMENTS

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Abstract. The article is focused on the study of personal narratives of adolescents with hearing impairments. The aim of the study was to determine narrative indicators of respondents' rules for living. To achieve this goal, there were analysed personal narratives of adolescents with hearing impairments. Besides, there were identified specific categories that reflect their rules for living. In addition, there was studied the level of subjective well-being of respondents and the relationship between the presentation of certain rules for living in personal narratives and the level of subjective satisfaction with life. The research methods were content analysis of personal narratives and subjective scaling. Statistical data processing was performed with the help of recursive division trees method. The results of the study show that rules for living typical for adolescents with hearing impairments are reflected in their narratives and can be divided into three groups. The first group includes self-focusing rules, the second – focusing on others, and the third – focusing on the out-world. Each of these groups is divided into two subgroups, and each subgroup includes the behaviour of supercompensation or avoidance. The most common among adolescents with hearing impairments are rules for living related to the focusing on others and self-focusing both by the type of avoidance. At the same time, the highest level of subjective satisfaction with life is connected with self-focusing rules for living by type of supercompensation. The obtained data allow us to conclude that the analysis of personal narratives of adolescents with hearing impairments allows to determine their rules for living. On the other hand, typical rules for living determine the level of person's subjective well-being. Prospects for further researches in this area are to study the representation in adolescents' narratives not only separate rules for living, but also core beliefs, the existence of which is ensured by these rules.

Keywords: personal narrative, content analysis, rules for living, core beliefs, adolescence, hearing impairments.

Литвиненко Олена. Представленість правил життя в персональних наративах підлітків, які мають порушення слуху.

Анотація. Статтю присвячено вивченню особливостей персональних наративів підлітків, які мають порушення слуху. Мета дослідження полягала у визначенні наративних індикаторів типових правил життя респондентів. Для досягнення мети було проаналізовано персональні наративи підлітків та виокремлено специфічні категорії, що відображають притаманні їм правила життя. Крім того було досліджено рівень суб'єктивного благополуччя респондентів і визначено взаємозв'язок, між презентацією певних правил життя в персональних наративах та суб'єктивним відчуттям задоволеності життям. У якості дослідницьких методів використовувався контент-аналіз персональних наративів та суб'єктивне шкалювання. Статистична обробка даних здійснювалась з використанням методу дерев ракурсивного ділення. Результати проведеного дослідження свідчать, що

правила життя, якими керуються підлітки з порушеннями слуху можна розділити на три групи, перша з яких передбачає орієнтацію на себе, друга – орієнтацію на інших, а третя – орієнтацію на навколишній світ. Кожна з зазначених груп розподіляється на дві підгрупи, які передбачають поведінку за типом гіперкомпенсації, або уникання. Найбільш розповсюдженими серед зазначеної категорії респондентів є правила життя, пов'язані з орієнтацією на інших за типом уникання та з орієнтацією на себе за аналогічним типом. Водночас, з найвищим рівнем суб'єктивного задоволення життям пов'язані правила життя, що передбачають орієнтацію на себе за типом гіперкомпенсації. Отримані дані дозволяють зробити висновок, що, аналіз персональних наративів підлітків, які мають порушення слуху дозволяє визначити притаманні їм правила життя. Своєю чергою, типові правила життя детермінують рівень суб'єктивного благополуччя особи. Перспективи подальших досліджень у цій сфері полягають у дослідженні представленості в наративах підлітків не лише окремих правил життя, але й глибинних переконань, існування яких і забезпечується цими правилами.

Ключові слова: персональний наратив, контент-аналіз, правила життя, глибинні переконання, підлітковий вік, порушення слуху.

Introduction

Narrative is a concept of postmodern psychology that includes the procedural self-realization of a person as a way of creating an author's text (Van Dijk, 2008). Representatives of the narrative approach pay attention to the author's relationship with his personal text – the narrative (Harre, 2002). In his scientific research, Sarbin (1986) reveals the working concept of personal narrative, which is typical for every person and is at the same time unstable and constantly updated. The basic narrative, according to the scientist's point of view, is the essence that circumscribes the spatial coordinates and time perspective in which a person lives.

Narratives are clearly structured and have their own modality and system of functions. The main functions of personal narratives are the following: organization of experience; self-making; replaying the internal conflicts; self-transformation (Bauer & McAdams, 2010).

In modern psycholinguistics, numerous works are devoted to the study of the mechanisms of reflecting the individual experience in the texts. Thus, researchers talk about the role of narratives in the process of socialization and personal development of the subject (Shymko, 2019), about the narrative as a mean of self-presentation (De Fina, 2020) and the result of social interaction (Yuryeva, 2018). Furthermore, there are researched models of speech generation and the formation of personal texts (Frank & Christiansen, 2018), as well as applied aspects of the cognitive schemas formation (Kazantseva, 2018).

Particularly, Chepeleva and Yakovenko (2013) study the peculiarities of personal texts production. They consider narrative psychology as one that should be based on understanding personality as self-narration and, accordingly, personal experience as a result of organizing life events into narrative texts. Scientists suggest that the narrative of life and living the life is essentially the same phenomenon. Thus, the narrative is a transformation of disordered life events in a certain sequence, based on the general life concept of the narrator, or his personal myth, which determines the

internal logic of the generated text. The consequence of this is the creation of one's own inner personal world, which is a reality built as a unique creation on the background of the author's attitude to the surrounding reality and to his own personal identity.

The logical conclusion from the above concepts can be the thesis that a personal narrative is a specific text, different from all others, which has its own structure and provides a unique relationship between the author and the text. The text in this case acts primarily as a psychotherapeutic tool that allows its creator to delve into the process of self-knowledge and embark on the path of self-development.

Creating his own texts, a person invests in them his own experience, worldview and conceptual constructs. Some structural elements of personal narratives can serve as the indicators of the traumatic experience that a person has experienced and should be taken into account in the process of formation of the overall strategy of psychotherapeutic work a person (Vasyliuk, 2014). This concept is the basis of narrative therapy, which is the one of the modern methods of purposeful psychological influence. In the broadest sense, narrative therapy is a conversation in which individuals retell different stories of their lives. For narrative therapists narratives are events that are combined in certain sequences over a period of time and thus brought into a state endowed with meaningful plot (Zhornyak, 2005). The story of each person consists of many narratives. The nature and specificity of these narratives determine the events a person pays the most attention to, their interrelations and personal meaning. According to the results of our previous research, the choice of events reflected in personal narrative and the general style of their presentation are determined by the individual psychological characteristics of the author (Lytvynenko, 2014).

In his narratives a person systematizes his own experience, outlines the range of claims, finds his identity and actualizes it. Thus, the narrative is a form of individual's "self-text", or his textual self-presentation. Masienko (2006) speaks about the possibility of studying personal manifestations of subjective narrative by the means of "self-text". From the researcher's point of view, "self-text" includes some discursive manifestations aimed at the embodiment or expression of person's self. This duality of "self-text" characterizes its main features that are incompleteness and cumulativeness. Besides, it determines its dynamic nature, because "self-text" is always in the process of formation (Masienko, 2006). The analysis of "self-texts" may be appropriate in the context of a comprehensive psychological diagnosis of person, as well as in the scientific researches aimed at studying his individual manifestations and characteristics.

Narrative psychology and related with it narrative psychotherapy are important areas of psychological theory and practice that study a person as a text creator, a subject who generates textual information about himself and through this information improves his own self-perception. However, mostly such studies cover the ontogenetic aspect of this problem. Thus questions of a dysontogenesis of formation of the textual personality in modern psychology are covered rather fragmentarily. Particularly, the studies of the linguistic development of people with hearing

impairments traditionally cover the problems of developmental delay and the possibility of its compensation, as well as ways to establish effective interpersonal interaction despite audio deprivation (Reagan et al., 2021). The results of studies of the personal formation of people with hearing impairments indicate that the development of deaf children's personalities occurs at the same stages as their healthy peers, but the transition from one stage to another takes place two to three years later (Vernon & Andrews, 2010). The other studies in this area showed that a child born deaf or whose hearing was impaired during the first two years of life is in a fundamentally different position in comparison with other people. The lack of verbal interaction, and consequently the violation of communication, isolates them from the environment and complicates the formation of self-awareness and other personal constructs. Children with hearing impairments undergo a process of separation from other and understanding their own qualities and traits later than their peers (Mitchell & Braham, 2011).

At the same time, the issues of reflecting the personal qualities of people who have hearing impairments in their texts are left out of consideration. That is why the aim of this research was to study personal narratives of adolescents with hearing impairments and to determine the narrative indicators of rules for living typical for them. Achieving the aim became possible due to the implementation of the following tasks: 1) to analyze the personal narratives of adolescents with hearing impairments; 2) to identify specific narrative categories that reflect the rules for living; 3) to study the level of subjective well-being of respondents and to determine the relationship between the presentation of certain rules in personal narratives and the subjective feeling of life satisfaction.

The concept of rules for living is considered within the cognitive-behavioural approach. Such rules are formed on the basis of core beliefs, which are generalized ideas of a person about himself and the world around him (Westbrook, Kennerley, & Kirk, 2007). In contrast to core beliefs, the rules for living can be verbalized. It allows to suggest that they are reflected in personal narratives.

With the help of the rules for living core beliefs are realized in everyday human activities. Core beliefs and related to them rules for living are formed in early childhood, in the process of adaptation to certain circumstances. As a result, there are formed and assimilated certain conclusions the degree of accuracy and fundamentality of which may be different. If a person's core beliefs are maladaptive, the person may have such rules for living that allow him to cope with the unpleasant core beliefs (Beck, 2011). All the rules for living can be divided into two groups: rules that lead to avoidance and rules that provide supercompensation. The rules of avoidance include giving up activities determined with the fear of failure and the desire to avoid risk and to maintain psycho-emotional balance. On the other hand, the rules of supercompensation are associated with the increase of behavioural activation and the desire to do the things that are opposite of core beliefs. Rules for living are activated due to the realization of core beliefs and maladaptive cognitive schemes (Arntz, 2020). The fundamental importance of the rules for living in the structure of

individual's personal experience suggests that they will be reflected in his personal narratives. This assumption became the hypothesis of our empirical study

Methods

An empirical study of narrative indicators of the rules for living of adolescents with hearing impairment was conducted on the basis of special boarding schools in Kyiv. Before the current study, we have received approval from Borys Grinchenko University of Kyiv Ethical Committee. The total number of respondents was 125. The age of the respondents was 14–16 years. The research methods were subjective scaling and content analysis of personal narratives. Statistical processing was performed using the method of recursive division trees.

The research procedure involved not only a psychologist, but also a sign language interpreter, who ensured effective interaction between the researcher and respondents. At the first stage, the respondents were asked to write a text about themselves – to create their own personal narrative. According to the instructions, respondents had to describe certain event of their lives that strongly impressed them. The modality of the remembrance (positive or negative) was not of fundamental importance. The only requirement was the personal orientation of the text. At this stage of the study, we relied on the classic thesis of narrative psychology that states that a person reveals fundamentally significant psychological characteristics while creating his own texts (narratives) (Sarbin, 1986).

The texts created by the respondents were analysed with the help of content analysis, which is a formalized and systematized method of studying textual and graphical information. It allows to transform the information into quantitative indicators and to precede them statistically (Wooffitt, 2015). Before the direct analysis of the text, it was necessary to determine the categories of this analysis, which are the key concepts (semantic units) presented in the text and correspondent to the definitions and their empirical indicators that are recorded in the research program. To analyse respondents' personal narratives there were identified four main categories that correspond to the typical rules of life: 1) self- focusing, 2) focusing on others, 3) focusing on the out-world. Each category was divided into two subcategories: avoidance and supercompensation.

The next stage of the research was the subjective assessment of respondents' satisfaction with their own lives at the time of described events. It was conducted with the help of a scale from 1 to 100. This method was chosen taking into account hearing impairments of the respondents that caused an inability to use standardized scales and questionnaires. The design of this study did not involve the adaptation of classical psychodiagnostic tools for the work with adolescents with hearing impairments. That is why it was decided to use non-specific search methods. As a result of subjective scaling, there were identified four levels of life satisfaction: 1) extremely low; 2) low; 3) medium and 4) high.

Thus, during the further analysis of the obtained data, we operated with four levels of subjective well-being and six subcategories of content analysis. As it was

noted, the statistical data processing was made with the help of the method of recursive division trees (Hothorn et al., 2006). This method was chosen because the categories of content analysis are nominative values that cannot be ordered on a ordinal scale more or less, and indicators of subjective life satisfaction, in this case, are numerical. The combination of nominative and quantitative scales made it impossible to use the classical technique of regression analysis. That is why we chose the method of recursive division trees. As is known, the result of using this method under the condition of a numerical initial variable is the average value and the confidence interval for it. On the other hand, in the case of qualitative initial variable the result is the probability of its manifestation under the identified conditions. In our case, the numerical variable was predicted, so we could predict the level of subjective well-being taking into account certain rule for living.

Results and Discussion

Personal narratives of adolescents with hearing impairments differ due to a very specific semantic and structural organization. Typical features of them are lexical simplification, the absence of complex patterns. Among the parts of speech the most common in the narratives of this category of people are verbs (29%), pronouns (25%) and nouns (21%) less represented are adjectives (14%) yet all other parts of speech in their texts are presented quite fragmentary (11%). Another feature of the narratives of deaf adolescents is the ignoring of grammatical structures, particularly, the inconsistency of parts of speech. All this makes their texts quite specific, difficult to analyse and different from the narratives of their peers. However, our task was to analyse the content of narratives, so we will leave their structural analysis as a perspective for further researches.

The results of content analysis of personal narratives of adolescents with hearing impairment s showed that their texts represent all 6 types of rules for living, but the distribution of this representation is quite uneven.

The most common rules were focusing on others (avoidance type) – 28% of the total distribution. Their verbal expression took the following forms:

"I do not go to the birthday, girl quarrel"
("я не йти день народження дівчата сваритись"[1]),
"I will not be friends, he talks another girl"
("я не буду він дружить, він говорить інша дівчина").

Guided by the presented rules, adolescents consider situations of interpersonal relationships as the most significant. At the same time, they suffer from possible failures in social interaction and to prevent them, refuse to take any behavioural activation.

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[1] Here and below there are original Ukrainian fragments of the texts due to their value for understanding and the impossibility to translate the entire linguistic structure and specifics.

The second most frequently represented rules (22%) were the rules for living, which are also characterized by an avoidance strategy, but in this case it is related to self-focusing. They were verbalized as follows.

"I never play volleyball like girls, so I leave the team"
("я ніколи не грати волейбол так, як дівчата, тому я покидати команду"),
"I don't become a photographer, there are no deaf photographers, it's nonsense"
("я не стати фотограф, нема глухих фотограф, це дурниця").

Accordingly, the activation of such a rule leads to the refusal of certain activities aimed at achieving. The reasons for refusal may be conditional self-esteem, insecurity and self-sufficiency, core beliefs about some defects.

It is interesting that both of the most typical rules for adolescents with hearing impairments are related to behavioural strategy "avoidance". This suggests that avoidance generally is a typical behaviour for such adolescents, which allows them to protect themselves from unpleasant experiences and maintain the stability of their psycho-emotional state.

The third group of rules for living includes the rules of focusing on by type of supercompensation (16%). In personal narratives of adolescents with hearing impairments the following text units represented this rule:

"I lots of friends, we're always together"
("я купа друзів, ми завжди разом"),
"I dated Olya, then Sonya, until Olya knew"
("я зустрічався Оля, потім ще Соня, поки Оля не знала").

Guided by such rules for living, adolescents choose patterns of behaviour that are the opposite to their core beliefs. In that way feeling social anxiety and self-doubt, they try to expand the range of their interpersonal interactions. Such behaviour gives them a sense of self-confidence and for some time reduces the feeling of anxiety.

The fourth group of rules includes the rules of focusing on the out-world by type of avoidance (13%). In the texts created by respondents, these rules are reflected with the help of following phrases:

"There is always trouble when I go somewhere",
("завжди стається біда, коли я кудись іду"),
"I do not go anywhere, because otherwise I get sick"
("я нікуди не ходити, бо інакше я захворіти").

It is obviously that such rules are primarily related to the expectation of a catastrophe and the fear of possible future dangers. To eliminate the harmful effects of these dangers on their lives, adolescents prefer to avoid any activities and stay away from even those events that are important to them.

The fifth group of rules includes rules of self-focusing by type of supercompensation (11%). The following phrases are presented in such narratives of adolescents:

"I need first place so that everyone knows how cool I am"
("я повинен перше місце, щоб всі знали, який я крутий"),
"I always study well, that's the way it should be"
("я завжди навчаюсь відмінно, так треба").

Focusing on such rules, adolescents try to compensate deep insecurity in themselves and their abilities of succeeding in various activities. This approach, on the one hand, gives a sense of self-worth for a while, but on the other hand, it is very exhausting, as it requires constant activation of internal resources.

The sixth group of rules for living includes rules related to focusing on the outworld by type of supercompensation (10%). Verbal implementation of these rules occurs in the following statements:

"I check my heart rate 4 times a day so that my heart is not bad"
("я 4 рази за день перевіряю пульс, щоб не було погано серце"),
"I call him because I'm afraid something will happen"
("я йому звоню, бо боюсь, щось станеться").

Such rules for living are based on the deep intolerance of uncertainty and high level of anxiety about possible future dangers. To alleviate this anxiety, adolescents tend to perform certain actions and rituals that under certain conditions can turn into obsessive compulsions.

Thus in the first stage of the study it was found that personal narratives of adolescents with hearing impairments do contain all six types of rules for living. However, the distribution of these rules representation is quite uneven and exactly half of all texts contain rules belonging to two groups: focusing on others by the type of avoidance and self-focusing by a similar type.

On the next stage of the study there was compared the results of content analysis and the data obtained from subjective scaling. As it was mentioned, the respondents were asked not only to create a text about a certain event in their lives that impressed them, but also to assess the level of life satisfaction in the time of the event on a scale from 1 to 100. This allowed us to obtain information about the levels of subjective satisfaction with the life, which could be very low, low, medium and high.

The hypothesis of this stage of the study was that the activation of different rules for living determines different experiences of adolescents and, accordingly, is assessed differently.

Our goal was to find such trends and determine the rules for living that are associated with the strongest positive and negative experiences.

To achieve this goal there was conducted statistical data processing with the help of the method of recursive division trees. Using this method allowed us to predict the probability of manifestation of one phenomenon in the presence of another. Thus, we tried to predict the probability of a particular level of life satisfaction depending on the leading rules for living and their representation in the personal narratives of adolescents. The results of statistical data processing are shown in Fig. 1.

Figure 1
Narrative Indicators of the Levels of Adolescents' Subjective Well-Being
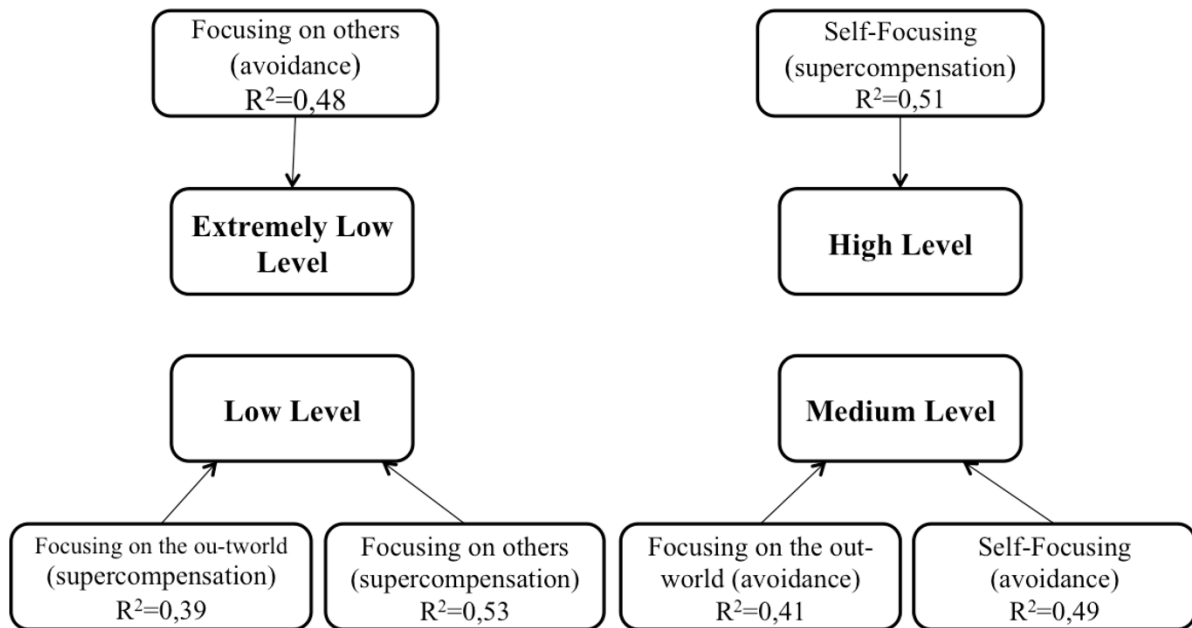
It is obviously that the manifestation of a high level of life satisfaction is possible in the case of activation of those rules for living, which are responsible for self-focusing by the type of supercompensation (R^2=.51). So, when in critical situations adolescents show a tendency to active behavioural, a desire to act and a willingness to do something to achieve a goal, they are most satisfied with their lives and have a high the level of subjective well being. This may be explained with the fact that the refusal to avoid activities forms a sense of control over the situation and the belief that they everything possible is done to achieve the goal. It is important that the relevant rules are clearly traced in the personal narratives of adolescents with hearing impairments. Accordingly, the study of texts allows not only to determine the rules for living, but also to predict the level of life satisfaction. This conclusion is important for psychological counselling and psychotherapy, as it expands the range of means of collecting primary information about clients, including those with hearing impairments.

The rules for living, the use of which causes the lowest level of subjective life satisfaction, are those of focusing on others by the type of avoidance (R^2=.48). In that way, the unhappiest are adolescents with hearing impairments, who tend to worry about the opinions of others in important life situations and refuse to act and achieve goals because of the fear of being condemned and devalued by others. High social anxiety, which is the basis for the formation of such rules for living, determines the manifestation of self-doubt, fear of social failure and the desire to stay away from large companies and turbulent events. All this forms a leading behavioural strategy, which is "avoidance". This strategy leads to the refusal from important events and activities, which causes sense of guilt, sadness and frustration. All this leads to a very low assessment of the level of subjective well-being. It is noteworthy that in the

narratives of adolescents with hearing impairments, the frequency of such rules for living was the highest. Accordingly, almost a third of such adolescents (28%) in difficult situations prefer to give up for fear of conviction. At the same time, they experience significant distress and a very low level of subjective well-being. Such trends open a wide field for practical work of psychologists and psychotherapists. This work should be aimed at testing the rules for living, which are obviously maladaptive, finding new rules and their implementation in the daily lives of adolescents with hearing impairments. Such work should increase the level of life satisfaction and be reflected in personal narratives.

Low levels of life satisfaction is also typical for adolescents, who tend to use the rules for living associated with focusing on others (R^2=.53) and the out-world (R^2=0.39) by type of supercompensation. Focusing on others here means that in important situations adolescents not only care about the opinions of others, but also try to do their best to earn approval and positive evaluation. Focusing on the out-world has a slightly different specificity and suggests that over-worrying about possible dangers and the general uncertainty of the future. Adolescents with hearing impairments take active measures to protect themselves from these dangers, or to insure against them in some way. However, each of these two types of rules for living is not subjectively comfortable, and its representation in the respondents' narratives has a stable connection with a low level of life satisfaction.

Worth noting is the fact that compensatory behaviour in the rules related to self-focusing is evaluated very positively. Accordingly, purposeful activities are subjectively enjoyable for adolescents when it is aimed at compensation of self-doubt, increasing self-esteem and strengthening self-confidence. When such activities are based on anxiety about other subjects and objects it causes noticeable discomfort and low level of life satisfaction.

The average level of life satisfaction is typical for respondents whose narratives contain the rules for living related to self-focusing (R^2=.49) and focusing on the out-world (R^2=.41) by the type of avoidance. In that way the refusal to be active, associated with feelings about one's incompetence and imperfection of the world is generally neutral and does not cause strong feelings. Thus, practicing avoidance, they do not get any achievements, but also do not face disappointments. This determines the presence of an average level of life satisfaction.

Conclusions and Recommendations

A study of personal narratives of adolescents with hearing impairment allowed us to draw a number of conclusions.

Firstly, the narratives of this category of persons, as well as any other texts created by them, differ in specific lexical and structural organization. They are characterized by grammatical inconsistency of parts of a sentence, lexical simplification, lack of complex grammatical constructions, predominance of nouns, pronouns and verbs among all parts of speech. Thus linguistic analysis of texts created by adolescents with hearing impairments should be the subject of a separate

study. However, within this scientific research, it was not included in the list of our goals, so there was only a superficial review of this issue.

Secondly, the narratives of hearing-impaired adolescents do reflect their own rules for living. Creating their own texts and structuring their history in it, adolescents demonstrate what rules they are guided by and what behavioural strategies these rules are implemented in.

Thirdly, the analysis of respondents' narratives allowed us to determine which rules for living are most typical for the sample and which are the least common. Thus, the most common among adolescents with hearing impairments are the rules for living related to focusing on others by the type of avoidance and self-focusing by a similar type (together it is 50% of total sample). This allows us to conclude that the behavioural strategy of avoidance is the most typical for such adolescents. Accordingly, in difficult life situations and conditions of uncertainty they tend to give up any activities to avoid distress and unpleasant experiences associated with it.

Lastly, there is a strong relationship between the rules for living presented in adolescents' narratives and the assessment of subjective well-being level at the time of implementation of these rules. The highest level of well-being is assessed by adolescents with hearing impairments, who use self-focusing rule for living by the type of supercompensation. Thus, being active in situations of increased responsibility, they feel the control of their own lives, which reduces the level of uncertainty about the future and has a positive effect on life satisfaction. At the same time, the lowest estimates of subjective well-being correlate with focus on others rules by type of avoidance. Accordingly, preferring giving up activities, adolescents face negative feelings about their own unrealized opportunities and feel dissatisfied with life. A high representation of such a rule among the respondents indicates the dominance of low assessment of the quality of their own lives.

The obtained empirical data suggest that working with the rules for living of adolescents with hearing impairment will affect their psycho-emotional well-being and increase life satisfaction. However, testing this assumption requires further researches. In addition, the prospect of researches may be to find ways to work with this category of people using the method of narrative psychotherapy. In the context of such work, the personal experience of the individual is structured and his own history reflected in personal narratives is formed. Thus, working with the narratives of adolescents who have hearing impairments, it is possible to achieve the goals presented earlier, in particular, to expand the repertoire of behavioural strategies and patterns. Another important area of researches is the study of representation in adolescents' narratives not only separate rules for living, but also core beliefs, the existence of which is ensured by these rules. Relevant researches will deepen the general knowledge about cognitive organization of adolescents with hearing impairments and develop algorithms for practical work with them, aimed at maintaining their psychological well-being.

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References

Арнц А. Схема-терапія: модель роботи з частками. Львів : Свічадо, 2014.

Василюк О. Автобіографічний наратив як діагностичний інструментарій під час дослідженні травматичної пам'яті. *East European Journal of Psycholinguistics.* 2014. Том 1, №1. С. 201–208.

Жорняк Е. С. Нарративная психотерапия. *Журнал практической психологии и психоанализа.* 2005. № 4. С. 75–87.

Казанцева Е. В. Психологический субстрат нарративной схемы. *Психолог.* 2018. №1. С. 39 – 48. https://doi.org/10.25136/2409-8701.2018.1.24412

Литвиненко О. О. Індивідуально-психологічні особливості сприймання літературного тексту [Дис. канд. психол. наук]. КНУ імені Т. Г. Шевченка, 2014.

Масієнко Ю. О. Структурно-динамічні ознаки «Я-тексту» особистості [Автореф. дис. канд. психол. наук]. КНУ імені Т. Г. Шевченка, 2006.

Чепелєва Н. В. & Яковенко Л. П. Методи аналізу оповідального тексту. *Технології розвитку інтелекту.* 2013. № 4. С. 231–238.

Шимко В. До питання про місце і роль мови в процесі соціалізації особистості: структурно-онтологічний ескіз. *Psycholinguistics.* 2019. Вип. 26, № 1. С. 385–400. https://doi.org/10.31470/2309-1797-2019-26-1-385-400

Юрьева Н. М. Интерактивный компонент в механизме порождения нарратива детьми. *Вопросы психолингвистики.* 2018. Т. 1, № 35. С. 115–125. https://doi.org/10.30982/2077-5911-2018-35-1-115-125

Bauer, J. & McAdams, D. (2010). Eudaimonic growth: Narrative growth goals predict increases in ego development and subjective well-being 3 years later. *Developmental Psychology, 46*(4), 761–772. https://doi.org/10.1037/a0019654

Beck, J. S. (2011). Cognitive behavior therapy: Basics and beyond (2nd ed.). Guilford Press.

De Fina, A. (2020). Doing Narrative Analysis from a Narratives-as-Practices Perspective. *Narrative Inquiry, 17,* 32–45. https://doi.org//10.1075/ni.20067.def

Frank, St. L. & Christiansen, M. (2018). Hierarchical and sequential processing of language. *Language, Cognition and Neuroscience, 33*(9), 1213–1218. https://doi.org/10.1080/23273798.2018.1424347

Harre, R. (2002). Cognitive Science. A Philosophical Introduction. Sage Publications.

Hothorn, T., Hornik, K. & Zeileis, A. (2006). Unbiased Recursive Partitioning: A Conditional Inference Framework. *Journal of Computational and Graphical Statistics, 15*(3), 33–45. https://doi.org/10.1198/106186006X133933

Mitchell, T. R. & Braham, L. G. (2011). The Psychological Treatment Needs of Deaf Mental Health Patients in High-Secure Settings: A Review of the Literature. *International Journal of Forensic Mental Health, 10*(2), 92–106. https://psycnet.apa.org/doi/10.1080/14999013.2011.577135

Reagan, T., Matlins, P. & Pielick, D. (2021) Deaf epistemology, sign language and the education of deaf children. *Educational Studies, 57*(1), 1-21. https://doi.org/10.1080/00131946.2021.1878178

Sarbin, T. (1986). Narrative psychology: the storied nature of human conduct. Harvard University Press.

Stephens, C. & Breheny, M. (2015). Narrative Analysis in Psychological Research: An Integrated Approach to Interpreting Stories. *Qualitative Research in Psychology, 10,* 71–78. https://doi.org/10.1080/14780887.2011.586103

Van Dijk, T. (2008). Philosophy of Action and Theory of Narrative. Edward Elgar Publishing.

Vernon, M. & Andrews, J. (2010). The Psychology of Deafness. Longman.

Westbrook, D., Kennerley, H., & Kirk, J. (2007). An Introduction to Cognitive Behavioural Therapy. Sage Publications.

Wooffitt, R. (2005). Conversation Analysis and Discourse Analysis. Sage. https://dx.doi.org/10.4135/9781849208765

References (translated and transliterated)

Arntz, A. (2020) Skhema-terapiya: model roboty z chastkamy [Scheme-Therapy: a Model of Work with Particles]. Lviv: Svichado.

Vasylyuk, O. (2014). Avtobiohrafichnyy naratyv yak diahnostychnyy instrumentariy pid chas doslidzhenni travmatychnoyi pam'yati [Autobiographical narrative as a diagnostic tool in the study of traumatic memory]. *East European Journal of Psycholinguistics, 1*(1), 201–208.

Zhornyak, E. S. (2005). Narratyvnaya psykhoterapyya [Narrative psychotherapy]. *Zhurnal Praktycheskoy Psykholohii i Psykhoanalyza, 4,* 75–87.

Kazantseva, Ye.V. (2018). Psikhologicheskiy substrat narrativnoy skhemy [The Psychological Substrate of the Narrative Scheme]. *Psikholog, 1,* 39–48. https://doi.org/10.25136/2409-8701.2018.1.24412

Lytvynenko, O. O. (2014). Indyvidual′no-psykholohichni osoblyvosti spryymannya literaturnoho tekstu [Individual-psychological peculiarities of literary text perception]. Unpublished PhD thesis. Taras Shevchenko University of Kyiv.

Masiyenko, Yu. (2006). Strukturno-dynamichni oznaky "YA-tekstu" osobystosti [Structural and dynamic features of "self-text" of personality]. Extended abstract of PhD thesis. Taras Shevchenko University of Kyiv.

Chepelyeva, N. V. & Yakovenko, L. P. (2013). Metody analizu opovidal′noho tekstu [Methods of Analysis of the Narrative Text]. *Tekhnolohiyi Rozvytku Intelektu, 4,* 231–238.

Shymko, V. (2019). Do pytannya pro mistse i rol′ movy v protsesi sotsializatsiyi osobystosti: strukturno-ontolohichnyy eskiz [On the question of the place and role of language in the process of personality socialization: structural-ontological sketch]. *Psycholinguistics, 26*(1), 385–400. https://doi.org/10.31470/2309-1797-2019-26-1-385-400

Yuryeva, N. M. (2018). Interaktivnyy komponent v mekhanizme porozhdeniya narrativa det'mi. Voprosy psikholingvistiki [Interactive component in the mechanism of generation of narrative by children]. *Voprosy Psykholynhvystyky, 1*(35), 115–125). https://doi.org/10.30982/2077-5911-2018-35-1-115-125

Bauer, J. & McAdams, D. (2010). Eudaimonic growth: Narrative growth goals predict increases in ego development and subjective well-being 3 years later. *Developmental Psychology, 46*(4), 761–772. https://doi.org/10.1037/a0019654

Beck, J. S. (2011). Cognitive behavior therapy: Basics and beyond (2nd ed.). Guilford Press.

De Fina, A. (2020). Doing Narrative Analysis from a Narratives-as-Practices Perspective. *Narrative Inquiry, 17,* 32–45. https://doi.org//10.1075/ni.20067.def

Frank, St. L. & Christiansen, M. (2018). Hierarchical and sequential processing of language. *Language, Cognition and Neuroscience, 33*(9), 1213–1218. https://doi.org/10.1080/23273798.2018.1424347

Harre, R. (2002). Cognitive Science. A Philosophical Introduction. Sage Publications.

Hothorn, T., Hornik, K. & Zeileis, A. (2006). Unbiased Recursive Partitioning: A Conditional Inference Framework. *Journal of Computational and Graphical Statistics, 15*(3), 33–45. https://doi.org/10.1198/106186006X133933

Mitchell, T. R. & Braham, L. G. (2011). The Psychological Treatment Needs of Deaf Mental Health Patients in High-Secure Settings: A Review of the Literature. *International Journal of Forensic Mental Health, 10*(2), 92–106. https://psycnet.apa.org/doi/10.1080/14999013.2011.577135

Reagan, T., Matlins, P. & Pielick, D. (2021) Deaf epistemology, sign language and the education of deaf children. *Educational Studies, 57*(1), 1-21. https://doi.org/10.1080/00131946.2021.1878178

Sarbin, T. (1986). Narrative psychology: the storied nature of human conduct. Harvard University Press.

Stephens, C. & Breheny, M. (2015). Narrative Analysis in Psychological Research: An Integrated Approach to Interpreting Stories. *Qualitative Research in Psychology, 10,* 71–78. https://doi.org/10.1080/14780887.2011.586103

Van Dijk, T. (2008). Philosophy of Action and Theory of Narrative. Edward Elgar Publishing.

Vernon, M. & Andrews, J. (2010). The Psychology of Deafness. Longman.

Westbrook, D., Kennerley, H., & Kirk, J. (2007). An Introduction to Cognitive Behavioural Therapy. Sage Publications.

Wooffitt, R. (2005). Conversation Analysis and Discourse Analysis. Sage. https://dx.doi.org/10.4135/9781849208765

VERBAL INDICATORS OF PERSONAL IDENTITY
IN *THE ROAD PAST ALTAMONT* BY GABRIELLE ROY

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Abstract. The present paper explores personal identity linguistic indicators detected in *The Road Past Altamont* by Gabrielle Roy. Works by this Canadian writer, public personality, and significant figure in French Canadian literature are of interest to a broad audience today in Canada, where almost all her books have been translated into English, and abroad. Written in a fluid, spare style, they are distinguished by lively narration and a keen sense of observation. Her literature approaches the world and people with clear sight and compassion. *The Road Past Altamont* (1966) by Roy is one of the most original in Canada, as varied as it is cohesive. The novel is dedicated to the coverage of the autobiographical narrative, the peculiarities of the personal identity crisis for different age groups, the succession of generations. These existential problems are actualized in crisis life situations. Despite containing four independent texts, *The Road Past Altamont*, each of which tells a finished story, is not a collection of short stories but a novel-saga. Its genre is both fragmented and unified, and it has a flexible structure based on the concept of the human life course. The four stories in this novel are connected not only by the main character at different points in her life but also by the themes that explore the changes, ageing, and society's relation to the elders. The study aims to single out verbal indicators of personal identity obtained from the second part, "The old man and the child" of the Roy's novel and the music album of the same name, created on its basis in 2021. Among the main findings are the defining psycholinguistic markers of time and space in the discourse of "The

Old Man and the Child" that encompass personal identity cognitive component. Hence, it is possible to treat the transformation of identity in the modern world in terms of constructing "self" as a reflexive project - implementing an integral, biographical story being changed in a polyvariant context of choice.

Keywords: *Gabrielle Roy, The Road Past Altamont, personal identity, verbal indicators, discourse, narrative, identity crisis.*

Кузікова Світлана, Вертель Антон, Зливков Валерій, Лукомська Світлана. Вербальні маркери особистісної ідентичності в романі Габріель Руа «Дорога з Альтамону».

Анотація. Статтю присвячено виявленню лінгвістичних маркерів особистісної ідентичності у творі «Дорога з Альтамону» Габріель Руа. Ця відома канадська письменниця і громадська діячка – одна з головних фігур у французькій канадській літературі. Написані простим і лаконічним стилем, твори Г. Руа сьогодні цікавлять широку публіку і в Канаді, де майже всі її книги були перекладені англійською мовою, і за кордоном. Роман «Дорога з Альтамону» (1966) присвячений висвітленню автобіографічного наративу, особливостей перебігу кризи особистісної ідентичності у людей різного віку, спадкоємності поколінь, екзистенційним проблемам, що актуалізуються у кризових життєвих ситуаціях. Попри те, що твір містить чотири незалежні тексти, кожен з яких розповідає закінчену історію, він не є збіркою оповідань, а романом-сагою, – жанром, який одночасно фрагментований і уніфікований, має гнучку структуру, яка базується на концепції життєвого шляху людини. Метою дослідження є аналіз вербальних індикаторів особистісної ідентичності другої частини роману Г. Руа «Старий і дитина» та однойменного музичного альбому, створеного на його основі. Концепт особистісної ідентичності у тексті актуалізується насамперед в тому, що розповідь ведеться від імені Крістін, яка водночас є дійовою особою ("tâchedevivre") та спостерігачем за нею ("regarde" et "juge"), таке "doublingoftheself" тематично, структурно і стилістично створює цілісний автентичний автобіографічний наратив, де виражається формування особистісної ідентичності та перебіг її кризи. Результатом дослідження є виокремлення в дискурсивному середовищі «Старого і дитини» психолінгвістичних маркерів часу й простору, які становлять просторово-часовий компонент когнітивної складової особистісної ідентичності. Доведено, що трансформація ідентичності у сучасному світі може бути зрозуміла лише у термінах конструювання «Я» як рефлексивного проекту – здійсненні цілісного, біографічного оповідання, яке постійно коректується у поліваріативному контексті вибору. У такому випадку досягнення ідентичності розуміється як розробка траєкторії «Я», що стає чи не найважливішим життєвим завданням усуспільненого індивіда.

Ключові слова. *Габріель Руа, Дорога з Альтамону, особистісна ідентичність, вербальні індикатори, дискурс, наратив, криза ідентичності.*

Introduction

Postmodernism literature is characterized by the use of unreliable narration, self-reflexivity, and intertextuality. Moreover, it has open and ambiguous endings, after which readers have more questions than answers. In addition, popular in the 30s of the XX century, the opposition of the female "Self" and all others in the 60s gives way to the interaction of female and male – "maternal and parental Self" in the ambivalent intersection of time and place of the story (Boucher, 1990). The literary heritage of Gabrielle Roy belongs to the literature of postmodernism, hence meaning that this empirical investigation is full of the personal identity verbal indicators.

Gabrielle Roy was a Canadian author from St. Boniface (Manitoba) and one of the major figures in French Canadian literature. She lived on rue Deschambault, a house and neighbourhood in Saint Boniface that would later inspire Roy to create one of her most famous works. She is considered by many to be one of the most important Francophone writers in Canadian history and one of the most influential Canadian authors. In 1963, she was on a panel that gave the Montreal World's Fair, Expo 67, its theme *Terre des hommes* or in English *Man and His World*. It was her suggestion to use Antoine de Saint-Exupéry's 1939 book title as the organizing theme. In 2016, Margaret Atwood, Canadian poet, literary critic, and novelist who had read Roy's books as a teenager, wrote an essay about her own career and noted that her works were still more relevant than ever. A tormented and solitary personality, afflicted by numerous contradictions and a longing for her western roots, fragile and endearing at the same time, Gabrielle Roy is one of the greatest contemporary writers on the human condition.

First published in French in 1966, the book's title is lifted from the last story "La Route d'Altamont" ("The Road Past Altamont"). It is a wonderful old-fashioned coming-of-age-themed 4-group of stories: *My Almighty Grandmother, The Old Man and the Child, The Move, The Road Past Altamont*. The novel is about a young francophone girl Christine, growing up in lonely, windswept, pioneering Manitoba at the turn of the twentieth century. The subject of the novel penetrates to the heart of a child's in-depth world, forming a subtle yet considerable linkage of impressions, feelings, and relationships. Christine is an autobiographical character, based on G. Roy; hence, one must speculate that the protagonist's memories and responses are the author's own. The four stories in this novel are connected not only by the main character at different points in her life but also by the themes that push the issues of change, aging and relation of society to the elders.

The Road Past Altamont was simultaneously published in French and translated in English by J. Marshall. G. Roy herself collaborated closely with J. Marshall on translating her work. As a result, English translation represented a significant contribution of her own English-language writing about the Canadian highway in the 1960s.

Roy's novels are filled with images of childhood and aging, family, rural and urban French-Canadian settings; the generation gaps present themselves in many human relationships and thread themselves throughout Roy's works. In G. Roy's novels, life stories of the heroes' change, expand and become more complicated in the process of their maturation, gaining life experience and distance from the mother figure (Gilbert, 1993). For example, in The *Road Past Altamont*, the development of Christine's life is gradual: from playing with dolls at home, where the social networks are limited to the mother (narrative "doll") as well as dreams of seeing something new, to the expansion of the social contacts (narrative "lake"), acquaintance with a male figure, but also to realizing the maternal function (narrative "movement") to discover a completely new world, opposite to the usual, but no less attractive and fascinating. This gradation is observed from the Manitoba prairies to the hills of Winnipeg (narrative "mountain"). Despite the logic of the description of the life

cycle, G. Roy highlights an important psychological problem - the loss of control over life events - the main feature of the personal identity crisis. When Christine realizes that not everything in her life can be controlled, including natural life cycles such as aging and death, she reflects on her feelings and verbalizes them, thereby reducing anxiety over the course of her later life. It is clear that Christine resembles Gabrielle Roy herself and has strong biographical elements.

It is true that the novel is an "adult" fiction not because of separation, mourning, and consolation but because of the maturity of its message; it covers psychological and socio-philosophical topics. Researcher of G. Roy's heritage Fortier adapted the text of Roy's story especially for the music album "Le vieillard et l'enfant" ("The Old Man and the Child", La Montagne secrète, 2021), which made it possible to understand it for children from 3 years of age, while preserving its basic problems, namely: childhood, family, self-discovery and the world at large, the desire for independence and adventure. According to the Canadian novelist and translator, "Childhood and ageing - moments of wonder and peace, at the same time – are transitional stages of the life, when there is an encounter with the immeasurable – a kind of window into what awaiting people: the future life of the child and the inevitable death of the elderly"(«L'enfance et le grand âge sont des moments d'émerveillement et d'apaisement. En même temps, on sent que ce sont des moments de transition... Cette rencontre avec l'immensité est en quelque sorte une fenêtre sur ce qui les attend : la vie future de l'enfant et la mort prochaine du vieillard»).

If we consider the novel in general, its protagonist Christine is presented in such age periods as in early childhood, at 6, 8, 11, 14 years and in youth. Thus, the stages of her psychological maturation can be observed. Musical album, realized in 2021, does not specify the girl's age; it is probably 8-11 years when she develops the ability to reflect, think about herself, her past and future, as well as about the probable death of family members and her own. It is here in the novel that the cyclical nature of life asserts itself. Mothers and daughters – frequently portrayed in the relationships of three generations – lend themselves par excellence to illustrate Gabrielle Roy's belief in the cyclical nature of life. Christine opposes the social expectations that burdened women, especially at that time. Travel, adventure, setting off for the unknown – everything that allows space to expand entails rejecting the traditional subservience of women. Christine does not adopt a rebellious tone in her narrative, for that was forbidden to women of the time.

The concept of personal identity in *The Road Past Altamont* is actualized first of all in the fact that the narration is conducted on behalf of Christine, who is both an actor ("tâche de vivre") and an observer ("regarde" et "juge"), such as "doubling of the self". Thematically, structurally, and stylistically, focalization creates a holistic authentic autobiographical narrative, which expresses the formation of personal identity and the course of its crisis («… et il est vrai, parfois aussi, pour la communication. je suis devenue peu à peu une sorte de guetteuse des pensées et des êtres et cette passion pourtant sincère use l'insouciance qu'il faut pour vivre… » (La Route d'Altamont, p. 239).

Methods

Our theoretical research question is: "What kinds of verbal indicators do characterize personal identity following the example of Gabrielle Roy's novel and the musical album based on it?" The aim of the current study is to investigate the links between personal identity verbal indicators based on data obtained from Gabrielle Roy's novel *The Road Past Altamont*, the second part of "The Old Man and the Child", and the music album of the same name created in 2021. This empirical study is focused on the methods of discursive and narrative analysis of the novel and the musical album "The Old Man and the Child". The main task of discursive analysis is to understand the concept of texts – a set of ideas and representations, through which the author explains and forms reality using illustrations and music. The basis of this method is the study of the structure of the text, followed by analysis of its semantic elements: the meaning of words and sentences, the relationship between sentences, as well as the stylistic and rhetorical formations of meanings.

Discourses are not merely linguistic phenomena, but they are always shot through with power and are institutionalized as practices. It should be noted that while audio recordings are the primary medium for linguistically oriented discourse analysis, it is not uncommon to draw on textual or video data as well (Schilling, 2013). One of the most important focuses of the study of text semantics is the local coherence of the novel: how individual parts of the text are related to each other; for example, in our study, the four parts of the novel are connected by matching time, conditions, reasons, circumstances (Thomas, 2014). As a result of discursive analysis, the situational / event model of " The Old Man and the Child " was formed. This model not only provides information expressed in the text, but it is also based on existing knowledge of readers, their culturally determined scenarios and experiences of social life.

Narrative is one of the most frequently occurring and ubiquitous forms of discourse. Narrative analysis is a qualitative method of research aimed at interpreting the story, which pays special attention to the chronological sequence that the narrators follow when talking about their lives and surrounding events (Kutkova, 2014). Narratives represent storied ways of knowing and communicating; there are several types of narrative analysis: thematic analysis – emphasis is on the content of a text, "what" is said more than "how" it is said, the "told" rather than the "telling"; structural analysis- shifts to the telling, the way a story is told; interactional analysis – the focus is on the dialogic process between teller and listener; performative analysis – is an extending the interactional approach, interest goes beyond the spoken word and, as the stage metaphor implies, storytelling is seen as performance – by a "self" with a past – who involves, persuades, and perhaps moves an audience through language and gesture, "doing" rather than telling alone. For narrative analysis, the following is important: the presence of the narrator, viewer, reader or listener; the sequence of events experienced by the character; the narrator's attitude to what is being said. Accordingly, we have identified verbal markers of personal identity based on such parameters as the narrator, characters, time, events, space, relationships

between categories (dichotomies), intertextual connections and cultural presuppositions.

Results and Discussion

In the discursive environment of "The Old Man and the Child", we identified the following psycholinguistic indicators: time and space, which are the spatio-temporal component of the personal identity cognitive representation. Particularly, we noted that the feature of this music album is the illustrated picture book accompanied by recordings of the narrated story and 13 songs.

The first stage of the study implied reading the novel and its adapted version in the music album and thorough investigation of the texts. This approach allowed the authors to identify the words and phrases most often found in these texts (in French). The repetitions were further translated and analyzed.

At the second stage, students and teachers of higher educational institutions of Ukraine joined the study; the total sample is 312 people, and the average age of the subjects – 42.7 years. The study involved respondents who speak French at the level of A2-B2 (from basic to independent users). Hence, it is obvious that the sample of the study ensured quality results because of the number of participants, their experience due to the age category, and language proficiency.

All words and phrases were translated into Ukrainian. Students analyzed words and phrases and determined their impact on emotional state (positive, negative, neutral) and associations with space and time. To assess the emotional effect of words and phrases that reflect the temporal and spatial components of identity, we used semantic-differential scale.

The semantic-differential scale consists of two opposing adjectives put at the beginning and end of the scale for the respondent to identify their choice on it. This questionnaire rating scale helps to obtain negative and positive evaluations (Henerson et al., 1987). The respondents were asked to rate each item within the frames of a multi-point rating option: $1 – 2$ = negative response, 3 = neutral response, and $4 – 5$ = positive or affirmative response. The collected responses from the questionnaire were coded and entered into SPSS 21.0 to run the analyses. We conducted statistical processing of the data obtained using the SPSS 21.0 in order to identify the correlations of the respondents' answers and determine statically significant differences in the representation of personal identity in the novel and in the music album. In particular, we used Fisher's φ * criterion that helped to describe the tendencies in the distribution associations of experimental groups.

To comply with the ethics of research that includes human participation, we sought ethical approval from the publishing house "La Montagne secrète" prior to the data collection. To analyze the content of the associative field, we used six main semantic zones of the associative gestalt: subject, object, characteristic, action, state, and locus. Table 1 below shows the associations selected by more than 51.0% of the subjects; * the associations that are statistically significantly different in the novel and in the music album are indicated at p <.05.

Table 1

Quantitative Analysis of the Associative Field Content of the Temporal and Spatial Personality Identity

Semantic fields	"The Road Past Altamont"	"The Old Man and the Child"
SUBJECT Person associated with time	Old man (99.4%), child (99.7%), mother (89.5%), grandmother (54.2%) *	Old man (99.7%), child (99.7%), mother (90.9%)
Person associated with space	Traveler (86.7%), housewife (61.8%) *	Traveler (92.9%), neighbor (79.1%)*
OBJECT Specific items associated with time	Clock (71.1%), time (97.2%), sand (88.5%), bell (61.8%)*, eternity (64.1%), lighthouse (59.4%)*, information (77.1%)*, doll (99.4%)*	Time (99.4%), gray hair (78.2%)*, bald head (59.5%), beard (96.9%)*, doll (87.3%)*
Specific items associated with space –	Train (99.2%), cart (62.6%)*, lake (99.7%), emptiness (58.9)*, plain (99.4%), hill (86.4%)*	Train (99.7%), wagon (85.3)*, lake (99.7%), sea (96,6%), plain (99.7%), water (58.9%), wheel (83.9%), clouds (82.7%)*, waves (85.6%)*, space (80.4%), territory (85.3%), air (96.4%)
ACTION, STATE in time	Life (95.8%), death (92.4%)*, past (99.2%), future (98.8%), present (61.8%),* cycle (86.7%), transience (63.4%), flow (86.7%), sadness (62.6%)*, anticipation (63.7%), choice (85.3%)*, change (88.1%)	Life (99,7%), past (93.5%), future (99.1%), present (84.1%)*, cycle (64.1%), transience (62.6%), flow (82.7%), friendship (99.2%)*
ACTION, STATE in space	Movement (95.2%), stop (57.2%)*, journey (92.9%)	Movement (96.6%), pause (70.6%)*, travel (57.2%)*, play (60.9%)*, journey (96.9%)
LOCUS in time	In the evening (71.1%),	Far from the clock

	in the morning (74.8%), in the afternoon (62.6%)	(64.4%)*, at afternoon (67.7%)
LOCUS in space	On the road (93.5%), on the shore (94.1%)	On a train (96.6%), on a lake (99.2%), under a tree (95.8%)*, on the shore (92.4%)
CHARACTERISTIC of time	Positive (31.7%)* Neutral (28.1%)* Negative (40.2%)*	Positive (70.5%)* Neutral (27.1%)* Negative (2.4%)*
CHARACTERISTICS of space	Positive (52.5%) Neutral (43.6%) Negative (3.9%)*	Positive (53.9%) Neutral (45.9%) Negative (.2%)*

Note that the subjects assessed the characteristics of time and space not by associations but by their personal attitude towards them; in general, the attitude towards all the above associations with time and space can be designated as neutral, negative, and positive. Obviously, it is the characteristics of the musical album that are positively colored for the subjects, while the novel as a whole is neutral and partially negative, especially when it comes to associations with time.

Time as a verbal indicator (prospective identity)

An important psychological view clearly reflected in " The Old Man and the Child " is the value of being in a situation "here and now". The meeting of past (old age) and future (childhood) occurs in the present. According to Marcotte (2001), it is here that the two contrary points of life cycle intersect.

Assumptions about the presence of temporal "modes" in the structure of "Self" are traditional for psychological studies of personality. Undoubtedly, it has been a central concept within symbolic interactionism since these minal writings of Mead (1934), Cooley (1902), and James (1890). Beginning with the classic works of James, "Self concept" laid not only a relevant idea of self but also the way the individuals assess the possibilities of their development in the future. The research of the last decade has not only continued and developed it but also made it one of the central problem related to the "Self". First of all, this is due to the introduction into active scientific circulation of the concept of "possible self", which reflects not only the predicted future but also the unrealized past. It is not identical with the "ideal self" given by social norms because it contains negative self-characteristics. It also differs from the "desired self" directly determined by human motivations, as it includes a reflection of moments of involuntary self-development.

Today, the traditional problem of "time of self-concept" in its motivational meaning is increasingly realized through the study of so-called prospective identity. It

contains those identification characteristics of the individual that are related to the future (Nezlek et al., 2007). Prospective identity is understood as an image of "Self-in-the-future", which includes the future personal and social identity of the subject. In essence, this is the actualization of one of the "possible self", taken from the social environment. Continuity, presented as the unity and integrity of human existence in the process of time, reflects the temporal nature of identity. The individual develops his or her self-theory to assist in the maintenance of a favorable pleasure-pain balance, assimilate the data of experience, and maintain self-esteem. The described criterion of identity is provided by the process of transformation of any changes that occur with human and in human, into a continuous, consistent integrity (Zinn et al., 2020). As a result, conceptions of the future self transform intertemporal choice.

Returning to the results of our empirical study, we note that the key actors who, according to respondents, reflect the temporal nature of identity are old man, child, mother, grandmother. They are the main characters of the novel and music album which differ primarily in age. Instead, the objects aimed at making the reader (listener) better imagine the time perspectives of the works are clock, time, sand, bell, eternity, lighthouse, information, and doll. Characters in their environment perform certain actions which in the temporal component are expressed by words and phrases such as life, death, cycle, transience, flow, anticipation, choice, and change. The time locus reflects such characteristics as – in the evening, in the morning, in the afternoon. In general, the temporal component of identity is represented in the novel by 26 words and phrases and in the music album by 18.

In the dialogues, there is a communicative interaction between the characters; the lyrics and illustrations reflect the key points of G. Roy's story - "movement", "journey", "plain," lake" ,"intergenerational interaction", "reflection". The autobiographical narrative is emphasized by music using exclusively acoustic instruments. D. Lavoie said that he wanted to reflect the simplicity of the text through music, "The idea was to illustrate the tale with music in a fun, playful and bright form [...] I wanted it to be quite acoustic, close to folk".

A time paradox is an apparent contradiction which is basically associated with the idea of time travel. Confronting / combining childhood with old age is a key aspect of the paradoxical concept of time reflected in the novel, and especially in "The Old Man and the Child" (Gilbert, 1993). Thus, opposites that can neither agree nor cancel each other are united in a paradox in which they can coexist simultaneously. Indeed, through the characters of Christine and Saint-Hilaire, G. Roy illustrates the paradoxical course of time. It occurs in the form of pauses and jerks as well as in a circular motion where opposites combine. Hence, childhood and old age, the two extreme poles of life, meet and merge into one point at a given point in time ("temporalité et paradoxe", Fortier, 2002). When Christine asks Monsieur Saint-Hilaire what the distant coats of Winnipeg Lake are –

"Its end or its beginning?", the old man replies, "The end, the beginning? You ask a strange question! The end, the beginning ... What if it was the same thing! ... Maybe everything ends in a big circle, in which the end and the beginning converge" (La fin, le commencement? Tu

en poses de ces questions! La fin, le commencement... Et si c'était la même chose au fond! Peut-être que tout arrive à former un grand cercle, la fin et le recommencement se rejoignant).

Indeed, while people tend to be linear and relentless over time, it seems that children and the elderly belong to another time or even sometimes go beyond it. Just because they do not have time does not mean they have to hurry but rather that time does not belong to them. The subtle boundary that separates life from death or being from non-existence, when time is nearing its end or just beginning its countdown, should be abstracted from it and lived, albeit for a moment, in a realm that does not belong to eternity. Traveling with Monsieur Saint-Hilaire, Christine asks herself a question that for us is key in this story, "What does it mean to live life?" answering himself: "It is to rediscover the joy of childhood at a time when you are on the verge of death." Such a concise description of a child's life is strikingly similar to the definition of an autobiography or any work based on autobiographical inspiration, the purpose of which is to find and resurrect lost time through memories of childhood and adolescence.

In «The Old Man and the Child», the phrase «rediscovered time» (*temps retrouvé*) is found several time. In the whole novel, it is found much more often, i.e. it is important in the intergenerational interaction of grandmother Christine, her mother Evelyn, actually Christine and Monsieur Saint-Hilaire. This is not a real past that can be resurrected by awakening memories, but it is an idyllic place that belongs to a completely different time or, more likely, a place that is beyond time and more controlled by imagination than memory. While the traditional autobiography deals with the «I» itself and tries to recreate an individual and unique past, *The Road Past Altamont* is a language from «we», which combines several «I»; it is essentially a polyphonic story in which several voices complement each other to reach agreement in the multiple but, nevertheless, single perspective of personal identity.

Another important psychological aspect revealed by G. Roy in «The Old Man and the Child» is memory selectiveness. People remember events that had a strong emotional impact, but subsequent life circumstances in one way or another affect the change in the view of them, as they will be retold in a few years. In telling her story, Christine uses words such as «peutetre», «je pense», «je crois», «j'imagine», «je suppose», «il me semble», which emphasize her uncertainty in her memories – "maybe it was so…", ie by telling others a story, we control the story (keep control of our past), consciously or unconsciously omitting certain details that seem insignificant or vice versa - traumatic, emotionally stressed, which are difficult to talk about and therefore easier to create a new narrative where the keyword will be «probably».

The linear movement from childhood to old age is illustrated by the change of seasons during the four stories. The action of the first takes place during «beautiful autumn» (le bel automne), which ends with the first snowstorm of winter, the second – in the middle of hot summer, and the third – in late spring, early summer, before the heat, the fourth – in autumn. Winter is present in the novel by its absence. Grandmother Christine died in the winter, but in the second story, this fact is only

mentioned; the death of grandmother is an expected event but one that requires understanding. Christine, experiencing grief, asks herself the question: «What does it mean to expect death?» Unable to ask her grandmother, she asks her mother and Saint-Hilaire, while seeking her own answers, comparing death to the onset of winter. Christine has a reoccurring vision of her dead grandmother that brings her to feel fully the impact of her loss (Carr, 2001). The older narrator tells us that as a young girl, she has not yet known the meaning of death. She had only experienced it as «une absence,» as «une disparition.

Consolation can be seen as occupying the middle and concluding stages of what is now called grief work or it can be seen as a distinct approach to mourning. It is thus necessary to keep in mind three somewhat overlapping levels. Firstly, within the fiction, Christine and the other characters seek consolation for the losses and separations they experience. Secondly, by recasting the separations of her youth into fiction, Roy herself seeks consolation for the stresses her family life caused and continued to cause her, even as she wrote; her letters and essays can give further insight into this personal search for consolation that in turn is reflected in the kinds of consolation she proposed for her characters in her fiction. Finally, readers of the novel may not come to it seeking consolation, but if they enter into its spirit, they will be forced to grapple with issues of loss and the quest for relief.

Christine has a reoccurring vision of her dead grandmother that brings her to feel fully the impact of her loss. Christine recounts her visits to the little grove of trees near her home where she recalled «le visage dur come pierre» of her grandmother in the open coffin. At that point she maintains that she did not yet understand that death awaited every human, «nous tous». Later with Monsieur Saint-Hilaire, she visualizes her grandmother not as dead but busily sewing, and the main character experiences her grandmother's death as an abandonment. Her death is not just an absence but a diminishment. When she finally realizes the universality and finality of death, «la verite de la vieillesse et quoi elle mene», she is struck by a generalized sadness, «un chagrin,» that leaves even the beauties of nature «ternes et comme delaissees".

However, this knowledge is only the first stage of a greater insight. At the opening stage, not yet knowing «what death is», Christine first sees a cross on her grandmother's grave. In the second story, the girl associates death with a coffin because she often mentions her grandmother lying in a coffin. The view of Lake Winnipeg in the company of Mr. Saint-Hilaire, memories of his grandmother, raises her questions about the meaning, origin and finality of life. Deciding to leave home and acting against her mother's will for the first time, Christine makes a new conclusion: «This morning I left the known world and entered a new one» (p. 167). Forced to choose between fidelity to her mother and herself, Christine sets the priority: «something must die to make room for the new» (p. 165). She understands that despite her young age (11 years), death has already affected her. In a hurry to get away from the «horribly gray» and «dead end» existence, there is the desire to return and come back with a new experience or in the memory of future generations.

Space as a verbal indicator (space-symbolized personal identity)

Peculiarities of personality identification are considered by the representatives of symbolic interactionism in close combination with the processes of symbolization. Symbol is something that stands for or suggests something else by reason of relationship, association, convention, or accidental resemblance, especially a visible sign of something invisible (Olderr, 2012). Zhayvoronok (2004) notes, "Through feelings and modal relations, man is closely connected with nature (environment) and the world in the broadest sense of the word. At the same time, the world for her appears in two dimensions - real (external) and unreal (internal)… ". It is significant that the bearers of the corresponding symbolic categories are mostly the names not of abstract concepts but of the realities that always accompany a person (Kononenko, 2001). Man's cognition of the world begins with sensory contact with the world, with a «living gaze.» «Living contemplation» implies the sensory reflection of reality in such forms as sensation, perception, and imagination. All these forms, as well as cognition in general, are mediated and conditioned by practice (Olderr, 201).

In the works of G. Roy, geographical landscape symbolizes a certain age of human life. So, in the novel, the plain is a metaphor of childhood, and it is not just a geographical concept, but through memories, it reflects a sense of belonging to a cultural community, Christine's social identity. Her return to the plains after traveling to the lake (adulthood) and hills (old age) shows reconciliation with their past, which is manifested in the internalization of living space, transformed into a symbolic place, the complexity of which is consistent with the psychological development of the protagonist.

In the novel and in the music album, according to the results of our empirical research, the key subjects that reflect the spatial component of identity are traveler, neighbor, and housewife. Instead, the objects aimed at giving the reader (listener) a better idea of the spatial environment, the place where the actions of the characters occur are train, wagon, lake, sea, plain, water, wheel, clouds, waves, space, territory, and air. Actually, the actions of the characters in the spatial perspective are expressed in words and phrases, such as movement, pause, travel, play, and journey. And the spatial locus reflects such characteristics as on a train, on a lake, under a tree, on the shore. In general, the temporal spatial component of identity is represented in the novel – 12 words and phrases and in the music album – 23.

Landscape, or rather geographical contrasts, such as hills and plains, are used to describe protagonists such as Christine or her mother in the book. The journey made by two women to the hills of Altamont is characterized by wanderings, adventures and self-search. Landscapes and characters merge because G. Roy abstracts from real geography and reduces the personality's temporality: past, present and future, old age and youth, departure and return. Then each form of landscape is identified. The road to Altamont very clearly illustrates the fusion of character and landscape with metaphors such as «huge desires» («vastes désirs»), «mysterious sky» («ciel énigmatique»), «waiting space» («espaces en attente»), «Mirage» («bien dans ses mirages»). In «La route d'Altamont», the geographical landscape is gradually

transformed into an indefinite universal space – a stage for the unfolding of life stories.

Importantly, the following three characters are presented differently in the novel and the music album: «plain» (zone of comfort and discomfort at the same time, the desire to change residence and fear of change), «lake» (something new, unknown, related to adventures), and «hills» (not listed in the children's album, as they characterize the socio-philosophical aspect of the finiteness of life, the discovery of another world «over there»).

The life of Christine and her mother unfolds among the endless Manitoba prairies, vividly described in D. Lavoie' song «Jours de plaine» («Days on the Plain»). It is noteworthy that the characteristics of everyday life of G. Roy and D. Lavoie in Manitoba almost overlap ("Y'a des jours de plaine où dans les nuages on voit la mer, Y'a des soirs de plaine où on se sent seul sur la terre" - "Days of the plain, when in the clouds you can see the sea, Evenings of the plain, when you feel yourself the only person on earth»), and therefore, the reader can clearly imagine how the heroes of the novel feel, what their everyday lives are. Christine asked: "Connaissez-vous les petites routes rectilignes, inflexibles, qui sillonnent la prairie canadienne [?]" et enchaîne : "Je vous le dis, ces routes composent comme une sorte de vaste jeu troublant" ("Do you know the small straight, inflexible roads which crisscross the Canadian prairie [?]" And continues: "I tell you, these roads form a sort of vast, disturbing game»).

The plain is a symbol of anticipation, an eager desire to receive news from afar. It is on the plain that Christine first ponders existential questions: "What is movement?, "What is death?", "Will a person live in the memory of others after his death?"… It is fatigue from the plain that motivates a girl not to wait passively, but to meet a new one. Just like D. Lavoie, he left Manitoba to discover the world outside of it, wrote the song «J'ai quitté mon île» («J'ai quitté mon île», matin vous verrez les voiles de mon voilier» – «I left my island, I left it quietly, without songs and tears. One fine morning you will see the sails of my ship going out to sea»). In the work of D. Lavoie, there are concepts «island» (île) («the village of Danry, where he spent his childhood» and «sea» (as opposed to the hot plain, but just as large). For G. Roy, similar concepts are «street» (rue) and «lake» (lac). If the first is presented more in her previous novel «Rue Deschambault», where the main character is the same girl Christine, the second is symbolized in the story «The Old Man and the Child» as well as vividly illustrated by a music album. There was an idea that lakes are sacred places where the gods live, femininity, purification and healing, as well as the source of life in general. In addition, water is always associated with the relationship between deep and superficial, external, and internal. For Christine, the lake becomes a symbol of insights, answers to important questions for her, and finally, understanding the issues of aging, death, memories and life history. The music album pays a lot of attention to preparing for a trip to the lake, the road to it and your own stay on the shore. The authors emphasized that the search for answers to complex existential questions requires long preparation. At the same time, it is needed to be alone and share their

thoughts with the significant Other. Hence, autobiographical narrative is impossible in a hurry, as it takes time to comprehend and reproduce.

The symbol of «hills» (collines) is presented in the novel *The Road Past Altamont*, but it is not covered in the music album, probably because of its focus on children. Although, as noted by the authors and the sample of the study, the album is very close to the story. In such a way, it is accepted by all age categories. Returning to the symbolism of the hills, we note that in general the mountain, the hill, and the top of the mountain are associated with the idea of meditation, spiritual elevation, and transcendence (Renée, 1998).

Another concept-symbol of the novel and the music album is «road» (route). The formation of his or her identity is impossible without the gradual advancement of his or her life; it is the symbol of the road that allows the reflection of their own experience on the plain, lake, and hill. Referring again to the work of the musical album «The Old Man and the Child», we define a notable song that the composer includes to the list − «O route la route mène». It clearly describes the movement of a resident of the Manitoba prairies to their own peaks (including career). This movement is based on self-confidence and significant Others («Je me laisse aller, Où la route mène», - «I allow myself to go where the road leads»). It is important to allow yourself to go on a journey, to take the first step from one comfort zone in search of another but unknown.

Another concept-symbol of the novel is the horizon. It is a horizon that represents the future, a set of opportunities which are poorly understood and often turn to be utopian. It is a kind of universal ideal state that one person can never achieve completely. As an adult, Christine remembers: «How many times as a child I tried to get to him! You always think that you are about to reach the horizon, but as soon as you approach it, it will move away from you by a certain distance. With age, we become sad and aware that there is something that pushes us to move forward, even if the ideal horizon is never reached by us" (Franzen, 1996). Hence, the novel introduces the paradox that makes the reader give pause and challenge mind.

To look beyond the horizon, Christine since childhood has repeatedly tried to rise above her fulcrum which each time as if was shifted further. This attempt to change perspective by raising the bar is necessary for people who have decided to make a profound psychological development in their personality. Christine, as a child, demonstrates this existential need by repeatedly substituting the concepts of «attitude» (habit) and «altitude» (height). Here the fusion of space-time, plain and height becomes very specific. It includes self-development and self-improvement as well as self-realization that is the search for an authentic «Self» which is impossible without changing the usual to the unknown. The constant contrast between horizontality and verticality in the work of G. Roy implies a dichotomy of immobility and motion. Infinite horizontal space expresses the forced expectation, the desire for change which Christine calls «boring». However, if in some cases it can be reconciled, then the boring motive becomes the key that motivates girl's departure. It is notable that the concept of boring is also presented in a music album because it is the cause that fascinated journey to Lake Winnipeg.

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The process of formation of personal identity is not simple. This fact is demonstrated by the following episode: "the plain, flat and submissive, seemed to have risen, cracks and blurred cracks appeared at the beginning; then from it grew elevations, which gained height, surrounding me on all sides, as if, freed from its heavy silence, my familiar world began to move» (p. 191). A similar thing happens with the lake in the story «The Old Man and the Child». Lake Winnipeg –Christine and Monsieur Saint-Hilaire trip purpose – first appears as a real geographical formation. Then, over time, it loses this role, and like the plains, it turns into an indefinite mass, into an interior landscape that embodies changes in personality: «... waking up, I was infinitely surprised to find myself on the sand next to this a horrible dark mass, which a few steps away from us shook and growled deafly ...» (p. 146-147). Again, the image of the landscape acquires a dual function: first, the reflection of the inner state of the main character – the child; then, a symbol of the inevitable entry into a new world, a reality never known before which is symbolized by the play of light and darkness on the water mirror. The expression «immensely surprised» (immensément étonnée) here marks the gradual erasure of characteristic landscape contours. Like the prairies, the lake is always presented by Christine as space itself: mysterious and meaningless: «This mysterious lake, at the same time changeable and calm, like the sea, is a real symbol of human life, also full of great mysteries: birth, death» (p. 197). The impossible task of defining its boundaries raises the question of beginning and end. Obscurely, the beginning and ending of the lake symbolize the unfolding of life in a circular shape: «If it were the same! ... Maybe everything eventually forms a big circle, the end and the beginning are connected together» (p. 121). And again, in addition to the characters of the old man and the child, a universal vision of time and space, a cyclical way of life and death in terms of departure and return is formed.

Conclusion

The novel *The Road Past Altamont* is an autobiographical narrative which emphasizes impossibility of being authentic. Hence, this life story tells the readers that one is unable to have a formed personal identity and the ability to effectively overcome crises without accepting their own life experiences, understanding key events and their emotional recycling. At any age, a person has his or her own life narrative that is conscious and, therefore, controlled; hence, the formed personal identity is not least in maintaining control over their past. Personal identity can hardly be acquired without making the choice of individual freedom as well as without finding one's place in a changing and unpredictable world. The instability of the world encourages freedom of choice, taking responsibility for their actions.

In essence, both the novel and the music album are varieties of telling the same story in different ways (text and a combination of text and music). Hence, our analysis of variation begins by noting that two or more linguistic forms are "different ways of saying the same thing," (Schilling, 2013). However, if the content as a whole

in these works is similar, then from the perspective of personality psychology, they emphasize different components of identity – temporal or spatial.

The main character G. Roy demonstrates reflexivity through the image of her as "the author of the narrative" and as "his witness". Hence, one of the means of overcoming the identity crisis is reflexivity.

Ananiev (1968) emphasized that the individual is a «contemporary» of his own epoch, pointing to its specific historical character. Faced with problems, uncertainty, and stress, a person is able to «rise» above the situation, look at himself and herself as if from the side, constructing its model; in fact, it is reflexivity that allows a person to master their way of life, development as well as improve the subjective position in social relations. The differentiated approach to the definition of reflexivity offers three forms: 1) introspection associated with a focus on their own condition and experiences; 2) systemic reflection, i.e. self-distancing, looking at oneself from the side which allows both the subject and the object poles to be covered; 3) quasi-reflection aimed at an object that does not relate to the actual life situation. The transformation of identity in the modern world can be understood only in terms of constructing the «Self» as a reflective project - the implementation of a holistic, biographical story, which is constantly adjusted in the multivariate context of choice. In this case, the achievement of identity is understood as the development of the trajectory of «Self», which becomes perhaps the most important life task of the socialized individual. Thus, the novel is more focused on revealing the temporal aspect of personal identity, and the musical album is more focused on the spatial one.

Music album has been recommended for study in elementary school in Canada and France since the next school year. Note that the symbolization of experiences, the expression of identity not in words but in symbols, is not new to G. Roy. So, in the story «Un jardin au bout du monde» Marta, an emigrant from Ukraine, answering the question of who she is in Canada, said "I will never be able to express my feelings in words, and therefore keep them in the most secret corners of my soul". She conveyed herself non-verbally in creating a flower garden that symbolizes her personality, which she has no opportunity to realize. And in the album "The Old Man and the Child", most of the experiences are symbolically expressed by music, which helps the characters to reveal their life stories, and listeners – to better understand them.

The formation of personal identity always occurs in the social context. At first glance, it seems that the story of Christine in "The Old Man and the Child" lacks key figures in her environment, which significantly influenced the formation of her worldview. However, as noted by Fortier, this aspect is given enough attention in the previous novel *Street of Riches* by G. Roy. In *The Road Past Altamont*, brothers, sisters, uncles, aunts, cousins, neighbors, and friends are absent. The novel is so focused on Christine that even close family members do not play a special role in it. So the author completely ignores the identity of the father who, however, played an important role in the girl's life in the novel *Street of Riches*. Moreover, less attention is paid to the figure of Christine's mother, thus limiting the range of communication between the girl's grandmother (not for long) and Monsieur Saint-Hilaire (too long). We note that this moment is vividly depicted in the film, where both Christine and

Saint-Hilaire are shown as persons without their own stories. The interpretation of the social context of Christine's life in the music album is even more interesting: owing to the voices of different singers (also of different ages), the listener can imagine that the girl's personality was formed not only in communication with her mother and elderly neighbor in interaction with dad, cousins, and friends. This aspect is an indication that the music album "The Old Man and the Child" has not only its own musical value but also a strong psychological content, thus transforming it from "childish" to an album for people from 3 to 103 years.

References

Жайворонок В. Етнолінгвістика в колі суміжних наук. *Мовознавство.* 2004. № 5-6. С. 23-25.

Кононенко В. Символи української мови. 2-ге вид, доп. і перероб. Івано-Франківськ : Прикарпат. нац. ун-т ім. В. Стефаника, 2013. 439 с.

Кутковая Е. С. Нарратив в исследовании идентичности. *Национальный психологический журнал.* 2014. № 4(16). С. 23-33.

Boucher, J.-P. (1990) Recueil et voyage: La Route d'Altamont de Gabrielle Roy. *Revue Littératures Université McGill, 6,* 39-57.

Carr, T. M. (2001). Separation, Mourning, and Consolation in La Route d'Altamont. *French Language and Literature Papers*, *19,* 97-112.

Fortier, D. (2002). L'écriture comme paradoxe: étude de l'oeuvre de Gabrielle Roy.

Franzen, P. (1996). Margaret Laurence et Gabrielle Roy: un pays, deux mondes?. *Cahiers franco-canadiens de l'Ouest*, *8*(2), 239-270.

Gilbert, P. R. (1993). All Roads Pass Through Jubilee: Gabrielle Roy's La Route d'Altamont and Alice Munro's Lives of Girls and Women. *Colby Quarterly*, *29*(2), 136-148.

Henerson, M.E., Morris, L.L. & Fitz-Gibbon, C.T. (1987). How to Measure Attitudes. Newbury Park: SAGE Publications

Marcotte, S. (2001). Correspondance, autobiographie et journal personnel chez Gabrielle Roy. *Quebec Studies*, *31*, 76-96.

Nezlek, J. B., Schütz, A., & Sellin, I. (2007). Self-presentational success in daily social interaction. *Self and Identity*, *6*(4), 361-379. https://psycnet.apa.org/doi/10.1080/15298860600979997

Olderr, S. (2012). *Symbolism: a comprehensive dictionary*. McFarland.

Renée, L. (1998) Espace et asservissement dans La route d'Altamont de Gabrielle Roy. *Cahiers franco-canadiens de l'Ouest*, *2*, 271-280.

Roy, G. (1970). La route d'Altamont. *Mosaic: A Journal for the Interdisciplinary Study of Literature*, *3*(3), 133-138.

Schilling, N. (2013). Surveys and interviews. In Podesva, R. J. & Sharma, D., (Eds.). Research Methods in Linguistics. (pp. 96-115). Cambridge: Cambridge University Press.

Thomas, J. A. (2014). *Meaning in Interaction: An Introduction to Pragmatics*. Routledge.

Zinn, M. E., Huntley, E. D., & Keating, D. P. (2020). Resilience in adolescence: prospective Self moderates the association of early life adversity with externalizing problems. *Journal of Adolescence*, *81*, 61-72. https://doi.org/10.1016/j.adolescence.2020.04.004

References (translated and transliterated)

Zhayvoronok, V. V. (2004) Etnolinhvistyka v koli sumizhnykh nauk. *Movoznavstvo*, 5–6, 23-35.

Kononenko, V. I. (2013) Symvoly ukrayins′koyi movy. Ivano-Frankivs′k: Vasyl Stefanyk Pre-Carpathian National University.

Kutkovaya, K. S. (2014). Narrativ v issledovanii identichnosti. *Natsional'nyy Psikhologicheskiy Zhurnal*, 4(16), 23-33.

Boucher, J.-P. (1990) Recueil et voyage: La Route d'Altamont de Gabrielle Roy. *Revue Littératures Université McGill, 6,* 39-57.

Carr, T. M. (2001). Separation, Mourning, and Consolation in La Route d'Altamont. *French Language and Literature Papers*, *19,* 97-112.

Fortier, D. (2002). L'écriture comme paradoxe: étude de l'oeuvre de Gabrielle Roy.

Franzen, P. (1996). Margaret Laurence et Gabrielle Roy: un pays, deux mondes?. *Cahiers franco-canadiens de l'Ouest*, *8*(2), 239-270.

Gilbert, P. R. (1993). All Roads Pass Through Jubilee: Gabrielle Roy's La Route d'Altamont and Alice Munro's Lives of Girls and Women. *Colby Quarterly*, *29*(2), 136-148.

Henerson, M.E., Morris, L.L. & Fitz-Gibbon, C.T. (1987). How to Measure Attitudes. Newbury Park: SAGE Publications

Marcotte, S. (2001). Correspondance, autobiographie et journal personnel chez Gabrielle Roy. *Quebec Studies*, *31*, 76-96.

Nezlek, J. B., Schütz, A., & Sellin, I. (2007). Self-presentational success in daily social interaction. *Self and Identity*, *6*(4), 361-379. https://psycnet.apa.org/doi/10.1080/15298860600979997

Olderr, S. (2012). *Symbolism: a comprehensive dictionary*. McFarland.

Renée, L. (1998) Espace et asservissement dans La route d'Altamont de Gabrielle Roy. *Cahiers franco-canadiens de l'Ouest*, *2*, 271-280.

Roy, G. (1970). La route d'Altamont. *Mosaic: A Journal for the Interdisciplinary Study of Literature*, *3*(3), 133-138.

Schilling, N. (2013). Surveys and interviews. In Podesva, R. J. & Sharma, D., (Eds.). Research Methods in Linguistics. (pp. 96-115). Cambridge: Cambridge University Press.

Thomas, J. A. (2014). *Meaning in Interaction: An Introduction to Pragmatics*. Routledge.

Zinn, M. E., Huntley, E. D., & Keating, D. P. (2020). Resilience in adolescence: prospective Self moderates the association of early life adversity with externalizing problems. *Journal of Adolescence*, *81*, 61-72. https://doi.org/10.1016/j.adolescence.2020.04.004

A CONTRASTIVE PSYCHOLINGUISTIC STUDY OF THE BRITISH EMOTIONAL CONCEPT *'ENVY'* AND UKRAINIAN *'ZAZDRIST* ¹*'*: PARTICULARITIES OF PHRASEOLOGICAL OBJECTIFICATION

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Abstract. The article focuses on exploring the phraseological objectification of the "sinful" emotional concepts Brit. ENVY and Ukr. ЗАЗДРІСТЬ in the remotely related lingual cultures (British and Ukrainian). To identify common and distinctive senses of these concepts (1) the range of the concepts that closely correlate to the discussed emotional concepts was defined and (2) the system of conceptual metaphors representing these concepts was revealed. The material involves 253 phraseological units (PUs) that denote envy in the English language and 309 PUs in Ukrainian. The material is selected from authoritative explanatory, bilingual and phraseological dictionaries. The contrastive research of the concepts ENVY & ЗАЗДРІСТЬ that correlate with other ethical and emotional concepts (e.g.: GRATITUDE, KINDNESS, VIRTUE, HONOUR) makes it possible to speak about the concurrence of fundamental moral values and attitudes in Christian cultures. Moreover, the concepts ENVY & ЗАЗДРІСТЬ figure prominently in the hierarchy of values ("white" envy) vs. disvalues ("black" envy) of the contrasted lingual cultures. The conceptual metaphors provide the concept ENVY with the meanings that are considered to be specific for the lingual culture under study. Our findings show that despite the universal character of envy both as an emotion and a feeling, it is permanently affected by ethnic and socio-cultural factors that provide the concepts ENVY & ЗАЗДРІСТЬ with specific lingual cultural meanings. It is noteworthy that the study of the PUs can reveal only the traditional (fixed) understanding of envy. Therefore, to detect the changes in the modern priorities of the British and Ukrainians, it is necessary for prospective research to compare the results of

the language material (lexicographic and phraseographic resources) with the results of analysis of actual language data, i.e. psycholinguistic experiments, sociolinguistic monitoring, language corpora.

Keywords: emotion, lingual cultural concept, conceptual metaphor, phraseological objectification.

Мізін Костянтин, Славова Людмила, Петров Олександр. Британський емоційний концепт ENVY та український ЗАЗДРІСТЬ у зіставному аспекті: особливості фразеологічної об'єктивації.

Анотація. Пропонована стаття присвячена аналізу фразеологічної об'єктивації "гріховних" концептів брит. ENVY та укр. ЗАЗДРІСТЬ у віддаленоспоріднених лінгвокультурах (британській та українській). Із метою виявлення спільних і відмінних смислів цих концептів (1) установлено коло їхніх концептів-корелятів та (2) визначено систему концептних метафор, які репрезентують досліджувані емоційні концепти. Фактичним матеріалом слугували 253 ФО на позначення заздрості в англійській та 309 ФО в українській мовах. Вибірка матеріалу здійснена з авторитетних тлумачних, двомовних і фразеологічних словників. Зіставне вивчення кореляції концептів ENVY і ЗАЗДРІСТЬ з іншими етико-емоційними концептами (напр., ВДЯЧНІСТЬ, ДОБРОЗИЧЛИВІСТЬ, ДОБРОЧЕСНІСТЬ, ЧЕСТЬ) дає змогу стверджувати про збіг у християнських культурах базових моральних цінностей і настанов, а також про те, що концепт ЗАЗДРІСТЬ займає чільне місце в ієрархії цінностей ("біла" заздрість) vs. антицінностей ("чорна" заздрість) зіставлюваних мовних етносів. Установлено, що, незважаючи на універсальність заздрості як емоції і почуття, на неї перманентно впливають етно- та соціокультурні чинники, які наповнюють концепти ENVY і ЗАЗДРІСТЬ специфічними для зіставлюваних лінгвокультур смислами. Прикметно, що вивчення ФО може спряти розкриттю лише традиційних (усталених) уявлень про заздрість. Тому для виявлення змін у сучасних пріоритетах британців і українців потрібно у перспективі порівняти результати аналізу мовного матеріалу (лексикографічні та фразеографічні джерела) з результатами аналізу мовленнєвих (актуальних) даних (психолінгвістичні експерименти, соціолінгвістичні моніторинги, мовні корпуси тощо).

Ключові слова: емоція, лінгвокультурний концепт, концептна метафора, фразеологічна об'єктивація.

Introduction

From the very beginning of its sociologization, people have been permanently struggling with their weaknesses – pride, greed (stinginess), lust (profligacy), anger, gluttony, envy (jealousy) and laziness. Christianity defines these weaknesses as cardinal sins, so long as they are the most dangerous and tempting for a man on the way to God. Therefore, human sins have ceased to be exceptionally theological or philosophical problems. At present, when interdisciplinary approach to a human basic nature is being applied on a large scale, human "sinful" weaknesses are in the focus of researchers in psychological, sociological sciences and cultural anthropology (see, e.g.: Breslav, 2004; Bucher, 2012; Dyson, 2006; Epstein, 2003; Foster, 1972; Lindholm, 2008).

Psychologists focus on the emotional nature of human sins since almost all of them were once formed as emotions caused by survival instincts that ensured the adaptation of an individual in a team, contributed to his / her survival in the harshest conditions of collective co-operation and did not let the inner "I" disappear. It means that "sinful" emotions were unique regulators of social relations throughout the history of human development being an individual's reaction to the external, mainly

"hostile" world. At the same time, not only "their" groups of one or different societies can be perceived as "hostile", but also "our" groups (relatives / close people) because there is a sharp competition within them (see, e.g.: Smith, 1991; Van de Ven, 2009; Van de Ven et al., 2009).

In the process of sociologization, "sinful" emotions have turned into corresponding human qualities or character traits, which in European linguo-cultures have the axiological labelling that ranges from "very negative" to "neutral" or even "positive" in spite of the common Christian heritage. At the same time, the degree of negativity a human society endows human vices with is determined by those value orientations and priorities that are dominant at a certain stage of the society development. For instance, nowadays the Germans perceive stinginess more positively than the British, Ukrainians or Russians, and greediness is not such a great evil for practical Americans (see, e.g.: Mizin & Petrov, 2017).

The peculiarities of the cardinal sins perception by various linguo-cultures caught the scientists' attention with the spread of Cognitive Linguistics, where much attention is paid to the analysis of emotional concepts (see, e.g.: Kövecses, 1990; Mizin & Letiucha, 2019; Mizin & Ovsiienko, 2020; Oster, 2012; Panasenko, 2012; Schwarz-Friesel, 2015; Soriano, 2015; Wierzbicka, 1992), and of "sinful" ones, in particular (see, e.g.: Matiová, 2019; Ogarkova, 2007). In its turn, Cognitive Linguistics has become a basis for the development of a wide range of culturally-oriented linguistic disciplines. Here, first of all, Cultural Linguistics and its post-Soviet version – Linguoculturology should be mentioned, for which the study of "sinful" emotional concepts is of a great interest (see, e.g.: Malahova, 2011; Mizin, 2018; Serhiyenko, 2015; Wilson & Lewandowska-Tomaszczyk, 2017).

Within Linguoculturology a new post-Soviet "autochthonous" discipline – Contrastive Linguoculturology has received development over a couple of decades (Drobakha, 2019, p. 294; Mizin & Ovsiienko, 2020, p. 144–145). Its appearance has purely methodological reasons: a part of linguoculturologists realized the scientific unreliability of results and conclusions of monolingual linguoculturological studies, because statements about linguistic and cultural peculiarities of a certain linguo-culture are considered more valid if the latter is being compared with other ones.

The basic epistemological unit in Contrastive Linguoculturology is a complex mental construct – a linguo-cultural concept, which is defined as "the main cluster of culture in the human consciousness" (Stepanov, 1997, p. 40). Studying the cardinal sins as linguo-cultural concepts, including the concept ENVY, can help in determining relevant data concerning value orientations and priorities in a certain linguo-society as well as identifying trends towards changes of value priorities in the modern European linguo-cultures, for social and economic processes in Europe nowadays have great impact on people's lives and lead to an increasing inequality in societies, they activate envious attitude towards both a person and a group of people.

The nature of envy has recently been the subject of a heated debate. Some researchers see envy as a complex, yet a unitary construct that, despite being hostile in nature, can lead to both hostile and non-hostile reactions. Others offer a dual approach to envy, in which envy's outcomes reflect two types of envy: benign envy, involving upward motivation, and malicious envy, involving hostility against

superiority of others (Crusius et al., 2020, p. 4). Envy is often understood as an inimical, hostile attitude to other person's success, popularity, moral superiority or dominance. The reasons for the emergence of envy have common grounds: objective and subjective contradictions in the interaction of individuals and society. These contradictions arise in the processes of one's comparing him / herself with others, provoking inflation of one's own merits and hyperbolizing the benefits of another person, which generates intolerance to the success of other people (Lange et al., 2018; Protasi, 2016; Sawada & Fujii, 2016; van de Ven & Zeelenberg, 2015).

Method

The methodology of Contrastive Linguoculturology is now being formed and needs improving as long as it has "inherited" the methodological inconsistences of Linguoculturology where scientifically adequate analytical tools have not yet been developed (Mizin et al., 2019, p. 54). Especially it concerns such an epistemological construct as a concept, because its study requires a large range of research procedures known as "conceptual analysis", which has not been properly defined yet (Mizin & Ovsiienko, 2020, p. 148). The indeterminacy of this notion is primarily due to the fact that the analysis of a linguo-cultural concept requires the use of various methods of traditional linguistics, cognitive linguistics, psycholinguistics, corpus linguistics, and other disciplines. Therefore, conceptual analysis is not a well-defined research procedure, such as definitional, etymological or contextual ones, but it is a comprehensive methodology that covers a range of procedures. To represent a phraseological objectification of linguo-cultural concepts is one of the steps of conceptual analysis.

Culture occupies a prominent place in language studies, for culture and language are inextricably linked. Methodologically relevant in this context is the idea that language, particularly its lexicon, is a reflection of a human conceptual system, which makes it possible to reveal the complex structure of emotional concepts through the analysis of conventionalized linguistic expressions (such as metaphors, metonymies, idioms, clichés, proverbs, collocations, etc.). This structure is studied on four levels: 1) a system of conceptual metonymies associated with the emotional concept, in which the physiological or behavioural effects stand for the emotion; 2) a system of conceptual metaphors associated with the emotional concept; 3) a range of concepts related to the emotional concept; 4) a prototypical cognitive model that works (with certain variations) for all emotions and consists of five phases: Cause (Danger) → Emotion (Fear) → Attempt at Control → Loss of Control → Behavioural Response (Flight) (Kövecses, 1990, p. 41).

The purpose of the given study is to determine the peculiarities of the phraseological objectification of the "sinful" concepts Brit. ENVY and Ukr. ЗАЗДРІСТЬ in the remotely related (British and Ukrainian) linguo-cultures. Due to the limitations concerning the article size, common and distinctive senses of the concepts ENVY & ЗАЗДРІСТЬ are defined on two of four levels, mentioned above, which involves (1) determining the range of the concepts, which closely correlate to

the emotional concepts under study and (2) revealing the system of conceptual metaphors that represent the latter ones.

Defining the features of the phraseological objectification of the concepts Brit. ENVY and Ukr. ЗАЗДРІСТЬ is a methodologically important step that makes it possible to identify changes in the value contents of these concepts, since the PUs represent a certain understanding of envy, which is considered as fixed (traditional) in a definite language, because PUs express very clearly value norms of every linguo-culture (see, e.g: Piirainen, 2012; Piirainen, 2016). The next step, which can be regarded as a perspective study of the concepts under analysis, should include the definition of contemporary meanings of envy on the basis of, for instance, psycholinguistic experiments or language corpora data. The comparative study of phraseological and contemporary meanings can reveal an objective understanding of changes that occur in the minds of the representatives of European linguo-cultures as to the perception of "sinful" concepts, ENVY & ЗАЗДРІСТЬ in particular.

Materials

The material involves 253 PUs that denote envy in the English language and 309 PUs in Ukrainian. The material is selected from authoritative explanatory, bilingual and phraseological dictionaries (Barantsev, 2005; DPUU, 2003; ODEP, 1970; ODP, 2004; PDP, 2000; PDU, 1999; Stone, 2006; Wilkinson, 2002). It is worth emphasizing that the sample is made according to a broad understanding of the scope of phraseology, in conformity with which the nucleus of the latter is formed by completely reconsidered PUs, first of all idioms, and the periphery includes partially reconsidered PUs, in particular paremias. It is remarkable that the correlation between idioms and paremias in our sample is disproportionate, as paremias make 68.3% of English units, and 74.7% of Ukrainian ones. It may be explained in the following way: ENVY is a moral and ethical concept, and values are mostly represented in paremias.

Concerning the notion "British" it should be noted that in contrastive studies it is considered methodologically correct to compare only those lingual units, phenomena and structures, which can be theoretically (i.e. in principle) comparable. It can also be applied to the sample of the actual material: if two European linguo-cultures are compared – the British and Ukrainian – then the sample should be made mainly from dictionaries of the British version of the English language. Otherwise, if a large selection is made, that is using dictionaries, e.g. the Australian and New Zealand versions of the English language, a logical question arises whether European linguo-cultures are really being compared.

Results and Discussion

It was ancient Greeks who began to differentiate between "white" (competitive) and "black" (destructive) envy. However, Christianity did not share this dual approach of the Greeks to envy, as in early Christianity jealousy was considered a significant threat to the life of a believer, as evidenced by its categorical

condemnation in the ancient writings of early Christian authors, the apostles (authors of canonical and apocryphal texts), the apostolic fathers and Christian apologists. They considered envy to be the worst sin and the most destructive passion because enviers punish and torture themselves and they never get rid of this sin. The British closely associate envy with immortality, e.g.: *Envy never dies*; *The envious die, but envy never.*

The exceptional depravity of this emotion is proved by the fact that Pope Gregory the Great (590–604) put the envy in the list of cardinal sins in the third position. But even before that, St. Augustine (354–430), describing life as a creative force, stressed that jealousy is a destructive force, which can be illustrated with the English paremia *Envy feeds on the living.* Cyprian of Cartagena (210–258) proclaimed envy the root of all evil – *radix est malorum omnimum.* Envy was forbidden in ancient moral code, i.e. the Ten Commandments of Moses. The English PU *to break the tenth commandment* is a linguo-culturally illustrative example related to the tenth commandment which means 'to envy'. Euphemism of this PU proves that the British, unlike the Ukrainians tend to hide this human drawback. The correctness of this idea can be proved by the fact that the British are declined to hide their emotions: both negative and positive ones (Kobozeva, 1995; Komova, 2010). That is why, the emotions, particularly the negative ones do not have their lingual denominations in English (Mizin et al., 2019, p. 64).

It is noteworthy that in the Old Testament the concept of envy is hardly ever found and is only seen in such phrases as *an eye envies, an envious eye, worth of envy, black vs. white envy.* On the other hand, in the New Testament there are numerous mentions of envy (or jealousy). Here the evangelical moral doctrine objects to the ancient virtues and competitive spirit indicating that for a Christian any desire to compete is immoral because passion for competition and rivalry provoke envy, strife, slander, and evil suspicions. It is worth mentioning that in British and Ukrainian linguo-cultures it is servants of God who are characterized by extraordinary envy, e.g.: Eng. *No envy like a monk's*; Ukr. *очі як у попа* 'envious eyes' (lit. "eyes like a cassock's").

Meanings of the concept ENVY, motivated by religion as sinful, are absolutely negative in both linguo-cultures. Since the very beginning of Christianity, in different linguo-ethnic groups of the territory of modern Europe, there has been an intensified tendency to conceal all kinds of evil emotions (feeling). Christian understanding of the latter reduced positive meaning of "white" – evolutionary – envy. It is clear that axiological scale of "sinful" concepts, particularly the concept ENVY, is not the same in European linguo-cultures because, first, the latter ones do not have the same level of secularity. Second, the understanding of envy is "affected" by some differences in the worldview of representatives of different linguo-societies that directly influence the ratio of positive and negative meanings of the analysed concept. Thus, the British "island psychology" (see, e.g.: Kobozeva, 1995; Moiseev & Gicheva, 2009) was the basis for a well-known British emotional restraint. The latter is the reason for the restraint of emotional world of the British where the principle of politeness makes them, to some extent, not only hide negative emotions, jealousy in particular, but also

positive ones. While for the Ukrainian linguo-society, especially in the past, a connection between moral and ethical concepts of SIN and SHAME was linguo-culturally significant (Vdovychenko, 2015), which affected the interpretation of envy, e.g.: *Заздрі очі не знають сорому* (lit. "Envious eyes do not know what shame is").

Envy is an emotional reaction generated by social comparison (Alicke, & Zell, 2008; Feather & Nairn, 2005; Vrabel et al., 2018). Accordingly, there is no specific analogue of envy both in the nature and social life, i.e. there are people who experience a feeling of envy. This feeling requires communication involving at least two individuals, and, as the social experience proves, the number of those who participate in the situation generated by envy can grow infinitely because in practice envy turns out to be a socio-psychological phenomenon. Sometimes envy, to an individual or even an entire social group, is a value orientation, social guidance, which can be found in a special type of social behaviour.

Anthropologists and psychologists argue that envy is an anthropological property of people and is closely related to their social life (Kutter, 1998; Schoeck, 2008; Takahashi et al., 2009). Moreover, it is a "basic anthropological category" (Kutter, 1998, p. 71), which emerges in childhood and early adolescence. As human history shows, eliminating envy as an emotion and feeling is practically impossible because this emotion is a part of human genes taking an important part in human evolution as it results from competition for limited resources. It is noteworthy that envy as well as jealousy, love, hate, respect, contempt, compassion, etc. belong to a number of moral feelings that allow people directly, without hesitation, evaluate events ethically and act morally (Vorkachev, 1998, p. 39). Envy, just like jealousy, love and hate, is closely related to a desirative assessment, i.e. a desire to get an item to influence it. Linguo-culturally relevant in this sense is the English PU (8) *smth. gives smb. no rest*, which, besides the semantics of different feelings, jealousy in particular, can mean an obsessive desire, which shows a specific connection between the concepts ENVY and DESIRE in the British linguo-culture.

There is a duality in the assessments of both envy and love: 1) negative (belonging to the seven cardinal sins); 2) positive (envy stimulates to some extent a person's creativity and his / her social activity). That is, on the one hand, envy is strongly condemned together with ambition and vanity by which it is generated in the caste-structured communities (this is the question of incompatibility with the commandments of Christian humility which excludes any need for competition); on the other hand, envy seems to be a constant companion of any egalitarianism and is stimulated by consumption orientation of society. Therefore, in the community, characterized by social mobility, where there is a spirit of competition and a sense of rivalry, envy can be a positive expression of success motivation which was typical of both ancient times and today. Between positive and negative dimensions of envy there is only a thin boundary because a need for competition which could turn into jealousy any time and focus on consuming, i.e. the greed, which is proved by the analysis of the factual material, where many British and Ukrainian PUs show a blurred difference between these emotions, e.g.: Eng. *the devil looking over Lincoln* 'inveterate critic; envious or jealous person'; *Covetousness is always filling a*

bottomless vessel 'envy has big eyes'; *Cast no greedy eye at another man's pie* 'be not envious and greedy'; Ukr. *Що на людях видно, то й собі жадно* 'envy has big eyes' (lit. "One is greedy for the things that others have").

The given examples demonstrate the close interrelation of semantics of envy and jealousy, on the one hand, and of envy and greed, on the other.

The range of the concepts that closely correlate with the concepts ENVY & ЗАЗДРІСТЬ

Most closely the concept ENVY is connected to the concept JEALOUSY because these emotions (moral feelings) are characterized by a dual desire of "to take" and "to keep". These emotions are related so closely that they can be easily used interchangeably. Moreover, by experiencing these emotions a person has the same psychosomatic and physiological processes (increased heartbeat, loss of appetite, intense bile, skin and whites of the eyes yellowing, etc.). Psychosomatic reactions of envy and jealousy largely depend on individual peculiarities of the subject who is experiencing them, and on the particular situation where one of the emotions predominates that accompanies envy and jealousy, including discomfort (anxiety), sorrow (sadness), nuisance (self-torture), hatred and anger (fury, rage) (Petiak, 2020, p. 141).

Particularly unclear is the boundary between the British concepts ENVY and JEALOUSY, e.g.: *the green-eyed monster* 'envy / jealousy'; *wear yellow hose* (*stockings / breeches*) 'be envious or jealous'. Even dictionaries sometimes do not clearly explain what semantics is rendered by English PUs – envy or jealousy, e.g.: *jealous as three Bartelmy dolls in a wicker basket* 'very envious / jealous'. In these cases, it makes sense to interpret PUs linguo-culturologically which includes the inner form demotivation of the latter (Shapran, 2015, p. 130). Finding a cognitive script which formed the basis of the PU's inner form allows us to claim that this PU conveys the semantics of envy: Bartholomew's fair was the main fabric fair in London; it was held annually on August 24 the day on St. Bartholomew's day. Probably the goods at this fair were of high-quality and expensive as the envy of those who did not have such goods to those who could afford such a luxury.

Sometimes etymology- and linguo-culturological analysis does not allow revealing PU's inner form, such as PU *the devil looking over Lincoln* 'inveterate critic; envious / jealous person'. Obviously, this means the devil statue at Lincoln College, Oxford, which was dismounted in 1731. If it is so, the PU mentioned above carries the semantics of envy rather than that of jealousy because this semantics may be based on the assumption that the mentioned devil could envy Lincoln cathedral spire which was higher than 520 feet (ibid., p. 131).

English and Ukrainian native speakers' naive picture of the world consider jealousy to be a companion of love because this feeling makes its positive energy (cf. Eng. PU *keep a jealous eye on* 'to guard jealously, to worry about someone or something') as well as its negative one focus on close, particularly intimate relationships between people, i.e. intimate partners, friends, parents and the like.

Envy has a much wider range of influence, because it concentrates its negative energy on both material and non-material goods. Furthermore, envy can be focused on strangers, when a person envies someone's appearance. Since envy is defined as "jealousy of social comparison" which is understood as a desire for excellence (superiority) in any respect (Salovey & Rodin, 1984, p. 781), this caused the kind of envy that cannot tolerate (hate) any superiority in the British linguo-culture, e.g.: *Envy can abide no excellency*. Nevertheless, envy is a constant companion of any superiority, e.g.: *Envy shoots at the fairest mark*; *Things most excellent are ever most envied.* In this context it is worth mentioning that the English adjective *excellent* can convey semantics of superiority. This is due to the fact that envy grows and rises; it constantly grows along with the growth of claims on heritage – in childhood an object of envy is usually a variety of toys, in adolescence it is clothing, a bicycle or a computer, in high school these include looks, good scores and first love, in adult life it may be a car, a house, a boat or yacht, etc. – and increases along with the career growth.

An oppositional correlate to the concept ENVY in both linguo-cultures is the concept BENEVOLENCE, which is confirmed by the analysis of English and Ukrainian PUs, e.g.: Eng. *Envy is what inclines up to speak evil of the virtuous rather than of the wicked*. Researchers claim that basic moral values and guidelines coincide in Christian cultures: pride is opposed to humility, deception to honesty, anger to forgiveness, greed to generosity, etc. These values are universal so they form the connection in relationships between different nations which unite them. It should be noted that in the British linguo-culture there are two more concepts opposing envy, which are VIRTUE and HONOUR, e.g.: *Envy is the companion of honour*; *Four good mothers beget four bad daughters: great, contempt; truth, hatred; virtue, envy; riches, ignorance.*

The concept ENVY has a close semantic connection virtually with all the "sinful" concepts. The correlation of this concept to the concept ANGER (or MALICE) is illustrative of both linguo-cultures compared, e.g.: Eng. *Envy is what inclines up to speak evil of the virtuous rather than of the wicked*; Ukr. a. *Злий плаче від заздрості, а добрий від жалю* (lit. "An evil person cries because of envy, a good-hearted one cries because of sorrow"); *Залізо іржа з'їдає, а заздрий від злості погибає* (lit. "Iron is destroyed by rust and an envious person dies of anger").

This is related to the fact that envious people bring all sorts of troubles to an object of envy, often wishing them death. In this regard there can be mentioned the English PU-curse, which conveys the state of envious people's hatred for others: *Could drown you in a spoonful of water!* Thomas Aquinas accurately studied reactions of envious people in this type of envy: the envy generates hostility, resentment, malevolence, hatred and slanders. This means that from ancient times to the present day, mankind has interpreted envy as an emotion that is largely associated with evil intentions.

Powerless anger of an envious person (loser) causes great suffering. Such people are hurt when others possess more than them and their main mistake is looking for

the source of their pain in others, not in themselves. Thomas Aquinas considered this kind of envy to be a pathology, feeling surprised that someone can feel pain about what is expected to please. Therefore, ancient Greeks clearly understood how this type of envy "corrodes" the man. It is noteworthy that the correlation between the concept ENVY and the concept SUFFERING is relevant for both Ukrainian and British linguo-cultures, e.g.: Ukr. *стояти кісткою в горлі* 'prevent someone from doing something; make someone feel concerned; make somebody feel envious' (lit. "to stand like a bone in the throat"). Anger, sadness and sorrow of an envious person grows with the happiness of the object of envy, e.g.: Eng. *Envy is the companion of felicity*; Ukr. *Чуже щастя спати не дає* (lit. "Someone's happiness prevents someone from sleeping").

A similar situation can be traced back to the positive concept of "success": the more successful a person is, the more capacities he shows, the more envy it causes, e.g.: Eng. *Envy is the companion of felicity*. It has become normal in modern society to envy those who are successful. If a person is not envied, it can only mean that the person is a hopeless loser to be only sympathized with. The analysis of the material proves the following: in both linguo-societies the concepts ENVY and SUCCESS, and JEALOUSY and PITY have a close semantic relation, e.g.: Eng. a. *It is better when people are jealous of your success than sorry for you*; *Better be envied than pitied*; Ukr. a. *Людям на заздрість, а нам на користь* (lit. "It is better to let people envy and to have one own profit"); *Краще викликати до себе заздрість, ніж жалість* (lit. "It is better to be envied than pitied"). It is British linguo-culture only where envy is related to the concepts that directly correlate with success: PRAISE, CELEBRITY and FLATTERING, e.g.: Eng. a. *Envy is a kind of praise*; *The dog of envy barks at celebrity*; *Envy is the sincerest form of flattering*.

Relevant conceptual metaphors that represent the concepts Brit. ENVY and Ukr. ЗАЗДРІСТЬ

In cross-cultural studies, dedicated to the analysis of emotional concepts, the following common types of concept metaphors are distinguished: 1) EMOTION IS SOMETHING INSIDE THE BODY; 2) EMOTION IS A FORCE (subtypes: a) EMOTION IS AN ANTAGONIST; b) EMOTION IS AN AUTONOMOUS FORCE; c) EMOTION IS AN AUTONOMOUS BEING, THOUGH STILL PART OF THE PERSON); 3) EMOTION IS AN ILLNESS / INSANITY; 4) EMOTION IS AN OBJECT; 5) EMOTION IS A PLACE / A CONTAINER (see, e.g.: Oster, 2010). The analysis of the phraseological material made it possible to single out eight concept metaphors within these subtypes that represent the concepts ENVY and ЗАЗДРІСТЬ: 1) ENVY IS A COMPETITOR; 2) ENVY IS A NEIGHBOUR; 3) ENVY IS AN ENEMY; 4) ENVY IS AN INSATIABLE CREATURE; 5) ENVY IS A WATCHFUL CREATURE; 6) ENVY IS A YELLOW / GREEN-EYED CREATURE; 7) ENVY IS A COMPANION OF THE RICH; 8) ENVY IS A BLIND CREATURE (Table 1).

Table 1

Relevant Conceptual Metaphors That Represent the Concepts ENVY & ЗАЗДРІСТЬ

Metaphor: ENVY IS		English examples	Ukrainian examples
1. AN ANTAGONIST	(1) A COMPETITOR	*One potter envies another;* *The potter envies the potter, the smith the smith*	–
	(2) A NEIGHBOUR	*An envious man grows lean with the fatness of his neighbour*	*Сусід спати не дає – добре живе* (lit. "The neighbor living well, one cannot sleep")
	(3) AN ENEMY	*Envy is the basest of all enemies*	–
	(4) AN INSATIABLE CREATURE	(a) *Envy eats nothing but its own heart*	(a) *заздрість зжирає кого-н.* 'someone is full of envy' (lit. "envy eats someone")
		(b) *An envious man is never content with what he has;* *Envy and covetousness are never satisfied*	(b) *Очі завидющі, руки загребущі* (lit. "Eyes are envious, hands are grabby" (cf. English PU *itching palm* 'greed, gluttony'))
		(c) *A covetous man is like a dog in a wheel – that roasts meat for others;* *Covetous man is good to none but worst to himself;* *Covetousness is always filling a bottomless vessel*	(c) *Що на людях видно, то й собі жадно* (lit. "One is greedy for the things that others have"); *Пес на сіні лежить – сам не їсть і другому не дає* (lit. "The dog lies in the manger but it does not eat and does not let others eat")
	(5) A WATCHFUL CREATURE	(a) *Nothing sharpens the sight like envy;* *Envy has smarting eyes*	(a) *Бачить чуже під лісом, а не бачить свого під носом* (lit. "He, who sees someone's things at a forest, but does not see his own things under his nose")
		(b) –	(b) *очі завидющі* 'someone is very jealous, greedy, insatiable, etc.' (lit. "envious eyes")
		(c) *Another man's food tastes sweeter;* *Grass is always greener on the other side of the fence*	(c) *У чужих руках завше більший шматок* (lit. "A piece is always bigger in someone else's hands"); *Все чуже смачніше* (lit. "The things that belong to others taste better")
2. AN AUTONOMOUS FORCE	(6) A YELLOW / GREEN-EYED CREATURE	(a) *green with envy* 'very envious / jealous'; *green eye* 'envy / jealousy'	(a) *очі мов жовтки* 'of envious eyes' (lit. "eyes like yolk")
		(b) *to look through green glasses* 'to envy'	(b) –
	(7) A COMPANION OF THE RICH	*Nobody is envious of him that is poor or is in trouble;* *Envy does not enter an empty house*	*Заздрість нікого ще не збагатила* (lit. "Envy has never enriched anyone"); *Нехай заздрять гірше, щоб прибуло більше* (lit. "Let them envy, so that you can get your own profit")

3. AN ILLNESS	(8) A BLIND CREATURE	*Envy is blind*	–

Comments on the cognitive basis of the conceptual metaphors mentioned in the table:

ENVY IS A COMPETITOR: Representatives of any ethnic and territorial, social and political, religious groups as well as those who are united by one business, i.e. people close in origin, likeness, age, talent, residence, glory and mansion can feel envious. "Competitive" envy that arises on ethnic, religious, professional, social and caste, and the like bases can provoke those who envy to reject the very foundations of society. Out of fear they envy those who are close to them and for this reason some ideas cannot be implemented, discoveries are hampered. So envy takes a deterrent function in an individual's development. An individual who is envious realizing the impossibility to compete with or prevail over a rival concentrates on their own flaws feeling depressed, humiliated, helpless and hopeless. To "relieve" this humiliation the individual does not improve himself but seeks to humiliate the opponent resorting to malicious slander, gossip, success distortion, impairing or even ignoring his merits which prove the stagnation in the development of his personality. The analysis of phraseological material makes it possible to trace linguo-cultural contrast of meaning content in the concepts Brit. ENVY and Ukr. ЗАЗДРІСТЬ as only in the British linguo-society the conceptual metaphor ENVY IS A COMPETITOR is commonly found, represented by the cognitive feature "envy among peers" (Table 1, row 1(1)).

ENVY IS A NEIGHBOUR: Native speakers' language consciousness in the compared languages quite clearly demonstrates a so-called "social envy proximity phenomenon" (Schoeck, 2008, p. 40). It concerns the closeness between people which often causes envy. The intensity of envy depends largely on how often an envious person meets the object of envy in everyday life (Ulich & Mayring, 1992). It is clear that the closer a person is (colleague, neighbour, friend / girlfriend, etc.), the oftener an envious person feels envy. It may be assumed that neighbours are the closest strangers, so the image of a neighbour as the biggest envious person is obviously universal in the European linguo-cultures (Table 1, row 1(2)).

ENVY IS AN ENEMY: People by their nature have more or less equal capabilities which create equality in their hope to achieve the goal. A desire to have the same makes people enemies and makes them destroy or subdue one another. People seek to be appreciated as highly as they appreciate themselves. The presence of competition, lack of confidence, fame and desire are the main reasons for hostility. Remarkably, envy is associated with the enemy only by the British (Table 1, row 1(3)).

ENVY IS A WATCHFUL CREATURE: An envious person seeks mainly what he sees, so naive representatives of the British and Ukrainian linguo-cultures imagine envious people with a specific evil eye and keen eyesight to notice every detail of the

object of envy (Table 1, row 2(5)/(a)). Only Ukrainian envy is associated with a hostile look (Table 1, row 2(5)/(b)). The analysis of phraseological material has revealed the fact that envy often sees everything in non-objective perspective and in the light of their greedy nature which is proved by English and Ukrainian paremias (Table 1, row 2(5)/(c)). This means that envy is generated not by objective differences between people but emerges from subjective perception, which has a special "optics" of envy, i.e. an envious person sees only what stirs up his envy. That is why "in all cultures it is considered not only a good manner but almost a mandatory rule of behaviour never to talk to others about their preferences (their superiority), new acquisitions or luck, remembering failures, deficiencies or lack of something" (Schoeck, 2008, p. 40).

ENVY IS A YELLOW / GREEN-EYED CREATURE: The emotion of envy stimulates physiological processes in the human body including intensive secretion of bile which provides envious eyes with a yellowish or greenish shade (Table 1, row 2(6)/(a)). It should be mentioned that only in the British linguo-society there exists the PU *to look through green glasses* (Table 1, row 2(6)/(b)).

ENVY IS A BLIND CREATURE: The British endow envy with blindness (Table 1, row 3). The cognitive basis of this concept metaphor is the fact that firstly, the emotion of envy may cause disease to all people despite their status, sex, nationality etc. and secondly, envy may be directed to everybody, even to the closest people (children are envious of parents, parents – of children, a brother – of a brother, a sister – of a sister and the kind).

Conclusions

The analysis of phraseological objectification of the "sinful" emotional concepts Brit. ENVY and Ukr. ЗАЗДРІСТЬ enables to state that envy, like other sinful human weaknesses, is perceived in the religious context as a person's character trait or sin. However, modern psychology offers a wider understanding of envy, because it is as an emotion (a priori inherent in a human being; it belongs to the instincts of survival) and a feeling (phenotypic expression; state of psychophysiological experience), and an option of behaviour. As well as moral feelings in general, envy is characterized by an extremely complex nature, and it is distinguished by the dual direction of the desire to "take" and "keep". This fact is characteristic of jealousy, therefore in certain situations, envy can transform into jealousy, and jealousy becomes envy. The semantic interlacing of the latter is so tight, that some PUs in the English language have both meanings of envy and jealousy.

The contrastive study of the correlation of the concept ENVY with other ethical and emotional concepts proved its close connection with a range of other emotional concepts (e.g.: GRATITUDE, KINDNESS, VIRTUE, HONOUR), which allowed to claim that there exists a concurrence of fundamental moral values and attitudes in Christian cultures, moreover, the concept ЗАЗДРІСТЬ occupies a leading position in the hierarchy of values ("white" envy) vs. antivalues ("black" envy) of compared

linguo-societies. At the same time, it is elicited that envy is permanently influenced by ethnic and sociocultural factors despite the universality of envy as an emotion and feeling, which is proved on the basis of phraseological objectification of the most common conceptual metaphors that represent the concept of ENVY in British and Ukrainian linguo-cultures. The conceptual metaphors provide the concept ENVY with the meanings that are considered to be specific for the compared linguo-cultures.

It is worth emphasizing that the conclusion is based on the analysis of the phraseological material, which includes traditional (fixed) understanding of envy by a linguo-culture. This conception has been formed for centuries and accumulated in PUs. Lexicographers and phraseographers single out, as a rule, only the most common PUs for each stage of development of a linguo-society and "sift" what is occasional (individual). Consequently, the analysis of PUs cannot provide full information about the values and the value priorities of the linguo-society. Particularly it concerns modern changes in such priorities. To detect these changes, it is necessary, as it was mentioned before, to compare the results of the language material (lexicographic and phraseographic resources) with the results of analysis of actual language data (psycholinguistic experiments, sociolinguistic monitoring, linguistic corpora etc.). For example, simple inquiries with the help of Sketch Engine make it possible to find out that *fear* (*feared*) is a frequency left collocate of *envy* as a verbal lemma in EnTenTen13, a *weep* – nominal lemma, e.g.: *weep with envy* (Sketch Engine, 2020). Of course, in this article the full list of conceptual metaphors that represent concept ENVY may be called into question because there are at least two other metaphors for the British linguo-culture: ENVY is FEAR and ENVY is WEEPING. However, in this case the contemporary meanings of the concepts under study, and eliciting the actual meanings of the latter are the purpose of our further investigation.

References

Alicke, M. D. & Zell, E. (2008). Social Comparison and Envy. In R. H. Smith (Ed.), *Envy: Theory and Research* (pp. 73–116). Oxford: Oxford University Press.

Бреслав Г. М. Психология эмоций. М.: Смысл & Академия, 2004.

Bucher, A. (2012). *Geiz, Trägheit, Neid & Co. in Therapie und Seelsorge: Psychologie der 7 Todsünden*. Berlin & Heidelberg: Springer Verlag.

Crusius, J., Gonzalez, M. F., Lange, J., & Cohen-Charash, Y. (2020). Envy: An Adversarial Review and Comparison of Two Competing Views. *Emotion Review, 12*(1), 3–21. https://doi.org/10.1177/1754073919873131

Drobakha, L. (2019). Besonderheiten der semantischen Realisierung der Wörter im Schaffen der indoeuropäischen Völker. *Analele Universităţii din Craiova, Seria Ştiinţe Filologice, Lingvistică, XLI*(1–2), 294–307.

Dyson, M. (2006). *Pride: The Seven Deadly Sins*. New York: Oxford University Press.

Epstein, J. (2003). *Envy*. New York: Oxford University Press.

Feather, N. T., & Nairn, K. (2005). Resentment, Envy, Schadenfreude, and Sympathy: Effects of Own and Other's Deserved or Undeserved Status. *Australian Journal of Psychology, 57*, 87–102. https://doi.org/10.1080/00049530500048672

Foster, G. M. (1972). The Anatomy of Envy: A Study in Symbolic Behavior. *Current Anthropology, 13*, 165–202.

Кобозева И. М. Немец, англичанин, француз и русский: выявление стереотипов национальных характеров через анализ коннотаций этнонимов. *Вестник Московского государственного университета*, 1995. Т. 9, № 3. С. 102–117.

Комова Т. А. Введение в сопоставительную лингвокультурологию. Великобритания – Россия. М.: Макс Пресс, 2010.

Kövecses, Z. (1990). *Emotion Concepts*. New York: Springer.

Куттер П. Любовь, ненависть, зависть, ревность. Психоанализ страстей. СПб.: Б.С.К., 1998.

Lange, J., Weidman, A. C., & Crusius, J. (2018). The Painful Duality of Envy: Evidence for an Integrative Theory and a Meta-analysis on the Relation of Envy and Schadenfreude. *Journal of Personality and Social Psychology, 114*, 572–598. https://doi.org/10.1037/pspi0000118

Lindholm, C. (2008). Culture and Envy. In R. H. Smith (Ed.), *Envy: Theory and Research* (pp. 227–244). Oxford: Oxford University Press.

Matiová, M. (2019). Cognitive Analysis of the Concept of ENVY as an Interpretative Construct of Slovak Lingual and Cultural Society. In M. Matiová & M. Navrátil (Eds.), *A Reflection of Man and Culture in Language and Literature* (pp. 81–105). Berlin et al.: Peter Lang.

Малахова С. А. Личностно-эмоциональные концепты «гордость» и «стыд» в русской и английской лингвокультурах. Армавир: РИЦ АГПА, 2011.

Мизин К. Изменение ценностных приоритетов в современных европейских лингвокультурах: морально-этический концепт ГОРДОСТЬ. *Opera Slavica*, 2018. Т. 28, № 4. С. 5–33. https://doi.org/10.5817/OS2018-4-1

Mizin, K., & Letiucha, L. (2019). The linguo-cultural concept TORSCHLUSSPANIK as the representative of ethno-specific psycho-emotional state of Germans. *Психолінгвістика. Психолингвистика. Psycholinguistics, 25*(2), 234–249. https://doi.org/10.31470/2309-1797-2019-25-2-234-249

Mizin, K., Letiucha, L., & Petrov, O. (2019). Deutsche linguokulturelle Konzepte im Lichte der germanisch-ostslawischen Kontraste: Methode zur Feststellung von spezifischen bzw. einzigartigen Bedeutungen. *Germanoslavica, 30*(1), 49–70.

Mizin, K., & Ovsiienko, L. (2020). The German Linguo-cultural Concept SCHADENFREUDE in Cross-cultural Perspective: A Corpus-based Approach. *Lege Artis. Language Yesterday, Today, Tomorrow, V*(1), 143–184.

Mizin, K., & Petrov, O. (2017). Metaphorical Modelling of Cognitive Structure of the Concept STINGINESS in British, German, Ukrainian and Russian Linguo-cultures. *Przegląd Wschodnioeuropejski*, 8(1), 219–226.

Моисеев М. В., Гичева Н. Г. Сопоставительная лингвокультурология английского и русского языков. Омск: ОГУ, 2009.

Ogarkova, A. (2007). Green-eyed Monsters: A Corpus-based Study of the Concepts of ENVY and JEALOUSY in Modern English. *metaphorik.de, 13*, 87–147.

Oster, U. (2010). Using Corpus Methodology for Semantic and Pragmatic Analyses: What Can Corpora Tell Us about the Linguistic Expression of Emotions? *Cognitive Linguistics, 21*(4), 727–763. https://doi.org/10.1515/cogl.2010.023

Oster, U. (2012). "Angst" and "Fear" in Contrast: A Corpus-based Analysis of Emotion Concepts. In M. Brdar, I. Raffaelli, & M. Žic Fuchs (Eds.), *Cognitive Linguistics between Universality and Variation* (pp. 327–355). Newcastle upon Tyne: Cambridge Scholars Publishing.

Panasenko, N. (2012). Linguistic Markers of Emotional Concept LOVE in Literary Texts. *US-China Foreign Language, 10*(4), 1067–1084.

Petiak, O. (2020). Associative and Gender Aspects of the Emotional Concept of "Jealousy" in the Ukrainian Linguistic Culture. *East European Journal of Psycholinguistics, 7*(1), 140–146. https://doi.org/10.29038/eejpl.2020.7.1.pet

Piirainen, E. (2012). *Widespread Idioms in Europe and Beyond. Toward a Lexicon of Common Figurative Units*, vol. 1. New York: Peter Lang.

Piirainen, E. (2016). *Lexicon of Common Figurative Units. Widespread Idioms in Europe and Beyond*, vol. 2. New York: Peter Lang. https://doi.org/10.3726/b10457

Protasi, S. (2016). Varieties of Envy. *Philosophical Psychology, 29*, 535–549. https://doi.org/10.1080/09515089.2015.1115475

Salovey, P., & Rodin, J. (1984). Some Antecedents and Consequences of Social-comparison Jealousy. *Journal of Personality and Social Psychology, 47*(4), 780–792.

Sawada, M., & Fujii, T. (2016). Do Envious People Show Better Performance? Focusing on the Function of Benign Envy as Personality Trait. *Japanese Journal of Psychology, 87*, 198–204. https://doi.org/10.4992/jjpsy.87.15316

Шёк Г. Зависть: теория социального поведения. М.: ИРИСЭН, 2008.

Schwarz-Friesel, M. (2015). Language and Emotion. The Cognitive Linguistic Perspective. In U. Lüdke (Ed.), *Emotion in Language* (pp. 157–173). Amsterdam: John Benjamins.

Сергієнко В. Л. Лінгвокультурні концепти PRIDE і NOBILITY у британській мовній картині світу: дис … канд. філол. наук: 10.02.04. Івано-Франківськ, 2015. 245 с.

Шапран Н. В. Семантико-когнітивна структура концепту ЗАЗДРІСТЬ у лінгвокультурологічному висвітленні: дис … канд. філол. наук: 10.02.15. Одеса, 2015. 197 с.

Sketch Engine. (2019). *EnTenTen13*. https://www.sketchengine.eu/ententen-english-corpus

Smith, R. (1991). Envy and the Sense of Injustice. In P. Salovey (Ed.), *The Psychology of Envy and Jealousy* (pp. 79–99). New York: Guilford.

Soriano, C. (2015). Emotion and Conceptual Metaphor. In H. Flam & J. Kleres (Eds.), *Methods of Exploring Emotions* (pp. 206–214). New York & London: Routledge.

Степанов Ю. С. Константы. Словарь русской культуры. Опыт исследования. М.: Языки русской культуры, 1997.

Stone, J. (2006). *The Routledge Book of World Proverbs*. London & New York: Routledge.

Takahashi, H., Kato, M., Matsuura, M., Mobbs, D., Suhara, T., & Okubo, Y. (2009). When Your Gain is My Pain and Your Pain is My Gain: Neural Correlates of Envy and Schadenfreude. *Science, 323*, 937–939. https://doi.org/10.1126/science.1165604

Ulich, D., & Mayring, Ph. (1992). *Psychologie der Emotionen*. Stuttgart: Kohlhammer.

Van de Ven, N. (2009). *The Bright Side of a Deadly Sin: The Psychology of Envy*. Amsterdam: Kurt-Lewin-Institute.

Van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and Leveling down: The Experiences of Benign and Malicious Envy. *Emotion, 9*(3), 419–429. https://doi.org/10.1037/a0015669

Van de Ven, N., & Zeelenberg, M. (2015). On the Counterfactual Nature of Envy: "It Could Have Been Me". *Cognition & Emotion, 29*, 954–971. https://doi.org/10.1080/02699931.2014.957657

Вдовиченко Н. В. Вербалізація морально-етичних концептів в українській мовній картині світу: дис … канд. філол. наук: 10.02.01. Одеса, 2015. 212 с.

Воркачев С. Г. Зависть и ревность: к семантическому представлению моральных чувств в естественном языке. *Известия АН. Серия литературы и языка*, 1998. Т. 57, № 3. С. 39–45.

Vrabel, J. K., Zeigler-Hill, V., & Southard, A. C. (2018). Self-esteem and Envy: Is State Self-esteem Instability Associated with the Benign and Malicious Forms of Envy? *Personality and Individual Differences, 123*, 100–104. https://doi.org/10.1016/j.paid.2017.11.001

Wierzbicka, A. (1992). Defining Emotion Concepts. *Cognitive Science, 16*(4), 539–581.

Wilkinson, P. (2002). *Thesaurus of Traditional English Metaphors*. London & New York: Routledge.

Wilson, P. A. & Lewandowska-Tomaszczyk, B. (2017). Pride in British English and Polish: A Cultural Linguistics Perspective. In F. Sharifian (Ed.), *Advances in Cultural Linguistics* (pp. 373–409). Singapore: Springer. https://doi.org/10.1007/978-981-10-4056-6_12

References (translated and transliterated)

Alicke, M. D., & Zell, E. (2008). Social Comparison and Envy. In R. H. Smith (Ed.), *Envy: Theory and Research* (pp. 73–116). Oxford: Oxford University Press.

Breslav, G. M. (2004). *Psihologija jemocij [Psychology of Emotions]*. Moskva: Smysl & Akademija.

Bucher, A. (2012). *Geiz, Trägheit, Neid & Co. in Therapie und Seelsorge: Psychologie der 7 Todsünden*. Berlin & Heidelberg: Springer Verlag.

Crusius, J., Gonzalez, M. F., Lange, J., & Cohen-Charash, Y. (2020). Envy: An Adversarial Review and Comparison of Two Competing Views. *Emotion Review, 12*(1), 3–21. https://doi.org/10.1177/1754073919873131

Drobakha, L. (2019). Besonderheiten der semantischen Realisierung der Wörter im Schaffen der indoeuropäischen Völker. *Analele Universităţii din Craiova, Seria Ştiinţe Filologice, Lingvistică, XLI*(1–2), 294–307.

Dyson, M. (2006). *Pride: The Seven Deadly Sins*. New York: Oxford University Press.

Epstein, J. (2003). *Envy*. New York: Oxford University Press.

Feather, N. T., & Nairn, K. (2005). Resentment, Envy, Schadenfreude, and Sympathy: Effects of Own and Other's Deserved or Undeserved Status. *Australian Journal of Psychology, 57*, 87–102. https://doi.org/10.1080/00049530500048672

Foster, G. M. (1972). The Anatomy of Envy: A Study in Symbolic Behavior. *Current Anthropology, 13*, 165–202.

Kobozeva, I. M. (1995). Nemec, anglichanin, francuz i russkij: vyjavlenie stereotipov nacional'nyh harakterov cherez analiz konnotacij jetnonimov [A German, an Englishman, a French and a Russian: Identification of the Stereotypes of the National Characters by Means of the Analysis of the Connotations of Ethnonyms]. Vestnik *Moskovskogo gosudarstvennogo universiteta [Moscow State University Bulletin], 9*(3), 102–117.

Komova, T. A. (2010). *Vvedenie v sopostavitel'nuju lingvokul'turologiju. Velikobritanija – Rossija [Introduction to Contrastive Linguoculturology. Great Britain – Russia]*. Moskva: Maks Press.

Kövecses, Z. (1990). *Emotion Concepts*. New York: Springer.

Kutter, P. (1998). *Ljubov', nenavist', zavist', revnost'. Psihoanaliz strastej [Love, Hate, Envy, Jealousy. Psychoanalysis of Passions]*. Sankt Peterburg: B.S.K.

Lange, J., Weidman, A. C., & Crusius, J. (2018). The Painful Duality of Envy: Evidence for an Integrative Theory and a Meta-analysis on the Relation of Envy and Schadenfreude. *Journal of Personality and Social Psychology, 114*, 572–598. https://doi.org/10.1037/pspi0000118

Lindholm, C. (2008). Culture and Envy. In R. H. Smith (Ed.), *Envy: Theory and Research* (pp. 227–244). Oxford: Oxford University Press.

Matiová, M. (2019). Cognitive Analysis of the Concept of ENVY as an Interpretative Construct of Slovak Lingual and Cultural Society. In M. Matiová & M. Navrátil (Eds.), *A Reflection of Man and Culture in Language and Literature* (pp. 81–105). Berlin et al.: Peter Lang.

Malahova, S. A. (2011). *Lichnostno-jemocional'nye koncepty GORDOST' i STYD v russkoj i anglijskoj lingvokul'turah [Personality and Emotional Concepts PRIDE and SHAME in the Russian and English Linguo-cultures]*. Armavir: RIC AGPA.

Mizin, K. (2018). Izmenenie cennostnyh prioritetov v sovremennyh evropejskih lingvokul'turah: moral'no-jeticheskij koncept GORDOST' [The Changes of Value Priorities in Modern European Linguo-cultures: The Moral and Ethical Concept of PRIDE]. *Opera Slavica, 28*(4), 5–33. https://doi.org/10.5817/OS2018-4-1

Mizin, K., & Letiucha, L. (2019). The linguo-cultural concept TORSCHLUSSPANIK as the representative of ethno-specific psycho-emotional state of Germans. *Психолінгвістика. Психолингвистика. Psycholinguistics, 25*(2), 234–249. https://doi.org/10.31470/2309-1797-2019-25-2-234-249

Mizin, K., Letiucha, L., & Petrov, O. (2019). Deutsche linguokulturelle Konzepte im Lichte der germanisch-ostslawischen Kontraste: Methode zur Feststellung von spezifischen bzw. einzigartigen Bedeutungen. *Germanoslavica, 30*(1), 49–70.

Mizin, K., & Ovsiienko, L. (2020). The German Linguo-cultural Concept SCHADENFREUDE in Cross-cultural Perspective: A Corpus-based Approach. *Lege Artis. Language Yesterday, Today, Tomorrow, V*(1), 143–184.

Mizin, K., & Petrov, O. (2017). Metaphorical modelling of cognitive structure of the concept STINGINESS in British, German, Ukrainian and Russian linguo-cultures. *Przegląd Wschodnioeuropejski*, 8(1), 219–226.

Moiseev, M. V., & Gicheva, N. G. (2009). *Sopostavitel'naja lingvokul'turologija anglijskogo i russkogo jazykov [Contrastive Linguoculturology of the English and Russian Languages]*. Omsk: OGU.

Ogarkova, A. (2007). Green-eyed Monsters: A Corpus-based Study of the Concepts of ENVY and JEALOUSY in Modern English. *metaphorik.de, 13*, 87–147.

Oster, U. (2010). Using Corpus Methodology for Semantic and Pragmatic Analyses: What Can Corpora Tell Us About the Linguistic Expression of Emotions? *Cognitive Linguistics, 21*(4), 727–763. https://doi.org/10.1515/cogl.2010.023

Oster, U. (2012). "Angst" and "Fear" in Contrast: A Corpus-based Analysis of Emotion Concepts. In M. Brdar, I. Raffaelli, & M. Žic Fuchs (Eds.), *Cognitive Linguistics between Universality and Variation* (pp. 327–355). Newcastle upon Tyne: Cambridge Scholars Publishing.

Panasenko, N. (2012). Linguistic Markers of Emotional Concept LOVE in Literary Texts. *US-China Foreign Language, 10*(4), 1067–1084.

Petiak, O. (2020). Associative and Gender Aspects of the Emotional Concept of "Jealousy" in the Ukrainian Linguistic Culture. *East European Journal of Psycholinguistics, 7*(1), 140–146. https://doi.org/10.29038/eejpl.2020.7.1.pet

Piirainen, E. (2012). *Widespread Idioms in Europe and Beyond. Toward a Lexicon of Common Figurative Units*, vol. 1. New York: Peter Lang.

Piirainen, E. (2016). *Lexicon of Common Figurative Units. Widespread Idioms in Europe and Beyond*, vol. 2. New York: Peter Lang. https://doi.org/10.3726/b10457

Protasi, S. (2016). Varieties of Envy. *Philosophical Psychology, 29*, 535–549. https://doi.org/10.1080/09515089.2015.1115475

Salovey, P., & Rodin, J. (1984). Some Antecedents and Consequences of Social-comparison Jealousy. *Journal of Personality and Social Psychology, 47*(4), 780–792.

Sawada, M., & Fujii, T. (2016). Do Envious People Show Better Performance? Focusing on the Function of Benign Envy as Personality Trait. *Japanese Journal of Psychology, 87*, 198–204. https://doi.org/10.4992/jjpsy.87.15316

Schoeck, H. (2008). *Zavist': teorija social'nogo povedenija [Envy: Theory of Social Behaviour]*. Moskva: IRISEN.

Schwarz-Friesel, M. (2015). Language and Emotion. The Cognitive Linguistic Perspective. In U. Lüdke (Ed.), *Emotion in Language* (pp. 157–173). Amsterdam: John Benjamins.

Serhiyenko, V. L. (2015). *Linhvokul'turni kontsepty PRIDE i NOBILITY u brytans'kiy movniy kartyni svitu [Linguo-cultural Concepts PRIDE and NOBILITY in the British Linguistic Picture of the World]*. CSc dissertation, Ivano-Frankivs'k.

Shapran, N. V. (2015). *Semantyko-kohnityvna struktura kontseptu ZAZDRIST' u linhvokul'turolohichnomu vysvitlenni [Semantic and Cognitive Structure of the Concept ENVY in Linguo-culturological Interpretation]*. CSc dissertation, Odessa.

Sketch Engine. (2019). *EnTenTen13*. https://www.sketchengine.eu/ententen-english-corpus

Smith, R. (1991). Envy and the Sense of Injustice. In P. Salovey (Ed.), *The Psychology of Envy and Jealousy* (pp. 79–99). New York: Guilford.

Soriano, C. (2015). Emotion and Conceptual Metaphor. In H. Flam & J. Kleres (Eds.), *Methods of Exploring Emotions* (pp. 206–214). New York & London: Routledge.

Stepanov, Yu. S. (1997). *Konstanty. Slovar' russkoj kul'tury. Opyt issledovanija [Constants: Vocabulary of Russian Culture. Experience of Investigation]*. Moskva: Yazyki russkoj kul'tury.

Stone, J. (2006). *The Routledge Book of World Proverbs*. London & New York: Routledge.

Takahashi, H., Kato, M., Matsuura, M., Mobbs, D., Suhara, T., & Okubo, Y. (2009). When Your Gain is My Pain and Your Pain is My Gain: Neural Correlates of Envy and Schadenfreude. *Science, 323*, 937–939. https://doi.org/10.1126/science.1165604

Ulich, D., & Mayring, Ph. (1992). *Psychologie der Emotionen*. Stuttgart: Kohlhammer.

Van de Ven, N. (2009). *The Bright Side of a Deadly Sin: The Psychology of Envy*. Amsterdam: Kurt-Lewin-Institute.

Van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and Leveling down: The Experiences of Benign and Malicious Envy. *Emotion, 9*(3), 419–429. https://doi.org/10.1037/a0015669

Van de Ven, N., & Zeelenberg, M. (2015). On the Counterfactual Nature of Envy: "It Could Have Been Me". *Cognition & Emotion, 29*, 954–971. https://doi.org/10.1080/02699931.2014.957657

Vdovychenko, N. V. (2015). *Verbalizatsiya moral'no-etychnykh kontseptiv v ukrayins'kiy movniy kartyni svitu [Verbalization of Moral and Ethical Concepts in the Ukrainian Linguistic Picture of the World]*. CSc dissertation, Odesa.

Vorkachev, S. (1998). Zavist' i revnost': k semanticheskomu predstavleniju moral'nyh chuvstv v estestvennom jazyke [Envy and Jealousy: To Semantic Understanding of Moral Feelings in the Natural Language]. *Izvestija AN. Serija literatury i jazyka [The Bulletin of the Russian Academy of Sciences: Studies in Literature and Language], 57*(3), 39–45.

Vrabel, J. K., Zeigler-Hill, V., & Southard, A. C. (2018). Self-esteem and Envy: Is State Self-esteem Instability Associated with the Benign and Malicious Forms of Envy? *Personality and Individual Differences, 123*, 100–104. https://doi.org/10.1016/j.paid.2017.11.001

Wierzbicka, A. (1992). Defining Emotion Concepts. *Cognitive Science, 16*(4), 539–581.

Wilkinson, P. (2002). *Thesaurus of Traditional English Metaphors*. London & New York: Routledge.

Wilson, P. A., & Lewandowska-Tomaszczyk, B. (2017). Pride in British English and Polish: A Cultural Linguistics Perspective. In F. Sharifian (Ed.), *Advances in Cultural Linguistics* (pp. 373–409). Singapore: Springer. https://doi.org/10.1007/978-981-10-4056-6_12

Sources

Barantsev, K. T. (2005). *Anhlo-ukrayins'kyy frazeolohichnyy slovnyk [English-Ukrainian Phrase-book]*. Kyiv: Znannia.

DPUU. (2003). *Slovnyk frazeolohizmiv ukrayins'koyi movy [Dictionary of Phraseological Units of Ukrainian]*. Kyiv: Naukova dumka.

ODEP. (1970). *The Oxford Dictionary of English Proverbs by J. Wilson*. Oxford: Calendon Press.

ODP. (2004). *Oxford Dictionary of Proverbs*. Oxford: Oxford University Press.

PDP. (2000). *The Penguin Dictionary of Proverbs by R. Fergusson*. London: Penguin Books.

PDU. (1999). *Frazeolohichnyy slovnyk ukrayins'koyi movy [Phraseological Dictionary of Ukrainian]*. Kyiv: Naukova dumka.

PERCEIVED EXPRESSED EMOTION IN THE ILLNESS NARRATIVES OF INDIVIDUALS WITH CHRONIC GASTROINTESTINAL DISORDERS

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Abstract. While expressed emotion has long been considered a valid predictor of a poor clinical outcome in individuals with mental and physical conditions, the present study marks the empirical investigation to assess specific communication patterns between family members and individuals with chronic gastrointestinal disorders. Following a rich tradition of studying illness narratives and a narrative approach to healing chronic illnesses, the present study examined illness narratives in a group of 40 mid-life adults with chronic gastrointestinal disorders. Two reliable, independent experts unfamiliar with the participants' research objectives and diagnostic status coded all narratives (ICC = .77). Self-narratives describing the illness and its impact on the family life were analyzed for a set of narrative elements, including agency, communion fulfilment, and narrative coherence. In addition, the study applies measures to assess expressed emotion, criticism towards family and perceived criticism towards individuals with a condition. The correlation analysis results indicate an association between agency and criticism (.33) and perceived criticism (.33). The main issue emerging from the multiple regression analysis findings is that agency of the narrative, criticism towards family and duration of disease taken together contribute to perceived criticism of the family towards the individual with a condition. However, a family's criticism towards the individual with a condition is the only independent

significant predictor of perceived criticism. One of the more significant findings from this study is that substantial autonomy from significant others and empowerment of individuals with a condition could worsen the family environment and have an unfavourable clinical outcome. More practical information on service users' autonomy and its impact on disease self-management would help us establish a greater accuracy.

Keywords: expressed emotion, illness narrative, narrative elements, perceived criticism, agency.

Пастрик Тетяна, Кирєєва Зоя, Кордунова Наталія, Лила Магдалина. Сприйнята емоційна експресивність у наративах про хворобу в осіб із хронічними шлунково-кишковими розладами.

Анотація. Конструкт емоційної експресивності вважається значущим предиктором негативних клінічних наслідків в осіб із психічними та фізичними розладами рецидивів хвороби. Метою цього дослідження є емпіричне вивчення конкретних моделей спілкування між членами сім'ї та особами з шлунково-кишковими розладами. Слідуючи провідним ідеям наративного підходу та вивчення наративів про хвороби, ми досліджували наративи про хворобу 40 осіб середнього віку з хронічними шлунково-кишковими розладами. Двоє незалежних експертів, які не були знайомі з цілями дослідження та дослідницькими гіпотезами, здійснювали кодування наративів (ICC = 0,77). Аналіз наративів ґрунтувався на виділенні трьох провідних структурних компонентах наративів: суб'єктності, міжособової взаємодії, наративної когерентності. Наративна когерентність включає орієнтацію (наявність фонової інформації про особистий досвід), структуру (логічний й послідовний виклад подій), афекти (вираження емоцій і почуттів), інтегрованість (пояснення життєвих подій у контексті цілісного життєвого досвіду). Крім того, у дослідженні використовуються психометричні методики для вивчення EE (Health and Self-Management in Gastrointestinal Disorders, HASMGID, 2020), критичності стосовно членів сім'ї та й сприйнятої критичності особами із хронічною хворобою (Perceived Critisism Measure, 2019). Результати кореляційного аналізу вказують на зв'язок між змінними суб'єктності і критичності (0,33) та суб'єктності й сприйнятої критичності (0,33). Результати множинного регресійного аналізу свідчать про те, що наративна когерентність, критичність стосовно членів сім'ї та тривалість хвороби є предиктором сприйнятої критичності особами із хронічними захворюваннями. Водночас лише критичність стосовно членів сім'ї особи із захворюванням є єдиним незалежним значущим предиктором сприйнятої критичності. Одним із найбільш значущих висновків цього дослідження є те, що висока суб'єктність як інтенція контролювати хворобу та обставини, пов'язані із нею, мають зв'язок із підвищеною критичністю та сприйнятою критичністю, що зрештою погіршує сімейний клімат і може призвести до несприятливого клінічного результату. Подальше дослідження зв'язку суб'єктності та само-менеджменту хвороби й якості життя осіб із хронічними шлунково-кишковими захворюваннями дасть змогу розробити практичні рекомендації для клініцистів і розширити межі застосування наративного підходу у лікуванні осіб із хронічними захворюваннями.

Ключові слова: емоційна експресивність, наративи про хворобу, структурні компоненти наративу, сприйнята критичність, суб'єктність.

Introduction

The prognostic value of factors enhancing the health-related quality of life in individuals with chronic gastrointestinal (GI) disease has renewed the interest in the family environment as a robust predictor of chronic disease outcome (Ludvigsson et al., 2017; Sandler et al., 2002). In addition, recent developments in the family environment in disease management have heightened the role of Expressed Emotion (EE). EE is a well-validated measure of the familial emotional climate of individuals

with mental and physical conditions that examines carers' critical, hostile and emotionally over-involved attitudes towards a family member with a condition (Brown et al., 1972). Notwithstanding that most studies on EE have focused on family settings of service users with psychotic disorders, recent findings indicate a poor impact of EE on disease management in individuals with a medical condition (Wearden et al., 2000). Recently, considerable literature has grown up around the theme of life-long adhering to a diet and its negative effect on family relationships (Sandler et al., 2002). More specifically, preoccupation with food might reduce the quality of life of the entire family of a service user with chronic GI disease.

Explanatory models for EE

Previous research has established three explanatory models for EE, namely cause attributional model, vulnerability- or diathesis-stress model, and personality trait model.

The causal attribution model posits that high attributions of service users' controllability, responsibility, and blame concerning their illness might predict EE, families' high criticism towards service users in particular (Brewin et al., 1991). Family members with the high attributions of controllability consider that their family members with a condition can control their symptoms and express critical remarks when the service users, in their opinion, do not manage their condition. Blame/guilty attributions predict carers' belief in service users' responsibility for disease outcomes. The diathesis-stress model explains life-long disease as service users' specific vulnerability to experiencing stress (Hooley & Gotlib, 2000). Finally, the personality trait model points out that high EE-carers are more intolerant, inflexible, and intrusive than low-EE cares (Leff & Vaughn, 1985).

A narrative approach to perceived EE as a family communicative pattern

Unlike previous research, the current study aims to apply the narrative approach to examine EE as family communicative patterns. Evidence consistently suggests an association between EE and the speech style of family members towards individuals with a condition, namely high-EE carers who express more critical statements and fewer support statements than low-EE parents (Hooley & Parker, 2006). Leff and Vaughn (1985) point out four characteristics of high EE as a family communicative pattern, intrusiveness (verbal attempts to control service user's behaviour totally; emotional response (verbal expression of negative emotions, namely anger and emotional distress); unacceptance of service user's disease (verbally expressed blaming service user for symptoms and being ill); intolerant attitude towards service user (impatient and critical remarks). One significant way for service users to cope with chronic disease is to construct meaning of long-term sufferings and significant others attitudes towards them. Therefore, the perceived EE from the service users' perspective is essential (Medina-Pradas et al., 2011). In addition, it has been suggested that there is a reciprocal character of carers-service users' relationships.

One unanticipated finding was that the match between carers and service users, namely low service users' EE – low carers' EE or high service users' EE – high carers' EE is more important than the actual level of EE (Rienecke & Richmond, 2017). Considering this finding, the subjectively perceived family climate rather than the actual EE could explain the family communication and atmosphere and construct the meaning of health-related quality of life and favourable family environment. Despite the importance of perceived EE, there remains a paucity of evidence on illness narrative as a service user's way of constructing the meaning of family attitudes towards the individual with chronic GI disease. This paper shows that constructing illness self-narrative through distinct narrative elements is associated with the perceived EE and family environment of the individual with chronic GI disease.

Illness narrative and its elements

Chronic GI disease is a condition that considerably impacts service users' quality of life. Brokerhof et al. (2020) define chronic illnesses as prolonged illnesses, do not resolve spontaneously and are rarely cured completely. Every fourth individual in the world, four suffer from functional gastrointestinal disorders of varying severity. In addition, digestive diseases necessitate 25% of all surgical operations. Wearden et al. (2000) argue that in the case of chronic illnesses with diet adherence, EE refers instead to the course of illness than its outcome. Nevertheless, pointing out the outcome of the illness, other essential aspects emerge, namely "psychosocial adjustment, coping, and the burden of the family" amongst others (Wearden et al., 2000, p. 656). One of the most well-known approaches to examine all these aspects in individuals with a medical condition is illness narrative.

Shapiro (2020) argues that illness narrative is the conscious and unconscious representation of intricate personal motives and personal relations in micro-and macro-environments; therefore, illness narrative expresses family communicative patterns, considering disease and service user's behaviour. Thus, illness narratives and narrating elements could be an additional measure to assess perceived EE. Therefore, research of EE in illness narratives offers excellent potential for understanding the family environment in people with chronic GI disease.

Adler et al. (2012) suggest that agency, communion and narrative coherence are the fundamental elements in illness narratives in patients with a borderline personality disorder. We assume that these elements also play a crucial role in constructing the meaning of the family environment of a service user with the chronic disease since agency, community and narrative coherence express the subjective view of disease and its impact on relations with significant others. Furthermore, elements of agency and communion might express service users' perceived EE. Agency is a narrating element, expressing service users as the initiators of their family's experiences related to the chronic disease. Community regards the intimacy between the service user and significant others. While agency considers service users' motivation to overcome circumstances, communion expresses the individual's

motivation for attachment, affiliation, love, friendship, and nurturance (Adler et al., 2012, p. 501). Considering that agency and communion are two principal dimensions of thematic content, narration coherence is one of the fundamental structural components of illness narratives. Adler et al. (2012) suggest that low narrative coherence is associated with poor mental health. However, the association between low narrative coherence and chronic medical conditions remains unclear. The present study explores the specific manifestation of agency, community and narrative coherence of the illness narratives of individuals with chronic gastrointestinal disorders. The research question is relevant to the current research project: Is there any association between perceived EE and agency, community and narrative coherence as markers of constructing meaning in the illness narratives?

In light of the research question, the following is hypothesised for the current study:

H1: There is an association between EE, PC and criticism and structural components of illness narrative (agency, community and narrative coherence).
H2: There is a reciprocal character of carers-service users' relationships, which is embodied in a match of high PC towards service users and high service users' criticism towards carers.
H3: There is an association between narrative coherence and health and self-management in chronic disease.
H4: Duration of disease, criticism and agency will predict PC in individuals with chronic GI disorders.

Methods

Before the current study, we have got approval from Lesya Ukrainka Volyn National University Ethical Committee. Therefore, the inclusion criteria for recruiting participants are the clinical diagnosis of chronic with chronic GI study recruited 40 patients of Gastroenterology and Proctology Departments of Volyn Oblast Clinical Hospital (Lutsk, Ukraine), females (n=24), males (n=16), mean age was 44.90 ± 2.22 (see Table 1).

To consider the heterogeneity of the population with CD, we have applied a maximum variation sampling strategy regarding age, gender, marital status, occupational status, and disease duration. *Health and Self-Management in Gastrointestinal Disorders (HASMGID) as adopted version of Health and Self-Management in Diabetes*. The measure provides an assessment of self-management in diabetes (Carlton et al., 2020). The questionnaire consists of 8 attributes, four about quality of life (mood, disease relapse, social limitations, energy), and four about self-management (control, hassle, stress, support), and shows a high and constructed validity. The internal consistency for the adopted Ukrainian version of the entire questionnaire HASMGID is 0.72. Since the questionnaire includes health quality of life items in individuals with medical conditions, the current study applies this questionnaire to substitute item 2 of hypoglycemic attacks for disease relapse. The questionnaire assessed the individuals with a medical condition with eight items

anchored from 0 = not at all to 3 = a great deal. Scores are additive from 0 to 24. This measure has an inverse scoring, indicating that the higher score, the worse health self-management.

Perceived Criticism Measure. Masland et al. (2019) suggest that PC is an independent construct aligned with poor outcomes and relapses. Assessing the service users' views could lead to a deeper understanding of relatives' roles in the transactional process of family caregiving and illness. Considering criticism as a most significant component of EE, Hooley and Teasdale (2006) instructed the service users to rate how critical they thought their relative was of them using a 10-point Likert-type scale. In addition, they asked patients how critical they thought they were of their relative using the same scale. Therefore, the service users' responses to the two questions, namely "When your relative criticises you, how upset do you get" and "When you criticise your relative how upset does he or she get?" (Hooley & Teasdale, 2006, p. 391). Findings of assessing individuals with depression indicate an association between service users' scores, spouses' and overall EE (r= .51) when measured by the Camberwell Family Interview (CFI).

Narration coherence. The study examines illness self-narratives through narrative structural components: agency, community, and narrative coherence (Adler et al., 2012). We instructed the individuals with a medical condition to write the self-narrative about their disease and its impact on their life. Illness narratives were scored separately for the agency and community using a 0–3 scale. Narrative coherence includes four dimensions, namely *orientation* (essential background information to understand the context of the illness narrative), *structure* (logical and consistent narrating), *affect* (expressing emotions and feelings in the illness narrative), *integration* (relation of separate episodes to the entire personal story). The study assesses each dimension independently using a 0 to 3 scale, from 0 = not at all to 3 = a great deal. Here are two excerpts from the illness narratives and different scoring:

(1) When I got known my diagnosis, my relatives began to take care of me and support me in everyday activities. They do not overload me with work. I am thankful to God that I have my family.
(2) Everything seemed to be good before I felt ill. However, my disease made me feel angry all time. I often quarrel with my family members for any reason. I often cry at my wife and children because they do not understand me and my condition. They also are not satisfied with my behaviour and often criticise me. They are not aware that I can work as much as earlier. In addition, I cannot work at my previous job.

The first excerpt expresses positive family environments, and the second expresses a hostile atmosphere. All narrative structural components are embodied in distinct language units. For example, the first excerpt received score 3 on the agency ("I got known", "I am thankful") and communion ("they take care of me", "they support me"); score 1 on orientation (there is no background and personal experience before being diagnosed), score 1 on affect (there are no categories expressing feeling

and emotions except thankful), score 3 on structure (logical and consistent thoughts), score 1 (there is no concrete life episodes confirming narrator's experience).

The second example received score 3 on the agency (fully expressed narrator's stand and behaviour), score 0 on communion (there is no intimacy and family support and understanding the health-related issues), score 1 on orientation dimension (there a brief introduction and background), score 3 on structure dimension (the narration is logical and consistent), score 3 on affect dimension (there are categories indicating emotions and feelings: feeling angry, being not satisfied), score 1 on integration dimension (there is only one life episode describing the previous pace of occupation).

Two reliable experts, blinded to the objective and hypothesis of the current research examined all structural components of illness narrative (Agency ICC = .77, Communion ICC = .80, Orientation ICC = .80, Structure ICC =.79, Affect ICC = .82, Integration ICC = .79).

Results

Table 1
Descriptive Information for the Individuals with Chronic GI Disease Sample (n=40)

	Patients	
	Frequency	Percentage
Gender	24/16	60.0/40.0
Female/male		
Marital status		
Single	7	17.5
Married	33	82.5
Occupational status		
Full-time worked	22	55.0
Part-time worked	2	5.0
Retired	15	37.5
Unemployed	1	2.5
Partner	24	60.00
Other relatives	16	40.00
Duration of disease		
1-5 years	13	32.5
6 years and more	17	42.5
	Mean (SD)	Min-Max
Age	44.90 (2.22)	18-69
Duration of disease (years)	7.20 (.93)	1-20

H_1, H_2 and H_3 assume that there is an association between EE, PC and criticism and structural components of illness narrative; there is a reciprocal character of

carers-service users' relationships, embodies in the match of high PC towards service users – high service users' criticism towards carers; there is an association between narrative coherence and health and self-management in chronic GI disease.

The sample size meets the requirements of the Central Limit Theorem (n=40>30). Therefore, Pearson product-moment correlation was used.

Table 2 illustrates significant correlations between variables.

Table 2

Correlations (2-tailed Pearson r) Between HASMGID, EE, Perceived Criticism, Criticism and Structural Components of Illness Narrative (n = 40)

Variables	HASMGID	EE	PC	C	Ag	Cm	NC
HASMGID	-	-.26	.49**	.44**	.09	.04	.02
EE	-.26	-	-.20	-.04	.07	-.22	-.08
PC	.49**	-.20	-	.90**	.33*	.09	.06
C	.44**	-.39*	.90**	-	.33*	.24	.11
Ag	.09	.07	.33*	.33*	-	.15	.03
Cm	.04	-.22	.09	.24	.15	-	.59**
NC	.02	-.08	.06	.11	.03	.59**	-
Mean	10.45	5.75	7.23	6.70	3.19	1.52	5.35
(SD)	(3.52)	(4.02)	(7.65)	(6.27)	(.99)	(1.47)	(4.86)

Note. EE = Expressed emotion, PC = perceived criticism, C = criticism, Ag = agency, Cm= communion, A = affect, C = communion, NC = narrative coherence, *p < .05., **p< .01

Multiple regression analysis has been used to predict the value of continuous variable PC based on other independent continuous variables, namely duration of disease, criticism and agency. The assumptions of linear relationship, homoscedasticity, independence of residuals (Durbin Watson d=1.99), multicollinearity (average Tolerance=.97>.1, and average VIF=1.33, thus 1<VIF>10) were met. Finally, the sample size is above the number required by Central Limit Theorem (n=40>30). Therefore, the assumptions regarding the normal distribution of data are also met.

The results of the regression with a forced enter method show that three variables (duration of disease, criticism and agency) explained 81.3 % of PC in service users, R^2 = .813, $F (3.36)$ = 57.56, $p < .001$. The results also show that criticism significantly predict the perceived criticism, $b = .87$, $t (39) = 11.56$, $p < .001$. Duration of disease, $b = -16.03$, $t (39) = -1.58$, $p=.12$ and agency, $b = .13$, $t (39) = 1.24$, $p=.22$ do not significantly predict the PC in individuals with chronic GI disease (see Table 3).

Table 3

Summary of Multiple Regression Analyses for Variables Predicting PC for All Subjects with Chronic GI Disease (n = 40)

Variables	B	SEB	β	t	p
DD	-16.03	.10	-1.13	-1.58	1.24
Ag	.13	.10	.11	1.24	.22
C	.87	.08	.87	11.56	.001

Note. Ag = agency, C = criticism, DD = duration of disease

Discussion

It was hypothesised that individuals with chronic GI disease with PC represent structural peculiarities in their illness narratives. Concerning the first research question, it was found that there is a positive correlation between the structural narrative component of the agency and service users' criticism towards carers (r=.33, p<.05), PC towards service users (r=.33, p<.05). In addition, there is a medium positive correlation between HASMGID and PC (r=.49, p<.01). These results corroborate the recent findings of Rienecke and Richmond (2017), suggesting that the subjectively perceived family climate rather than the actual EE could explain the family communication and atmosphere. In addition, our findings are in line with the results of other research of Masland et al. (2019), suggesting that PC is an independent construct aligned with frequent relapses. Therefore, examining PC will shed light on the effect of family environment on health and self-management in individuals with chronic GI disease. Considering adhering to a life-long diet by service users with chronic GI disease, family support and understanding seems to be of great value. Another important finding was a moderate correlation between service users' criticism towards carers and PC by service users. This result reflects those of Rienecke and Richmond (2017), who also found that the match of carers and service users' EE is more critical than the actual level of EE. Contrary to expectations, this study did not find a significant difference between EE and HASMGID. However, these findings demand further investigation with a larger sample of participants.

One unexpected result is that there is a positive correlation between agency and perceived criticism (r=.33, p<.05) and criticism (r=.33, p<.05). A possible explanation for this might be that. In contrast, the agency is concerned with the individuals' motivation to achieve and exert some influence over their circumstances. It also relates to the motivation of control over the family environment and family members. This control could result in critical settings in the family, which has a poor impact on disease outcomes. This explanation supports other findings reported by Cherry et al. (2018), postulating that EE results from beliefs about the controllability of health-related difficulties. However, previous findings relate controllability as a

robust predictor of EE in carers. There are many unanswered questions about controllability as a predictor of service users' EE and perceived EE in health and self-management of chronic GI disease. This is an important issue for future research. Another unexpected finding is no significant negative correlation between communion and EE. This result may be explained by how communion relates to the individual's motivation for attachment and love.

By contrast, EE includes criticism, hostility and emotional over-involvement, which are not directly associated with attachment avoidance. This result corroborates the other findings, suggesting no associations were between emotional over-involvement as an EE component and attachment anxiety. However, further research is needed to clarify the association between criticism, PC and attachment. Considering the association between the fundamental role of PC and criticism and HASMGID, another important finding was that duration of disease, criticism, and agency have taken together are predictors of perceived criticism. In addition, actual criticism is a significant independent predictor of PC. Because the current study measures actual criticism as service users' critical attitudes towards carers. This result may be explained by hyper-controllability of disease, expressed by service users' agency, which might predict the critical family environment. However, these data must be interpreted with caution because high agency as a motivation to achieve and control health-related conditions could positively impact the health and self-management of chronic GI diseases. Further studies, which take variables of agency, criticism and PC, and HASMGID into account, will need to be undertaken.

Conclusions

This paper has argued an association between perceived EE in service users with chronic GI disease and agency, community and narrative coherence of the illness narratives. This study has identified that criticism and perceived criticism play a fundamental role in developing EE as a hostile family climate for service users' with chronic GI disease. The research has also shown a match of service users' criticism towards carers and PC by service users, confirming a reciprocal nature of EE. In addition, service users' high motivation to control health-related circumstances might predict high PC and criticism in the family environment. The findings will be of interest to clinicians to consider beliefs of disease controllability in both groups of service users with chronic GI disease and carers. However, considering the possible significant role of service users' controllability for efficient self-management of GI disease, further research is needed to clarify the degree of possible correlation the direction of effect of agency on PC and HASMGID before convincing conclusions can be drawn.

Focusing on GI, this study lacks PC, agency, and HASMGID in service users with other medical conditions. Notwithstanding these limitations, the study suggests that the association of PC, criticism, HASMGID and disease duration indicate the significance of psychological interventions for enhancing family climate. In addition, more information on the association between agency as a motivation to control

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medical conditions and criticism and PC and the impact of agency on HASMGID in service users with GI would help us establish a greater degree of accuracy on this matter.

References

Adler, J. M., Chin, E. D., Kolisetty, A. P., & Oltmanns, T. F. (2012). The distinguishing characteristics of narrative identity in adults with features of borderline personality disorder: An empirical investigation. *Journal of Personality Disorders, 26*(4), 498-512. https://doi.org/10.1521/pedi.2012.26.4.498

Ayilara, O., Ogunwale, A., & Babalola, E. (2017). Perceived expressed emotions in relatives of patients with severe mental illness: A comparative study. *Psychiatry Research, 257,* 137-143. https://doi.org/10.1016/j.psychres.2017.07.037\

Bernard W. S. Fan (2014) Measuring Perceived Expressed Emotion of Elderly with Schizophrenia. *International Journal of Mental Health, 43*(2), 3-16, https://doi.org/10.2753/IMH0020-7411430201

Brokerhof, I. M., Ybema, J. F., & Bal, P. M. (2020). Illness narratives and chronic patients' sustainable employability: The impact of positive work stories. *PloS ONE, 15*(2), e0228581. https://doi.org/10.1371/journal.pone.0228581

Brewin, C. R., MacCarthy, B., Duda, K., & Vaughn, C. E. (1991). Attribution and expressed emotion in the relatives of patients with schizophrenia. *Journal of Abnormal Psychology, 100*(4), 546. https://doi.org/10.1037/0021-843X.100.4.546.

Brown, G. W., Birley, J. L. T., & Wing, J. K. (1972). Influence of family life on the course of schizophrenic disorders: A replication. *British Journal of Psychiatry, 121,* 241–258. https://doi.org/10.1192/bjp.121.3.241

Carlton, J., Rowen, D., & Elliott, J. (2020). Assessment of the psychometric properties and refinement of the Health and Self-Management in Diabetes Questionnaire (HASMID). *Health and Quality of Life Outcomes, 18*(1), 1-11. https://doi.org/10.1186/s12955-020-01305-3

Cherry, M. G., Taylor, P. J., Brown, S. L., & Sellwood, W. (2018). Attachment, mentalisation and expressed emotion in carers of people with long-term mental health difficulties. *BMC Psychiatry*, *18*(1), 1-11. https://doi.org/10.1186/s12888-018-1842-4

Çolpan, M., Eray, Ş., Eren, E., & Vural, A. P. (2018). Perceived Expressed Emotion, Emotional and Behavioral Problems and Self-Esteem in Obese Adolescents: A Case-Control Study. *Journal of Clinical Research in Pediatric Endocrinology, 10*(4), 357. https://doi.org/10.4274/jcrpe.0101

Hooley, J. M., & Gotlib, I. H. (2000). A diathesis-stress conceptualization of expressed emotion and clinical outcome. *Applied and Preventive Psychology, 9*(3), 135-151. https://doi.org/10.1016/S0962-1849(05)80001-0

Hooley, J. M., & Parker, H. A. (2006). Measuring expressed emotion: An evaluation of the shortcuts. *Journal of Family Psychology, 20*(3), 386. https://doi.org/10.1146/annurev.clinpsy.2.022305.095236

Jenkins, J. H., & Karno, M. (1992). The meaning of expressed emotion: Theoretical issues raised by cross-cultural research. *American Journal of Psychiatry, 149*(1), 9-21. https://doi.org/10.1176/ajp.149.1.9

Leff, J., & Vaughn, C. (1985). Expressed emotion in families: Its significance for mental illness. Guilford Press.

López, S. R., Ramírez García, J. I., Ullman, J. B., Kopelowicz, A., Jenkins, J., Breitborde, N. J., & Placencia, P. (2009). Cultural variability in the manifestation of expressed emotion. *Family Process, 48*(2), 179-194.

Ludvigsson, J. F., Roy, A., Lebwohl, B., Green, P. H., & Emilsson, L. (2017). Anxiety and depression in caregivers of individuals with celiac disease—a population-based study. *Digestive and Liver Disease, 49*(3), 273-279. https://doi.org/10.1016/j.dld.2016.11.006

Masland, S. R., Drabu, S., & Hooley, J. M. (2019). Is perceived criticism an independent construct? Evidence for divergent validity across two samples. *Journal of Family Psychology, 33*(2), 133–142. https://doi.apa.org/doiLanding?doi=10.1037%2Ffam0000452

Medina-Pradas, C., Navarro, J. B., López, S. R., Grau, A., & Obiols, J. E. (2011). Further development of a scale of perceived expressed emotion and its evaluation in a sample of patients with eating disorders. *Psychiatry Research, 190*(2-3), 291-296. https://doi.org/10.1016/j.psychres.2011.06.011

Rienecke, R. D., & Richmond, R. L. (2017). Psychopathology and expressed emotion in parents of patients with eating disorders: Relation to patient symptom severity. *Eating Disorders*, *25*(4), 318-329. https://doi.org/10.1080/10640266.2017.1289795

Sandler R. S, Everhart J. E, Donowitz M., Adams E., Cronin K., Goodman C., Gemmen E., Shah S., Avdic A., Rubin R. (2002). The burden of selected digestive diseases in the United States. *Gastroenterology, 122*(5), 1500–1511. https://doi.org/10.1053/gast.2002.32978

Shapiro, J. (2011). Illness narratives: reliability, authenticity and the empathic witness. *Medical Humanities, 37*(2), 68-72.

Wearden, A. J., Tarrier, N., Barrowclough, C., Zastowny, T. R., & Rahill, A. A. (2000). A review of expressed emotion research in health care. *Clinical Psychology Review, 20*(5), 633-666.

Zasiekina, L. (2020). Trauma, Rememory and Language in Holodomor Survivors' Narratives. *Psycholinguistics, 27*(1), 80-94. https://doi.org/10.31470/2309-1797-2020-27-1-80-94

Zasiekina, L., Leshem, B., Hordovska, T., Leshem, N., & Pat-Horenczyk, R. (2021). Forgotten Stories of Women: Intergenerational Transmission of Trauma of Holodomor and Holocaust Survivors' Offspring. East *European Journal of Psycholinguistics, 8*(1), 137-158. https://doi.org/10.29038/eejpl.2021.8.1.zas

HERMENEUTICS OF *LÁZARO IN THE LABYRINTH* BY BUERO VALLEJO

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Abstract. This play contributes to a better understanding of the psychological mechanism of behavior with respect to recurrent auditory hallucinations and the traumatic origin that can cause it, such as experiencing a violent event. This causes an emotional blockage of fear in the actor, due to the defense mechanism of denial, with repercussions on memory and negative feelings of guilt and shame. The author proposes an adequate emotional management for the protagonist, Lázaro. The solution is aimed at making him dare to know the truth and accept it following current clinical psychological praxis, without taking refuge in the protection of others. In this way, he will improve and may even reduce the emotional state and the hallucination. In the analysis of the work, various contents are decoded. First, the planes of reality: the physical world, the fantasy world and the inner world of the characters. Second, the trauma lodged in the subconscious and auditory hallucination. Third, relationship of defense mechanisms, emotional intelligence and memory. Fourth, plot about love relationships. Fifth, the psychological mechanisms in favor of justice and truth. It is proposed how this drama could have contributed to the social imaginary to raise awareness about the emotional management of individuals. The results indicate that this symbolic and complex work of form and content also contributes to solving other human dilemmas such as the limitation to know reality, in addition to the feelings and emotions in the subconscious, as well as to accept them. It is discovered how to cope with an ethical sense of justice in a society in democratic transition, with still open wounds that derive from a war. Also, there is the aspiration to a humane society on the part of the author.

Keywords: Buero Vallejo, drama, Lázaro in the Labyrinth, trauma, emotional intelligence, acceptance.

Пенья-Акунья Беатрис. Герменевтика твору Буеро Вальєхо «Лазар у лабіринті».
Анотація. Ця п'єса сприяє кращому розумінню психологічного механізму поведінки в ситуації рекурентних слухових галюцинацій та їхнього травматичного походження, наприклад, переживання сцен насильства. У актора це викликає емоційне блокування страхом через захисний механізм заперечення, що впливає на пам'ять та негативне почуття провини та сорому. Автор пропонує адекватне керування емоціями головного героя Лазаря. Рішення спрямоване на те, щоб змусити його наважитися дізнатися правду і прийняти її, дотримуючись сучасної клінічної психологічної практики, не ховаючись від допомоги з боку інших. Таким чином він покращить і навіть нормалізує свій емоційний стан і зменшить галюцинації. Різні шари змісту одержують інтерпретацію під час аналізу тексту твору. По-перше, це плани реальності: фізичний світ, світ фантазії та внутрішній світ героїв. По-друге,

це травма, що засіла в підсвідомості та слухових галюцинаціях. По-третє, це взаємозв'язок захисних механізмів, емоційного інтелекту та пам'яті. По-четверте, це сюжет про любовні стосунки. По-п'яте, це психологічні механізми задля досягнення справедливості та правди. Авторка розмірковує, як ця драма могла б сприяти соціальним уявленням щодо підвищення обізнаності про керування емоціями індивідами. Результати засвідчили, що ця символічна і складна робота форми та змісту також сприяє вирішенню інших людських дилем, таких як обмеження пізнання реальності та прихованих у підсвідомому почуттів та емоцій, а також їхнє прийняття. Розглянуто питання того, як чинити з етичним почуттям справедливості в суспільстві з перехідною демократією, в якому ще не загоїлися рани від війни. Також у автора твору простежено прагнення до гуманного суспільства.

Ключові слова: Буеро Вальєхо, драма, Лазар у лабіринті, травма, емоційний інтелект, прийняття.

Introduction

Aristotle approaches catharsis (in the treatise of Poetic), the liberation of repressed emotions, through the genre of drama. Catharsis occurs when the audience identifies with the profound emotions evoked by the characters, producing an effect of purification. This purification is insufficient to psychologically cure a trauma, but it serves as a reminder and to make the audience realise that some event they have experienced is negative, painful and has serious emotional effects on them when they relive it.

At an emotional level, the phase of identification (Goleman, 1995; Bisquerra & Mateo, 2019) is especially acute in the protagonist, in whom fear, shame, low self-esteem and guilt are reflected, in both their words and their body language. In the case of individual with low self-esteem is characterized by having feelings of self-underestimation (Lancelle, 2002). The feeling of guilt is linked to religious parameters (Freud, 1975, p. 430).

These emotions have been studied according to the roles and the drama represented in the play, and have been deliberately rehearsed previously by the actors interpreting the work, under the orders of a director. The audience's ability to decode the emotion has a physiological basis known as mirror neurons (Rizollati et al, 2007), by which the individual can imitate, learn and understand the intentions of others.

On the moral plane, an emotional identification is also established. If we consider the approach of Piaget (1932; 1933), he establishes that the asymmetric interactions that parents establish with their children it is the context where the child assumes a heteronomous morality. Later, it is within the framework of symmetrical interactions with their peers that it is possible for young people to develop rational, consensual rules.

So, the mechanism of emotional identification with a character in a drama also occurs on the moral plane, embodied by the actions represented by the protagonist, given that moral values are transmitted both (López, 1997) aesthetically and ethically in the drama.

According to Freud (1920), the concept of trauma consists of the association of a dramatic event with an emotion in the mind of an individual. The individual has been

confronted by a stressful event which exceeds their capacity to face up to it. However, these two factors are dissociated from the subject's consciousness, so that the trauma becomes part of the repressed thoughts which populate their subconscious (Freud). According to Castiel et al (2012), the concept of trauma and defence contributes to the understanding of hysteria. In addition, Sletvold (2016) notes that Freud's first theory of trauma based on emotional events contributed to the understanding of neurosis (*non-neurological mental disorders*). Trauma can manifest itself in various ways in the individual: nightmares, insomnia, irritability, anxiety and nerves.

As a result of this trauma, the protagonist has persistent auditory hallucinations in the form of a telephone ringing which the others do not hear. These subjective hallucinations, which can produce anguish, do not correspond to physical reality, and are not necessarily related to schizophrenia or other mental pathology (Longdem, 2013). This state can be overcome through the use of cognitive treatment (López-Luengo, 2017). The treatment phase can also be reinforced with the application of emotional intelligence, through the identification, regulation and management of the emotions (Goleman, 1995).

Among the defence mechanisms by which the psyche avoids recognising traumatic events, expounded by Anna Freud (1936), can be found denial, isolation and undoing. In negation, the subject refuses to recognise the reality overwhelming them because the emotion is too intense.

The therapeutic response to traumatic experiences recommended by clinical psychology today is that of Acceptance and Commitment Therapy (ACT) (Hayes, 1984; Hayes et al, 1999; Ferro, 2000; Luciano & Valdivia, 2006). Hayes first defined of Acceptance and Commitment Therapy (ACT) in a paper on spirituality, starting with the observation that suffering is intimately bound up with verbal knowledge. Part of the process of ACT is to encourage individuals to find a transcendent sense of self known as self-as-context. By developing self-awareness and perspective, people can cease following behavioural norms learned from childhood.

This trauma has also produced in the protagonist the affective blockade to bet on finding a partner and projecting a family of his own. He has preferred to operate in a familiar context, operating on infantile attachment, in a context in which they have a secure bond, this entails feelings of stability and increased self-esteem (Branden, 2008), favouring empathy and emotional communication (Rodriguez, 2017). Paradoxically the main character maintains a childlike attachment being compatible with assuming an adult role (Goffman, 1997) protecting his sister Fina and his nephews with housing and sustenance.

Why this play: background to the author and his work

The early adulthood of Spanish playwright Antonio Buero Vallejo (1916-2000) was interrupted by the Spanish Civil War. He served with the Republicans, and at the end of the war was sentenced to death for his part in the 'rebellion', a sentence which some months later was commuted, and which ultimately saw him serve six years in

prison (Del Castillo, 1998). Monleón (Alvar, 2000, p. 5-6) regards him as an author with a background in the Fine Arts, whose works draw a portrait of human behaviour with realism and symbolism. Several of his works were censored by the state for their progressive undercurrents which failed to explicitly align with the dictatorship. In 1986, the year that *Lázaro in the Labyrinth* was first performed, he was awarded the prestigious Miguel de Cervantes Prize, having already been made a member of the Spanish Royal Academy in 1972, and he would go on the win the National Prize for Spanish Literature in 1996. The play was chosen for its titular character, a victim of trauma, and for the phenomenon of persistent auditory hallucination by which his trauma is manifested. The play also suggests how such trauma can be managed by strategies which foreshadow Goleman's (1995) emotional intelligence, and current clinical psychological practice embodied in Acceptance and Commitment Theory (Hayes, 1984; Ferro, 2000; Luciano & Valdivia, 2006).

Method

A baseline bibliographic review was carried out, and the work was hermeneutically analysed according to various paradigms in chronological for its richness in terms of register, content and construct: Plato's gnoseological conception (*Republic, VII*), Aristotle's catharsis (*Poetics*), Saussure's semiotics (1945), Sigmund Freud's concept of trauma (1920), negation (one of the defence mechanisms) described by Anna Freud (1936), ACT therapy (Hayes, 1984; Hayes et al, 1999), and the management of emotions using Goleman's (1995) model of emotional intelligence.

According to Plato, cognitive knowledge allows us to access a reflection, an image of what reality is (in the myth of the Cave, *Republic*, *VII*), but not reality itself. It is an opposite gnoseological paradigm to the Aristotelian (*Metaphysics*) one that affirms that it is possible to know the reality as it is.

Aristotle approaches catharsis (in the treatise of *Poetics*) as the liberation of repressed emotions (or endure purification) through perceiving and reliving the deep emotions of the characters in the drama. The viewer recognizes the passions in a vicarious way when seeing them projected in the characters of the work. In addition, sometimes it allows to consider the consequences or punishment deserved for these emotions. However, he does not directly experience such consequences or punishment.

Semiotics was formulated by de Saussure (1945) as the science that studies the life of signs within social life. Semiosis is the creation of a meaning from the use of a sign that can be interpreted in the mind of the individual who receives it. According to Saussure, symbol serves to designate the linguistic sign, or more exactly what we call the signifier. The characteristic of the symbol is that it provokes a natural link between signifier and signified.

Freud in (1920) develops the concept of trauma as association of a dramatic event with an emotion in the mind of an individual within the paradigm of unconscious´ phenomena. In fact, the Freudian definition of trauma is "any

excitations from the outside which are powerful enough to break through the protective shield there is no longer any possibility of preventing the mental apparatus from being flooded with large amounts of stimulus which have broken in and binding of them".

Anna Freud (1936) conceives negation as a mechanism of the immature mind because it conflicts with the ability to learn from and adapt to reality. When denial occurs in mature minds, it is most often associated with death, the state of impending death, and rape. Currently the concept has been extended (Kübler-Ross, 1969) to five phases of knowledge of near death and to death notices among survivors.

ACT therapy consist on the theory of relational frames that incorporates scientific advances in the study of language. This theory formulates that we are capable of establishing arbitrary relationships between different stimuli. Consequently, when a word is conditioned to an object, the reactions that had been conditioned to the object are given to the word. Therefore, just as an object evokes the word that names it socially, the same term evokes internal reactions similar to those provoked by the original object (Hayes et al, 2001).

According to Goleman (1995), the management of emotions refers to consciously identifying the emotions that are felt. At a later stage, they are accepted and regulated to better fit the context.

Results and Discussion

Analysis of the play

The play, set in a contemporary provincial town, follows the story of Lázaro, owner of a bookshop called *The Labyrinth*. Lázaro, middle-aged, lives with his sister Fina, who has been abandoned by her husband, and her two children, Mariano, a lawyer, and Coral, a musician. The two children have two friends in common, Germán, a lawyer, and Amparo, a writer, who had previously been in a relationship with Mariano. In his youth, Lázaro had attended a student demonstration with Silvia, the girl with whom he was in love, but on their way back Silvia had been viciously attacked by extremists and left disfigured. Despite the passing of twenty years, Lazaro remains tormented by the events, and hears a persistent auditory hallucination in the form of the ringing of a telephone. When he meets Amparo, the friend of his sister's children, in his daily life, he projects the feelings of love he felt for Silvia onto this other young woman.

The play is divided into two acts. The first is the longer, establishing the scene, and setting the plot in motion; the second is shorter and moves things along to the denouement. Scenes are played out in parallel, with dual dialogues dynamically interacting across a twin set as characters take turns to speak. The criss-crossing dialogue weaves increasing layers of meaning as the six characters interact. *Lázaro in the Labyrinth*, among Buero's last plays, was first performed in 1986 during the early years of the reestablishment of democracy in Spain following the death in 1975 of Franco. It was considered by critics as a passionate parable about love and fear (García Carzón, 1986).

Platonic dualism, semiotics and the interior world: reality, fantasy and introspection

Three different levels of reality operate in the play, symbolically suggested through a taught, economic style with highly suggestive touches, making use of a variety of effects suggestive of poetic, polysemous images, as noted below.

First, the drama presents elements and actions which are scatological and mysterious in themselves, especially in the character of Lázaro' sister, Fina. There are also on stage two phantasmagorical masked figures, giving form to the anguish deriving from the attack on Silvia. Fina is submissive "as behoves married women" (Aguilar & Miguel, 2021, p. 52) and overprotective of her brother. She practises cartomancy – fortune telling with cards – in order to divine what the future holds for Lázaro and Coral, and attempts to prevent what she foresees with warnings about how they should refashion their lives. She also foresees in her dreams what will soon befall Lázaro – "dreams tell us a lot of things" (Buero, 1986, p.43) – that he will meet a woman who reminds him of Silvia. As Freud brought to our attention, the world of dreams is the location where the subconscious mind projects its images.

Secondly, the name of the play, *Lázaro in the Labyrinth*, is in itself allusive, referring not only to the actual bookshop, but also to the emotional state of fear and anguish inhabited by the protagonist. As Amparo tells him, "you condemned yourself on that awful occasion to the shadows. To the labyrinth" (Buero, 1986, p.122).

Third, there is the visual plane of the imagery, which owes much to the writer's training in the visual arts. The characters avoid facing up to reality through the construction of fantasies, the contemplation of beauty and introspection into an inner world in another dimension. Such is the case of the park bench by the pond, sparkling in the reflected light. Besides being a physical place of contemplation, it is for Lázaro and Coral a spiritual retreat, and it around this bench that much of the drama occurs: escape, discovery of visual and musical beauty, emotional peace, and the search, in part, for equilibrium. It is where they piece together a coherent account of the events in their lives: "The discovery was not mine, but Silvia's. She was the great discoverer. She said that if we know how to look and listen to things, they wink at us. The light reflecting off the water was for her its way of winking at us" (Buero, 1986, p.14). The specialness of the locale is defined further in the second act: "It is the place where the truth is revealed" (Buero, 1986, p. 86). The influence of Plato's gnoseological aesthetic can be seen here, in terms of the allegory of the Cave (the Republic), pointing to another level of reality which is difficult to approach and comprehend. In the allegory a group of people chained to a wall inside a cave are unable to perceive the outside world, which represents the world of ideas, intelligible and consistent, but must instead attempt to fathom it from the shadows projected onto the wall of the cave (the visible world). According to Angarita (2011), the allegory reminds us of the importance of analytical evidence, as in a case study, when it comes to understanding all the contradictions involved in the primitive mechanisms of an individual's learning baggage.

Spirituality and beauty are also foregrounded against a common background of music. In conversation with Lázaro, Coral exclaims, "Do these notes really sound alike? Yes! The water sparkles over our bodies and these notes over us" (Buero,

1986, p. 15). Coral plays the lute, an unconventional instrument on which she is unable to express how she feels because her lack of understanding of her inner life prevents her from achieving mastery. Many of the scenes feature background music, and accomplished compositions are mentioned, such as the baroque composition, Gavotte, based on a French folk dance, and referring here to the Suite in E-flat major (Buero, 1986, p.73, 85), by the composer Johann Christian Bach for lute.

This fantasy is counterpointed by the social reality which the author puts in the world-weary mouth of Germán, "two fighters who are at odds with this rotten society". We are reminded of this reality in the account of their political activism – "They went to a student protest together and on the way home two strangers set on them on a corner" (Buero, 1986, p.36) – and by the general tone of censure for the acts of repression of the period. The portrait of society is one of a society divided, in conflict, with the fratricidal war (1936-1939) still relatively recent. On the one hand, there is the comfortable middle-class represented by Lázaro and his family, on the other, the less well-off embodied by Germán and Amparo, progressive in political outlook, and lacking all privilege with respect to the job market. To overcome his disadvantages Germán behaves unscrupulously in competition with Mariano, so that he manages to be contracted by a law firm, while Mariano is left unemployed. Lázaro is unimpeachable in all his actions, with the grave exception of the events with Silvia. Amparo is guided more by the need to maintain herself on her own merits while preserving her ethical standards.

Trauma in the subconscious and persistent auditory hallucinations

Lázaro suffers episodes of persistent auditory hallucinations when he is told that Sylvia, the young woman who was brutally attacked after attending a political demonstration with him many years previously, has been seen again. As López Luengo (2017, p. 8) says, this is the triggering event: "when one's attention is self-directed towards internal information of great emotional charge, the conditions are favourable for the appearance of hallucinations". Lázaro' trauma, tinged with culpability and shame, follow the pattern of remembering, repeating and working through described by Freud (cited in Etxeverry, 1986, p.151-152): "in general the person under analysis remembers nothing of what has been forgotten and repressed, and instead acts it out. They do not reproduce it as a memory, but as an action. They repeat without knowing, of course, what they are doing." This kind of trauma signifies a loss, according to LaCapra (2009, p. 65-103).

Defence mechanisms, emotional intelligence and memory

The writer draws a deep emotional portrait of the six characters, sketching in each's conflicting feelings towards the family, work and love, and how they manage the emotions arising as a result.

According to the different mechanisms of defence described by Anna Freud (1936), Lázaro has repressed his memory of the event perhaps because he felt close to his death or as a survivor of the brutal beating who does not want to acknowledge the

death of his friend Silvia. In the play these facts are blurred as in the mind of the protagonist. With an attitude of denial, he refuses to admit to his family how much it unceasingly overwhelms him, causing them to worry about him. It is only to Amparo that he reveals that he has in his memory two different versions of what happened the night Silvia was attacked:

> Amparo: "In one, he ran to help when she called out, and then they attacked him"
> Mariano: "¿And in the other?"
> Amparo: "He heard her call out, but he froze on the spot out of panic, and watched them beat her up at a distance. Only after they'd fled the scene did he go to help her" (Buero, 1986, p.114).

Nevertheless, Amparo suspects that Lázaro cannot face up to the version in which he was a coward. Lázaro becomes blocked and cannot apply the emotional intelligence required to dare identify, regulate and manage his emotions (Goleman, 1995) precisely because of the profound fear he feels. He has no wish to discover which way he acted, of which, at heart, he feels guilty. Because of this emotional blockage, he has lost his memory of the event and cannot face up to it: "You have forgotten because you feel nothing but fear. A fear so great, so constant that to make it go away, you have engineered things to make it a nice and quiet blip in your memory" (Buero, 1986, p.121).

His sister Fina reinforces this denial with her overprotective posture towards him. She even withholds from him her belief that Silvia actually died from her injuries – "I think that Silvia died ... a long time ago" (Buero, 1986, p.87) – which she learnt when Silvia's parents called her to ask that Lázaro no longer call their daughter. She thus takes an active part in prolonging Lázaro's suffering over the years, and, in not wanting to face up to the truth, also behaves in a cowardly manner.

Affective relationships and the plot

The topic of affective relationships is central to the play, such that the characters emanate tensions that are not overtly expressed, but are felt beneath the surface. Fina has been abandoned by her husband, and is cared for by her brother Lázaro. So protective of him is she that she even contemplates her daughter committing incest with him, the man who has acted as a father figure for her (evoking Freud's famed Oedipal Complex), and hints that the two get married: "Mum, don't you realise that you're talking to me about him as if he was engaged to me?" (Buero, 1986, p. 93).

Amparo recommends that Lázaro send Coral abroad because she suspects that Coral is in love with her uncle. (Amparo): "I suspect…that it is you she has always been in love with" (Buero, 1986, p.188).

Male rivalry is reflected in the struggle for Amparo's affections between Lázaro, his nephew Mariano, and Germán. Amparo is portrayed as a strong woman, with no interest in making a good match, or finding a good man to marry. That kind of consideration reflected conventional mores, according to which women did not go to

university or study a trade, and so lacked economic independence. If Amparo is to have any kind of relationship with a man, it is to be on an equal footing, with no economic dependence on her part. For the period in which she is represented, she is advanced in her attitudes.

The process of catharsis and identification of the two protagonists takes place in the penultimate scene of Act II. Lázaro declares his feelings of love for Amparo. She reciprocates, but is set on leaving because she wants Lázaro to face up to the truth of what happened with Silvia, and begin a healing process and acceptance therapy (Ferro, 2000, Luciano & Valdivia, 2006), beyond cathartic purification (Aristotle). She wants him to emotionally overcome for himself the trauma caused by his fear, and not to take sanctuary in her protection alone like a child: "At your side, I would only keep you stuck in your helpless child's fear, I would never drag you out of it ... If you are going to be reborn, if you can manage it, you need to be far away from me" (Buero, 1986, p. 124). She has a fuller conception of love: "I don't want just another lover; I have long understood that desire and the fascination of the other's presence are not enough" (Buero, 1986, p.123). Amparo would like a reciprocal relationship built on strength and generosity, not based on weakness and selfishness.

> Lázaro: "I don't understand. ¿Why are you leaving?
> Amparo: "For love". (Buero, 1986, p.125)

Psychological mechanisms promoting justice and truth

Germán suspects that Fina knows more than she lets on about Silvia. In front of everybody, he cross-examines her, and using psychological questioning, he backs her into a corner and finally makes her reveal what she knows about Lázaro and Silvia, which she has been keeping secret all this time. The episode reflects Buero's own experiences at the end of the war, when he was tried and imprisoned for six years for his political affiliation (Del Castillo, 1998).

The author draws a careful portrait of Amparo, who can be considered the fairest-minded character for several reasons. First, she is frank about people's feelings. Secondly, in the professional sphere, she reports the unethical practices of her former employers, but at no time does she seek to take advantage of the working conditions offered to her by Lázaro. Thirdly, acting on moral grounds, she reveals that Germán has been dishonest with Mariano. And finally, most importantly, she resists the convenience of marrying Lázaro and the economic security that entails.

Another recurrent theme in the play is the irrationality of aggression rooted in the fear of not being able to survive. It surfaces in the words of Amparo: "Fear, in sum, for his dear life. This fear gives rise to selfishness and aggression, which then gives rise to fear... And this is the hell where we find ourselves" (Buero, 1986, p.108). The issue is interwoven with another scene in which the phantasms reappear, this time with a speaking role which gives them greater importance. It is they that

bring to close the play. The two masks taking the role of the chorus in a Greek tragedy, and representing the irrationality of hate and aggression in general:

> 2nd Mask: "Of course. Because now others must be attacked".
> 1st Mask: "Or shot"
> 2nd Mask: "Or remotely controlled explosives".
> 1st Mask: "Or targeted missiles. The last word". (Buero, 1986, p. 126)

Conclusions

The style of the play is sombre, but layered with complexities. With respect to form, it draws on various art-forms: the dramatic, with elements of the poetic, the visual, the dialogic, the symbolic and the musical.

The interplay of three levels of reality suggested by the characters – the inner world, the world of fantasy, and physical reality – enable the writer to draw on symbolic and poetic elements, and hint at the scatological and the mysterious, so as to reproduce the complexity of human behaviour. The overall effect is to foreground the disorientation and limitations of people to really know what is happening around the in society and to understand themselves (Hayes, 1984; Ferro, 2000; Luciano & Valdivia, 2006). In short, Buero's aspiration in his conception of reality is articulated by Lázaro in dialogue with Amparo:

> Lázaro: ¡How you remind me of someone I knew well! ...Yes. And her vision, which became mine. A humane world, which we must fight for and which hasn't arrived. ¿Will it arrive?" (Buero, 1986, p.53).

On the moral level, the author portrays a social reality that is still deep in political conflict, despite the many years since the internecine war. Nevertheless, when it comes to moral judgements, it is even-handed. Although the play has a clear progressive slant, it manages to avoid simplistic schemes by which characters are painted in the same political and moral brush-strokes. Buero recognises the good attitudes and actions of comfortably off progressives (Amparo, Lázaro, Mariano and Coral), but deplores that of the middle-class character (Fina's withholding of information about Silvia from Lázaro), and the outwardly progressive, but dissembling character (Germán's unscrupulous treatment of Mariano).

With regard to content, it sets up through the characters great human dilemmas, such as the limitations of access to cognitive knowledge of reality. Likewise, the paradoxical psychological mechanisms of the subconscious emerge in favour of justice and the truth. Another significant element of the play is the unhappiness caused by unresolved trauma and the mechanisms of defence against it. Nevertheless, the play does offer some solutions, such as acceptance of emotional states, and learning to self-regulate one's emotions, alongside unlearning acquired attitudes so as to reduce the negative emotions associated with fear and hallucinations. One

recurrent theme is that of creating lasting bonds through love and the need to progress from infantile to adult attachment. A sense of justice and ethical behaviour in one's civic life are also considered, as are the difficulties facing a society in transition towards democracy, weighed down with the baggage of a recent political-social conflict.

The play can be classified as a drama with considerable emotional impact as it follows the affective arcs of the characters. It opens with an emotional crisis suffered by the leading male character, Lázaro, which leaves him with a persistent auditory hallucination. Not only is this unresolved, but in fact the situation becomes worse, as he loses the company and the love of the two women he has been in love with, Silvia and Amparo.

Despite Lázaro's titular significance, the young Amparo has an important part to play. The two are the most rounded characters: Lázaro is vulnerable, diminished by fear and guilt; Amparo, by contrast, is an intelligent, strong and fair-minded woman, ahead of her time. She behaves most exemplary of all the characters, the most idealise, and the character the audience is most likely to identify with on an emotional and moral plane.

In short, the psychological portrait of the characters' emotions is drawn with understanding and depth. Above all, the work is successful in its treatment of love in conflict with the emotion of fear. It is this depth of understanding of human nature which has caused Buero to be considered a classic author, resonating with writers of the stature of Calderón de la Barca and Shakespeare.

References

Aguilar López, A. M., Miguel Borge, M. (2021). Female roles in *la Cinta Dorada* by María Manuela Reina and models of the world. *East European Journal of Psycholinguistics*, *8*(1), 41-56. https://doi.org/10.29038/eejpl.2021.8.1.agu

Alvar López, A. (2000). Buero. Las puertas del drama: revista de la Asociación de Autores de Teatro, 2. http://www.aat.es/pdfs/drama2.pdf

Angarita R., E. (2011). A propósito del mito de la caverna de Platón. *Psicoanálisis XXIII* (2), 103-109.

Aristóteles (1992). Poética. Gredos. Edición trilingüe de Valentín García Yebra.

Aristóteles (2018). Metafísica. (2018). Edición trilingüe a cargo de Valentín García Yebra. Gredos.

Branden, N. (2008) El respeto hacia uno mismo. Paidós.

Bisquerra, R., Mateo, A. (2019). *Competencias emocionales para un cambio de paradigma en educación*. Editorial Horsori.

Castiel, S.V., Sibemberg, A. D.P., Firpo, L.S. (2012). Defensa y trauma: del proyecto a la actualidad. Ágora: *Estudos em Teoria Psicanalítica, 15*(1), 63-77. https://psiquiatria.com/trabajos/usr_8572959916877.pdf

Del Castillo, J. (1998). Buero es el escenario de la vida. *Tribuna de actualidad, 549,* 58-59.

Etcheverry, J. L. (ed.) (1986). *Sigmund Freud. Obras completas*, 12. Amorrortu.

Ferro García, R. (2000). Aplicación de la terapia de aceptación y compromiso en un ejemplo de evitación experiencial. *Psicothema*, *12*(3), 445-450. https://www.redalyc.org/pdf/727/72712318.pdf

Freud, S. (1920/1961) *Beyond the pleasure principle*. In Strachey J (Ed.). WW Norton.

Freud, A. (1936). *Ego and mecanism of defence*. Routledge.

Freud, S. (1975). *Totem und tabú*, Fischer, Studienaus-gabe, IX.

García Carzón, J.I. (1986). Lázaro en el laberinto. Apasionante parábola de Buero Vallejo sobre el amor y el miedo. *ABC*, 20.

Goffman, E. (1997). *La presentación de la persona en la vida cotidiana*. Amorrutu editores.

Goleman, D. (1995). *Inteligencia emocional*. Kairos.

Hayes, S. (1984). *Making sense of spirituality*. Behaviourism, 12, 99-110.

Hayes, S. C., Strosahl, K. D. & Wilson, K.G. (1999). *Acceptance and commitment therapy*. Guilford Press.

Hayes, S. C., Barnes-Holmes, D. & Roche, B. (Eds.). (2001). Relational frame theory: A post-Skinnerian account of human language and cognition. Kluwer Academic/Plenum Publishers.

Kübler-Ross, E. (1969). On Death and Dying. McMillan.

LaCapra, D. (2009). Historia y memoria después de Auschwitz. Prometeo.

Lancelle, G. (2002). La autoestima. *Intercambios papeles de psicoanálisis/Intercanvis: papers de psicoanàlisi*, *8,* 53-58. https://raco.cat/index.php/Intercanvis/article/view/355140

Longden, E. (2013). *Learning from the voices in my head*. TED Books.

López Quintás, A. (1997). *La formación por el arte y la literatura*. Rialp.

Luciano Soriano, M. C.; Valdivia Salas, M. S. (2006). La terapia de aceptación y compromiso. Fundamentos, características y evidencia. *Papeles del Psicólogo*, 27(2), 79-91.

López-Luengo, B. (2017). Desaparición de alucinaciones auditivas persistentes mediante un entrenamiento cognitivo. Estudio de caso único. XVIII Congreso Virtual Internacional de Psiquiatría. *Interpsiquis 2017,* Cartagena (España).

Platón. (2003). *Diálogos*. Obra completa en 9 volúmenes. Gredos.

Piaget, J. (1967). *La nueva educación moral*. Losada.

Piaget, J. (1984). *El criterio moral en el niño*. Martínez Roca.

Rizollati, G., Fogassi, L., Gallese, V. (2007). Neuronas espejo. *Investigación y ciencia*, *364,* 14-21.

Rodríguez Rodríguez, J. C. (2017). *Apego e inteligencia emocional como predictores del funcionamiento familiar en familias en riesgo social*. Tesis. Universidad de Almería. https://dialnet.unirioja.es/servlet/tesis?codigo=129849.

Saussure, F. (1945). *Curso de Lingüística General*. Losada.

Sletveld, J. (2016). Freud's Three Theories of Neurosis: Towards a Contemporary Theory of Trauma and Defense. *Psycoanalitic Discourses*, *2*(84), 460-475. https://doi.org/10.1080/10481885.2016.1190611

Source

Buero Vallejo, A. (2010). *Lázaro en el laberinto*. Voces críticas.

UNCONSCIOUS MEMORY IN ACQUIRING NEW VOCABULARY USING FLASHCARDS

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Abstract. Most people tend to memorize different things unconsciously, without even taking notice of this process. However, it comprises a vital and effective function of the human mind that requires little effort. Following this perspective, the article aims to analyze the possibility of applying this function in the language learning process, particularly in facilitating the process of memorizing new foreign words. The experiment was conducted to prove the effectiveness of the proposed method and consisted of two phases. First, three focus groups of students were to observe the flashcards alongside the translation of words for the time period of 16 weeks, unconsciously memorizing them. Then, there were two control tests to determine the effectiveness of such a learning method. The present paper also relies on the articles and research activities of numerous scholars, e.g. Standing (1973), Urgolites (2013), Nikolic (2007), Brady, Konkle (2011), Schurgin & Cunningham (2018), showcasing the effectiveness of visual memory in retaining the information for a longer period of time. These studies emphasized the associations that people make while memorizing different things. Our research posits that color flashcards with the translation of words facilitate the process of creating associations among students, ensuring high results of their memory performance. Foreign language teachers can hence use the research results to facilitate learning new words by students.

Keywords: memory, language learning, vocabulary memorizing, long-term memory, flashcards.

Подоляк Михайло. Несвідома пам'ять під час набуття нової лексики за допомогою флеш-карток.

Анотація. Більшість людей запам'ятовують різні речі несвідомо, не усвідомлюючи процесу. Це дуже важлива та ефективна функція людського розуму, яка вимагає невеликих зусиль. Враховуючи це, дана стаття намагається проаналізувати можливість використання цієї функції в процесі вивчення іноземної мови. Зокрема – у полегшенні процесу запам'ятовування нових іноземних слів. Тому експеримент проводився для доведення ефективності запропонованого способу. Три групи студентів спостерігали за картками з перекладом слів протягом 16 тижнів, несвідомо запам'ятовуючи їх. В подальшому було проведено два контрольних тести для визначення ефективності такого методу навчання. Численні статті та дослідницька діяльність вчених (Standing, 1973; Urgolites, 2013; Nikolic, 2007; Brady & Konkle, 2011; Schurgin & Cunningham, 2018) доводить ефективність зорової пам'яті в утримуванні об'єктів протягом тривалого часу. Більшість із них роблять акцент на асоціаціях, які люди роблять, запам'ятовуючи різні речі. Тому в нашому дослідженні кольорові картки з перекладом слів полегшують процес створення асоціацій у студентів, забезпечуючи високі результати роботи пам'яті. Таким чином, результати дослідження можуть бути використані вчителями іноземних мов для полегшення вивчення студентами нових слів.

Ключові слова: пам'ять, вивчення мови, запам'ятовування словникового запасу, довготривала пам'ять, картки.

Introduction

While going to some unfamiliar places for the first time, people are inclined to use the Internet and different devices so as to learn the route in detail. They search for bus or subway stops, bus numbers, and the locations where they need to get off public transport. It is considered a rather typical procedure. However, when people are going home from work or from/to some familiar place, they do not search information about commuting to this place. They know the route, public transport numbers, and stops. They do it automatically and unknowingly, because they take the same route very often. They unintentionally memorize public transport numbers, stops, and places where they must get off.

The US website "Psychology Today" states that the person first gets the information into sensory memory, then this information is transferred into short-term memory or working memory, where the information is being processed and then placed into long-term memory. It is the latter type of memory the person utilizes every time he/she goes the same way because – after a while – the person will need little effort to recall necessary information. Therefore, this process is done automatically, without any prior thinking, and is based on associations that occur in the person's memory, making it long-term. In addition, this long-term memory becomes implicit because the person is using and relying on it unconsciously.

Memory, especially its visual aspect, has been the object of numerous studies. Scholars have researched the storage function of long-term visual memory (Shepard, 1967; Standing, 1973); visual working memory (Brady et al., 2016; Curby et al., 2009); retrieval function of visual long-term memory for the objects, which were memorized once in the past and were not maintained (Squire, 2004; Cowan, 2008; Brady et al., 2011). However, the issue of using unconscious memory for memorizing new words has not been yet the object of the research. Nevertheless, it is important to bring to the fore and research the retrieval function of such a methodology of words memorization in the long-term perspective. Thus, taking into account the data presented above, the present study premised on the initiative to apply the methodology of unconscious words memorizing by using flashcards along with the translation of words during the process of foreign language learning. Specifically, the analysis deals with learning and memorizing the English language words.

Following this line of reasoning, the aim of the research was to investigate the storage capacity and retrieval function of long-term memory by applying the method of visual words memorization by voluntary observing colored flashcards, providing as well words' translation.

Methods

82 students of the specialty "Veterinary Medicine", aged 17–18 years old, took part in the research project. The students had been studying the English language at school for about 10 years, passed External Independent Testing, and enrolled at the

University. The level of their English language competence varies from A1 to B2. All students were split into four groups:

Group No. 1 (*control group*) consisted of 24 students, who had English lessons 3 times a week;
Group No. 2 comprised 18 students, who had English lessons 3 times a week;
Group No. 3 contained 21 students and had English lessons 3 times a fortnight;
Group No. 4 included 19 students that attended English lessons 3 times a week.

It is worth mentioning that one lesson lasted 90 minutes. The words were printed on three flashcards of size 1 m x 85 cm, in color, located under the pictures and accompanied with Ukrainian translation. The flashcards were of the following topics: household tools (32 words), laboratory equipment (34 words), and emotions (14 words).

The experiment lasted for 2 semesters, 16 weeks each, starting from September until May. It was decided to divide the process of research into two stages, according to the semesters: *stage 1* – first semester, *stage 2* – second semester.

The research project started with the evaluation of students' knowledge in the format of a vocabulary test. It consisted of the following two parts: first, the students are to translate the words from Ukrainian/English into English/Ukrainian (15 words each value 2 points); afterwards, they are asked to fill in the appropriate words in the sentences (10 sentences each 4 value 4 points). The total that the students can score at the test is 100 points.

Chronologically, the test was given three times during the research project with such objectives:

- at the beginning of stage 1: to evaluate the general level of students' English vocabulary competence and determine what words they know;
- at the end of stage 1: to evaluate the number of memorized words during their observation;
- at the end of stage 2: to estimate the number of words recalled by the students after 16 weeks.

It is necessary to note that the words from flashcards were not actively used during the class discussions so that the students memorized words mainly by observation.

Generally, each group of students majoring in Veterinary learns English for one year that is equal to two semesters. The experiment was framed according to the following criteria and stages:

At the beginning of the first stage students were given a vocabulary test with a task to translate the words and fill the missing words. They were not informed that there would be the test, therefore they could not prepare or revise any materials for it. However, the first group (which later became the focus group) was warned that the test would be given, so they received the words to memorize. The results of the test were the following:

Group No. 1 (focus group) scored 84 points on average out of 100;
Group No. 2 got 8 points on average out of 100;
Group No. 3 scored 6 points on average out of 100;
Group No. 4 received the average of 8 points out of 100.

These scores manifest that Groups No. 2, No. 3 and No. 4 knew less than 5% out of all vocabulary of the research at the initial stage of the project. The students must know less than 10% of the total words in order to meet the entry criterion for the research in their memory abilities.

All flashcards, arranged in different colors and accompanied with the translation of words, which were the focus of the abovementioned test, were hung on the walls of the room during the next lesson. Students of the 2nd, 3rd, and 4th groups had lessons in this room during the entire academic year. Students were sitting in a row, 2 persons at each desk. For the entire semester the students have a chance to observe these flashcards each time they have English lessons. The words from the flashcards are not learned intentionally and used minimally during the English lessons. The flashcards were hung in different positions for every set of students:

Group No. 2 had flashcards on the sidewalls. Students were sitting on the left and on the right to the flashcards. The left and the right sides had 3 flashcards at each wall.
Group No. 3 faced the flashcards on the front wall, so they were positioned in front of the students.
Group No. 4 also had flashcards on the front wall, thus the flashcards were situated in front of the students.

One can thus assume that students having flashcards with words in front of them observed them more than did the students with flashcards placed sideways. The distance between students and flashcards was from 0,5 meter (flashcards on the sides) to 6 meters (flashcards on the front wall and students at the back desks).

The control test, the same as the first one, was given to students of all groups at the end of the first stage in order to see how well they have memorized the given words. The flashcards were taken away at the beginning of the second stage and students had lessons in the same room. The other control test was given at the end of the second stage to all groups to check how well words are recalled from their memory. The control group memorizes words and takes the word test. They are placed in the other room, without flashcards, and are given the same test on the words at the end of the first and second semesters in order to compare two different types of words memorizing.

Results and Discussion

To begin with, let us present the results of the voluntary memorizing words on flashcards. The test results at the end of *the first stage* (16 weeks after the start) were the following:

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Group No. 1 scored 62 points on average out of 100;
Group No. 2 got 38 points on average out of 100;
Group No. 3 had 54 points on average out of 100;
Group No. 4 received 66 points on average out of 100.

At the end of *the second stage*, that is 32 weeks after the start of the English course, the results of the same test were as follows:

Group No. 1 got 40 points on average out of 100;
Group No. 2 scored 26 points on average out of 100;
Group No. 3 received 38 points on average out of 100;
Group No. 4 had 48 points on average out of 100.

The results are displayed in Table 1.

Table 1
The Results of Two Stages in Students' Testing

	The results of the test at the beginning of the experiment	The results of the experiment at the end of the 1st stage, 16 weeks after the beginning of the experiment	The results of the experiment at the end of the 2nd stage, 32 weeks after the beginning of the experiment; 16 weeks after the words were not observed by students
Group No. 1 (Focus group)	84	62* *the group did not observe words for 16 weeks	40** **it did not observe words for 32 weeks.
Group No. 2	8	38	26
Group No. 3	6	54	38
Group No. 4	8	66	48

It is reasonable to state that unconscious words memorizing can be an effective way of foreign words learning. Using this methodology can facilitate both the learning and teaching process. Returning to the aim of the present research project, i.e. to analyze the efficiency of learning new vocabulary by voluntary observing flashcards with new words and their translation, as well as to research the potential time period these words can be stored in memory and the possible results of their restoring after some time, the paper underscores the fact that the position of flashcards towards the students plays a crucial role in words memorizing. Specifically, flashcards placed in front of the students have better results for words

memorizing in comparison with the flashcards, placed sideways. The other outcome of the project lies in the fact that the more frequently students observed flashcards, the better were the results.

The results demonstrated that this method is a productive way to support the process of new vocabulary learning. Visual means of learning new information are efficiently used by a number of teachers for presenting new vocabulary. A great number of scholars have proven the efficiency of visual tools of memorizing information. In 1973, Standing presented 10,000 pictures to observers in his experiments to examine their memory capacity, and they remembered approximately 80% (Standing 1973). The other scholars (Brady et al., 2008) presented 2500 images, and the result was above 80% as well. The study of Bui and McDaniel (2015) proved the efficiency of a visual type of learning as well. Based on the results of their research, it has been concluded that illustrative diagrams, which are supported by text description, facilitate the learning process and recalling of information. The other study by Carney and Levin (2002) proves the efficiency of pictures in the information perception and learning excellence. It is important to mention that the authors highlight the indispensible role of pictures in a text intended for children with the help of which the language and literacy of kids are being improved. Moreover, pictures improve text comprehension, make the reader more focused on preventing the loss of attention, and facilitate mnemonic function. Concerning the mnemonic illustrations, Carney and Levin (2002) stressed upon the research done by Dretzke, mentioning that mnemonic illustrations foster recalling of text information among younger and middle-aged adults.

Having completed the experiment, we organized a questionnaire for a range of students from each group, who answered the principal question: «What served the facilitating function for you in the process of words memorizing?» In most cases, the answers were as follows: «Pictures helped to make associations», or «We have seen flashcards many times per week». Similar results were obtained in the study by Karpicke (2016). The paper emphasizes the role of retrieval in long-term learning, stating that the best way to learn new material is to create associations that can be easily retrieved from memory and can therefore promote long-term learning. In addition, it is important to constantly retrieve information from memory in order to acquire its nets for a longer period of time. The other factor, highlighted in the abovementioned article, that also supports the results of the present research, emphasizes the interconnection of visual and repeated learning. Karpicke mentioned that the most effective way of learning the words is the one when the repetitions are spaced. The study by Terada (2017) supports the role of associations and repetitions as well. The author stresses upon the repetition of learned information using tests, as well as modern applications and websites. Terada's study also claims that information is easy to remember when it is presented in different ways, especially using visual aids (flashcards, pictures, tables, etc.).

The research of Brady et al. (2008) proves the efficiency of long-term memory in storing massive information, especially when it comes to images. The authors also turned to presenting 2500 pictures to observers and told them to memorize these pictures. The results were outstanding and proved the efficiency of the method. In addition, the researchers showed the pictures in such a manner that one picture

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repeated on average once in eight images, and the results were tremendous as well. With this in mind, another research, conducted by Konkle et al. (2010) showcased the efficiency of image storage in memory when pictures are repeated. As far as our research is concerned, it should be mentioned that the students were observing a much smaller number of images than in the abovementioned experiment. On the other hand, the students were not told to memorize them, they did it unconsciously, having memorized words that denote those. So the image helped them to create associations. In addition, students had a different frequency of looking at pictures, as well as much longer time of their observance. However, our indicators are still lower than the ones of the abovementioned research, since there was a break of 16 weeks when students did not have the contact with previously presented images and words.

While doing our research, we took into account the notion and function of working memory in order to make the process of learning new words more effective. Moreover, new words should go through the working memory before entering the long-term memory. According to Schurgin et. al (2018), working memory is engaged when new and previously unstudied information is displayed to the students. In our experiment, students were facing new words and the images that they refer to. Therefore, the newly encoded information of the image and its semantics entered the long-term memory and was retrieved by stimuli (*flashcards*) for a multitude of times.

Moreover, Vulchanova et al. (2014) underlined that working memory is active in the tasks of retrieving information from the long-term memory. It plays a crucial role, particularly in the experiment conducted by the above listed group of scholars, proving that the visual semantics in combination with words has a better effect on memorizing information at length. It has also been proven by the current experiment, since students from Groups No. 2, No. 3 and No. 4 remembered almost the same amount of words as the students from Group No. 1 at the end of the experiment. However, the students from all Groups faced difficulties while recalling longer, multi-syllable words. Regarding this fact, Gathercole and Baddeley (1990) noticed such a tendency: immediate recalling declines when the length of the word increases. However, the experiment demonstrated that this statement could be applied to the long-term memory as well.

Other studies by Nikolic and Singer (2007) reiterate that working memory serves as a gate for the storage of information into the long-term memory. They mention that visual working memory plays an important role in the formation of visual long-term memory. Based on their second experiment, Nikolic and Singer even remarked that the time needed to memorize stimuli (images) was on average 30 seconds under the most difficult conditions. On the contrary, in our experiment the students had around 90 minutes to observe the pictures. Yet in the experiments by Nikolic and Singer there were no words encoding the meaning of the picture. In addition, the third experiment, examined in the abovementioned article, postulated that the performance of the long-term memory was 53%.

Gathercole and Baddeley (1990) also dealt with working memory, and their research puts the episodic long-term memory alongside the language and visual semantics. Moreover, the following observation was made: processing words in its perceptual appearance or spoken sound is less effective for words learning than learning them from their encoded meaning or its emotional tone.

In their studies, Sekeres et al. (2016) focused on recovering and preventing the loss of detailed memory. Such endeavor has proven that information retrieval from a memory with relatively little losses is possible shortly after it was encoded. Furthermore, their research foregrounds the importance of cues and repeated restorations in the process of memorizing and retaining of information in our memory. Therefore, one may state that memory retained the flashcards' information each time they were observed. In addition, these flashcards provided the cues, i.e. pictures and the words they mean. Thus, students memorized words well, as these two factors ensured the retention of words during a longer time period.

Vulchanova et al (2014) mentioned that memory is a key mechanism in language learning, emphasizing the importance of vocabulary development along with grammar among students. The researchers made a claim that it is often harder for students to acquire the meaning of abstract words than the meaning of words referring to physical objects. According to the authors, the ability to understand and learn abstract words depends on the semantic skills of each and every student. In the context of our research, we noticed that students faced some difficulties while learning abstract words (flashcards rendering the emotions). It is worth mentioning that students with better knowledge of a foreign language learned words referring to emotions faster and better than their peers with lower language competence.

An important factor that we took into consideration at the beginning of the experiment was whether flashcards should be in color or not. According to the research of Brady et al. (2013), color plays a principal role in visual long-term memory as well as in visual working memory. Taking into account the process of our experiment, it was decided to use colored flashcards for students in our research. To our mind, it helped to facilitate students in making associations and therefore memorizing new words.

Another factor worth considering is how the possible stress on testing memorized words could influence memory. The article by Smith et al (2016) notes that acute stress impairs memory retrieval. However, in our research students were not under any severe stress due to testing, since it did not have a chance to influence their semester mark. The location of flashcards and their distance as well as the frequency of their observance is also a crucial aspect of the experiment. Owing to this, we took into consideration the findings of the paper by Hughes et al. (2016). However, in contrast to the scholars, we placed our research focus not on auditory-verbal determinants of short-term memory, but on visual and spatial ones.

Conclusion

The results of the research can potentially find a wide range of practical implementation from parental teaching of their children to the university courses. However, it should be noted that the best way to use the method of voluntary observing of the words on flashcards is in connection with learning new vocabulary and its active use in speaking and writing. While the teacher presents new vocabulary and gives practical exercises to learn it, he/she can hang flashcards with these words on the wall in front of students in order to facilitate the learning process. The method

can be widely used at home as well. People, living in a building, full of colored flashcards, which they notice while doing housework or just walking, can facilitate the process of learning a new language. In addition, when the children or students are bored with waiting for the teacher or doing mundane exercises, they try to distract and entertain themselves. Mainly, it is done by using a smartphone, however if they are not allowed to use smartphones they would carefully observe the room, searching for something interesting. In such a vein they would find brightly colored pictures with words. They keep reading them, at least in their mind, for a couple of times and thus memorize them.

References

Brady, T. F., Konkle, T., & Alvarez, G. A. (2011). A review of visual memory capacity: Beyond individual items and toward structured representations. *Journal of Vision*, *11*(5), 4, 1-34. https://doi.org/10.1167/11.5.4

Brady, T., Stormer, V., & Alvarez, G. (2016). Working memory is not fixed-capacity: More active storage capacity for real-world objects than for simple stimuli. *Proceedings of the National Academy of Sciences*, *113*(27), 7459-7464. https://doi.org/10.1073/pnas.1520027113

Brady, T., Konkle, T., Alvarez, G. & Oliva, A. (2008). Visual long-term memory has a massive capacity for object details. *Proceedings of the National Academy of Sciences of the United States of America*, *105*(38), 14325-14329. https://doi.org/10.1073/pnas.0803390105

Brady, T. & Konkle, T., Gill, J., Oliva, A. & Alvarez, G. (2013). Visual Long-Term Memory Has the Same Limit on Fidelity as Visual Working Memory. *Psychological Science*, *24*(6), 981-990. https://doi.org/10.1177/0956797612465439

Bui, D. & Mcdaniel, M. (2015). Enhancing learning during lecture note-taking using outlines and illustrative diagrams. *Journal of Applied Research in Memory and Cognition, 4,* 129-135. https://doi.org/10.1016/j.jarmac.2015.03.002

Butler, A. (2010). Repeated testing produces superior transfer of learning relative to repeated studying. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *36*(5), 1118–1133. http://dx.doi.org/10.1037/a0019902.supp

Cowan, N. (2008). What are the differences between long-term, short-term, and working memory? *Progress in Brain Research*, *169,* 323-338. https://doi.org/10.1016/S0079-6123(07)00020-9

Curby, K., Glazek, K., & Gauthier, I. (2009). A visual short-term memory advantage for objects of expertise. *Journal of Experimental Psychology: Human Perception and Performance*, *35*(1), 94. https://doi.org/10.1037/0096-1523.35.1.94

Gathercole, S. and Baddeley, A. (1990), The role of phonological memory in vocabulary acquisition: A study of young children learning new names. *British Journal of Psychology*, *81,* 439-454. https://doi.org/10.1111/j.2044-8295.1990.tb02371.x

Hanggi, D. (1989). Differential aspects of visual short and long-term memory. *European Journal of Cognitive Psychology*, *1,* 285-292. https://doi.org/10.1080/09541448908403089

How memory works? *Psychology Today*. https://www.psychologytoday.com/us/basics/memory

Hughes, R. & Chamberland, C. & Tremblay, S. & Jones, D. (2016). Perceptual-Motor Determinants of Auditory-Verbal Serial Short-Term Memory. *Journal of Memory and Language*, *90,* 126-146. https://doi.org/10.1016/j.jml.2016.04.006

Karpicke, J. (2016). A powerful way to improve learning and memory. Practicing retrieval enhances long-term, meaningful learning. *Psychological Science Agenda*, *30*(6). https://www.apa.org/science/about/psa/2016/06/learning-memory

Desmond, J., Fiez, J. (1998). Neuroimaging studies of the cerebellum: language, learning and memory. *Trends in Cognitive Science*, 2(9). 355-362. https://doi.org/10.1016/S1364-6613(98)01211-X

Konkle, T. & Brady, T. & Alvarez, G. & Oliva, A. (2010). Scene Memory Is More Detailed Than You Think: The Role of Categories in Visual Long-Term Memory. *Psychological Science*, *21*(11). 1551-1556. https://doi.org/10.1177/0956797610385359

Schurgin, M., Cunningham, C., Egeth, H., Brady, T. (2018). Visual Long-term Memory Can Replace Active Maintenance in Visual Working Memory, *BioRxiv, https://www.biorxiv.org/content/10.1101/*381848v2 Acessed 14 December 2019. https://doi.org/10.1101/381848

Kuldas, S., Ismail, H.N., Hashim, S. et al. (2013). Unconscious learning processes: mental integration of verbal and pictorial instructional materials. *SpringerPlus, 2,* 105. https://doi.org/10.1186/2193-1801-2-105

Sekeres, M., Bonasia, K., St-Laurent, M., Pishdadian, S., Winocur, G., Grady, C. & Moscovitch, M. (2016) Recovering and preventing loss of detailed memory: differential rates of forgetting for detail types in episodic memory. *Learning and Memory, 23,* 72-82. https://doi.org/10.1101/lm.039057.115

Vulchanova, M., Foyn, C., Nilsen, R., Sigmundsson, H. (2014). Links between phonological memory, first language competence and second language competence in 10-year-old children. *Learning and Individual Differences*, *35,* 87-95. https://doi.org/10.1016/j.lindif.2014.07.016

Ellis, N. & Beaton, A. (1993). Factors affecting the learning of foreign language vocabulary: Imagery keyword mediators and phonological short-term memory. *The Quarterly Journal of Experimental Psychology, Section A, 46*(3), 533-558. https://doi.org/10.1080/14640749308401062

Nikolic, D. & Singer, W. (2007). Creation of visual long-term memory. *Perception & Psychophysics*, *69*(6). 904-912. https://doi.org/10.3758/BF03193927

Carney, R. and Levin, J. (2002) Pictorial illustrations still improve students' learning from text. *Educational Psychology Review*, *14*(1), 5-23 https://doi.org/10.1023/A:1013176309260

Schacter, D. L. (1987). Implicit memory: history and current status. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *13*(3), 501–518. https://doi.org/10.1037/0278-7393.13.3.501

Shepard, R. N. (1967). Recognition memory for words, sentences, and pictures. *J of verbal Learning and Verbal Behavior*, *6*(1), 156-163. https://doi.org/10.1016/S0022-5371(67)80067-7

Smith, A. & Floerke, V. & Thomas, A. (2016). Retrieval practice protects memory against acute stress. *Science*, *354,* 1046-1048. https://doi.org/10.1126/science.aah5067

Standing, L. (1973) Learning 10000 pictures. *Quarterly Journal of Experimental Psychology*, *25,* 207-222. https://doi.org/10.1080/14640747308400340

Squire, L. R. (2004). Memory systems of the brain: a brief history and current perspective. *Neurobiology of Learning and Memory*, *82*(3), 171-177. https://doi.org/10.1016/j.nlm.2004.06.005

Urgolites, Z. & Wood, J. (2013). Visual Long-Term Memory Stores High-Fidelity Representations of Observed Actions. *Psychological Science*, *24,* 403-411. https://doi.org/10.1177/0956797612457375

Terada, Y. (2017). Why students forget – and what you can do about it. http://edutopia.org/article/why-students-forget-and-what-you-can-do-about-it

FIRST LANGUAGE ACQUISITION
BY ROMA AND SLOVAK CHILDREN

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Abstract. The study analyzes the context and relationships of the progress in first language acquisition by monolingual children (First language: Slovak) and Roma-Slovak bilingual children (First language: Romani), as determined by the type of Roma community in which individual children live. We conducted the research in two phases, the first at the beginning of the school year (test) and the second at the end of the school year (post-test). The OOS image-vocabulary test as a psychological tool was used for examining children's vocabulary and a certain dimension of their readiness for school. The standardized O-S-S tool is structured to include 30 colorful images illustrating objects, animals, and activities, which are presented to children on an individual basis (Kondáš, 2010). For the purposes of the study, the test was modified and culturally adapted for Roma children with a pairing of Romani and Slovak languages. The research set in total consists of (n = 135) children in their first year of schooling and is separated into Roma children with L1: Romani (n = 68) and Slovak children with L1: Slovak (n = 67). Subsequently, the research set of Roma children (n = 68) belong to 3 types of communities. These 3 types of communities are the following: type 1: municipal and urban concentrations (n = 22); type 2: settlements located on the outskirts of a city or municipality (n = 23); and type 3: settlements spatially remote or separated by a natural or artificial barrier (n = 23). To analyze the data statistically, we used the SPSS 20.0 statistical program. The results shown statistically significant differences in L1 comprehension between Roma-Slovak bilingual children from type 1, type 2, and type 3 Roma communities and, additionally, between monolingual children at the beginning and at the end of the school year. According to the first measurement at the beginning of the school year (test) and the second measurement at the end of the school year (post-test) in L1 in the case of verbs and nouns, the highest

success rate was achieved by monolingual Slovak children, followed by Romani-Slovak bilingual children from type 1 communities, followed by children from type 2 communities, and the lowest success rate was achieved by children from type 3 communities. The main research problem arising from the findings is that the progress in first language acquisition by Roma-Slovak bilingual children is determined by the type of Roma community in which the child lives.

Keywords: Roma, acquisition progress, mother language, native language, first language, Romani, Slovak.

Самко Мілан, Черешник Міхал, Черешникова Мирослава. Оволодіння першої мови ромськими та словацькими дітьми.

Анотація. У дослідженні аналізується контекст і взаємозв'язки прогресу в опануванні першою мовою дітьми-монолінгвами (рідна мова: словацька) та ромсько-словацькими дітьми-білінгвами (рідна мова: ромська), що визначаються типом ромської спільноти, в якій проживають окремі діти. Дослідження проведено у два етапи, перший на початку навчального року (тест) і другий наприкінці навчального року (після тесту). Образно-словниковий тест OOS як психологічний інструмент використовувався для перевірки словникового запасу дітей та виміру їхньої готовності до школи. Стандартизований інструмент O-S-S структурований так, щоб включати 30 кольорових зображень, що ілюструють об'єкти, тварини і види діяльності, які представлені дітям на індивідуальній основі (Kondáš, 2010). Для цілей дослідження тест був модифікований та адаптований для ромських дітей із поєднанням ромської та словацької мов. У дослідженні взяли участь загалом 135 дітей першого року навчання в школі, поділені на ромських дітей-монолінгвів з ромською рідною (n = 68) та словацьких дітей зі словацькою рідною (n = 67). Вибірка ромських дітей (n = 68) далі мала поділ на 3 типи спільнот, які складалися з a) муніципальних та міських спільнот (n = 22); б) населених пунктів на околицях міста або муніципалітету (n = 23) і в) віддалених населених пунктів або розділених природним або штучним бар'єром (n = 23). Для статистичного аналізу даних використано програму SPSS 20.0. Результати показали статистично значущі відмінності в розумінні рідної мови між ромсько-словацькими двомовними дітьми з ромських громад 1, 2 та 3 типу, а також між одномовними дітьми на початку та в кінці навчального року. Згідно з першим вимірюванням іменників та дієслів рідної мови на початку навчального року (тест) та другим вимірюванням наприкінці навчального року (після тесту), найвищого показника успішності досягли одномовні словацькі діти, за ними йдуть ромсько-словацькі двомовні діти з громад типу 1, за ними йдуть діти з громад типу 2, а найнижчого показника успішності досягли діти з громад типу 3. Основна проблема дослідження, яка випливає з отриманих результатів, полягає в тому, що прогрес у оволодінні рідної мови ромсько-словацькими двомовними дітьми визначається типом ромської спільноти, в якій проживає дитина.

Ключові слова: роми, прогрес в оволодінні мови, материнська мова, рідна мова, перша мова, ромська, словацька.

Introduction

The language rights of Roma[1] and national minorities in the Slovak Republic are laid down in legislative language norms which, under certain conditions, allow the implementation of Romani language into the educational environment.

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[1] In the 2011 population and housing census in the Slovak Republic, 105,738 inhabitants officially declared their Roma nationality (Stat. Office., Tab. 115). However, unofficial estimates of the number of Roma in Slovakia are significantly higher; for example, based on sociographic mapping and a qualified estimate, the 2013 Atlas of Roma Communities states that there are 402,840 Roma living in Slovakia (Mušinka et al., 2014). 122,518 inhabitants officially declared the Romani language as their native language (Stat. Office., Tab. 156). This means that 19,780 more inhabitants declared Romani as their native language compared to the inhabitants who declared to be of Roma nationality. There is a total of 803 settlements in cities and municipalities in Slovakia, including 324 settlements on the outskirts of municipalities, 246 settlements inside municipalities, and 233 segregated settlements. 95,020 Roma live in settlements on the outskirts of municipalities, 73,920 in segregated settlements, and 46,496 in settlements inside municipalities. 187,305 Roma live dispersed among the majority population (Mušinka et al., 2014).

Nevertheless, this language legislation is not put into practice and the Roma people have no real opportunity to learn in their native language (Samko, 2019; 2020). Evaluating the progress in first language acquisition by bilingual Roma children and monolingual Slovak children as the majority population can significantly contribute to solving Roma language problems, to the processes of implementing Romani into the educational environment, and, at the same time, to harmonizing language legislation in practice. This study aims to contribute to the recognition of processes related to first language acquisition by monolingual children (L1: Slovak) and Roma-Slovak bilingual children (L1: Romani) in their first year of schooling, differentiated by three types of Roma communities and two points of reference at the beginning and the end of the school year. At the same time, the aim is to contribute to the recognition of the context and relationships of the progress in first language acquisition by Roma-Slovak bilingual children based on the type of Roma community in which the children live. From the spatial point of view, this study is therefore based on three types of Roma communities as language communities, with the strategic goal of examining their linguistic characteristics. These communities include: type 1. communities concentrated in a municipality (Roma inhabitants living within a municipality but only concentrated in part thereof), type 2. communities concentrated on the outskirts of a municipality (Roma inhabitants concentrated in the outskirts of a municipality), and type 3. communities concentrated outside a municipality (Roma inhabitants living in a settlement remote or separated from a municipality by some kind of a barrier). A number of studies are known in the field of research concerned with language acquisition by monolingual and bilingual children, while studies researching the language pair with Romani are rather rare.

Findings from studies on Roma children's acquisition of languages suggest that, in addition to standard factors such as the socioeconomic status of the Roma, many other factors need to be evaluated to explain the acquisition processes, such as the type of Roma community in which the children live (Kyuchukov et al., 2017). In a study by Kyuchukov (2014), the research results are presented on the basis of newly developed psycholinguistic tests taken by bilingual Roma children from a Roma community not far from the city of Burgas. The tests are mainly focused on understanding and measuring children's language skills in the area of passive verbs, sentence repetition, verb tenses, and rapid mapping of nouns and adjectives. The tests aim to identify the level of Roma children's knowledge of grammatical categories and the effect of this aspect on their communication competence in their second language. The results of this study show average scores achieved in these tests by Roma children from the Roma community in question (Kyuchukov, 2014). Hoff-Ginsberg examined the differences in the language of child-oriented mothers based on the socioeconomic standing of their families. He found that children with high socioeconomic status show more advanced lexical development than children with moderate socioeconomic status (Hoff-Ginsberg, 1998). At the same time, Spencer et al. suggest a link between the socioeconomic background and the language skills of speakers from two different socioeconomic classes (Spencer et al., 2012). Furthermore, Scheele et al. evaluated the relationship between learning activities in

L1 and vocabulary in monolingual and bilingual immigrants, concluding that monolingual children scored higher in the L1 vocabulary test than bilingual children (Scheele et al., 2010). Subsequently, Hoff's findings suggest that different language environments provide different communication experiences and motivation to learn a language, along with a language model as a mechanism of acquisition, thus creating group and individual differences in language development (Hoff, 2006).

Methods

The research tests the following research question (RQ): How significant is the progress in first language acquisition by monolingual children (L1: Slovak) and Roma-Slovak bilingual children (L1: Romani) in their first year of schooling, when differentiated by three types of Roma communities (type 1, type 2, and type 3) and two points of reference at the beginning of the school year (test) and the end of the school year (post-test).

Research Set

The research set in total consists of (n = 135) children in their first year of schooling and is separated into Roma children with L1: Romani (n = 68) and Slovak children with L1: Slovak (n = 67). Subsequently, the research set of Roma children (n = 68) belong to the 3 types of communities mentione in the introduction. These 3 types of communities are the following: type 1: municipal and urban concentrations (n = 22); type 2: settlements located on the outskirts of a city or municipality (n = 23); and type 3: settlements spatially remote or separated by a natural or artificial barrier (n = 23).

Research Tool

In the research, we made use of a standardized research tool, the OOS Test, an image-vocabulary test (Kondáš, 2010). The OOS image-vocabulary test is one of the psychological tools for examining children's vocabulary and a certain dimension of their readiness for school. The standardized O-S-S tool is structured to include 30 colorful images illustrating objects, animals, and activities, which are presented to children on an individual basis (Kondáš, 2010). For our purposes, the test was modified and culturally adapted for Roma children with a pairing of Romani and Slovak languages.

Test Completion and Scoring

The standardized O-S-S tool is structured to include 30 colorful images illustrating common or less common objects, animals, and activities, which are presented to children individually. Each child is shown an image and asked a related

question: "What is it?" In images 16-21, which illustrate activities, each child is also given an instruction: "Now, tell me what the boy is doing." Each correct answer is scored with one point. Half-point values (0.5) can only be assigned in six cases. The maximum score is 30 points. We carried out the testing in the school premises in the presence of a teacher's assistant and recorded it with the informed consent of parents.

Statistical Data Analysis

To analyze the data statistically, we made use of the SPSS 20.0 statistical program. Due to non-standard distribution of the data, we also made use of the Wilcoxon test, a nonparametric version of the t-test for two dependent selections, the Mann-Whitney test, and the Kruskal-Wallis test. We arrived at a standard significance level of $\alpha \leq .05$.

Research Implementation Schedule

The first phase of research: Test
We carried out the first phase of the research in September, at the beginning of the school year. Roma pupils were tested first by taking 68 tests in L1 (Romani), followed by Slovak pupils taking 67 tests in L1 (Slovak). In the first phase of the research, we carried out a total of 135 tests.

The second phase of research: Post-test
We carried out the second phase of the research in June, at the end of the school year. Roma pupils were tested first by taking 68 tests in L1 (Romani), followed by non-Roma pupils taking 67 tests in L1 (Slovak). In the second phase of the research, we carried out 135 tests. In both phases of the research, we carried out a total of 270 tests.

Results

Table 1
Progress in Language Acquisition by Monolingual Children in L1: Slovak

	N	M	SD	SEM	Z	p
			L1-Slovak			
Test_L1_Nouns	67	18.85	2.66	.33	-3,635	<.001
Post-test_L1_Nouns	67	19.99	2.41	.30		
Test_L1_Verbs	67	5.81	.44	.05	-1,833	.067
Post-test_L1_Verbs	67	5.89	.30	.04		

When comparing the language skills of Slovak children in the September test and the June post-test, we found a statistically significant increase in correctly marked nouns (Z = -3.635; p < .001). The increase represented 1.14 points.

Table 2
Progress in Language Acquisition by Bilingual Children in L1: Romani Language

	N	M	SD	SEM	Z	p
			L1-Romani			
Test_L1_Nouns	68	13.23	3.51	.43	-3.799	<.001
Post-test_L1_Nouns	68	14.15	3.62	.44		
Test_L1_Verbs	68	3.88	1.55	.19	-4.650	<.001
Post-test_L1_Verbs	68	4.71	1.47	.18		

When comparing the language skills of Roma children in the September test and the June post-test, we found a statistically significant increase in correctly marked nouns and verbs in both Slovak and Romani languages. The Wilcoxon test values ranged from -3.799 to -4.650. The significance of differences was at the level of α ≤ .001. In the case of verbs, the difference represented .83, i.e., 1.03 points. In the case of nouns, the difference represented .92, i.e., 1.56 points.

Table 3
Progress in Native Language Acquisition by Roma and Slovak Children

	L1	N	M	SD	SEM	U	p
Test_Nouns	Romani	68	13.23	3.51	.43	508.5	<.001
	Slovak	67	18.85	2.66	.33		
Post-test_Nouns	Romani	68	14.15	3.62	.44	447.5	<.001
	Slovak	67	19.99	2.41	.29		
Test_Verbs	Romani	68	3.88	1.55	.19	540.5	<.001
	Slovak	67	5.81	0.44	.05		
Post-test_Verbs	Romani	68	4.71	1.47	.18	1045.0	<.001
	Slovak	67	5.89	0.30	.04		

When comparing the children's skills in determining nouns and verbs in their native language, we found statistically significant differences in all measurements. The Mann-Whitney test values ranged from 447.5 to 1045. The significance of differences was at the level of α ≤ .001. In the case of nouns, the difference represented 5.62, i.e., 5.84 points. In the case of verbs, the difference represented 1.93, i.e., 1.18 points. The differences are shown in Fig. 1.

Figure 1

Progress in Native Language Acquisition by Roma and Slovak Children
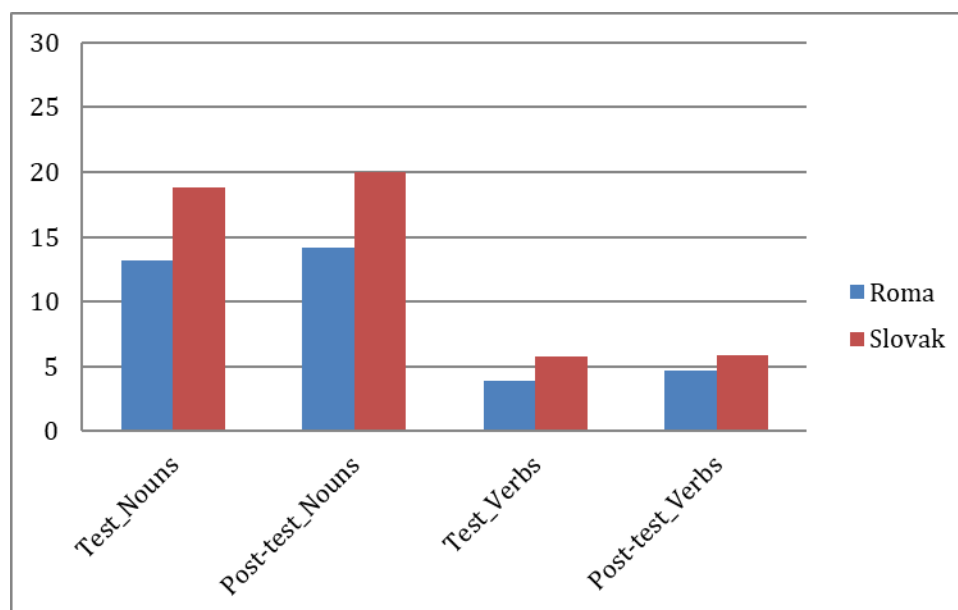

Table 4

Progress in Native Language Acquisition by Slovak and Roma Children in Types 1, 2, and 3 Communities

		Test-Nouns	Post-test-Nouns	Test-Verbs	Post-test-Verbs
				Mother tongue	
L1_Slovak	N	67	67	67	67
	M	18.85	19.99	5.81	5.89
	SD	2.66	2.41	.44	.30
	SEM	.33	.29	.05	.04
L1_Romani_type 1	N	22	22	22	22
	M	16.41	16.64	5.05	5.45
	SD	2.89	2.99	.90	.74
	SEM	.62	0.64	.19	.16
L1_Romani_type 2	N	23	23	23	23
	M	12.52	14.41	3.61	4.74
	SD	3.24	3.62	1.70	1.45
	SEM	0.68	0.76	.35	.30
L1_Romani_type 3	N	23	23	23	23
	M	10.89	11.50	3.04	3.96
	SD	1.69	2.18	1.22	1.67
	SEM	.35	.45	.26	.35
	H	78.744	77.395	82.514	51.356
	p	<.001	<.001	<.001	<.001

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When comparing the children's skills in determining nouns and verbs in their native language in relation to the type of settlement in which they live, we found statistically significant differences in all measurements. The Kruskal-Wallis test values ranged from 51.356 to 82.514. The significance of differences was at the level of $\alpha \leq .001$. In the case of nouns, the difference between the most successful and the least successful group was at the level of 7.96, i.e., 8.49 points. In the case of verbs, the difference between the most successful and the least successful group was at the level of 2.77, i.e., 1.93 points. The differences are shown in Fig. 2. Slovak children were always the most successful (unspecified type of settlement, marked as type 0 in Fig. 2). Roma children from the type 3 community always represented the least successful group.

Figure 2

Progress in Native Language Acquisition by Slovak and Roma Children in Types 1, 2, and 3 Communities
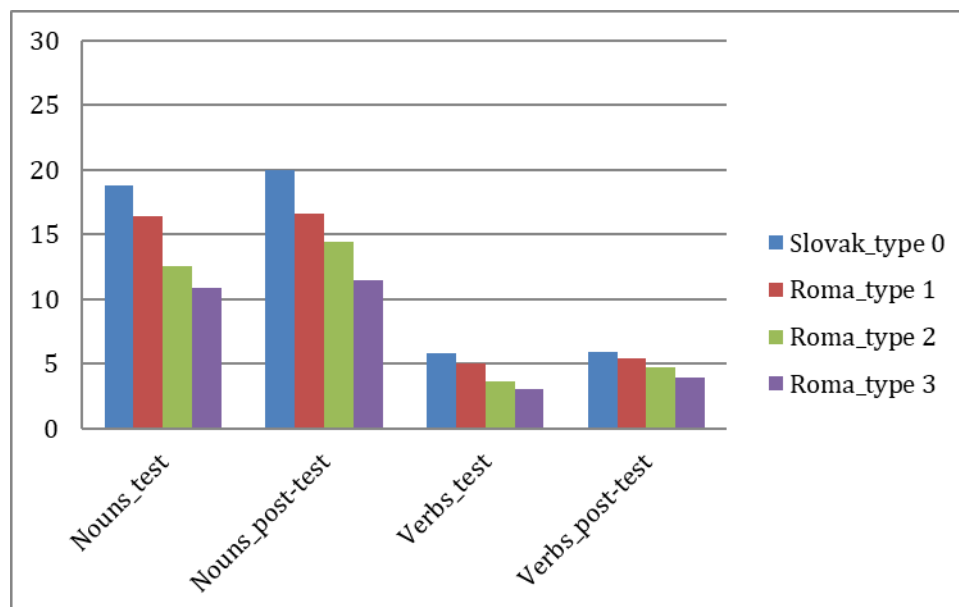
Discussion and Conclusion

This study was based on three types of Roma communities in Slovakia, as language communities and is strategically aimed to contribute to the recognition of processes related to first language acquisition by monolingual children (L1: Slovak) and Roma-Slovak bilingual children (L1: Romani) in their first year of schooling. The intention was also to serve as a step toward recognizing the context and relationships present in the progress of first language acquisition by Roma-Slovak bilingual children based on in which communities they live. As one of the findings, this study shows statistically significant differences in L1 between Roma-Slovak bilingual children from type 1, type 2, and type 3 Roma communities as well as between monolingual children at the beginning and at the end of the school year. The research has also shown statistically significant differences in the acquisition progress

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in L1 between children from type 1: municipal and urban concentrations; type 2: settlements located on the outskirts of a city or municipality; and type 3: settlements spatially remote or separated by a natural or artificial barrier at time of testing. According to the first measurement at the beginning of the school year (test) and the second measurement at the end of the school year (post-test) in L1 in the case of verbs and nouns, the highest success rate was achieved by monolingual children, followed by Romani-Slovak bilingual children from type 1 communities, followed by children from type 2 communities, and the lowest success rate was achieved by children from type 3 communities. The primary conclusion taken from these findings is that first language aquisition in Roma-Slovak bilingual children is determined by the type of Roma community in which they live.

Our findings correspond to the research which studies the vitality and endangerment of the Romani language in the Slovak Republic. Rácová and Samko state that, taking into account the factors endangering the language, it clearly follows that the Romani language in Slovakia is indeed endangered and is not being passed down between the generations throughout the Roma population (Rácová & Samko, 2017). Roma children do not learn to read and write in the Romani language and most Roma people have no experience with texts written in Romani whatsoever. Rusnáková (2013, p. 227) further states that the school applies a "civic" approach to Roma pupils, while their ethnicity (and everything connected with it, including language) is of little or no interest to the teacher. Lewis et al. examined the relationship between literacy and language skills of bilingual children. Their findings suggest that language and literacy experiences at home have different effects on language skills in both languages (Lewis et al., 2016). Winsler et al. found that children who attended bilingual preschool facilities compared to those who stayed at home showed significant and parallel gains in Spanish language development, as well as a significant and greater increase in English language skills over time (Winsler, 1999).

The Romani language is not an official language in any country, and as such nowhere is it protected nor promoted as a state language. This fact puts the Romani language at a disadvantage compared to languages that are both official and minority languages in other countries. This study is mainly limited by the lack of a standardized research tool to evaluate Roma-Slovak bilingualism and by the fact that the research set is only limited to Roma community types within a single region of Eastern Slovakia. Therefore, the results of this research cannot be considered to apply throughout the entire Roma language community, nor to sets of particular types of Roma communities. This research primarily raises questions about the direction of further language research based on types of Roma communities.

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References

Hoff-Ginsberg, E. (1998). The relation of birth order and socioeconomic status to children's language experience and language development. Applied Psycholinguistics, 19(4), 603-629. https://doi.org/10.1017/S0142716400010389

Hoff, E. (2006). How social contexts support and shape language development. Developmental Review, 26, 55-88.

Kondáš, O. (2010). Obrázkovo-slovníková skúška. Bratislava: Psychodiagnostika.

Kyuchukov, H., Samko, M. & Kopčanová D. (2017). Knowledge of Romani language grammar. Psychology in Russia. State of the Art, 10(4), 76-85. https://doi.org/10.11621/pir.2017.0407

Kyuchukov, H. (2014). Acquisition of Romani in a Bilingual Context. Psychology of Language and Communication, 18(3), 211-225. https://doi.org/10.2478/plc-2014-0015

Lewis, K., Sandilos, L. E., Hammer, C. S., Sawyer, B. E. & Méndez, L. I. (2016). Relations among the home language and literacy environment and children's language abilities: A study of Head Start dual language learners and their mothers. Early Education and Development, 27(4), 478-494. https://doi.org/10.1080/10409289.2016.1082820

Mušinka, A., Škobla, D., Hurrle, J., Matlovičová, K. & Kling, J. (2014). Atlas rómskych komunít na Slovensku 2013 [Atlas of Roma Communities in Slovakia 2013]. Bratislava: (UNDP).

Rácová, A. & Samko, M. (2017). On the vitality and endangerment of the Romani language in Slovakia. Asian and African Studies, 26(2), 185-208.

Rusnáková, J. (2013). Sociálna práca v rómskych komunitách [Social work in Roma communities]. In: Idem et al. Komunitná sociálna práca: sociálna práca v komunite [Community social work: social work in the community], 208-232. Bratislava: IRIS.

Samko, M. (2019). Language Problems from the Perspective of the Roma in the Context of the Romani Language Network. International Journal of Linguistics & Communication, 7(2), 29-34. https://doi.org/10.15640/ijlc.v7n2a5

Samko, M. (2020). Language Problems from the Perspective of the Roma in the School Environment. In: Journal of Foreign Languages, Cultures & Civilizations, 8(1), 52-56. https://doi.org/10.15640/jflcc.v8n1a5

Scheele, A., Leseman, P. & Mayo, A. (2010). The home language environment of monolingual and bilingual children and their language proficiency. Applied Psycholinguistics, 31(1), 117-140. https://doi.org/10.1017/S0142716409990191

Spencer, S., Ciegg, J. & Stackhouse, J. (2012). Language and disadvantage: A comparison of the language abilities of adolescents from two different socioeconomic areas. International Journal of Language & Communication Disorders, 47(3), 274–284. https://doi.org/10.1111/j.1460-6984.2011.00104

Winsler, A., Diaz, R. M., Espinosa, L. & Rodriguez, J. L. (1999). When learning a second language does not mean losing the first: Bilingual language development in low-income, Spanish-speaking children attending bilingual preschool. Child Development, 70(2), 349–362. https://doi.org/10.1111/1467-8624.t01-1-00026

Sources

Tab. 115 Obyvateľstvo podľa pohlavia a národnosti [Population by gender and nationality] (20.12.2020). https://census2011.statistics.sk/tabulky.html

Tab. 156 Obyvateľstvo podľa pohlavia a materinského jazyka [Population by gender and mother tongue] (20.12.2020). https://census2011.statistics.sk/tabulky.html

LEXICON ON BOARD: A MEG STUDY
BASED ON EXPRESSIVE PICTURE-NAMING

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Abstract. No task can better depict the path underlying word production in human brain than picture naming as it covers all the stages of production from visual analysis to motor execution. Nevertheless, the cognitive processes associated with word retrieval and the investigation on word-picture differences are complex and not fully understood. Uttering a word entails orchestrating several steps as visual object recognition, accessing a lexical concept, lemma selection, lemma retrieval, accessing the morpheme(s) and generating the phonological word, and finally retrieving syllabic gestural scores and articulation. Moreover, it is already known that the brain function is not the outcome of isolated regions but the network of regions interacting with each other. To study the mechanisms of word retrieval in lemma selection phase, we compared the three groups of monolingual, semi-bilingual and bilingual learners Spanish-English speakers through a functional neuroimaging technique with respect to their topography and strength of Functional Connectivity (FC) values of the most highlighted pair of activated nodes in the time range of 0-150 ms in different frequency bands (delta, theta, alpha, beta, and. gamma) upon application of the stimuli. We have seen no significant difference between difference frequency bands (p >.05) at the most highlighted FC pairs. However, we observed higher gamma values signifying the semantic activation of the word. We could not find any significant difference between the three groups in terms of FC values at designated pairs of nodes signifying that different amount of exposure could not affect electrophysiological patterns in the preliminary step of word production.

Keywords: lexicon, MEG, picture naming, monolingual, semi-bilingual, bilingual, Content and Language Integrated Learning (CLIL).

Табарі Фатіме. Лексикон у розпорядженні: дослідження експресивного називання на основі зображень із використанням МЕГ.

Анотація. Жодне із завдань не здатне так добре описати шлях від породження слова в людському мозку, ніж називання зображень, оскільки воно охоплює всі стадії породження від візуального аналізу до моторного втілення. Водночас, когнітивні процеси, пов'язані з пошуком слів і дослідженням відмінностей слів і зображень, є складними і не повністю зрозумілі. Породження слова передбачає декілька етапів, таких як розпізнавання візуального об'єкта, доступ до лексичного поняття, вибір леми, її вилучення, доступ до морфем(и) й створення фонологічного слова, і, нарешті, вилучення складів і артикуляції. Крім того, відомо, що функція мозку – це не результат роботи ізольованих ділянок, а мережа цих ділянок, що активно взаємодіють одне з одним. Щоб вивчити механізми вилучення слів на етапі вибору леми, порівнювали три групи учнів-монолінгвів, іспансько-англійських

напівбілінгвів і білінгвів з огляду на їхню топографію та значущістьфункціонального зв'язку (ФЗ) найвиділенішої пари активованих вузлів у часовому діапазоні 0-150 мс у різних діапазонах частот (дельта, тета, альфа, бета і гамма) під час застосування стимулів. Не помічено суттєвої різниці між діапазонами різниці частот (p>0,05) у найбільш виділених парах ФЗ. Проте ми спостерігали вищі показники гамма-значення, що означає семантичну активацію слова. Не виявлено істотної різниці між групами щодо значень ФЗ у визначених парах вузлів, що означає, що різна кількість експозицій не може вплинути на електрофізіологічні патерни на попередньому етапі породження слова.

Ключові слова: *лексикон, МЕГ, називання зображень, монолінгв, напівбілінгв, білінгв, предметно-мовне інтегроване навчання (CLIL).*

Introduction

One of the most impressive capabilities of human is to access right word at the right moment (Levelt & Schriefers, 1987). How do we access and retrieve words when we are speaking? The answer to this question is embedded in the findings from neuropathology of lexical access (e.g. analysis of speech errors, tip of tongue, and aphasiology) and reaction time research (Brown & Nix, 1996; Rastle & Burke, 1996). Among all methodologies, picture naming and picture-word interference studies contribute a lot to the understanding of underlying mechanism of lexical access.

The cognitive processes associated with word retrieval and the investigation on word-picture differences are complex and not fully understood. It has become the center of attention in modern cognitive science and psychology. Many new theories and advances are elaborated based on the findings derived from such investigation. Efficient word retrieval is necessary for most high-level tasks in the workplace, so even mild deficits can have a deleterious effect on communication in daily life (Frantantoni et al., 2017). The inability to retrieve and integrate features can interfere with activation of a semantic memory and its associated word representation.

Uttering a word entails orchestrating several steps as visual object recognition, accessing a lexical concept, lemma selection, lemma retrieval, accessing the morpheme(s) and generating the phonological word, and finally retrieving syllabic gestural scores and articulation. At the beginning, visual representation of the object (percept) which involves abstract properties of the objects (like color, orientation or size) is computed from the visual image (Hart & Gordon, 1992). Then proper lexical concept is activated to refer to the percept and it is totally depends on the perspective meant by the speaker in various communication situations (Levelt, 1996; Levelt et al., 1999).

The percept can be conceptualized in the basic level (such as House, Piano, Car) which is easily induced to operate in picture naming. However, some activation has always been spreading from the target concept to semantically related concepts. Afterward, the activation of a lexical concept normally spread to all associated lemmas which is a lexical record that encodes a word's semantic and grammatical features, but not its phonological or orthographic properties (Badecker et al., 1995).This step as the syntactic representation and the prerequisite of grammatical

encoding of the word, extract initial information like syntactic category, gender, part of speech. Ultimately one lemma is chosen from all lexical concepts.

At lemma selection, phonological form of the word is created by retrieval of morphemes (which is word form representation of lemma) by phonemes (word's phonological shape) and metrical structures (Levelt, 1992; Roelofs & Meyer, 1997). Then the phonemic segments correspond to their metrical structures and create phonological syllables (Levet et al., 1998). And at the end, by spreading activation, syllabary which is the depot of abstract motor representation for language syllables sends the appropriate gestural scores after a syllable being retrieved (Levelt & Wheeldon, 1994). As soon as all syllabic score are retrieved, the articulatory system executes the gestural scores and provides motor instructions for the respiratory, the laryngeal, and the supralaryngeal systems involved in articulation of speech. The overt speech is then monitored by the speaker by activating comprehension, and self-correction or monitoring prearticulatory internal speech happens appropriately (Levelt, 1989; Levelt & Wheeldon, 1994).

Lemmas can become available at different moments in time, dependent on the speaker's unfolding of the message. Unfolding the time course and mechanism of encoding stages of word production is one of the big concerns in expressive language production. Moreover, word retrieval requires precise timing of interactions between brain regions (Hart et al., 2013). EEG and MEG have high temporal resolution and is sensitive to the timing of neuronal synaptic and dendritic activity. According to the literature, the average picture naming latency starting from visual input to articulation lasts 538 ms (Thorpe et al., 1996). It seems really difficult to distribute the timing on different stages. ERPs can be a great resource to disentangle multiple components involved in comprehension, production, and domain-general processes.

It is already known that the brain function is not the outcome of isolated regions but the network of regions interacting with each other. The neurofunctional imaging methods used for brain mapping categorizes different brain regions recruited by functionalities such as the regions around the posterior part of the superior temporal sulcus (superior and middle temporal gyri) for language comprehension, left posterior temporal regions and the left inferior frontal cortex (IFC) for semantic processing, basal inferior temporal areas that are involved in lexical retrieval for visual tasks such as reading or naming, IFC inferior and anterior parts, i.e. the pars orbitalis [Brodmann area (BA) 47] pars triangularis (BA 45) dorsolateral prefrontal cortex (DLPFC) (BA 46/9) executive aspects of semantic processing (Duffau et al., 2005). Although the involved cortical areas in picture naming may vary by the individuals, the mapped areas identified during such procedures has been included triangular or opercular part of the inferior frontal gyrus, the angular gyrus or posterior part of the superior temporal gyrus, the motor strip, and premotor Broca's area, language sites, medial temporal gyrus and the parietal and prefrontal cortices (Ojemann et al., 1989; Friederici, 2011; Ardila et al., 2016; Westwood & Romany, 2017).

No task can better depict the path underlying word production in human brain than picture naming as it covers all the stages of production from visual analysis to motor execution. This task which is very demanding on brain activation and selection

in lexical system involves word retrieval and inhibition. Picture naming as a tested psycholinguistic metrics is a great measure for speculating the correlations between distinct stages of cognitive processing and cortical dynamics (Levelt et al., 1998). Uncovering spatial and temporal mechanism of the core cognitive processes involved in word production has been the main concern of neuroscience of language (Valente et al., 2014).

From Bilingualism Perspective

It is well documented that bilinguals attain higher cognitive ability due to their unique brain architecture. This cognitive ability contributes to inhibit impulses and natural, habitual, or dominant behavioral responses to stimuli or control the automatic or impulsive responses (Diamond, 2013; Ilieva et al., 2015). If being bilingual means being equipped with an additional cognitive tool, bilingualism should have a profound effect on neural development and cognitive improvement.

Many studies have report the superiority of bilinguals over their monolingual peers on different aspects such as executive function (Braver et al., 2001; Morales, Gómez-Ariza, & Bajo, 2013; Morales et al., 2015; Teubner-Rhodes et al., 2016), working memory and attention (Eunju Yang, 2017; Bialystok, 2017), greater structural density or better functional patterns and structural pattern (Mohades et al., 2012; 2015), greater sensitivity (Kuipers & Thierry, 2012; Barac et al., 2016) and many more facilities. However, in most of the studies the compared populations were early versus late bilinguals (Hull & Vaid, 2006; 2007; Martin et al. 2013; Gullifer et al., 2018; Lukasik et al., 2018), simultaneous versus sequential bilinguals (Giedd et al., 1996; Schlegel et al., 2012) or bilinguals versus monolinguals (Kovelman et al., 2008; Grady et al., 2015; Grundy et al., 2017; Frutos-Lucas et al., 2019).

However, bilingual education takes different forms based on the curricula adopted by educational systems. It can vary from a few hours of L2 education during the week or being a fully proficient bilingual who maintains regular use of L1 and L2. Not all types of bilingualism have the same effect in learning, and may lead to different cognitive, behaviour and neural responses. The concept of "the many kinds and degrees of bilingualism and bilingual situations" (Crystal, 2003, p. 51) calls the attention toward to importance of the context and the setting where bilingual experience occurs. The amount of environmental stimulation can also vary the effect size. Increased grey matter density in the Left Inferior Parietal-LIP (center of language processing), especially LIPG (Left inferior parietal gyrus), has been found to be positively correlated to participants' degree of bilingualism (Mechilli et al, 2004; Della Rosa et al., 2013) and increases as more time is spent in a foreign language class (Stein et al. 2012). In this paper, the classical bilingualism categorizations will not be followed, but rather based on the amount of exposure classification, that is, the time spend on learning the other language through a weekly schedule. Accordingly, we categorized our participants to monolingual, bilingual and semi-bilingual groups. Our semi-bilinguals are enrolled in a bilingual educational system in Spain called Content and Language Integrated Learning (CLIL).

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Among all different approaches, functional connectivity (FC) is an advanced measure for studying how different brain regions synchronize to interact with each other. This approach has already been used in bilingual studies especially at resting state (Chai et al., 2016; Hsu et al., 2015; Perani et al, 2017; Frutos-Lucas et al., 2019). For example, bilinguals exhibited greater FC at rest between the inferior frontal gyrus (an area that has been demonstrated to be susceptible to structural and functional changes as a result of second language acquisition) and other brain regions (Berken et al. 2016).

So far much has been said about cortical activation during picture naming but in the present study we try to shift our focus from localizing functional regions to interaction between different regions in initial stages of word production. To study the mechanisms of word retrieval in lemma selection phase, we compared the three groups of monolingual, semi-bilingual and bilingual learners with respect to their topography and strength of FC values of the most highlighted pair of activated nodes in the time range of 0-150 ms in different frequency bands (delta, theta, alpha, beta, and. gamma) upon application of the stimuli.

Materials and Methods

The study was approved by the local Ethics Committee at Autonomous University of Madrid. The methodology and the aim of the study were clearly explained to all subjects, and informed written consents were obtained from each of them.

Participants

Fifteen right-handed healthy teenagers (range: 11-13 years) participated in the experiment including five Spanish-English semi-bilinguals (2 males, 11.4 mean age), five Spanish-English bilinguals (3 males, 12 mean age) and five Spanish monolinguals (2 males, 11.4 mean age). The participants' handedness was checked through Edinburgh Handedness Inventory (Oldfield, 1971). The participants were administered a general health screening and a language history questionnaire, which included self-ratings of proficiency in each speaking language (on a 5-point Likert scale). None of the participants reported a history of neurological or psychiatric illness, had experienced a neurological injury, or had used a psychotropic medication.

Their vocabulary and grammar proficiencies were measured through Oxford Placement Test which is a written multiple-choice test of 60 questions of English morphosyntax, and the scores range from 0 to 60. The summary of participants' information is depicted in table 1. All participants were living and studying in Spain at the time of testing. All immersions (bilinguals) judged themselves to be totally bilingual and equally fluent in both Spanish and in English. Our tests also proved that.

Table 1
Participants' Information

	Age (testing)	Age (exposure)	Proficiency	Exposure
Monolingual	11.4 y	5 y	41.0 (2.07)	5 hrs
CLIL	11.4 y	5 y	46.4 (2.59)	11 hrs
Bilingual	12 y	4-6 y	55.5 (1.46)	25 hrs

Note: The age difference was due to classification of education in different schools (e.g., the 5th grade of one school was equal to the 6th grade of another school).

The participants were enrolled from four different schools located in Madrid (Spain). The English education in the monolingual school was delivered at least 5 hours per week through English as a Foreign Language (EFL), while the students of semi-bilingual schools (which we call a CLIL system, studied English for at least 11 hours per week including EFL together with other courses, such as Natural Sciences, Social Sciences, and Arts and Crafts. At the same time, bilinguals were recruited from two British schools (which we call an Immersion system), where all subjects were taught in English except social studies and Spanish language for at least 25 hours per week. The summary of participants' information is depicted in

Table 1.
The Peabody Picture Vocabulary Test (2007 edition) was administered in Spanish and English to test participant's receptive vocabulary ability for Standard Spanish and English. The Raven's SPM 60-item test was also used for measuring abstract reasoning, regarded as a non-verbal estimate of fluid intelligence. Selective attention capacity and skills, as well as their processing speed ability were also measured through the Stroop effect test. The three groups were matched based on the above-mentioned qualities and GPA of previous academic year.

Stimuli and Task

The standardized set of picture naming that was born in 1980 by Joan G. Snodgrass and Mary Vanderwart and widely used so far. Although this 260-image set were added and normed in different languages, the main set was actually designed for American English. Therefore, in this study, our target stimuli for this experiment consisted of 120 black and white drawings and their corresponding modal names adopted from MultiPic databank which was generated and normed in order to facilitate replication and extension to other languages than English including German, Italian, Spanish, French, and Dutch. The materials are open-access and free from copyright restrictions for non-commercial purposes at http://www.bcbl.eu/databases/multipic.
All items are presented in two blocks of 60 stimuli, a pseudo-random order without the intervention of the participants, a different order for each participant and

a break after each block. The pseudo-randomization was preferred to a complete randomization to avoid succession of stimuli from the same semantic category or with high phonological overlap. Ten warm-up filler trials corresponding to easy-to-name stimuli were set at the beginning of the experiment and after the break. There was a short break between the two blocks. On each trial a fixation white cross was projected on a black background appeared for 500 ms. The drawing was presented for 3000 ms followed by a blank screen for a variable duration 1000ms after the stimulus.

MEG Recording and Preprocessing

Experiment stimuli were presented using Psychopy software (Peirce, 2007). Recordings were performed with an The Elekta Neuromag® (Elekta AB, Stockholm, Sweden) MEG whole-head scanner (102 magnetometers, 204 planar gradiometers) placed inside a magnetically shielded room (VacuumSchmelze GmbH, Hanau, Germany) at the "Laboratory of Cognitive and Computational Neuroscience" (Madrid, Spain). This scanner comprises 306 channels, of which, 204 are planar gradiometers and 102 magnetometers.

Digital models of each subject's headshape were determined before the recordings using a digitizer (3Space Fast-Track, Polhemus, Colchester, VT, USA). The scans included coordinates of three anatomical landmarks and five reference points in order to coregister neuromagnetic data with MEG. Channels with poor signal quality were manually de-selected after visual inspection for artifacts and a Signal-Space Separation (tSSS) filter (Elekta data) was applied for artifact removal using MaxFilter software. Head position with respect to the MEG helmet was monitored using three coils placed at anatomical landmarks of the head (nasion, left and right pre-auricular points).

The participants were seated in a padded chair inside a magnetically shielded room containing the MEG instrument 135 cm from a CRT monitor. They were guided to say the words covertly to avoid muscle contamination artefacts due to mouth movements during language production, The potential artefacts may distort the signals and lead to a bad signal-to-noise ratio in the measurements. However, there is a great body of literature on overt language production in ERP studies that is extensively explained by a review from Ganushchak, Christoffels and Schiller (2011). The analysis was carried out using MATLAB (R2017a; Mathworks Inc., MA, USA) and its Brainstorm toolbox (Tadel et al., 2011).

Standard default anatomy of Brainstorm was warped to fit the digitized head points recorded using Polhemus Fastrak device. Cortical surface was modelled using *Overlapping spheres* as the forward model, having approximately 15000 vertices on the mesh. The brain sources underlying the recorded MEG were estimated using Minimum norm imaging method and sLORETA maps, where the dipoles were constrained to be normal to the cortex as most of the cortical neurons are pyramidal and have normal-to-cortex electrical activity.

Desikan-Killiany atlas was used to identify regions of the posterior left hemisphere such as inferior temporal (IT), medial temporal (MT), superior temporal

(ST), supramarginal (SM), inferior parietal (IP), superior parietal (SP), and lateral occipital (LO). The choice of these regions is based upon the findings of the study by (Kielar et al., 2015). Besides, the estimated brain source activations in the posterior left hemisphere (PLH) regions discussed above were evaluated for their principal component to get the event-related fields (ERF) for each subject. These ERF were then also normalized to the maximum of their absolute value before averaging them between subjects of the same class or group such as Bilingual, Semi-bilingual, or Monolingual. This group average has been referred to as average normalized response.

Recordings were performed with the Elekta Neuromag® (Elekta AB, Stockholm, Sweden) MEG whole-head scanner (102 magnetometers and 204 planar gradiometers) placed inside a magnetically shielded room (VacuumSchmelze GmbH, Hanau, Germany) at the Laboratory of Cognitive and Computational Neuroscience (Madrid, Spain). The participants were placed 135 cm from a CRT monitor. Digital models of each subject's headshape were determined before recordings using a digitizer (3D Space Fast-Track, Polhemus, Colchester, VT, USA) which were coregistered with three fiducial points. Channels with poor signal quality were manually unselected after visual inspection for artifacts and a temporal Signal-Space Separation (tSSS) filter was applied for artifact removal using the MaxFilter software. The head position with respect to the MEG helmet was monitored using four coils placed on the head.

Source Localization and Time Course

The standard default anatomy of Brainstorm was warped to fit digitized head points recorded using the Polhemus Fastrak device. The cortical surface was modeled using Overlapping spheres as the forward model, having approximately 15000 vertices on the mesh. The brain sources underlying the recorded MEG were estimated using sLORETA method, where dipoles were constrained to be normal to the cortex as most of cortical neurons are pyramidal and have normal-to-cortex electrical activity.

After removing a DC offset for each channel using the baseline -1000 ms to -1 ms and removing Signal-Space Projections (SSP) for eye blinks and heartbeats[1], 120 4-s epochs (-1 to 3 seconds) were generated corresponding to each image. Our continuous data were then segmented into non-overlapping epochs spanning from 500 ms before to 2000 ms after the presentation of the visual stimuli. Epochs containing high amplitude, high frequency muscle noise and other irregular artifacts were removed. We time-locked to the beginning of visual stimuli to the onset of lemma selection.

Connectivity Calculation

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[1] Due to a technical error, electrocardiogram activity was only recorded for subjects 1-4. For this reason, SSP for heartbeats couldn't be removed for the rest of the subjects. Consequently, we can't study lower band frequencies in the collected MEG data.

Since the brain is a nonlinear dynamical system, phase locking is an appropriate approach to quantifying interaction. Phase interaction measure of Phase Locking Value (PLV) is absolute value of the mean phase difference between the two signals expressed as a complex unit-length vector (Lachaux et al., 1999; Mormann et al., 2000). A more pragmatic argument for its use in studies of LFPs (local field potentials), EEG and MEG is that it is robust to fluctuations in amplitude that may contain less information about interactions than does the relative phase (Lachaux et al., 1999; Mormann et al., 2000). FC between all pairs of sources was estimated using phase-locking value (PLV) algorithm.

If the marginal distributions for the two signals are uniform and the signals are independent, then the relative phase will also have a uniform distribution and the will be zero. Conversely, if the phases of the two signals are strongly coupled then the PLV will approach unity. For event-related studies, we would expect the marginal to be uniform across trials unless the phase is locked to a stimulus. In that case, we may have nonuniform marginals which could in principle lead to false indications of phase locking.

Phase synchronization between two narrow-band signals is frequently characterized by the Phase Locking Value (PLV). Consider a pair of real signals s1(t) and s2(t), that have been band-pass filtered to a frequency range of interest. Analytic signals can be obtained from s1(t) and s2(t) using the Hilbert transform:

$$z_i(t) = s_i(t) + jHT\left(s_i(t)\right)$$

(1)

Using analytical signals, the relative phase between z1(t) and z2(t) can be computed as,

$$\Delta\phi(t) = arg\left(\frac{z_1(t)z_2^*(t)}{|z_1(t)|\,|z_2(t)|}\right)$$

(2)

The instantaneous PLV is

$$PLV(t) = \left|E\left[e^{j\Delta\phi(t)}\right]\right|$$

(3)

Data were analyzed separately using a mixed effect two-way analysis of variance (ANOVA) with method of acquisition (between-subject factor: group [Immersion vs. Bilingual vs Monolingual]; within-subject factor: condition [Delta vs. Theta vs Alpha vs Beta vs Gamma band]). We performed statistical comparisons for each frequency band separately, we Bonferroni-adjusted the p-value of each significant cluster such as $\alpha = .01$. Level of bilingualism was included as a covariate in statistical analyses.All statistical analyses of behavioral data were performed using IBM SPSS Statistics 21 for Windows (SPSS Inc., Chicago, USA).

Results

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(Tabari, 2021).

The analyses brought significant six FC pair in five frequency ranges all of them exhibiting in all the groups. Among all the FC links between our MEG channels the following were more pronounced: 1941-1911 (LO1), 2042-1912 (LO2), 1913-1942 (LO3), 1311-1131 (RP-RT), 1221-1311 (RT-RF1) and 1232-1323 (RT-RF2)[1].

Figure 1

Regions Activated in Phase-locked to Lemma Selection Time Window (0-150 ms) in 4 Different Bands (Averaged for 3 Groups)

Abbreviation	Full name
LO	Left occipital
RP	Right Parietal
RO	Right occipital
LP	Left parietal
RF	Right Frontal
LF	Left Frontal

2-4 Hz   5-7 Hz

8-12 Hz   15-25 Hz

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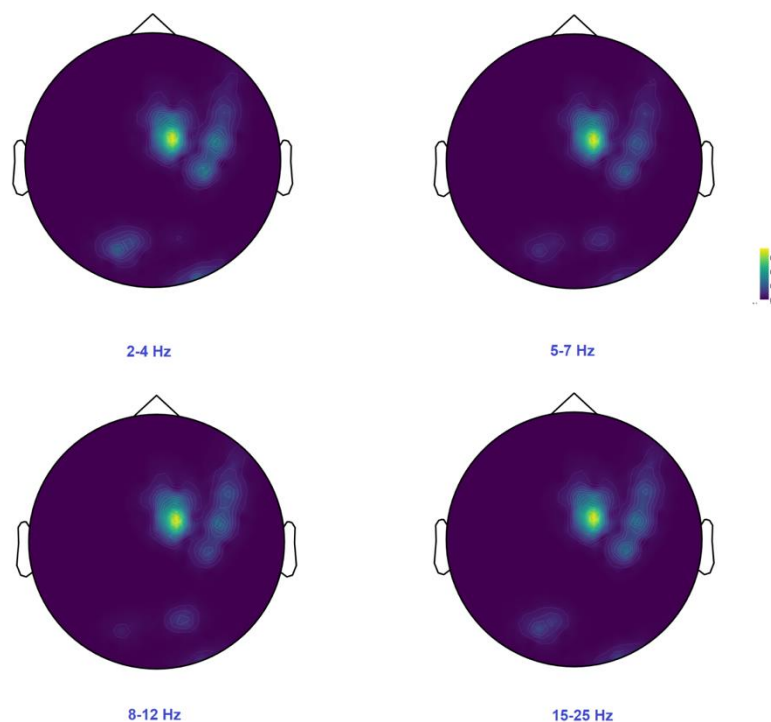
[1] Authors labled the pair of MEG channels to ease addressing.

To compute the difference between the conditions (high vs low proficiency), we used the normalized form (A-B/A+B). We found difference in the pairs (1131-2031=.7785), (1131-1322=.8575), (1131-1232=.7037) and (1043-2013=.7063), which involves the right parietal , temporal, frontal, and occipital and left parietal probably due to the preparation to select lemma.

RO	LO	RP	RT	RF	LP
2031	1911	1131	1311	1221	2013
2131	1912	1132	1332	1222	
2132	1913	1133	1322	1232	
2133	2042	1042	1323		
	2043	1031			
	1941				
	1942				

LO1=1911-1941; LO2=1912-2042;LO3=1913-1942; RP-RT=1131-1311; RT-RF1=1311-1221; RT-RF2=1232-1221

Repeated measures ANOVAs were conducted on each FC link and the data were screened for missing values, normality, presence of outliers and variable correlation. However monolingual group showed a higher mean value of FC in LO1, LO2, LO3 in Alpha, Beta, Theta and Delta Band than the other two groups but such difference was not significant (p>.05) Tukey's HSD test showed no significant difference between the three groups in Gamma Band (p>.05); although monolinguals had a higher score in LO2 (.7323±.0785), LO3 (.7448±.0665), immersion group scored higher in LO1 (.7219±.0195) and bilingual group leaded in PR-RT (.5963±.0588), RT-RF1 (.6044±.0301) and RT-RF2 (.3637±.0547).

In Delta band, Monolinguals showed a higher score in LO1 (.7457±.737) , LO2 (.7876±.0347) , LO3 (.7869±.0501), while in PR-RT, immersions leaded the peers (.5950±.0375) and bilinguals surpassed the others in RT-RF1 (.7281±.0558) and RT-RF2 (.5662±.0470). However none of the differences were statistically significant (p>.05). Similarly in Theta band, Monolinguals showed a higher score in LO1 (.7463±.950) , LO2 (.7885±.441) , LO3 (.7847±.0448), while in PR-RT and RT-RF1, immersions leaded the peers (.5599±.690 and .7236±.0531 respectively) and bilinguals surpassed the others in RT-RF2 (.5249±.0489). However, none of the differences were statistically significant (p>.05).

Likewise, no significant difference between the three groups in Alpha Band (p>.05); although monolinguals had a higher score in LO1 (.7243±.1195), LO2 (.8146±.0274), LO3 (.7720±.887), and bilingual group leaded in RT-RF1 (.7283±.0809), PR-RT (.5773±.798), and RT-RF1 (.4451±.536). In Beta band, like other bands monolinguals had a higher score in LO1 (.7431±.0575), LO2 (.7657±.0274), LO3 (.7519±.0524) and bilingual group leaded in RT-RF1 (.6802±.0464), PR-RT (.5692±.0990), and RT-RF1 (.4525±.0742). We also did not find any significant difference between the LO1 in the different bands (delta

[MS=.11; F=2.33; p=.140], theta [MS=.004; F=.751; p=0.493], alpha [MS=.001; F=.148; p=.864], beta [MS=.005; F=1.303; p=.308] and [MS=.005; F=2.494; p=.124] gamma).

Figure 2

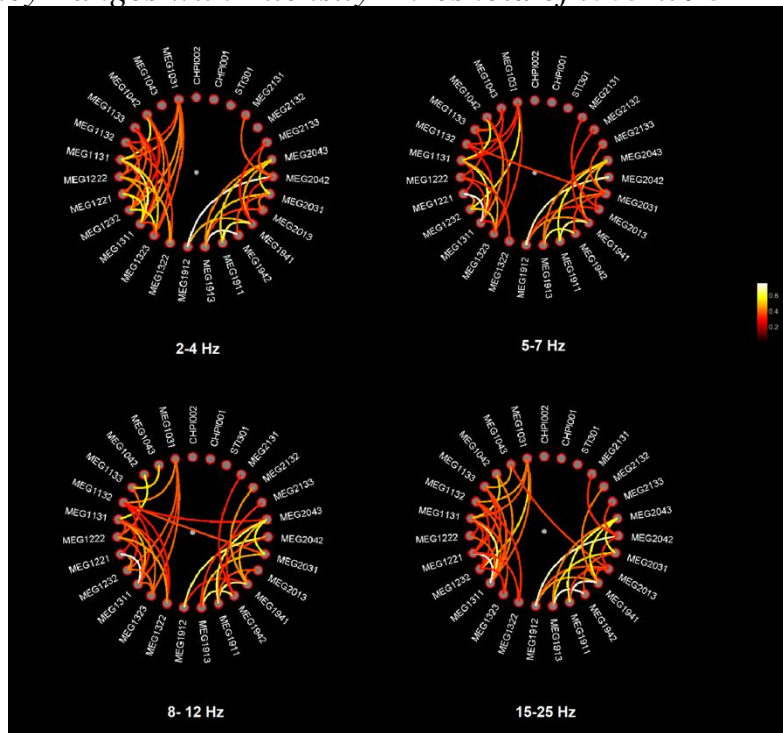*FC in 4 Frequency Ranges with Intensity Threshold of .005-.798*

Table 2

Repeated Measures ANOVAs Also Applied to Test Differences Between FC Values in Each Frequency any of Frequency Bands

Pairs of channels		Delta	Theta	Alpha	Beta	Gamma
LO1	**MS**	.011	.007	.001	0.005	0.005
	F	2.33	3.284	.148	1.303	2.494
	p	.140	.073	.864	0.308	0.124
LO2	**MS**	.007	.004	.015	0.008	0.029
	F	3.284	.751	2.344	2.389	3.113
	p	.073	.493	.138	.134	.081
LO3	**MS**	.003	.003	.003	.005	.017
	F	1.098	1.333	.422	.919	1.935
	p	.365	.300	.665	.425	.187
RPRT	**MS**	.007	.010	.004	.006	.000
	F	2.550	1.548	.495	1.104	.137

	p	.119	.252	.621	.363	.873
	MS	.002	.001	.004	.004	.006
RT-RF1	F	.323	.217	.583	.573	.998
	p	.730	.808	.573	.397	.397
	MS	.014	.010	.000	.010	.014
RT-RF2	F	2.123	2.289	.038	2.289	2.123
	p	.162	.144	.963	.144	.162

Figure 3

FC Values for Each Pair at Different Frequency Bands
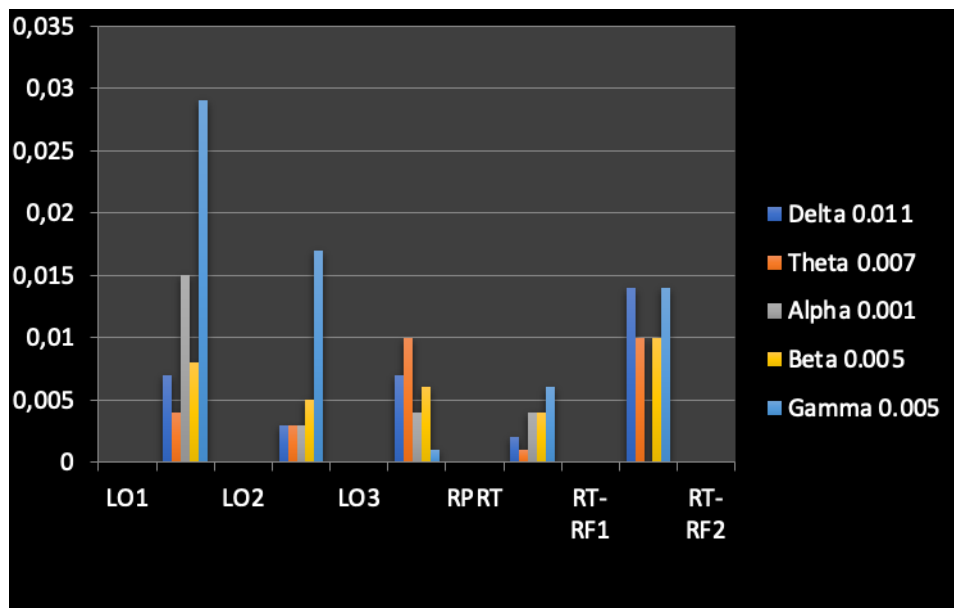
Discussion

The aim of the present study was to investigate whether different level of exposure to second language would be associated with different patterns of functional connectivity at lemma access level (0-150 ms). As we have seen no significant difference (p > .05) between monolingual, bilingual and CLIL learners in terms of FC values in lemma selection stage. Hence, we void the assumption of the difference between the groups.

We also observed strong activations between 0-150 ms after the presentation of visual stimuli. According to the results of picture naming/lexical decision experiment by Levelt et al. (1991), the time estimated for lemma access in naming tasks was 115 ms. In Roelofs's (1992) computational model lemma selection durations using semantically related and unrelated distracters was reported in the range of 100 to 150 ms; while, Potter and Faulconer's (1975) estimation of lemma access turn out to be 150 ms.

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The results of some ERPs reported that the concept beginning to be accessed some 100 ms after picture onset (Potter, 1983). First, Roelofs's (1997) picture/word interference experiments in the presence of auditory phonological distracters gives an estimate of 265 ms for the interval between lemma selection and accessing the syllable score of a monosyllabic word including syllable node selection and phonemic segment attachment. Second, in a phoneme agreement experiment by Wheeldon and Levelt (1994), the estimate of the internal encoding duration of the whole word phonologically found out to be 125 ms.

Other studies, however, suggest that brain engages in lexical selection around 200 ms after picture onset (e.g., Hirschfeld et al., 2008; Costa et al., 2009; Strijkers et al., 2010; Aristei et al., 2011). An ERP study with go/no go design for semantic picture categorization by van Turennout, Hagoort, and Brown (1997), the duration estimate of phonological encoding was about 120 ms. Accordingly, visual processing plus accessing the lexical concept for an average naming latency of 538 can be split to 150 ms; lemma selection: 125 ms; phonological encoding: 125 ms; and phonetic encoding and initiation of articulation: 138 ms. Strijkers and Costa (2011) assessed such latencies as input to concept: 175 ms; from concept to syntax: 75 ms; from syntax to first phoneme: 40 ms; and from concept to first phoneme: 115 ms. To summerize the whole process begins from lexical selection around 100 ms after picture, phonological encoding between 275 and 400 ms and morphological processes starting around 350 ms after the picture onset (Indefrey & Levelt, 2004; Hirschfeld et al., 2008; Costa et al., 2009; Strijkers et al., 2010; Aristei et al., 2011.; Eulitz et al., 2000, Koester & Schiller, 2008).

Left hemispheric activation has always been the centre of attention in most language studies while the importance of right hemisphere (especially inferior frontal and temporal regions) in some core language processing is rarely discussed (Binder et al. 1997; Fedorenko et al. 2010; Price 2012; Bozic et al. 2015; Chai et al., 2016). However, we observed activations in LO, RF, RP and RT regions ans specifically right IFG due to the preparation to select lemma during the time-locked window of 0 to 150 ms. In a similar study by Salmelin et al (1994) on the dynamics of brain activation during picture naming, the authors reported right occipital visual area reaction followed by early bilateral signals close to the temporo-parieto-occipital junctions. Right IFG has been known as central to attentional control and response inhibition essential for bilinguals to navigate through semantic, syntactic an phonological cues (Dove et al., 2000; Aron et al., 2003 and 2004; Hampshire & Owen 2006). Aron and colleagues (2003) also reported that response selection can be disturbed by damage to right IFG, especially pars triangularis. The activation of this region at this time window could be the effect of right IFG in lemma selection process which entails inhibitory control over interfering non-target language. Selection of the correct lemma involves initial activation of multiple lexical representations corresponding to the target and competitor words, until one lemma attains a level of activation exceeding all others with similar semantic features by some particular threshold (Popescu et al. 2017). The probability that a lemma get

1992).

Little has been said about the association between frequency bands and language networks. It is argued that not the same frequency bands play similar roles in different stages of language production and comprehension (Kösem & Van Wassenhove, 2017) as bottom-up processing evokes high frequency oscillations while mediate top-down process evokes slower frequency range (Palva & Palva 2018). Among all alpha oscillation is associated with verbal working memory while beta oscillation has been correlated with verbal memory, semantic prediction (top-down process) and language production (Weiss & Mueller, 2012). Theta synchronizes with syllabic rates and increases by verbal working memory and verbal information retrieval (Giraud & Poeppel, 2012; Friederici & Singer, 2015; Meyer, 2018). Gamma high frequency oscillations is correlated with phonological perception and semantics of the incoming word (Meyer, 2018). High synchrony in right frontal and right central regions was seen to be associated positively with vocabulary outcome in young participants (Mundy et al., 2003). But delta range synchronizes with intonational processing and syntactic comprehension (Meyet, 2018).

We also compared different frequency bands at the same time window in the three groups of participant. We have seen no significant difference between difference frequency bands ($p > .05$) at the most highlighted FC pairs. However, we observed higher gamma values signifying the semantic activation of the word. Doesburg and colleagues (2012) also reported increased gamma synchronization during expressive language task among task-activated regions.

Conclusion

Functional connectivity is an emphasis on the importance of studying communication between language regions. To our knowledge, this is the first study focusing on linguistic electrophysiological pattern of lemma access from FC perspective in three levels of bilingual students. Due to our small sample size we could not find any significant difference between the groups in terms of FC values at designated pairs of nodes signifying that different amount of exposure could not affect electrophysiological patterns in the preliminary step of word production. More in-depth studies are required to investigate the following stages. Neither had we found any differences between the 5 frequency bands at the pairs. However, higher gamma oscillation and activation is right temporal and frontal lobe confirms ongoing lemma access process in the phased locked time window of 0-150 ms.

Limitation of the study

Due to technical cautions, we had to adopt covert naming protocol which had its own limitations. We could not be sure that participants are following our instructions during the task. There are different cortical patterns for covert versus overt naming.

Secondly, our results are limited by sample size. Due to financial observation, we could not enroll more participants to make the result stronger. Further studies with larger sample size is highly recommended.

Acknowledgements

References

Ardila, A., Bernal, B., & Rosselli, M. (2016). Why Broca's Area Damage Does Not Result in Classical Broca's Aphasia. Frontiers in Human Neuroscience, 10, 249. https://doi.org/10.3389/fnhum.2016.00249

Aristei, S., Melinger, A., Abdel Rahman, R. (2011). Electrophysiological chronometry of semantic context effects in language production. Journal of Cognitive Neuroscence. 23 (7), 1567–1586. https://doi.org/10.1162/jocn.2010.21474

Aron, A. R., Fletcher, P. C., Bullmore, E. T., Sahakian, B. J., & Robbins, T. W. (2003). Stop-signal inhibition disrupted by damage to right inferior frontal gyrus in humans. Nature Neuroscience, 6(2), 115–116. https://doi.org/10.1038/nn1003

Aron, A. R., Robbins, T. W., & Poldrack, R. A. (2014). Inhibition and the right inferior frontal cortex: one decade on. Trends in cognitive sciences, 18(4), 177–185. https://doi.org/10.1016/j.tics.2013.12.003

Berken, J. A., Chai, X., Chen, J. K., Gracco, V. L., & Klein, D. (2016). Effects of Early and Late Bilingualism on Resting-State Functional Connectivity. The Journal of Neuroscience: The Official Journal of the Society for Neuroscience, 36(4), 1165–1172. https://doi.org/10.1523/JNEUROSCI.1960-15.2016

Badecker, W., Miozzo, M., & Zanuttini, R. (1995). The two-stage model of lexical retrieval: evidence from a case of anomia with selective preservation of grammatical gender. Cognition, 57(2), 193–216. https://doi.org/10.1016/0010-0277(95)00663-j

Barac, R., Moreno, S., & Bialystok, E. (2016). Behavioral and Electrophysiological Differences in Executive Control Between Monolingual and Bilingual Children. Child Development, 87(4), 1277–1290. https://doi.org/10.1111/cdev.12538

Bialystok, E. (2017). The bilingual adaptation: How minds accommodate experience. Psychological Bulletin, 143(3), 233–262. https://doi.org/10.1037/bul0000099

Binder, J. R., Frost, J. A., Hammeke, T. A., Cox, R. W., Rao, S. M., & Prieto, T. (1997). Human brain language areas identified by functional magnetic resonance imaging. The Journal of Neuroscience: The Official Journal of the Society for Neuroscience, 17(1), 353–362. https://doi.org/10.1523/JNEUROSCI.17-01-00353.1997

Bozic, M., Fonteneau, E., Su, L., & Marslen-Wilson, W. D. (2015). Grammatical analysis as a distributed neurobiological function. Human brain mapping, 36(3), 1190–1201. https://doi.org/10.1002/hbm.22696

Braver, T. S., Barch, D. M., Keys, B. A., Carter, C. S., Cohen, J. D., Kaye, J. A., Janowsky, J. S., Taylor, S. F., Yesavage, J. A., Mumenthaler, M. S., Jagust, W. J., & Reed, B. R. (2001). Context processing in older adults: evidence for a theory relating cognitive control to neurobiology in healthy aging. Journal of Experimental Psychology: General, 130(4), 746–763. https://doi.org/10.1037/0096-3445.130.4.746

Brown, A. S., & Nix, L. A. (1996). Age-related changes in the tip-of-the-tongue experience. The American Journal of Psychology, 109(1), 79–91. https://doi.org/10.2307/1422928

Chai, Xiaoqian & Berken, Jonathan & Barbeau, Elise & Soles, Jennika & Callahan, Megan & Chen, Jen-Kai & Klein, Denise. (2016). Intrinsic Functional Connectivity in the Adult Brain and Success in Second-Language Learning. Journal of Neuroscience. 36 (3) 755-761; DOI: https://doi.org/10.1523/JNEUROSCI.2234-15.2016

Chai, L. R., Mattar, M. G., Blank, I. A., Fedorenko, E., & Bassett, D. S. (2016). Functional Network Dynamics of the Language System. Cerebral Cortex, 26(11), 4148–4159. https://doi.org/10.1093/cercor/bhw238

Clahsen, H., Paulmann, S., Budd, M. J., & Barry, C. (2018). Morphological encoding beyond slots and fillers: An ERP study of comparative formation in English. PloS One, 13(7), e0199897. https://doi.org/10.1371/journal.pone.0199897

Costa, A., Strijkers, K., Martin, C., & Thierry, G. (2009). The time course of word retrieval revealed by event-related brain potentials during overt speech. Proceedings of the National Academy of Sciences of the United States of America, 106(50), 21442–21446. https://doi.org/10.1073/pnas.0908921106

Crystal, D. (2003). English as a Global Language. Cambridge University Press. https://doi.org/10.1017/CBO9780511486999

De Frutos-Lucas, J., López-Sanz, D., Cuesta, P., Bruña, R., De la Fuente, S., Serrano, N., Maestú, F. (2020). Enhancement of posterior brain functional networks in bilingual older adults. Bilingualism: Language and Cognition, 23(2), 387-400. https://doi.org/10.1017/S1366728919000178

Della Rosa, P. A., Videsott, G., Borsa, V. M., Canini, M., Weekes, B. S., Franceschini, R., & Abutalebi, J. (2013). A neural interactive location for multilingual talent. Cortex: A Journal Devoted to the Study of the Nervous System and Behavior, 49(2), 605–608. https://doi.org/10.1016/j.cortex.2012.12.001

Diamond A. (2013). Executive functions. Annual Review of Psychology, 64, 135–168. https://doi.org/10.1146/annurev-psych-113011-143750

Doesburg, S. M., Vinette, S. A., Cheung, M. J., & Pang, E. W. (2012). Theta-modulated gamma-band synchronization among activated regions during a verb generation task. Frontiers in Psychology, 3, 195. https://doi.org/10.3389/fpsyg.2012.00195

Dove, A., Brett, M., Cusack, R., & Owen, A. M. (2006). Dissociable contributions of the mid-ventrolateral frontal cortex and the medial temporal lobe system to human memory. NeuroImage, 31(4), 1790–1801. https://doi.org/10.1016/j.neuroimage.2006.02.035

Duffau, H., Gatignol, P., Mandonnet, E., Peruzzi, P., Tzourio-Mazoyer, N., & Capelle, L. (2005). New insights into the anatomo-functional connectivity of the semantic system: a study using cortico-subcortical electrostimulations. Brain: A Journal of Neurology, 128(4), 797–810. https://doi.org/10.1093/brain/awh423

Eulitz, C., Hauk, O., & Cohen, R. (2000). Electroencephalographic activity over temporal brain areas during phonological encoding in picture naming. Clinical Neurophysiology: Official Journal of the International Federation of Clinical Neurophysiology, 111(11), 2088–2097. https://doi.org/10.1016/s1388-2457(00)00441-7

Farah, M. J. (2015). The Unknowns of Cognitive Enhancement. *Science, 350*(6259), 379-380. http://dx.doi.org/10.1126/science.aad5893

Fratantoni, J. M., DeLaRosa, B. L., Didehbani, N., Hart, J., Jr, & Kraut, M. A. (2017). Electrophysiological Correlates of Word Retrieval in Traumatic Brain Injury. Journal of neurotrauma, 34(5), 1017–1021. https://doi.org/10.1089/neu.2016.4651

Fedorenko, E., Hsieh, P. J., Nieto-Castañón, A., Whitfield-Gabrieli, S., & Kanwisher, N. (2010). New method for fMRI investigations of language: defining ROIs functionally in individual subjects. Journal of Neurophysiology, 104(2), 1177–1194. https://doi.org/10.1152/jn.00032.2010

Friederici, A. D., & Levelt, W. J. (1987). Resolving perceptual conflicts: the cognitive mechanism of spatial orientation. Aviation, Space, and Environmental Medicine, 58(9 Pt 2), A164–A169.

Friederici, A. D., & Levelt, W. J. M. (1987). Spatial description in microgravity: Aspects of cognitive adaptation. In P. R. Sahm, R. Jansen, & M. H. Keller (Eds.), Scientific Results of the German Sacelab Mission D1. (pp. 518-524) Cologne: Deutsche Forschungs- und Versuchsanstalt für Luft- und Raumfahrt.

Friederici A. D. (2011). The brain basis of language processing: from structure to function. Physiological Reviews, 91(4), 1357–1392. https://doi.org/10.1152/physrev.00006.2011

Friederici, A. D., & Singer, W. (2015). Grounding language processing on basic neurophysiological principles. Trends in Cognitive Sciences, 19(6), 329–338. https://doi.org/10.1016/j.tics.2015.03.012

Ganushchak, L. Y., Christoffels, I. K., & Schiller, N. O. (2011). The use of electroencephalography in language production research: a review. Frontiers in Psychology, 2, 208. https://doi.org/10.3389/fpsyg.2011.00208

Gaudet, I., Hüsser, A., Vannasing, P., & Gallagher, A. (2020). Functional Brain Connectivity of Language Functions in Children Revealed by EEG and MEG: A Systematic Review. Frontiers in Human Neuroscience, 14, 62. https://doi.org/10.3389/fnhum.2020.00062

Giedd, J. N., Snell, J. W., Lange, N., Rajapakse, J. C., Casey, B. J., Kozuch, P. L., Vaituzis, A. C., Vauss, Y. C., Hamburger, S. D., Kaysen, D., & Rapoport, J. L. (1996). Quantitative magnetic resonance imaging of human brain development: ages 4-18. Cerebral Cortex, 6(4), 551–560. https://doi.org/10.1093/cercor/6.4.551

Giraud, Anne-Lise & Poeppel, David. (2012). Cortical oscillations and speech processing: Emerging computational principles and operations. Nature Neuroscience, 15, 511-7. https://doi.org/10.1038/nn.3063

Grady CL, Luk G, Craik FIM and Bialystok E (2015) Brain network activity in monolingual and bilingual older adults. Neuropsychologia, 66, 170–181. https://doi.org/10.1016/j.neuropsychologia.2014.10.042

Grundy JG, Anderson JAE and Bialystok E (2017) Neural correlates of cognitive processing in monolinguals and bilinguals. Annals of the New York Academy of Sciences, 183–201. https://doi.org/10.1111/nyas.13333

Gullifer, J. W., Chai, X. J., Whitford, V., Pivneva, I., Baum, S., Klein, D., & Titone, D. (2018). Bilingual experience and resting-state brain connectivity: Impacts of L2 age of acquisition and social diversity of language use on control networks. Neuropsychologia, 117, 123–134. https://doi.org/10.1016/j.neuropsychologia.2018.04.037

Hampshire, A., & Owen, A. M. (2006). Fractionating attentional control using event-related fMRI. Cerebral Cortex, 16(12), 1679–1689. https://doi.org/10.1093/cercor/bhj116

Hart, J., Gordon, B. Neural subsystems for object knowledge. Nature, 359, 60–64 (1992). https://doi.org/10.1038/359060a0

Hart H, Radua J, Nakao T, Mataix-Cols D, Rubia K (2013): Meta-analysis of fMRI studies of inhibition and attention in ADHD: exploring task-specific, stimulant medication and age effects. Archives General Psychiatry, 70, 185–198. https://doi:10.1001/jamapsychiatry.2013.277

Hirshfeld-Becker, D. R., Micco, J., Henin, A., Bloomfield, A., Biederman, J., & Rosenbaum, J. (2008). Behavioral inhibition. Depression and Anxiety, 25(4), 357–367. https://doi.org/10.1002/da.20490

Hsu, C.-T., Jacobs, A. M., Citron, F. M. M., & Conrad, M. (2015). The emotion potential of words and passages in reading Harry Potter—An fMRI study. Brain and Language, 142, 96–114. https://doi.org/10.1016/j.bandl.2015.01.011

Hull, Rachel & Vaid, J.. (2006). Laterality and language experience. Laterality, 11. 436-64. https://10.1080/13576500600691162

Hull, R., & Vaid, J. (2007). Bilingual language lateralization: a meta-analytic tale of two hemispheres. Neuropsychologia, 45(9), 1987–2008. https://doi.org/10.1016/j.neuropsychologia.2007.03.002

Ilieva, I. P., Hook, C. J., & Farah, M. J. (2015). Prescription stimulants' effects on healthy inhibitory control, working memory, and episodic memory: A meta-analysis. Journal of Cognitive Neuroscience, 27(6), 1069–1089. https://doi.org/10.1162/jocn_a_00776

Janssen, D. P., Roelofs, A., & Levelt, W. J. M. (2002). Inflectional frames in language production. Language and Cognitive Processes, 17(3), 209–236. https://doi.org/10.1080/01690960143000182

Jescheniak, J. D., & Levelt, W. J. M. (1994). Word frequency effects in speech production: Retrieval of syntactic information and of phonological form. Journal of Experimental Psychology: Learning, Memory, and Cognition, 20(4), 824–843. https://doi.org/10.1037/0278-7393.20.4.824

Kovelman, I., Baker, S. A., & Petitto, L. A. (2008). Bilingual and monolingual brains compared: a functional magnetic resonance imaging investigation of syntactic processing and a possible «neural signature» of bilingualism. Journal of Cognitive Neuroscience, 20(1), 153–169. https://doi.org/10.1162/jocn.2008.20011

Kuipers, J. R., & Thierry, G. (2012). Event-related potential correlates of language change detection in bilingual toddlers. Developmental Cognitive Neuroscience, 2(1), 97–102. https://doi.org/10.1016/j.dcn.2011.08.002

Kovelman, I., Baker, S., & Petitto, L. (2008). Age of first bilingual language exposure as a new window into bilingual reading development. Bilingualism Language and Cognition. https://doi.org/10.1017/s1366728908003386

Kösem, A., & van Wassenhove, V. (2017). Distinct contributions of low- and high-frequency neural oscillations to speech comprehension. Language, Cognition and Neuroscience, 32(5), 536–544. https://doi.org/10.1080/23273798.2016.1238495

Lachaux, J. P., Rodriguez, E., Martinerie, J., & Varela, F. J. (1999). Measuring phase synchrony in brain signals. Human Brain Mapping, 8(4), 194–208. https://doi.org/10.1002/(SICI)1097-0193(1999)8:4%3C194::AID-HBM4%3E3.0.CO;2-C

Levelt, W. J. M., & Flores d'Arcais, G.B. (1987). Snelheid en uniciteit bij lexicale toegang. In H. F. M. Crombach, L. J. Th. van der Kamp, & C. A. J. Vlek. (Eds.), De psychologie voorbij. Ontwikkelingen rond model, metriek en methode in de gedragswetenschappen (pp. 55-68). Lisse: Swets & Zeitlinger.

Levelt, W. J. M. (1987). Hochleistung in Millisekunden - Sprechen und Sprache verstehen. Jahrbuch der Max-Planck-Gesellschaft (pp. 61-77). Max-Planck-Gesellschaft: München.

Levelt, W. J. M., & Schriefers, H. (1987). Stages of lexical access. In G.A.M. Kempen (Ed.), Natural Language Generation (pp. 395-404). Dordrecht: Martinus Nijhoff.

Levelt, W. J., & Wheeldon, L. (1994). Do speakers have access to a mental syllabary?. Cognition, 50(1-3), 239–269. https://doi.org/10.1016/0010-0277(94)90030-2

Levelt, W. J. M., Praamstra, P., Meyer, A. S., Helenius, P., & Salmelin, R. (1998). An MEG study of picture naming. Journal of Cognitive Neuroscience, 10(5), 553–567. https://doi.org/10.1162/089892998562960

Levelt, W. J. M., Roelofs, A., & Meyer, A. S. (1999). A theory of lexical access in speech production. Behavioral and Brain Sciences, 22, 1-38. https://doi.org/10.1017/S0140525X99001776

Levelt, W. J. M. (2002). Phonological encoding in speech production. In C. Gussenhoven & N. Warner (Eds.), Papers in Laboratory Phonology VII. (pp. 87-99). Berlin: Mouton De Gruyter.

Levelt, W. J. M. (2002). Picture naming and word frequency: Comments on Alario, Costa and Caramazza, Language and Cognitive Processes, 17(3), 299-319. Language and Cognitive Processes, 17(6), 663-671. https://doi.org/0.1080/01690960143000443

Levelt, W. J. M., Roelofs , A., & Meyer , A. S. (2002). A theory of lexical access in speech production. In G. T. M. Altmann (Ed.), Psycholinguistics: Critical Concepts in Psychology (Vol. 5, pp. 278-377). London: Routledge (Reprinted from Behavioral and Brain Sciences (1999), 22, 1-72. https://doi.org/10.1017/S0140525X99001776

Levelt, W. J. M. (2003). Language. In G. Adelman & B. H. Smith (Eds.), Elsevier's Encyclopedia of Neuroscience (3rd edition). Amsterdam: Elsevier Science.

Lukasik, K. M., Lehtonen, M., Soveri, A., Waris, O., Jylkkä, J., & Laine, M. (2018). Bilingualism and working memory performance: Evidence from a large-scale online study. PloS ONE, 13(11), e0205916. https://doi.org/10.1371/journal.pone.0205916

Martin, C.D, Strijkers K., Santesteban, M., Escera, C., Hartsuiker, R.J., Costa, A. (2013). The impact of early bilingualism on controlling a language learned late: an ERP study. Frontiers in Psychology, 4, 1-15. http://doi.org/10.3389/fpsyg.2013.00815

Marian, V., Chabal, S., Bartolotti, J., Bradley, K., & Hernandez, A. E. (2014). Differential recruitment of executive control regions during phonological competition in monolinguals and bilinguals. Brain and Language, 139, 108–117. http://doi.org/10.1016/j.bandl.2014.10.005

Meyer, L. (2018). The neural oscillations of speech processing and language comprehension: state of the art and emerging mechanisms. European Journal of Neuroscience, 48, 2609–2621. http://doi.org/10.1111/ejn.13748

Mechelli A., Crinion J. T., Noppeney U., O'Doherty J., Ashburner J., Frackowiak R. S., et al. (2004). Neurolinguistics: structural plasticity in the bilingual brain. Nature, 431, 757–757. https://doi.org/10.1038/431757a

Mohades, S. G., Struys, E., Van Schuerbeek, P., Mondt, K., Van De Craen, P., & Luypaert, R. (2012). DTI reveals structural differences in white matter tracts between bilingual and monolingual children. Brain Research, 1435, 72–80. https://doi.org/10.1016/j.brainres.2011.12.005

Mohades, S. G, Van Schuerbeek, P, Rosseel, Y, Van De Craen, P, Luypaert, R, & Baeken, C. (2015). White-matter development is different in bilingual and monolingual children: A longitudinal DTI study. PLoS ONE, 10(2), 1–16. https://doi.org/10.1371/journal.pone.0117968

Mormann, Florian & Lehnertz, Klaus & David, Peter & Elger, Christian. (2000). Mean phase coherence as a measure for phase synchronization and its application to the EEG of epilepsy patients. Physica D: Nonlinear Phenomena, 144. 358-369. https://doi.org/10.1016/S0167-2789(00)00087-7

Moradi, F., Liu, L. C., Cheng, K., Waggoner, R. A., Tanaka, K., & Ioannides, A. A. (2003). Consistent and precise localization of brain activity in human primary visual cortex by MEG and fMRI. NeuroImage, 18(3), 595–609. https://doi.org/10.1016/s1053-8119(02)00053-8

Morales, Julia & Gomez-Ariza, Carlos & Bajo, Maria. (2013). Dual mechanisms of cognitive control in bilinguals and monolinguals. Journal of Cognitive Psychology, 25. 531-546. 10.1080/20445911.2013.807812.

Morales, Julia & Yudes, Carolina & Gomez-Ariza, Carlos & Bajo, Maria. (2015). Bilingualism modulates dual mechanisms of cognitive control: Evidence from ERPs. Neuropsychologia, 2015, 157-169. https://doi.org/10.1016/j.neuropsychologia.2014.11.014

Mundy, P., Fox, N., and Card, J. (2003). EEG coherence, joint attention and language development in the second year. Developmental Science, 6, 48–54. http://doi.org/10.1111/1467-7687.00253

Ojemann, G., Ojemann, J., Lettich, E., & Berger, M. (1989). Cortical language localization in left, dominant hemisphere. An electrical stimulation mapping investigation in 117 patients. Journal of Neurosurgery, 71(3), 316–326. https://doi.org/10.3171/jns.1989.71.3.0316

Oldfield, R. C. (1971). The assessment and analysis of handedness: The Edinburgh inventory. Neuropsychologia, 9(1), 97–113. https://doi.org/10.1016/0028-3932(71)90067-4

Palva, S., and Palva, J. M. (2018). Roles of brain criticality and multiscale oscillations in temporal predictions for sensorimotor processing. Trends in Neurosciences, 41, 729–743. http://doi.org/10.1016/j.tins.2018.08.008

Perani, D., Farsad, M., Ballarini, T., Lubian, F., Malpetti, M., Fracchetti, A., Magnani, G., March, A., & Abutalebi, J. (2017). The impact of bilingualism on brain reserve and metabolic connectivity in Alzheimer's dementia. Proceedings of the National Academy of Sciences of the United States of America, 114(7), 1690–1695. https://doi.org/10.1073/pnas.1610909114

Peristeri, E., Tsimpli, I., Sorace, A., & Tsapkini, K. (2018). Language interference and inhibition in early and late successive bilingualism. Bilingualism: Language and Cognition, 21(5), 1009-1034. https://doi.org/10.1017/S1366728917000372

Popescu, M., Hughes, J. D., Popescu, E. A., Mikola, J., Merrifield, W., DeGraba, M., Riedy, G., & DeGraba, T. J. (2017). Activation of dominant hemisphere association cortex during naming as a function of cognitive performance in mild traumatic brain injury: Insights into mechanisms of lexical access. NeuroImage: Clinical, 15, 741–752. https://doi.org/10.1016/j.nicl.2017.06.029

Price C. J. (2012). A review and synthesis of the first 20 years of PET and fMRI studies of heard speech, spoken language and reading. NeuroImage, 62(2), 816–847. https://doi.org/10.1016/j.neuroimage.2012.04.062

.Rastle, K. G., & Burke, D. M. (1996). Priming the tip of the tongue: Effects of prior processing on word retrieval in young and older adults. Journal of Memory and Language, 35, 585–605. https://doi.org/10.1006/jmla.1996.0031

Roelofs, A. (1992). A spreading-activation theory of lemma retrieval in speaking. Cognition, 42(1-3), 107–142. https://doi.org/10.1016/0010-0277(92)90041-F

Roelofs, A., & Meyer, A. S. (1998). Metrical structure in planning the production of spoken words. Journal of Experimental Psychology: Learning, Memory, and Cognition, 24(4), 922–939. https://doi.org/10.1037/0278-7393.24.4.922

Salmelin, R., Hari, R., Lounasmaa, O. V., & Sams, M. (1994). Dynamics of brain activation during picture naming. Nature, 368(6470), 463–465. https://doi.org/10.1038/368463a0

Schiller, N. O., Schmitt, B. M., Peters, J., & Levelt, W. J. M. (2002). 'BAnana' or 'baNAna'? Metrical encoding during speech production (abstract). In M. Baumann, A. Keinath, & J. F. Krems (Eds.), Experimentelle Psychologie. 44th Meeting of the Experimentally Working Psychologists (pp. 195). Regensburg: S. Roderer Verlag.

Schriefers, H., Meyer, A. S., & Levelt, W. J. M. (2002). Exploring the time course of lexical access in language production: Picture word interference studies. In G. T. M. Altmann (Ed.), Psycholinguistics: Critical Concepts in Psychology, 5. (pp. 168-191). London: Routledge. (Reprinted from Journal of Memory and Language 1990, 29, 86-102).

Schlegel, A. A., Rudelson, J. J., & Tse, P. U. (2012). White matter structure changes as adults learn a second language. Journal of cognitive neuroscience, 24(8), 1664–1670. https://doi.org/10.1162/jocn_a_00240

Stein M., Federspiel A., Koenig T., Wirth M., Strik W., Wiest R., et al. (2012). Structural plasticity in the language system related to increased second language proficiency. Cortex, 48, 458–465. http://doi.org/10.1016/j.cortex.2010.10.007

Strijkers K., Costa A., Thierry G. (2010). Tracking lexical access in speech production: electrophysiological correlates of word frequency and cognate effects. Cereb. Cortex 20, 913–928. https://doi.org/10.1093/cercor/bhp153

Strijkers, K., & Costa, A. (2011). Riding the lexical speedway: a critical review on the time course of lexical selection in speech production. Frontiers in Psychology, 2, 356. https://doi.org/10.3389/fpsyg.2011.00356

Tabari, F. (2021). MEG bilinguals, Mendeley Data, V1, https://doi.org/10.17632/jnvwjp3zh6.1

Tadel, F., Baillet, S., Mosher, J., Pantazis, D. & Leahy, R. (2011). Brainstorm: A user-friendly application for MEG/EEG analysis. Computational Intelligence and Neuroscience, 879716. https://doi.org/10.1155/2011/879716

Teubner-Rhodes, S. E., Mishler, A., Corbett, R., Andreu, L., Sanz-Torrent, M., Trueswell, J. C., & Novick, J. M. (2016). The effects of bilingualism on conflict monitoring, cognitive control, and garden-path recovery. Cognition, 150, 213–231. https://doi.org/10.1016/j.cognition.2016.02.011

Valente A, Bürki A, Laganaro M (2014) ERP correlates of word production predictors in picture naming: a trial by trial multiple regression analysis from stimulus onset to response. Frontiers in Neuroscience, 8, 390. https://doi.org/10.3389/fnins.2014.00390

van Turennout, M., Hagoort, P., & Brown, C. M. (1997). Electrophysiological evidence on the time course of semantic and phonological processes in speech production. Journal of experimental psychology. Learning, Memory, and Cognition, 23(4), 787–806. https://doi.org/10.1037//0278-7393.23.4.787

Weiss, S., & Mueller, H. M. (2012). "Too Many betas do not Spoil the Broth": The Role of Beta Brain Oscillations in Language Processing. Frontiers in Psychology, 3, 201. https://doi.org/10.3389/fpsyg.2012.00201

Westwood, S. J., and Romani, C. (2017). Transcranial direct current stimulation (tDCS) modulation of picture naming and word reading: a meta-analysis of single session tDCS applied to healthy participants. Neuropsychologia, 104, 234–249. http://doi.org/10.1016/j.neuropsychologia.2017.07.031

Yang E. (2017). Bilinguals' Working Memory (WM) Advantage and Their Dual Language Practices. Brain Sciences, 7(7), 86. https://doi.org/10.3390/brainsci7070086

EXPLORING BOHDAN LEPKY'S TRANSLATION ETHICS USING LINGUISTIC INQUIRY AND WORD COUNT

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Abstract. The present empirical study aims to outline ethical landmarks of Bohdan Lepky, the renowned Ukrainian writer and translator, in his Ukrainian translation of *Salom*é by Oscar Wilde. We assess the ethics of translation data defined by Kalina (2015) in terms of accuracy, impartiality, and confidentiality. In order to address these ethical issues, the study envisaged the following steps. First, source and target texts were analyzed using the Linguistic Inquiry and Word Count (LIWC) computerized program based on its built-in French 2007 and Ukrainian 2015 dictionaries. Second, all 'style words' (Tausczik & Pennebaker, 2010) represented by functional words, e.g., conjunctions, prepositions, and pronouns that bear procedural meaning, were compared in both texts. Findings showed that the translator followed the ethical "tradition of sameness" (Wyke, 2011), being less "visible" (Venuti, 1995) in his target language version. Despite a greater number of impersonal pronouns causing slight implicitation, we observed no traces of simplification or explicitation deforming tendencies in Lepky's translated text. Similar indices of conjunctions and prepositions, and the average number of words per sentence in both texts, confirmed the accuracy of meaning and style. Although markers of oral speech (fillers) prevailed in translation, this strategy manifests his agency and attempt to be ethically "accountable" for his product in the sense of Schlesinger's (1989) "equalizing." This shift moves along the oral-literate continuum towards more natural, i.e., rich in pragmatic discourse markers (Schiffrin, 1989) oral communication. The LIWC psychological category of "affect" filled with emotionally charged words was less dense in the Ukrainian version, contributing both to the translator's "ethics of difference" (Venuti, 1999) and his impartiality. Thus, results of the LIWC-processed data demonstrated high ethical standards of translating Bohdan Lepky met in his Ukrainian rendition of *Salom*é by Oscar Wilde.

Keywords: Salomé, Oscar Wilde, Bohdan Lepky, ethics of translation, translation universals, LIWC.

Засєкін Сергій. Дослідження перекладацької етики Богдана Лепкого на основі застосування Linguistic Inquiry and Word Count.

Анотація. Це емпіричне дослідження має за мету окреслити етичні орієнтири відомого українського письменника та перекладача Богдана Лепкого у його українському перекладі твору «Саломея» Оскара Вайлда. Ми оцінюємо етику перекладу, визначену в (Kalina, 2015) за параметрами точності, об'єктивності та конфіденційності. Для вирішення цих питань етики дослідження передбачало таку процедуру. По-перше, вихідні та цільові тексти було проаналізовано за допомогою комп'ютерної програми Linguistic Inquiry and Word Count (LIWC) на основі французького словника LIWC 2007 та українського словника LIWC 2015 року. По-

друге, в обох версіях було зіставлено всі «стильові слова» (Tausczik & Pennebaker, 2010), представлені функціональними словами, напр. сполучниками, прийменниками, займенниками, що містять процедурне значення. Результати засвідчили, що перекладач дотримувався етичної «традиції однаковості» (Wyke, 2011), бувши менш «видимим» (Venuti, 1995) у своїй версії цільовою мовою. Незважаючи на більшу кількість неозначених займенників, що є проявом імпліцитації, ми не помітили в перекладному тексті Лепкого жодних слідів спрощення чи експліцитації. Подібні показники сполучників і прийменників, середня кількість слів у реченні в обох текстах довели точність відтворення змісту та стилю. Хоча маркери усного мовлення (заповнювачі) переважали в перекладі, ця стратегія виявляє суб'єктність перекладача та намагання бути етично «відповідальним» за свій продукт у сенсі «вирівнювання» (Shlesinger, 1989). Ця перекладацька універсалія веде до природнішого, тобто багатого на прагматичні дискурсивні маркери (Schiffrin, 1989) усного спілкування. Психологічна категорія «афекту» в LIWC, представлена емоційно забарвленою лексикою, була менш щільною в українській версії, що засвідчило й «етику відмінності» перекладача (Venuti, 1999), і його відчуженість. Отже, результати аналізу оброблених LIWC даних продемонстрували додержання Богданом Лепким високих етичних стандартів під час його відтворення українською «Саломеї» Оскара Вайлда.

Ключові слова: *Саломея, Оскар Вайлд, Богдан Лепкий, етика перекладу, перекладацькі універсалії, LIWC.*

Introduction

There is a growing body of literature that recognizes the importance of studying translation ethics in all acts of intercultural verbal communication (Baixauli-Olmos, 2020; Baker & Meier, 2011). This study is a part of our broader research on translation universals (Zasiekin, 2020) and ethics (Zasiekin & Vakuliuk, 2020; Taraban et al., 2020). Historically, the term 'ethics of translation' has been used to describe moral principles accepted by translators in their interlingual activity. The translators' ethical behavior has been taken for granted for many centuries since the time of translating the Septuagint. However, the determination of ethics criteria seems even technically challenging today, for a major problem here is the existence of two approaches to translation ethics. Van Wyke (2011) put it in terms of two traditions that hold in translation studies – of "sameness" and "difference."

The first approach expected translators "to reproduce with absolute exactitude the whole text, and nothing but the text" (Nabokov, 2004, 212). Venuti treated it as a translator's "invisibility" (Venuti, 1995). The second approach demanded a thorough account of the translation purpose, thus focusing on the source text's message delivered for the target addressee. Enriched by Derrida's (1993) theory of deconstruction, the ethics of difference, in fact, means translators' presence, agency, or visibility in all acts of intercultural contact. In other words, meaning is not hidden inside the text, it is being born the moment the reader/translator starts decoding it.

Therefore, being ethical for a translator envisages making choices and being accountable for them. To put it simply, these two "ethics" were described by Newmark (1988) as semantic and communicative translation. The former attempts to move the reader closer to the author, whereas the latter makes the source text smoother, more transparent and understandable for the target reader, i.e., to move the author closer to the reader.

Taken together, these approaches and their prioritizing in translation studies today demonstrate a variety of labels for similar psycholinguistic phenomena - being faithful to the source text author or being loyal to the target text receiver. Adhering to one of these "faithfulnesses" could possibly prevent breaches in the translator's ethics traditionally assessed in terms of accuracy, impartiality, and confidentiality (Kalina, 2015).

However, translation is also reported to distort a translated language due to introducing 'the third code' (Frawley, 1984) features to the target language. This code is created at the threshold of two languages being neither source nor target language. As a result, the traces of translators' mental activity left in the target text can be treated both as a third code and as a breach of translation ethics that rests on the above mentioned three principles - accuracy, impartiality, confidentiality. Indeed, if translators simplify the style of the author's thought expression or add some information that was implicit in the source text, they make the target text inaccurate in terms of meaning, style or terminological consistency. Both explicitation and simplification cause the translator's undesirable visibility. However, the visibility should not be mixed with "difference" that implies, as mentioned before, translators' agency in establishing meaning, i.e., communicative mode of translation.

The past thirty-five years have seen increasingly rapid advances in the field of translation universals. For instance, Blum-Kulka (1986) mentions these linguistic items as 'shifts'. Berman (2000) addressed them as "deforming tendencies," Chesterman calls them 'translation universals' (Chesterman, 2011), and Toury (1995) prefers 'laws' instead. These 'deforming tendencies' destroy the translated language by erasing its natural pattern and adding a bundle of alien features causing its lexical, syntactical, and stylistic deficiencies. These linguistic features do not depend upon translation direction, kinds or types of translating, nor genre or functional style of the source texts.

According to Berman (2000), the list of 'deforming tendencies' includes:
– Rationalization
– Clarification
– Expansion
– Ennoblement
– Qualitative impoverishment
– Quantitative impoverishment
– The destruction of rhythms
– The destruction of underlying networks of signification
– The destruction of linguistic patternings
– The destruction of vernacular network or their exoticization
– The destruction of expressions and idioms
– The effacement of the superimposition of languages.

Chesterman (2011) elaborated on this list and suggested distinguishing *S*-universals and *T*-universals. The former capture universal differences between translations and their source texts, while the latter identify universal differences between translations and comparable non-translated texts. Among the potential *S*- and *T*-universals are *lengthening* (translations tend to be longer than their source texts), *standardization* (normalization), *explicitation* (translations tend to be more explicit

than their originals), *simplification* (less lexical variety, lexical density, and use of high-frequency items). Since the current study deals with translation and its source text, the focus here is on *S*-universals.

To date, few studies have investigated the association between translation universals and translator's ethics of professional commitment (Chesterman, 2017). Thus, this paper aims to define the translator's (un)ethical behavior in terms of translation universals.

Method

Procedure

In order to address these issues, the study envisaged the following steps. First, source- and target texts were analyzed using the Linguistic Inquiry and Word Count (LIWC) computerized program based on its built-in French 2007 and Ukrainian 2015 dictionaries. Second, all 'style words' (Tausczik & Pennebaker, 2010) represented by functional words, e.g. conjunctions, prepositions, pronouns, gap fillers, interjections, discourse markers that bear 'procedural meaning' (Blakemore, 2002), were compared in both texts. Their frequency deviation in source- and target versions signals the availability of a translation universal. Next, using computer data-analysis methods, a set of translation regularities was found out.

Basically, procedural meaning is treated in terms of Relevance Theory (Wilson & Sperber, 1993). It explains a conceptual-procedural distinction as a major distinction made between two types of linguistically encoded information. Conceptual information expressed by content words is viewed as encoding concepts being a part of explicit (arbitrary) principle based on metalinguistic and pragmatic knowledge (Paradis, 2004). Words with procedural meaning contribute to the derivation of implicatures, specific ways of processing propositions. Translation universals, therefore, are viewed as a result of the subliminal translation-inherent processes that can be traced in the translator's use of function words that encode procedural meaning.

Consequently, frequencies of function ('style') words detected by LIWC are an indicator of their implicit (unconscious) use both by the author and by the translator. Any deviations in their respective quantity signal the availability of a translation universal in the target language text. Since the unconscious decisions of translators explain the emergence of translation universals, the report on these tendencies expressed through 'style words' allows measuring the degree of translators' visibility in the target text and, therefore, their accuracy and impartiality.

LIWC: the Ukrainian version

In recent years, LIWC has been utilized for the quantification of psychological, psycholinguistic, and linguistic content data drawn from individual traumatic and stress narratives and/or source- and translated texts. The advantage of this psycholinguistic tool is that it allows making conclusions about the author's and translators' styles, amid the abundance of translation universals.

LIWC had no Ukrainian dictionary until 2018. Our team (Zasiekin et al, 2018) used the LIWC 2015 built-in English dictionary and reproduced it in Ukrainian to create this version. This version's utility has recently increased for linguists, psycholinguists, and psychologists. The greatest challenge of this enterprise is an urgent need to address the translation problems caused by different target culture-bound issues.

The LIWC2015 dictionary items had to be reproduced in Ukrainian with due account of their semantic, pragmatic, and cultural load. With this goal in mind, the translators applied a set of lexical translation transformations, including differentiation, concretization, generalization of word meaning along with transcoding, explication, adaptation, and calquing. These transformations as psycholinguistic logical operations performed in the translator's mind played a critical role in attaining their better understanding by the Ukrainian users.

Some linguistic items, e.g. from the category of 'Leisure', 'Netspeak' were not translated at all, i.e. retained their original form, due to their shared use today both by speakers of English and Ukrainian. On the other hand, all function words (excluding articles and auxiliary verbs absent in the Ukrainian language), including pronouns, conjunctions, prepositions, particles, interjections, were translated easily, for they had their invariable counterparts in the target language. Since our research focused on function words and psychological categories, e.g. 'affect' with procedural meaning, the Ukrainian LIWC dictionary was considered equivalent to its original English version.

By contrast, many English words with conceptual meaning like nouns with broad meaning demanded its concretization in Ukrainian. Similarly, gender in Ukrainian nouns, verbs, and adjectives caused the necessity of translating each word in all cases with respective gender markers. These items with 'conceptual meaning' were out of scope in this study.

Despite many grammatical and culture-bound challenges, the Ukrainian LIWC version was finally released in 2018 and was added to the list of downloadable dictionaries.

Materials

Due to practical constraints, this paper cannot provide a comprehensive review of ethical issues in literary translation. However, it is an attempt to highlight some ethical landmarks in the literary translation of Bohdan Lepky – a prolific Ukrainian writer, translator, public activist. His literary translation legacy embraces Polish renditions of *The Tale of Ihor's Campaign* and works by Taras Shevchenko, Mykhailo Kotsiubynsky, Maksym Rylskyi, Pavlo Tychyna, and other Ukrainian poets and writers. He also made a significant contribution to the creative enrichment of Ukrainian literature by translating poetry, fairy tales, plays from Polish, English, German, and Russian.

Despite the cultural importance of these translations, there remains a paucity of evidence both on Lepky's translations from French and the ethical criteria he followed in his work. As they are less known to the public, this study outlines his creative decisions made while translating *Salomé* – a literary work of high aesthetic value written in French by Oscar Wilde. This tragedy also attracts readers' attention due to its topical questions raised about human morality and global ethics.

In light of recent advances in the study of translation ethics, it is becoming extremely difficult to ignore the existence of translation universals viewed both as challenges for translators and as a threat to the natural patterning of the target language.

In this regard, the following research questions arise:

RQ1: Can selected translation universals be instrumental in our understanding of keeping the target language text "ethically" accurate?

RQ2: Did Lepky apply "an ethics of difference" in his translation?

Results and Discussion

Findings show that the translator mainly followed the ethical "tradition of sameness" (Wyke, 2011), being less "visible" (Venuti, 1995) in his target language version.

LIWC discovered traces of *implicitation* in the target version due to Lepky's more frequent use of impersonal pronouns (0.10 vs 4.32).

Despite a greater number of impersonal pronouns causing a slight *implicitation*, LIWC data discovered no traces of *simplification* or *explicitation* deforming tendencies in Lepky's translated text. Similar indices of conjunctions (6.07 vs 5.63) and prepositions (6.18 vs 6.43), the average number of words per sentence (WPS) (see Table 1) in both texts confirmed the accuracy of meaning and style.

Table 1

Results of Processing Source and Target Texts by LIWC

LIWC variables	Oscar Wilde's original "Salome" (French)	Bohdan Lepky's translated version (Ukrainian)
WPS	8.73	8.22
Ipron	.10	4.32
Conj	6.07	5.63
Prep	6.18	6.43
Affect	3.56	.96
Anx	.44	.04
Anger	.40	.17
Sad	.33	.01
Space	3.23	5.30
Time	2.53	1.71
Nonflu	.00	.25
Filler	.00	.07

Data show the prevalence of interjections, particles, and gap fillers (LIWC categories Nonflu, Filler) in Lepky's translation, making the original literary

characters' discourse less fluent and more natural for Ukrainian readers. In his target language version, the translator compensated their lack in the original, where natural speech contained no gap fillers and hesitation markers. Although these markers of oral speech prevailed in translation, this strategy manifests Lepky's agency and attempt to be ethically "accountable" for his product in the sense of Shlesinger's (1989) "equalizing." This shift is viewed along the oral-literate continuum towards more natural, i.e., rich in pragmatic discourse markers (Schiffrin, 1989), oral communication. Despite the fact that Shlesinger's finding was relevant for interpreting, the flatter language of translation shows that literate texts tend to have more oral "shape" (Pym, 2008). In essence, the detected equalizing is in effect 'normalization' in Chesterman's (2011) terms, as it results in a "reader-friendly" target version of the source text.

From this standpoint, the use of fillers and hesitation markers cannot be treated as something purely undesirable or outstanding. Instead, they play a constructive role in translation by contributing to a more natural speech flow in the conversation between the play's characters. This establishing of normal flow has little to zero destructive effect on the target language resulting in 'normalization'. And its emergence can be tolerated unless it compromises the accuracy of meaning.

Moreover, normalization as a candidate for translation universals can be related to the communicative method of translation (Newmark, 1988). Similarly, in terms of Venuti's (1999) translation ethics, it reflects Lepky's agentive status within "the ethics of difference." Another interesting finding concerns a 'time to space' shift in the Ukrainian version. This more spatial representation implies a semiotic step to a more "cyclic" time in the manner of events' representation. This normalization, or a spatial shift, characterizes the translator's adjustment to the norms of the Ukrainian language.

As to psychological categories, the LIWC category of "affect" filled with emotionally charged words was less dense in the Ukrainian version: the number of 'affect' linguistic markers was lower (3.56 vs. 0.96), which created the effect of rationalization viewed as Lepky's investment in *Salome's* objectivity and his emotional impartiality, or "non-engagement" (Baker & Maier, 2011). This choice contributed both to the translator's "ethics of difference" and his emotional impartiality.

Conclusions

Taken together, the discussed translation ethics phenomena suggest that literary translation is a multifaceted psycholinguistic process of the translator's psychosemiotic reproduction of the source text by means of the target language. The effect of this process is the creation of a cognitively asymmetrical new text that, despite retaining conceptual information, may contain deviations of the original syntactical, stylistic, and pragmatic features, i.e. procedural information marked by function words.

Results showed that selected translation universals could be instrumental in our understanding of keeping the target language text "ethically" accurate. Their availability automatically makes a translator visible in the text that breaches "the ethics of sameness". However, these deviations should not always be treated as the deforming features that endanger the natural pattern of the target language. Instead, they can be viewed as linguistic tools of those translators who pursue "the ethics of difference." Thus translator's agency and "the ethics of difference" do not deform the target language. Rather, they mark the translators' accountability for their product being more communicatively translated. These findings have significant implications for understanding how procedural information processed by translators is manifested in translation, influencing their ethical choices.

Thus, LIWC-processed data demonstrated high ethical standards Bohdan Lepky met in his Ukrainian rendition of *Salome* by Oscar Wilde. His translator behavior is characterized both by accountability for his creative decisions within "the ethics of difference" and accuracy with impartiality – seen as the key components of the translation "ethics of sameness".

The present study has been one of the first attempts to thoroughly examine psycholinguistic features of the translating process using Linguistic Inquiry and Word Count's Ukrainian 2015 version. Although this study focuses on the literary translation ethics of one translator, hopefully, the findings may well have a bearing on other translation universals, for instance, in non-literary translation involving other language pairs.

Acknowledgements

References

Baixauli-Olmos, L. (2020). Ethics codes for interpreters and translators. In K. Koskinen & N. K. Pokorn, (Eds.). The Routledge Handbook of Translation and Ethics. (pp. 297-319). Abingdon: Routledge.

Baker, M, Maier, C. (2011). Ethics in interpreter & translator training: Critical perspectives. *Interpreter and Translator Trainer, 5*(1), 1-14. https://doi.org/10.1080/13556509.2011.10798809

Baker, M. (1996). Corpus-based translation studies: The challenges that lie ahead. In H. Somers (ed.). Terminology, LSP and Translation. Studies in Language Engineering in Honour of Juan C. Sager. (pp. 175-186). Amsterdam/Philadelphia: John Benjamins.

Berman, A. (2000). Translation and the trials of the foreign, In L. Venuti (ed.), The Translation Studies Reader. London: Routledge. 284–297.

Blakemore, D. (2002). Procedural meaning. In *Relevance and Linguistic Meaning: The Semantics and Pragmatics of Discourse Markers* (Cambridge Studies in Linguistics, pp. 89-148). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511486456.005

Blum-Kulka, S. (1986). Shifts of cohesion and coherence in translation. In J. House & S. Blum-Kulka (Eds). Interlingual and Intercultural Communication. Discourse and Cognition in Translation and Second Language Acquisition. (pp. 17-35). Tübingen: Gunter Narr.

Chesterman, A. (2011). Translation universals. In Y. Gambier & L. van Doorslaer, (Eds.). Handbook of Translation Studies, 2. (pp. 175–179). Amsterdam/Philadelphia: John Benjamins. https://doi.org/10.1075/hts.2.tra12

Chesterman, A. (2017). Reflections on Translation Theory. Selected papers 1993 - 2014. Amsterdam/Philadelphia: John Benjamins. https://doi.org/10.1075/btl.132

Derrida, J. (1993). Aporias. Thomas Dutoit (trans). Stanford: Stanford University Press.

Kalina, S. (2015). Ethical challenges in different interpreting settings. MonTI Special Issue 2, 63-86. http://doi.org/10.6035/MonTI.2015.ne2.2

Lambert, J. (2020). Professional translator ethics. In K. Koskinen & N. K. Pokorn, (Eds.). The Routledge Handbook of Translation and Ethics Routledge. (pp. 165-179). Abingdon: Routledge.

Nabokov, V. (2004).Problems of translation: Onegin in English. In L. Venuti (ed.), The Translation Studies Reader, (pp. 115-127). London & New York: Routledge.

Newmark, P. (1988). Approaches to Translation. London; New York: Prentice Hall, 1988.

Nicolle, S. (1998). A relevance theory perspective on grammaticalization. Cognitive Linguistics, 9(1), 1–35.

Olohan, M., & Baker, M. (2000). Reporting that in translated English. Evidence for subconscious processes of explicitation? Across Languages and Cultures 1(2), 141–158. https://doi.org/10.1556/Acr.1.2000.2.1

Paradis, M. (2004). A Neurolinguistic Theory of Bilingualism. Amsterdam: John Benjamins. https://doi.org/10.1075/sibil.18

Pennebaker, J.W., Boyd, R.L., Jordan, K., & Blackburn, K. (2015). The development and psychometric properties of LIWC2015. Austin, TX: University of Texas at Austin.

Pym, A. (2007). On Shlesinger's proposed equalizing universal for interpreting. In F. Pöchhacker, A. L. Jakobsen, & I. M. Mees, (Eds.). Interpreting Studies and Beyond: A Tribute to Miriam Shlesinger. (pp. 175-190). Copenhagen: Samfundslitteratur Press.

Schiffrin, D. (1987). Discourse Markers. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511611841

Shlesinger, M. (1989). Simultaneous Interpretation as a Factor in Effecting Shifts in the Position of Texts on the Oral-Literate Continuum. MA thesis, Tel Aviv University.

Taraban, R., Marcy, W. M., LaCour, M. S., Koduru, L., & Prasad, H. C., Zasiekin, S. (2020). Using the Web to develop global ethical engineering students. *Advances in Engineering Education, 8*(3), 1-25. https://files.eric.ed.gov/fulltext/EJ1279780.pdf

Tausczik Y., Pennebaker J. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology, 29*(1), 24-54. https://doi.org/10.1177/0261927X09351676

Toury, G. 1995. Descriptive Translation Studies and Beyond. Amsterdam/Philadelphia: John Benjamins.

Venuti, L. (1995). The Translator's Invisibility: A History of Translation. London & New York: Routledge.

Venuti, L. (1999). The Scandals of Translation: Towards an Ethics of Difference. London & New York: Routledge.

Wilson, D., Sperber, D. (1993). Linguistic form and relevance. *Lingua, 90*(1), 1-25.

Wyke, B. van. (2011). Ethics and Translation. Handbook of Translation Studies Online. https://benjamins.com/online/hts/articles/eth1

Zasiekin, S., Bezuglova, N., Hapon, A., Matiushenko, V., Podolska, O., & Zubchuk, D. (2018). Psycholinguistic aspects of translating LIWC dictionary. East European Journal of Psycholinguistics, 5(1), 111-118. https://doi.org/10.29038/eejpl.2018.5.1.zas

Zasiekin, S. (2020). Psykholinhvistychni zakonomirosti vidtvorennia khudozhnioho tekstu v perekladi (na materiali Angliyskoyi ta Ukraïnskoyi mov) [Psycholinguistic regularities of reproducing literary texts in translation (English and Ukrainian languages)]. Unpublished DSc Dissertation. Kharkiv: V. N. Karazin National University of Kharkiv. https://core.ac.uk/download/pdf/334577669.pdf

Zasiekin, S., Vakuliuk, S. (2020). Ethical issues of neural machine translation. Psycholinguistics in a Modern World, 15, 81-83. https://doi.org/10.31470/10.31470/2706-7904-2020-15-81-83

Sources

Wilde, O. (1993). Salomé. Paris: Flammarion.

Wilde, O. (1957). Salomeia͡ translated by Bohdan Lepkyi, I. Kostetsʹky, Ed. Nʹiu Ulʹm: Vydannia "Na Hori".

NEUROPSYCHOLINGUISTIC LINKS BETWEEN PROCRASTINATION AND PROSPECTIVE MEMORY

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Abstract. The research objective is to examine the brain activity of individuals with different levels of procrastination. The study applies EEG data analysis with different levels of linguistic stimuli complexity (letter and semantic word), allowing to change the cognitive load and register the electrical activity of the cerebral cortex while performing tasks with two different stimuli: perceptual and semantic. We registered the electrical activity of the cerebral cortex in 20 individuals (18 females, 2 males) in the shielding lightproof testing room of the Laboratory of Age

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Neurophysiology at Lesya Ukrainka Volyn National University. This technique analyzes the dynamics of cortical electrogenesis identifies general patterns of local and spatial synchronization of biopotentials of the cerebral cortex. The findings indicate that the dynamics of cortical electrogenesis of prospective memory depends on linguistic stimuli complexity in procrastinators, associated with increased energy expenditure. Furthermore, the largest number of statistically significant intergroup differences in subjects with different levels of procrastination was found in the beta range of EEG, indicating the rhythm of activity. On the one hand, this rhythm of activity is dependent on the optimization of problem-solving. On the other, the increase in its power reflects cortical excitation and selective inhibition. Evidence consistently suggests that the complexity of the linguistic task increases the interaction of brain macrostructures in the anterior associative zone (fronto-central leads) in students with dilatory behaviour. In contrast, subjects without dilatory behaviour demonstrate only changes in spatial synchronization modulated according to the linguistic stimuli complexity.

Keywords: procrastination, prospective memory, electrical activity of the cerebral cortex, linguistic stimuli complexity.

Журавльова Олена, Журавльов Олександр, Козачук Наталія, Волженцева Ірина, Засєкіна Лариса. Нейролінгвістичні зв'язки прокрастинації та проспективної пам'яті.

Анотація. Метою дослідження є вивчення мозкової активності людей з різним рівнем прокрастинації. У дослідженні проведено аналіз даних ЕЕГ за стимуляції мозку вербальними стимулами різного рівня складності (буквеного ситимула та смислового слова), що дозволяє змінювати когнітивне навантаження та реєструвати електричну активність кори головного мозку при виконанні завдань із двома різними стимулами: перцептивним та семантичним. Нами проведена реєстрація електричної активності кори головного мозку у 20 осіб (18 чоловіків, 2 жінки) в екранному світло- та звукоізольованому кабінеті лабораторії вікової нейрофізіології Волинського національного університету імені Лесі Українки. Ця методика дає можливість проаналізувати динаміку коркового електрогенезу, виявляє загальні закономірності локальної та просторової синхронізації біопотенціалів кори головного мозку. Отримані дані свідчать про те, що динаміка коркового електрогенезу при подачі стимулів на проспективну пам'ять залежить від складності мовних стимулів у прокрастинаторів, які пов'язані із збільшенням енергетичних витрат. Крім того найбільшу кількість статистично значущих міжгрупових відмінностей у суб'єктів із різними рівнями прокрастинації було виявлено в бета-діапазоні ЕЕГ. З одного боку, цей ритм діяльності залежить від оптимізації вирішення проблем, з іншого боку, збільшення його потужності відображає кортикальне збудження і вибіркове гальмування. Отримані дані також свідчать про те, що складність лінгвістичного завдання посилює взаємодію макроструктур мозку в передній асоціативній зоні (фронто-центральні відведення) у студентів зі схильністю до відтермінування. Навпаки, суб'єкти без прокрастинації демонструють лише зміни просторової синхронізації, модульовані відповідно до складності лінгвістичних стимулів.

Ключові слова: прокрастинація, проспективна пам'ять, електрична активність кори головного мозку, складність мовних стимулів.

Introduction

The individual ability to discipline and self-organise determines success and effectiveness in the modern social environment. However, even if the individual has all the necessary resources, reluctance to use them on time in situations requiring immediate decision-making and specific actions can negatively affect the outcome. In

this light phenomenon of procrastination attracts attention in the recent research of individual efficacy.

The current studies examine procrastination extensively applying the psychometric approach to the delayed behaviour. However, no previous study has investigated procrastination from the perspective of the integrated model, postulating the ideas of the biological substrate of procrastination. Previous research has established that the behavioral procrastination was positively correlated with the regional activity of the ventromedial prefrontal cortex and the parahippocampal cortex, while negatively correlated with that of the anterior prefrontal cortex (Zhang, Wang, & Feng, 2016). Particular attention in this context deserves visualisation methods of brain processes to identify neural structures associated with procrastination (Wong et al., 2018; Wu et al., 2016). Most researchers investigating brain and procrastination have utilized fMRI. The present study applies encephalography (EEG) to examine the neural nature of procrastination.

Concerning the development of the paradigm of modern EEG research, we assume the relationship of procrastination with a separate memory subsystem, which stores information about life events and intentions for future actions. This type of memory has been called prospective memory instead of classical retrospective memory (Ericson, 2017).

In developing this study, we suggest different tasks combining two types of linguistic stimuli: task giving an access to working memory and task activating prospective memory. Two tasks have been introduced to the subjects simultaneously. Moreover, stimuli, activating prospective memory, included perceptual stimulus (Raskin et al., 2011) and semantic stimulus (West, 2008; Crystal & Wilson, 2015). The current study aims to examine the brain activity of individuals with different levels of procrastination. We apply EEG data analysis with different levels of linguistic stimuli complexity (letter and semantic word), allowing to change the cognitive load and register the electrical activity of the cerebral cortex while performing tasks with two different stimuli: perceptual and semantic.

Methods

The study examines brain responses to prospective stimuli in individuals with different levels of procrastination and includes two stages: psychological and neurophysiological. At the first stage, we selected 20 individuals (18 men and 2 women) and divided them in two equal groups applying a questionnaire for procrastination assessment (Zhuravlova & Zhuravlov, 2018). Table 1 illustrates descriptive statistics of the sample.

At the next stage, the electrical activity of the cerebral cortex was registered in a shielded room with the sound and light isolated in the Laboratory of Age Neurophysiology at Lesya Ukrainka Volyn National University (Ukraine). This technique analyses the dynamics of cortical electrogenesis and identifies general patterns of local and spatial synchronisation of biopotentials of the cerebral cortex.

The electrical activity of the cerebral cortex was recorded monopolar using the hardware and software complex "Neurocom", developed by the Scientific and Technical Center for Radio-Electronic Medical Devices and Technologies "KHAI-Medica" of Zhukovsky National Aerospace University "Kharkiv Aviation Institute" (Ukraine). The subjects were sitting at a distance of 1.5 m from the computer monitor demonstrating different stimulus material.

The electrodes were placed according to the international system of 10/20% in 21 symmetrical points of the left and right hemispheres of the brain. The experiment applies referent ear electrodes A1 and A2, and additional referent electrodes N and Ref. During the Fourier transform, the epoch of analysis was 500 ms. Analog signal sampling frequency – 2 ms; input resistance for in-phase signal – more than 100 Mohm. High-frequency filters are set to 50 Hz, low – 0.1 Hz – limits of possible relative error when measuring voltage and time intervals of electroencephalographic signals – ± 5%.

The study applies ICA analysis to screen EEG artefacts. Subsequently, the ISA components were filtered with the artefact signal and composition of non-artefact ISA, resulting in general patterns of EEG. In the cases that artefact activity could not be filtered by ISA treatment, artefact EEG segments were manually excised from the EEG.

The study registered electrical activity of the cerebral cortex while performing test tasks of two types, introducing perceptual and semantic stimuli.

1. Prospective memory test using a perceptual stimulus. We instructed the subject to indicate the presence/absence of a semantic pair by pressing the "left" key in case of a semantic pair or "right" in its absence (a task for the use of working memory). If a word starts with a capital letter appearing on the screen, the subject must press the "down" key (prospective memory task). After pressing the appropriate key, the subject received feedback on the correctness of choice. The total duration of the test was 15 min and involved sorting 200 words, of which 20 were with capital letters. To avoid an automatic response by the subjects, the interval of presentation of stimuli ranged from 1 to 1.5 s, the duration of the demonstration of words – 2 s.

2. Test for prospective memory using a semantic stimulus. We asked the subjects to indicate the presence/absence of a semantic pair with the demonstrated word by pressing the "left" key in the case of semantic pair or "right" in its absence (a task for the use of working memory). If a word denoting animal appeared on the screen, the subject had to press the "down" key (prospective memory task). After pressing the appropriate key, the subject received feedback on the correctness of choice. The total duration of the test was 15 min and involved the sorting of 200 words, 20 of which contained the names of animals. Although to avoid an automatic response by the subjects, the interval of presentation of stimuli ranged from 1 to 1.5 s, the duration of the demonstration of words was 2 s.

The stimulus material for the EEG study was developed in the open-source software package PsychoPy (version 1.90.3). Statistical processing of experimental data involved nonparametric Wilcoxon criteria.

Results and Discussion

The research dataset has been uploaded to Mendeley Data Repository (Zhuravlov & Zhuravlova, 2022).

Table 1

Descriptive Information for the Individuals with Different Procrastination Levels (n=10) – high (n=10) – low level

	High level of procrastination		Low level of procrastination	
	Frequency	Percentage	Frequency	Percentage
Gender				
Female/male	9/1	90.0/10.0	9/1	90.0/10.0
Marital status				
Single	7	70.0	9	90.0
Married	2	20.0	1	10.0
Divorced	1	10.0	0	.0
Occupational status				
Full-time worked	1	10.0	0	.0
Part-time worked	2	20.0	4	40.0
Student	7	70.0	6	60.0
	Mean (SD)	Min-Max		
Age	21.5 (5.33)	17-35		

The study of the cerebral cortex activation according to the spectral power of EEG revealed several specific electrogenesis in individuals with high procrastination. Furthermore, in all frequency bands of electrical activity, its dynamics was characterised by more generalised changes (see Fig. 1).

The findings show no changes in cortical electrogenesis of the group with low procrastination while performing perceptual (simple cognitive tasks). However, the study reveals significant differences in this group in two conditions: performing perceptual tasks and rest with open eyes covering only the left temporal structures (Fig. 1). Performing more complicated cognitive tasks with semantic stimuli is associated with local changes, covering all EEG bands. The findings indicate changes in alpha activity in Cz, Pz, and P4 sites and express increased values. In the remaining EEG bands, the changes relate only to the central occipital zone (theta band) and the right occipital and parietal areas (beta band) (Fig. 1).

Figure 1
Significant Changes in the Spectral Power of the Basic EEG Rhythms When Comparing Test Situations of Rest for Individuals with Low (LP) and High (HP) Procrastination.
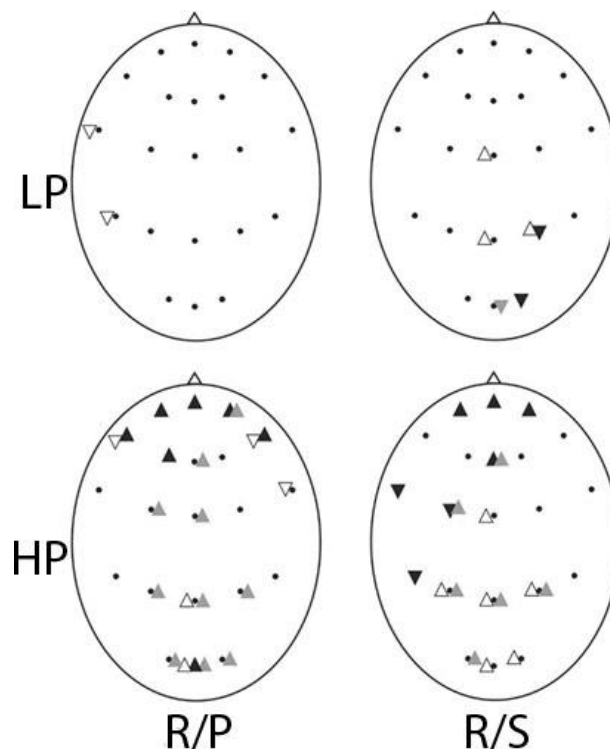
Note. An up arrow at the location of the corresponding zone indicates an increase in power. A down arrow indicates a decrease. The colours indicate white – alpha rhythm, black – beta rhythm, grey – theta rhythm.

The letters denote P – prospective memory test (perceptual stimulus); S – prospective memory test (semantic stimulus).

In the group with high procrastination, the transition from rest to prospective memory test was accompanied by a broad adjustment of the spectral power of brain structures, including adjustment of the activity of all EEG frequency bands. The use of verbal stimuli led to increased spectral power in the alpha band in the central, all parietal and occipital areas. In contrast, perceptual (letter) stimulus increased spectral power in the central parietal and temporal areas combined with a decrease in both lateral frontal areas and right anterior temporal. Such changes indicate an increase in energy expenditure when performing a mental task in individuals with high levels of procrastination.

The largest number of statistically significant intergroup differences represent the beta band of the EEG, which relates to the rhythm of activity. On the one hand, this band depends on the task optimisation and, on the other, on the increased power of reflection of cortical excitation. Performing a prospective semantic test compared to the condition of rest is characterised by activation of all anterior and central posterior zones. At the same time, performing the perceptual task increases the

spectral power of beta-rhythm covering almost all frontal areas and central occipital. One unexpected finding is the decrease in beta activity in the temporal and central areas of the left hemisphere during the test for semantic prospective memory, which is not observed in perceptual stimulation (Fig. 1).

Changes in the spectral power of the theta EEG band are mainly related to the central structures of the cortex. They are virtually indistinguishable in both prospective memory tests in individuals with high levels of procrastination.

The findings of cortical electrogenesis while performing tests for prospective memory using different stimuli indicate exciting effects related to the response to two different stimulations, perceptual and semantic.

Comparison of the spectral power of the cerebral cortex during prospective memory tests with perceptual and semantic stimuli showed that in the group with low procrastination, the greatest number of statistically significant differences was found in the theta band of EEG. In contrast, in the group with high procrastination, there are no differences at all (Fig. 2). The findings also demonstrate the lack of reorganisation of theta activity in the group with high procrastination. Previous research shows that organising and maintaining cortical activity correlates with brain energy expenditure during cognitive tasks and increases with increasing complexity and duration work on them (Gevins & Smith, 2000). Thus, preserving generalised activation of the theta band of EEG in procrastinators may indicate a more significant energy expenditure of the brain to perform tasks by maintaining the appropriate level of attention during mental activity.

Comparative analysis of the dynamics of electrogenesis of cortical zones in tests for prospective memory with different types of stimulation revealed peculiarities in both groups of subjects and the beta band of the EEG. In the group of individuals with low procrastination, there is a statistically significant (p <.05) decrease in the spectral power of the beta band of activity in the right lateral frontal zone, left anterior and posterior and symmetrical parietal and occipital areas, including the central occipital during the transition from perceptual to semantic stimulus material (Fig. 2). In the group with high procrastination, the the electrical activity of the cerebral cortex under different stimulations during the test for prospective memory also contain a wide range of changes. A significant decrease in beta-rhythm (p <.05) occurs more in the right hemisphere and localises in the right frontal temporal and left posterior temporal areas and the central occipital area.

Comparison of the electrical activity of the brain when performing tasks on prospective memory (semantic and perceptual stimuli) in the alpha band of the EEG showed that individuals with low procrastination demonstrate a statistically significant (p <.05) increase in the level of spectral power of alpha activity in the right posterior frontal, left and central parietal locations (Fig. 2). For individuals with high procrastination, two different test situations represent broader changes in the cerebral cortex's electrogenesis, increasing the right temporal, left central, and both parietal areas of the cerebral cortex, as well as in the central zone of the cortex, parietal and occipital locations (Fig. 2).

The study does not find out the intergroup difference of values during the prospective memory task with semantic stimuli, despite significant differences in the topographic distribution of the dynamics of electrical activity.

Figure 2
Significant Changes in the Spectral Power of the Basic EEG Rhythms When Comparing Tests for Prospective Memory Using Perceptual and Semantic Stimuli in Individuals with Low (LP) and High (HP) Procrastination.
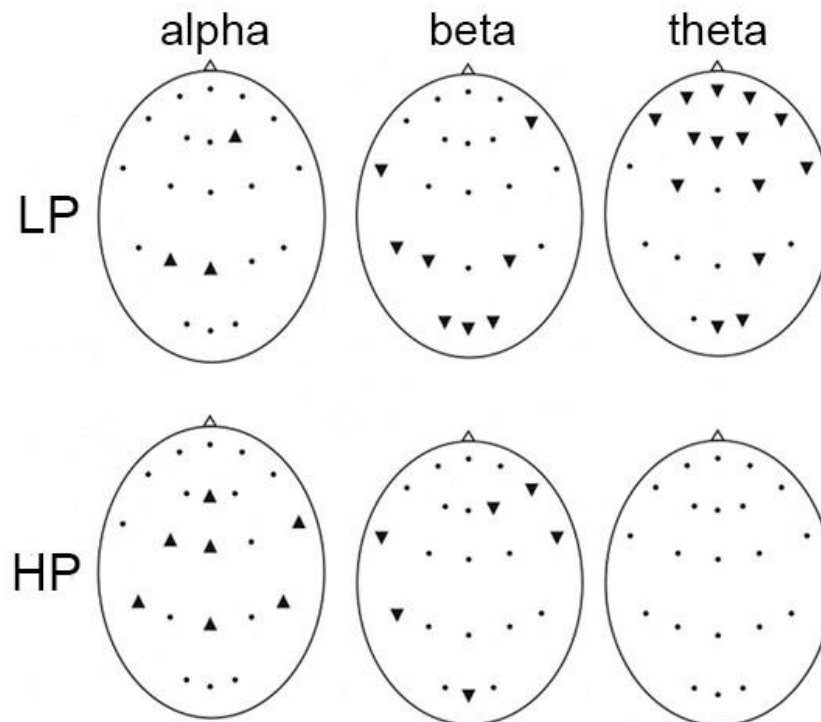
Note. An up arrow at the location of the corresponding zone indicates an increase in power, a down arrow indicates a decrease.

Spatial synchronisation of the bioelectrical activity of the cerebral cortex indicates the coherence of its parts and the level of their interaction in the cognitive activity. Individuals with different levels of procrastination in the condition of rest demonstrate peculiarities of spatial synchronisation.

An experimental study showed that in the group with high procrastination when performing the tasks both with perceptual and semantic stimuli, there is an increase of interaction of brain macrostructures in the anterior associative zone (fronto-central zones). At the same time, in individuals with low procrastination, changes in spatial synchronisation depend on the type of task. Analysis of statistically significant intergroup differences in the level of spatial synchronisation of cortical zones showed that in the condition of rest, higher rates were observed in the group of non-procrastinators. In comparison, the transition to the test for prospective memory group with high procrastination demonstrate higher rates (Fig. 3).

Recent findings in neurophysiology suggest that cognitive activity vs condition of low cognitive performance provides spatio-temporal dynamics of brain activity in the entire frequency spectrum of oscillations between symmetrical zones of the cerebral cortex and anteroposterior brain (Berdnikov, 2017). Researchers, in

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particular, emphasise that different cognitive activities relate to reliable cortico-activation structures. Thus, the performance of computational operations is mainly associated with the localisation of brain activity in the left frontal area and the close interaction of the temporal and central parietal structures of both hemispheres. Performing spatial tasks relates to developing foci of activity in the frontal area of the right hemisphere and increasing the activity of parietal and occipital zones of the same hemisphere. Verbal-logical tasks increase the activity of the left frontal hemisphere, including the Broca's area. In addition, the importance of interhemispheric coherence of rhythms in the frontal zones relates to a reliable decrease in depressive disorders and reduced performance (Varlamov & Strelec, 2013).

Figure 3
Spatial Synchronisation of the Biopotentials of the Cortex of the Large Hemispheres in the Conditions of Rest and the Performance of Cognitive Tasks in Individuals with Different Levels of Procrastination
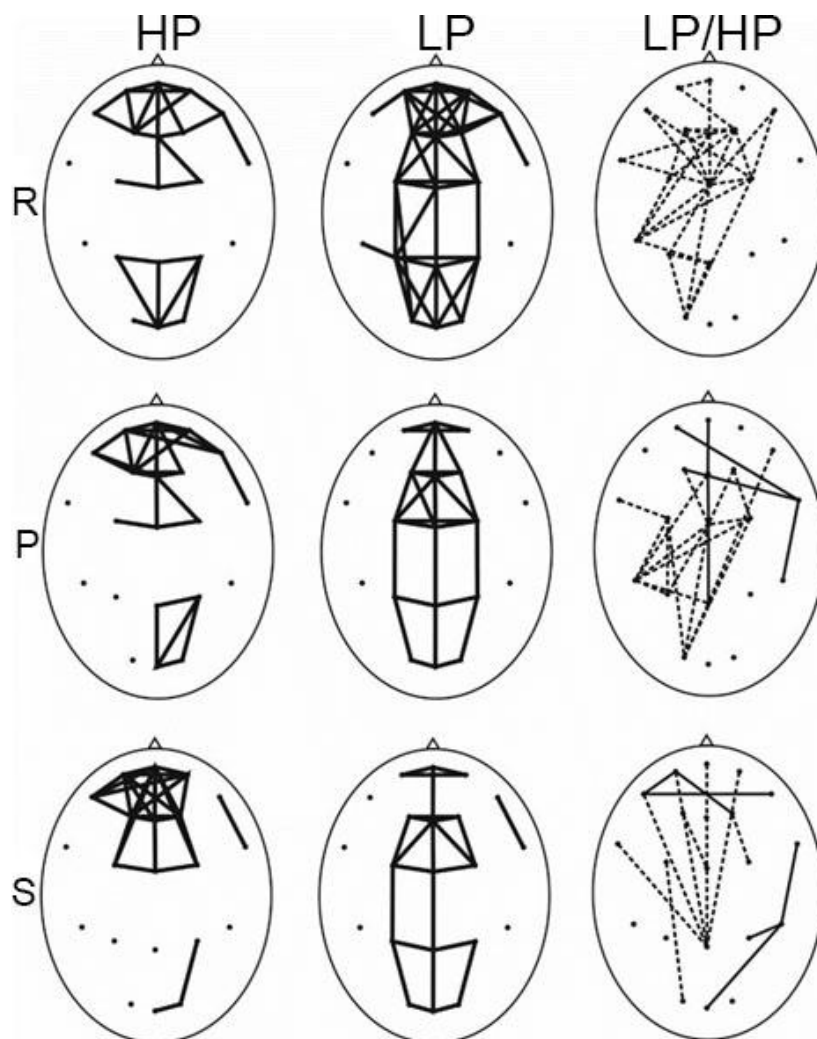
Note. LP – individuals with low procrastination, HP – individuals with high procrastination, LP / HP – statistically significant (p <0.05) differences between the

group of individuals with high and low procrastination (solid lines indicate statistically significantly higher values in the group with a high level of procrastination, dotted – statistically significantly higher values in the group with a low level of procrastination).

Thus, the analysis of the dynamics of the electrical activity of the cerebral cortex revealed several specific features for individuals with high procrastination. The most significant number of differences in absolute spectral power was observed in the EEG beta band, where statistically significantly lower values are found in the condition of rest. The number of differences increases in performing the tasks with two different stimuli: perceptual and semantic. The experimental groups do not demonstrate significant differences in theta band of the brain's electrical activity. However, the spatial distribution and activation/deactivation of brain structures show that procrastinators are characterised by changes in spectral power in all EEG frequency bands during the transition from rest conditions to cognitive activity and during performing tasks with different stimuli.

Conclusions

Comparative analysis of the dynamics of electrogenesis of cortical zones in performing a test for prospective memory with two linguistic stimuli of different levels of complexity revealed peculiarities in individuals with different levels of procrastination. According to the spectral power of the EEG, individuals with high procrastination demonstrate an increase in values in all frequency bands of electrical activity. Such increase is associated with the level of energy expenditure during cognitive tasks in individuals with a high level of procrastination.

The study revealed statistically significant intergroup differences in the beta band of EEG, which relates to the rhythm of activity, optimisation of problem-solving, and power increase of cortical excitation and selective inhibition.

Spatial synchronisation of the bioelectrical activity of the cerebral cortex indicates the coherence of its parts and shows the degree of their interaction during cognitive activity. Individuals with high procrastination demonstrate increased interaction of brain macrostructures in the anterior associative zone (fronto-central locations) while performing linguistic tasks. The study revealed statistically significant intergroup differences in spatial synchronisation of cortical zones in individuals with low procrastination, who demonstrate higher rates in the condition of rest. In contrast, individuals with high procrastination show higher rates during the transition to the more complex stimulus.

References

Berdnikov, D.V. (2017). Nejrofiziologicheskie i psihofiziologicheskie issledovaniya organizacii regulyacii celenapravlennoj deyatel'nosti [Neurophysiologycal and psychophysiological

studies of the organization of regulation of targeted human activity]. Zhurnal Fundamental'noj Biologii i Mediciny, 4, 12–20.

Crystal, J.D. & Wilson, A.G. (2015). Prospective memory: a comparative perspective. Behavioural Processes, 112, 88–99. https://doi.org/10.1016/j.beproc.2014.07.016

Ericson, K. M. (2017). On the interaction of memory and procrastination: Implications for reminders, deadlines, and empirical estimation. Journal of the European Economic Association, 15(3), 692-719. https://doi.org/10.1093/jeea/jvw015

Gevins, A. & Smith, M. (2000). Neurophysiological measures of working memory and individual differences in cognitive ability and cognitive style. Cerebral Cortex, 10(9), 829–832. https://doi.org/10.1093/cercor/10.9.829

Raskin, S., Buckheit, C. & Waxman, A. (2012). Effect of Type of Cue, Type of Response, Time Delay and Two Different Ongoing Tasks on Prospective Memory Functioning after Acquired Brain Injury. Rehabilitation Psychology, 22(1), 42–64. https://doi.org/10.1080/09602011.2011.632908

Varlamov, A.A. & Strelec, V.B. (2013). Analiz kogerentnosti EEG pri depressivnyh rasstrojstvah: sovremennoe sostoyanie i perspektivy klinicheskogo primeneniya [EEG Coherence Analysis in Depressive Disorders and ItsPossible Use in Clinical Practice: A Literature Review]. Zhurnal vysshej nervnoj deyatel'nosti im. I.P. Pavlova, 63(6), 6–13.

West, R. (2008). The cognitive neuroscience of prospective memory. In M. Kliegel, M. McDaniel, & G. Einstein (Eds.). Prospective memory: Cognitive, neuroscience, developmental, and applied perspectives (pp. 261–282). New York, NY: Tayler and Frances

Wong, A., Cooper, P.S., Conley, A.C., McKewen, M., Fulham, W.R., Michie, P.T. & Karayanidis, F. (2018). Event-Related Potential Responses to Task Switching Are Sensitive to Choice of Spatial Filter. Frontiers in Neuroscience, 12, 143. https://doi.org/10.3389/fnins.2018.00143

Wu, Y., Li, L., Yuan, B. & Tian, X. (2016). Individual differences in resting state functional connectivity predict procrastination. Personality and Individual Differences, 95, 62–67.

Zhang, W., Wang, X. & Feng, T. (2016). Identifying the neural substrates of procrastination: A resting-state fMRI study. Scientific Reports, 6, 33203. http://dx.doi.org/10.1038/srep33203

Zhuravliova, O., Zasiekina, L., & Zhuravliov, O. (2019). Academic Procrastination Among International Undergraduate Students Under the Conditions of Linguistic and Cultural Integration. East European Journal of Psycholinguistics, 6(1), 82-93. https://doi.org/10.29038/eejpl.2019.6.1.zhu

Zhuravlov, O. & Zhuravlova, O. (2022). EEG procrastination, Mendeley Data, V1, https://doi.org/10.17632/6s6jdkjyng.1

Zhuravlova, O. & Zhuravlov, O. (2018). Rozrobka ta aprobatsiia metodyky diahnostyky osobystisnoho konstruktuprokrastynatsii [Development and approbation of the diagnostic methodology of the personal construction of procrastination]. *Visnyk of Kherson State University. Seriia Psykholohichni Nauky, 1*(3), 42–46.

BOOK REVIEWS

A NEW CONTRIBUTION TO THE TREASURY OF TRANSLATION THEORY

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As a new contribution to the treasury of translation theory, Nova Knyha Publishers has presented the second volume in a series of the most influential and cutting-edge publications on translation theory and practice in Ukrainian translation. The second volume of *Translation Encyclopedia* edited by Oleksandr Kalnychenko and Leonid Chernovaty continues to introduce a variety of topics related to translation and translation studies. The publication that has aroused genuine interest of academics and practitioners all over the world is now available to the Ukrainian readers in their native language.

It comprises a translation of 35 articles from *The Handbook of Translation Studies* (edited by Yves Gambier, Luc van Doorslaer, John Benjamins Publishing Company, 2011). The collection includes papers of such prominent translation theorists as Hélène Buzelin, Sherry Simon, Jeroen Vandaele, Dilek Dizdar, Barbara Moser-Mercer, Kaisa Koskinen, Sharon O'Brien, Sonia Colina, Cristina Marinetti, Kirsten Malmkjær, Vicent Montalt, James St. André, Peter Flynn and Yves Gambier, Albert Branchadell, Nike K. Pokorn, Barbara Ahrens, Outi Paloposki, Şehnaz Tahir Gürçağlar, Francis Jones, Cristina Valdés, Andrew Chesterman, Luc van Doorslaer, Reine Meylaerts, Cees Koster, Rachele Antonini, Gideon Toury, Carol O'Sullivan,

Brian Mossop, Ritva Leppihalme, David Katan, Cecilia Wadensjö, Jean Boase-Beier, Christina Schäffner, Paul Bandia, Dirk Delabastita. Notably, the collection follows a good tradition of presenting well-known names along with the new authors of breakthrough ideas and original approaches.

The book covers a wide range of theoretical issues in the field of translation. New visions and discussions of established theoretical approaches call the readers' attention to the paradigmatic shifts that have occurred in linguistics in the recent decades – from language-focused to communication-focused and, further, human-focused translation studies. In particular, in *Linguistics and translation,* Kirsten *Malmkjær* discusses the relationship between linguistics and translation as well as linguistic theories of translation suggested by J-P. Vinay and J. Darbelnet, J.C. Catford, E-A. Gutt. Hélène Buzelin considers translation from the viewpoint of the agent in *Agents of translation*, where the concept of "agents" is discussed in relation to socio-historiographic, sociological and ethnographic paths. In *Comparative approaches to translation*, the author critically evaluates several existing theoretical methods of the comparative procedure, particularly those of Toury, Van Leuven-Zwart, Holmes.

A sphere of special interest is comprised by field-specific translation research works. Aspects of different types of oral and written translation such as remote interpreting, institutional, medical, advertising, literary translation are also examined in the collection. In *Institutional translation* by Kaisa Koskinen, the "institutional translation" refers to activities or translated works within the various concrete institutions that modern societies have built to carry out their governance and control needs. The author also considers genre characteristics of institutional translation, making a valuable contribution to the sociology of translation.

This unity of translation theory and practice is a distinctive and valuable trait of the reviewed research collection. Dirk Delabastita in *Literary translation* defines this type of translation and touches on some issues and aspects of sociolinguistics, history of literary translation. Medical translation and its genres are discussed in *Medical translation and interpreting* by Vicent Montalt. The nature of poetic text makes it challenging to translate, which has caused much debate about how these challenges should be tackled. Francis R. Jones in *Poetry translation* describes these issues, as well as the skills, working processes and professional conditions involved in translating poetry. Enriching the general translation theory, these works elaborate on the aspects that comprise translation problems encountered by practitioners.

Much attention is devoted to discussion of practical issues encountered in translation. Of great interest to the audience will be the article *Realia* by Ritva Leppihalme. This paper explains the concept of realia, gives a classification and presents translation strategies of realia with authentic examples representing a number of language pairs. One of the most extensively researched problem in translation studies is the translation of wordplay and Jeroen Vandaele in *Wordplay in translation makes* his contribution to the scope of these studies. Besides recommendations for practitioners, such works outline new methods of analysis and prompt further insights into translation problems rooted in the differences of

cognitive level – worldviews, cultural attitudes, interpretational frames. Undoubtedly the publication will stir the research interest and creative imagination of the young scholars working in the field of translation studies.

The publication of the invaluable *Handbook* in Ukrainian is phenomenal in an array of senses: it opens the access to the research works to a broader Ukrainian-reading audience, involving the scholars and translators of other-than-English languages in discussions; it develops the Ukrainian translation terminology and respective theoretical/cognitive basis; it comprises exemplary translations which may by themselves become the subject of study, comparison and discussion.

The publication of the second volume of *Translation Encyclopedia* (Edited by O. Kalnychenko and L. Chernovaty) cannot be overestimated: it marks a new milestone in the development of the theory and practice of translation. The book will be useful not only to students and scholars in the field of translation studies but also to translation practitioners and researchers working in other subject fields and all who are interested in translation and interpreting. It is sure to raise the discussions of translation problems and difficulties to a new theoretical and practical level.

Looking forward to new volumes of the *Translation Encyclopedia* in Ukrainian, we hail this publication as a remarkable and outstanding event in the history of Ukrainian translation.

A NEW INSIGHT INTO THEORY OF CONCEPTUAL METAPHOR

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The author of the reviewed book is Zoltán Kövecses, a renowned cognitive linguist from Central and Central-Eastern Europe, but lesser-known from the Ukrainian academic literature. He is Emeritus Professor at Eötvös Loránd University (Budapest, Hungary). He is one of the four editors of the international scholarly journal, *Metaphor and Symbol*, and he also serves on the advisory board of *Cognitive Linguistics* and several other international professional journals. He carried out research and taught as visiting lecturer at several world-famous American and European universities (e.g. the University of Nevada at Las Vegas, Rutgers University, University of Massachusetts at Amherst, the University of California at Berkeley, Hamburg University, and Odense University).

Cognitive linguistic bases of the conceptual metaphor theory (CMT) were laid down by Lakoff and Johnson (1980) in their book *Metaphors We Live By*. This was the basic work on which cognitive linguists based their further research, supplementing and refining the original ideas of linguists who can be called the fathers of this theory. In the preface, the author testifies to the theory underlying the book as follows: "I believe CMT is a theory that can provide powerful and coherent explanations for a variety of aspects of metaphor. In my judgment, no other theory is as comprehensive as CMT. It took almost forty years for CMT to reach this stage. It's been steadily developing thanks to the many great scholars who played key roles in making it what it is today. I see the present book as just another contribution to this line of development – as an organic part of all the efforts that have been put into making it better" (p. xi).

Besides the preface, the book is divided into eight chapters, having a special structure. In the preface, the author outlines the book, its structure and basic concept,

and mentions by name all those who helped the development of his theory with their thoughts and research. He highlights two linguists in particular: "Two people have played very special roles in the course of my career as a metaphor researcher. Ray Gibbs has always been available to discuss various issues related to the field and he and his work gave me a huge amount of encouragement and inspiration. And last but definitely not least, without George Lakoff I could not have and would not have done any of my work on metaphor" (p. xiii). In the first chapter, the author presents the traditional conceptual metaphor theory, which is "standard" in his formulation, and raises some of the questions that form the basis of the following five chapters. The titles of Chapters 2-6 are thus questions that have been articulated in the author in the course of several years of research activity in connection with the theory. These are the suggestions responding to which will lead us to an extended version of the conceptual metaphor theory. Relying on his own research and that of the cognitive linguistic society, the author justifies the raison d'être of the question in each chapter and illustrates his line of thought with linguistic examples, tables and figures. The rest of the book contains two summarizing, integrating chapters (7-8), in which the author outlines the extended CMT, and then as a conclusion answers the questions discussed in the book. The publication ends in a long list of references and an index.

In the first chapter (*A Brief Outline of "Standard" Conceptual Metaphor Theory and Some Outstanding Issues*), the author discusses the basics of CMT in detail. He emphasizes that there is no full agreement among cognitive linguists on the interpretation of the theory, but in this chapter, he focuses on those elements and features that are predominantly interpreted similarly by metaphor researchers. At the end of the chapter, the author lists problems that have arisen over the years and are waiting to be solved.

The title of the second chapter (*The Abstract Understood Figuratively, the Concrete Understood Literally, but the Concrete Understood Figuratively?*) projects its content, its central issue, the nature of meaning. The author considers the distinction between concrete and figurative meaning to be particularly important, since, according to the definition of "standard" theory, the conceptual metaphor is based on precisely this distinction. In this chapter, the author argues that even our most concrete experiences can be interpreted figuratively and not just literally. We have a lot of concepts that we have taken over from previous generations, we understand them literally, and use them to conceptualize further abstract concepts. The notion of figuratively interpreting even our basic concrete experiences raises important questions for conceptual metaphor theory, which the author answers in turn in the chapter and then draws the following conclusion: "Thus, both concrete and abstract concepts have both embodied content ontology and figurative construal (i.e., figuratively constructed understanding) – but in different proportions. In conceptual metaphors, we have predominantly content-ontology-based concepts as source domains and predominantly figuratively-construed concepts as target domains. There are probably no pure ontology-content-based concepts and no pure figuratively-construed concepts" (p. 33).

In the section entitled *Direct or Indirect Emergence*, the author discusses what forms the basis of conceptual metaphors. He contrasts two views: the primary

metaphors are based on bodily experience, from which complex metaphors are constructed; every metaphor is built on metonymy. Basically, therefore, the author sheds light on the more nuanced relationship between the conceptual metaphor and metonymy in this chapter: "I […] suggest that many metaphors (of the correlational kind) derive from metonymies, that is, they have a metonymic basis. What distinguishes my position from the view of the other proponents in the group that favours a metonymy-based emergence for many metaphors is that I attempt to establish the relationship between metaphor and metonymy by relying on several particular characteristics of the conceptual system, as we know it today" (p. 35).

In the fourth chapter (*Domains, Schemas, Frames, or Spaces?*), Kövecses analyses in detail the differences between the concepts listed in the title and their significance in the CMT. He admits that cognitive linguists also often have difficulty figuring out how to unequivocally identify which conceptual unit or structure is involved in conceptual metaphors. According to Kövecses, the solution lies in thinking of conceptual metaphors as the ones that simultaneously involve conceptual structures, or units, on several distinct levels of schematicity. He believes that four levels can be distinguished ("the level of image schemas, the level of domains, the level of frames, and the level of mental spaces (in addition to the linguistic level of the actual utterances in which the metaphors are instantiated") (p. 51)), among which there is a hierarchical relationship. Each metaphor can be analysed at any level.

In the fifth chapter (*Conceptual or Contextual?*), the author explains the role of language users' local and global contexts in metaphorical conceptualization. The original standard CMT emerged primarily as a cognitive theory that ignored the contextual effect. As a result, linguists in many cases were unable to explain, or could explain only with difficulty the emergence of certain conceptual and linguistic metaphors. According to the contextualist version of conceptual metaphor theory, three important questions arise, which the author answers in the chapter: (1) What are the elements of (metaphorical) meaning making?; (2) What are the most common contextual factors that play a role in the use and creation of metaphors?; and (3) What is the cognitive mechanism through which contextual factors actually produce metaphors in natural discourse? (p. 94).

The question in the next chapter (*Offline or Online?*) is that during metaphorical conceptualization, conceptual metaphors are created online in real discourse, that is, we are constantly creating them, or they are present in our conceptual system and retrieved in certain discourses. The "standard" CMT has been the subject of most criticism for not examining conceptual and linguistic metaphors in living language speech, but on the basis of the linguistic material of databases and dictionaries. Kövecses sees the solution to the problem in the multi-level hierarchical system outlined in Chapter 4. "In the «standard» view of CMT, researchers work on the levels of image schema, domain, and frame. These are conceptual structures that are decontextualized patterns in long-term memory that can account for metaphorical meaning in the most general ways., (while) […] online metaphorical activity necessarily makes use of the conceptual structure of mental spaces" (p. 117). The conceptual metaphor can thus be both online and offline: during metaphorical conceptualization, we operate offline metaphors retrieved from long-term memory

online in the mental spaces of working memory. This view allows us to take into account the diversity of mental activities related to metaphors.

After asking the questions discussed in the previous five chapters, in the next one (*The Shape of the Extended View of CMT*), Kövecses outlines the theory he has extended, naming its new elements. The extended theory is basically organized around two main questions: (1) Why does the speaker choose (not consciously) that particular metaphor in a given context? (2) How can the speaker create and the listener interpret the meaning expressed by the conceptual metaphor? In addition to elaborating on the two questions, the chapter also discusses the difference between embodied and discourse metaphor, the types of metaphorical meaning and metaphors, and then itemizes the characteristics of the new approach to the theory, feeding back to the responses given to the questions discussed in previous chapters.

In the last chapter (*By Way of Conclusion: Responses to the Five Questions*), the author draws conclusions, evaluates the answers to the questions asked, and explains what overlaps can be detected between the extended CMT and different theories (blending, deliberate metaphor theory, structure-mapping theories, relevance theory). Finally, he compares the extended metaphor theory to the dynamic systems view of metaphor developed by Ray Gibbs (2017), according to which "metaphoric activity is a dynamic, self-organized process" and considers metaphor "as an emergent product of multiple constraints operating along different time scales" (p. 181). The similarity between the two theories is discussed in detail.

In summary, the book offers new insight into the subject of conceptual metaphor, updating the previously grounded theory. It relates conceptual metaphor theory to current theories of cognitive linguistics and clarifies a number of issues that metaphor researchers have raised over the past few decades. Relying on traditional CMT, the chapters provide suggestions for an extended conceptual metaphor theory, including a discussion of whether literal meaning exists at all, whether conceptual metaphors are conceptual and / or contextual, and whether they work offline and online at the same time. Cognitive linguistics is a new and continuously evolving linguistic discipline whose research findings are constantly updated. This book was also intended to fulfil this goal, which does not only enrich the knowledge of researchers of metaphorical cognition but can also broaden the perspectives of those interested in literary studies.

References

Gibbs, R. W. (2017). The embodied and discourse views of metaphor: Why these are not so different and how they can be brought closer together. In B. Hampe (Ed.), Metaphor: Embodied cognition and discourse (pp. 319-335). Cambridge: Cambridge University Press.

Lakoff, G. & Johnson, M. (1980). Metaphors We Live By. Chicago: The University of Chicago Press.

CALENDAR

PSYCHOLINGUISTIC RESEARCH EVENTS

25th Annual Ohio State University Conference on Hispanic and Lusophone Linguistics (Hybrid Event) - OSUCHiLL
Host institution: The Ohio State University, USA
Deadline for submitting abstracts: January 31, 2022
Location: Columbus, Ohio, USA
Start Date: 25th March, 2022
Contact: Pedro Antonio Ortiz Ramíre
E-mail: osuchill@osu.edu
URL: https://sppo.osu.edu/research/osu-congress-on-hispanic-lusophone-linguistics-symposium

Speech, Langauge and Learning Intervention Research Symposium - SLLIVRS
Host institution: Arizona State University
Deadline for submitting abstracts: March 15, 2022
Location: Virtual, USA
Start Date: 25th March, 2022
Contact: College of Health Solutions Events Team Arizona State University
E-mail: CHSEvents@asu.edu
URL: https://chs.asu.edu/sllivrs

4th Biennial University of Michigan International Conference on Arabic Applied Linguistics
Host institution: University of Michigan, USA
Deadline for submitting abstracts: January 31, 2022
Location: University of Michigan, USA
Start Date: 19th November, 2022
Contact: Mohammad Alhawary
E-mail: abuamr@umich.edu
URL: https://sites.lsa.umich.edu/arabic-sla-conference/call-for-papers/

9th Workshop on Speech and Language Processing for Assistive Technologies - SLPAT
Host institution: ACL/ISCA Special Interest Group on Speech and Language Processing for Assistive Technologies
Deadline for submitting papers: February 28, 2022
Location: Dublin, Ireland
Start Date: 27th May, 2022
Contact: Sarah Ebling
E-mail: slpat2022-organizers@googlegroups.com
URL: http://www.slpat.org/slpat2022/

Bi-SLI 2022 - Bi-/multilingualism and Developmental Language Disorder (DLD)
Host institution: Leibniz-Center General Linguistics
Deadline for submitting abstracts: February 21, 2022
Location: Berlin, Germany
Start Date: 9 May, 2022
Contact: Onur Özsoy
E-mail: fb2.bisli2022@leibniz-zas.de
URL: https://linktr.ee/Bi_SLI