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ARTICLES

VARIATION WITHIN IDIOMATIC VARIATION: EXPLORING THE DIFFERENCES BETWEEN SPEAKERS AND IDIOMS

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Abstract. Corpus-based research on idiomatic variation has shown that idioms can be utilized with an extensive range of variation, including the possibility of idioms occurring with adjectival modification (e.g. make rapid headway), lexical variation (e.g. the calm/lull before the storm), and partial forms (e.g. birds of a feather [flock together]). Previous experimental research eliciting variation within idioms has tended to focus on unintended ‘slips of the tongue’, or errors in production. To date, no experimental study has explored the creativity that speakers can employ when using idioms. This study, by contrast, aims to elicit conscious and spontaneous productions of idiomatic variation, exploring just how creative speakers can be when using idiomatic expressions. Participants were asked to create headlines for newspaper snippets using provided idioms. They were explicitly told that the expression did not have to be exact and that they could be as creative as they wanted. The headlines for each idiom and each speaker were then examined. Variational patterns are observed for both idioms and speakers. For instance, some idioms (e.g. jump on the bandwagon) typically occur with partial forms, lexical variation, and/or adjectival modification; whereas other idioms (e.g. call the shots) are predominantly used in their canonical form. Similarly, some speakers (e.g. Speaker 14037) demonstrated considerable flexibility and playfulness when using the expressions, while other speakers (e.g. Speaker 14020) preferred minimal, if any, modification to the idioms. These results not only converge with

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previous corpus-based findings, but they also highlight the individual differences between speakers, as well as reveal how creative and innovative speakers can be when using idiomatic

Keywords: *idioms, idiomatic variation, creativity, experimental, person-oriented, English.*

Геерерт Крістіна, Ньюмен Джон, Бааєн Гаральд. Варіація в межах ідіоматичної варіації: дослідження відмінностей уживання ідіом різними мовцями.

Анотація. Дослідження, що базуються на основі щодо ідіоматичних змін, показали, що ідіоми можуть бути використані з широким діапазоном варіацій, включаючи можливість ідіом, що виникають із модифікацією прикметника (напр., *make rapid headway*), лексичними варіаціями (напр., *the calm/lull before the storm*), а також часткові форми (напр., *birds of a feather [flock together]*). Попередні експериментальні дослідження, що спричиняють варіації в ідіомах, як правило, зосереджувались на ненавмисних «обмовках» або помилках під час породження мовлення. Сьогодні немає експериментальних досліджень щодо творчих здібностей мовців під час послуговування ідіомами. Тому це дослідження має за мету викликати свідомі та спонтанні породження ідіоматичних варіацій, вивчаючи, наскільки творчими можуть бути мовці, використовуючи ідіоматичні вислови. Учасників попросили створити заголовки для газетних фрагментів, використовуючи надані ідіоми. Їм прямо сказали, що вираз не повинен бути точним і що вони можуть бути настільки творчими, наскільки захочуть. Потім було вивчено заголовки кожної ідіоми та кожного доповідача. Варіаційні закономірності спостерігаються і для ідіом, і для мовців. Наприклад, деякі фразеологізми (напр., *jump on the bandwagon*) зазвичай трапляються з частковими формами, лексичними варіаціями та / або модифікацією прикметника; тоді як інші ідіоми (напр., *call the shots*) переважно використовуються у їх канонічній формі. Подібним чином деякі мовці (напр., мовець 14037) демонстрували значну гнучкість та грайливість при використанні виразів, тоді як інші мовці (напр., мовець 14020) віддавали перевагу мінімальним, якщо такі є, модифікаціям ідіом. Ці результати не лише збігаються з попередніми висновками на основі корпусу, але вони також висвітлюють індивідуальні відмінності між мовцями, а також виявляють, наскільки креативними та інноваційними можуть бути мовці під час використання ідіоматичних виразів.

Ключові слова: *ідіоми, ідіоматична варіація, креативність, експериментальний, особистісна орієнтація, англійська мова.*

1. Introduction

Research on idioms has a long history of focusing on the canonical form, as it was assumed that the idiomatic meaning was only understood when the exact form of the idiom was used. Recent research however has begun to explore idiomatic variation within corpora (cf. Moon, 1998; Barlow, 2000; Langlotz, 2006; Wulff, 2008; Duffley, 2013; Schröder, 2013). Moon (1998) conducted an extensive investigation of idioms and fixed expressions and found that idioms can occur with a range of variation; for example, lexical variation (e.g. *the calm/lull before the storm*), truncations (e.g. *birds of a feather [flock together]*), register variation (e.g. *knock someone dead vs. knock 'em dead*), dialectal variation (e.g. *wear the trousers [BrE] vs. wear the pants [AmE]*), and even 'erroneous' forms (e.g. *whet someone's appetite vs. wet someone's appetite*). Schröder (2013) found that 'fixed idioms' (e.g. *kick the bucket*) and 'mobile idioms' (e.g. *spill the beans*) had significantly fewer tokens of syntactic variation, compared with 'metaphor idioms' (e.g. *make*

headway), but that all three types can occur with adjectival and adverbial modification (e.g. *make rapid headway*).

Studies have also utilized the internet as a corpus to further explore idiomatic variation. Barlow (2000) observed several ways in which the current situation can be conceptually integrated into an idiom; for example, full noun phrases integrated into the subject position (e.g. *No competition is over until the fat lady sings*) or partial forms alluding to the whole idiom (e.g. *The fat lady burst into song far too early last Sunday*). Duffley (2013) showed that even nondecomposable idioms (e.g. *kick the bucket* and *shoot the breeze*) can undergo variation, such as adjectival modifiers (e.g. *reluctant to kick his brimming bucket of life*) and even passives (e.g. *breeze is shot, piss is taken, and a bit of fun is had*). These examples illustrate that idioms are not nearly as fixed or ‘frozen’ as previously assumed, but can actually occur with a remarkable amount of variation.

Few studies have explored the production of idiomatic variants. Cutting and Bock (1997) investigated the production of formal idiom blends. They presented two idioms to participants, and after a short delay, asked for one of the idioms. They were attempting to induce blends, which are often regarded as ‘slips of the tongue’ (Fay, 1982). They found that blends are more likely to be produced if the syntax and the semantics of the two idioms are similar. Recently, Konopka and Bock (2009) examined the production of phrasal verbs which could have an idiomatic interpretation (e.g. *pull off a robbery*) or a literal one (e.g. *pull off a sweater*). Using a priming study, they attempted to induce production errors in the syntax of the phrasal verb (i.e. the particle occurring after the verb or after the object). They found that phrasal verbs were influenced by the prime and produced with a similar structure, concluding that idiomatic phrasal verbs can be altered as much as non-idiomatic phrasal verbs.

These production studies may be important for theories of speech production, but they do not account for deliberate, intentional variation, or the range of variation that can be naturally produced by speakers. This study therefore focuses on idiomatic variation that can be spontaneously and consciously produced by speakers of English. One way to elicit variation may be to ask participants to produce newspaper headlines. Glancing through any newspaper, one can immediately see that idioms are used in headlines to attract reader’s attention (e.g. *Legit massage therapists rubbed the wrong way*). Providing participants with an opportunity to be as creative as they like should confirm already known uses of idioms, as well as reveal novel uses. The current study attempts, therefore, to explore how creative speakers can be with idioms when prompted.

2. Methodology

2.1. Materials

Sixty idioms and their definitions were selected from the Oxford Dictionary of English Idioms (Ayto, 2009) and the Collins COBUILD Idioms Dictionary (Sinclair, 2011). The idioms varied in length, from two to eight words, and syntax, including verb phrase idioms (e.g. *call the shots*), prepositional phrase idioms (e.g. *down the drain*), noun phrase idioms (e.g. *a needle in a haystack*), and sentential idioms (e.g. *it’s not over until the fat lady sings*). Each idiom was paired with a

newspaper snippet, ranging between three and six sentences in length. These snippets were extracted from the Strathy Corpus of Canadian English (Strathy Language Unit, 2013) and the Corpus of Contemporary American English (Davies, 2008), specifically from the newspaper genre.

2.2. Procedure

Participants were asked to create headlines for newspaper snippets. They were told to pretend they were the journalist who had just written the article and now must produce a headline. They were asked to include the provided idiom in their headline, but told that it did not have to be exact. They were also encouraged to be creative.

The experiment was created using E-prime 2.0 Professional. The text was presented in a bold, white, Courier New 24-point font on a black background. Before each newspaper snippet, participants were asked if they knew the idiom ('yes' or 'no'). If they did not know the idiom, a definition was provided. They then saw the newspaper snippet, along with the idiom, presented on the same screen. The snippet was positioned at the top of the screen, spanning 75 % of the screen's width. The idiom appeared below the snippet, in the centre of the screen, identified by "Expression". A text box appeared below the idiom, in the bottom-half of the screen. Participants were required to write their headline in the text box, before continuing on to the next idiom-snippet pair. The experiment was self-paced. All participants had an opportunity to take a short break halfway through the experiment.

All participants saw the same 60 idiom-snippet pairs, presented in random order. They also saw the same example idiom and snippet, shown in (1). Three example headlines were created, shown in (2). Headline (A) utilizes a partial form of the idiom (*mouthful of foot*), Headline (B) blends two idioms: *born with a silver spoon in one's mouth* with *put one's foot in one's mouth*, while Headline (C) uses lexical variation (*boot* instead of *foot*). Participants saw only one example headline. After the example, they were given four practice headlines.

(1) Example Snippet:

U.S. Rep. Charles Rangel told the New York Times: "Mississippi gets more than their fair share back in federal money, but who the hell wants to live in Mississippi?" It led to a firestorm of newspaper attention. "I was trying to explain why the federal government gives more to a different state," Rangel says. "You have more poor folks in Mississippi than in New York."

Example Idiom:

put one's foot in one's mouth

(2) Example Headlines:

- A. *Mouthful of foot: Rangel comment causes uproar*
- B. *Rangel, born with a silver foot in his mouth*
- C. *Rangel's comment put the whole boot in his mouth*

After the experiment, participants were presented with a few additional questions. They were first asked three questions pertaining to their idiom usage: (1) How often do you use these expressions?; (2) How often do others around you use these expressions?; and (3) Do you like using these expressions? They responded to these questions using a 7-point Likert scale (i.e. 1 = ‘dislike’ and 7 = ‘like’). They were next asked to rate the acceptability of seven prescriptively ‘incorrect’ sentences, shown below, using the same 7-point scale.

Language Questions (LQ):

1. *The only option the school board has is to lay off a large amount of people.*
2. *Slot machines are thought to be more addicting than table games.*
3. *The document had to be signed by both Susan and I.*
4. *While cleaning the kitchen, Sally looked up and saw a spider on the roof.*
5. *I thought it could’ve went either way.*
6. *She could care less what he had to say about it.*
7. *You have to balance your life, irregardless of what anybody thinks.*

2.3. Participants

Thirty undergraduate linguistics students from the University of Alberta participated in this experiment, ranging from 18 to 39 years of age. All participants considered themselves native speakers of English. Participants were compensated for their time with course credit.

3. Results

3.1. Idioms

We look specifically at five selected idioms (produced by the 30 participants) and discuss the variation and creativity used with these idioms in the elicited newspaper headlines. Each of the five idioms demonstrate a different usage pattern of variation, worthy of discussion.

3.1.1. Call the Shots

Some idioms, such as *call the shots* and *pull the plug*, show little variation in the headlines. The variation evident with *call the shots* is especially minimal – the verb occurs in either the progressive form *calling*, see (3), or in the present tense form *call*, see (4). All instances utilize the canonical structure, with no alternations besides altering the aspect of the verb.

- (3)
 - a. *Who is Really Calling the Shots?*
 - b. *Are Billionaire Sponsors Really Calling the Shots in our elections?*
 - c. *Cut out the Middle Men: We Know it’s the Billionaires Calling the Shots*
- (4)
 - a. *Billionaires who call the shots should have to explain them*
 - b. *Billionaires Play Puppeteer and Call the Shots*
 - c. *Rich sponsors call the shots on presidential campaigns*

3.1.2. Jump on the Bandwagon

Idioms, such as *jump on the bandwagon* and *hear something through the grapevine*, occur with a wide range of variation, occurring predominantly with adjectival modification and a richness of creativity mostly due to the salience of *bandwagon* and *grapevine*. The majority of headlines utilize the full form of the idiom, shown in (5a), although some show minor modification (e.g. omission of *the*). Half of the headlines occur with adjectival modification, integrating an additional concept into the idiom. Example (5b) shows the incorporation of *snazzy lookin'*, which may reflect the participant's attitude about school uniforms, while (5c) includes the use of *uniform* itself – the most-utilized modifier in the headlines. This example also illustrates lexical variation, one of two instances which alter the verb, and syntactic variation, particularly the use of the progressive aspect, which was the most frequent type of syntactic variation with this idiom.

- (5) a. *Beaconsfield High School refuses to jump on the bandwagon: students and parents voted No to introducing uniforms into the school*
b. *Beaconsfield High not to jump on this snazzy lookin' bandwagon*
c. *Beaconsfield won't be joining the uniform bandwagon*
d. *Beaconsfield sees bandwagon in uniform, refuses to jump on*
e. *Students and parents vote to stay off bandwagon*
f. *Uniformed wagons making way down Montreal*
g. *Uniforms as the new bandwagon?*

The remaining examples show the considerable degree of creativity that speakers can utilize with idioms like *jump on the bandwagon*. The salient word *bandwagon* in (5d) has been separated from the rest of the idiom (i.e. *jump on*), but more importantly, blended into a rich imagery of the bandwagon dressed in uniform, playing on the notion that bands, who traditionally rode on these wagons, wore uniforms, meanwhile conveying that a particular school chose not to implement a dress code. Example (5e) utilizes a partial form of the idiom (i.e. *bandwagon*), but in a context that expresses the opposite notion of the idiom – *staying off* as opposed to *jumping on*. Example (5f) has drastically truncated the idiom so that all that appears is a portion of the salient word (i.e. *wagons*). This usage not only conveys the idiom, specifically that support for school uniforms is spreading through the city of Montreal, but also that decorated physical wagons might be travelling alongside the hype. The last example, (5g), shows an instance of a formal idiom blend, blending the expression *X is the new black* with *jump on the bandwagon*. This example merges the popular, support-driven *bandwagon* with the latest fad, *the new black*. Creativity is also observed in how the participants describe the lack of *jumping on* by the particular school. This school *refuses to jump on*, *stays off*, and even *misses the bandwagon*. The school *jumps on the bandwagon against uniforms*, *says no*, and simply *won't be joining*. The range of variation in describing how this school declined *jumping on the bandwagon* is itself noteworthy.

3.1.3. It's Not Over Until the Fat Lady Sings

Some idioms have more than one salient word, such as *it's not over until the fat lady sings*, where *fat*, *lady*, and *sing* are all salient. These idioms tend to have one or more elements in the idiom replaced, or are used with a greater array of partial forms. The full form appears in about half of the headlines, but most occur with slight modification to the form, such as *it's not over* becoming *it isn't over*, *it ain't over*, and even *not over*, as illustrated in (6a). A new noun phrase is often incorporated into the initial subject position (i.e. replacing *it* with a noun relevant to the current situation), as shown in (6b). Modification of a noun phrase is also observed with *the fat lady*, where this NP is replaced with one that is more relevant to the current situation, such as (6c).

- (6) a. *Christian Right lobbyists claim that it isn't over until the fat lady sings*
 b. *The proposal is not over until the fat lady sings*
 c. *Not over until lawmakers sing, lobbyists say*
 d. *Statehouse Regulars are keeping pressure on lawmakers until the fat lady sings*
 e. *The fat lady hasn't sung yet, she's simply heavily sedated*
 f. *Opponents Refuse to Listen to the Fat Lady*
 g. *No singing heard yet at the legislative session*

Partial forms of the idiom are also commonly used, containing elements of varying lengths from the second half of the expression, such as *until the fat lady sings*, seen in (6d), or with the elements *fat*, *lady*, and *sing*, as in (6e). This latter use typically includes these three elements in a negative past-participial construction (i.e. *the fat lady hasn't sung*), although they can also occur in other constructions, such as *the fat lady may still sing* or *when will the fat lady sing*. Other partial forms can be utilized, such as those containing only *the fat lady* (see 6f) or only the verb *sing* (see 6g). In these instances, reference is made to the fact that she or the singing cannot be *heard yet*, or alternatively, that someone chooses not to *listen*. The majority of headlines convey the idea that *the fat lady* has not begun her *singing*, only one headline manipulates this idea to convey that she is being ignored (i.e. *refuse to listen*), while a different headline conveys that she has not quite finished (i.e. *the fat lady is still singing*). These results nicely overlap with Barlow's (2000) corpus-based findings.

3.1.4. Down the Drain

While prepositional phrase idioms, like *down the drain* and *in the bag*, are not manipulated to the same extent as idioms like *jump on the bandwagon* or *it's not over until the fat lady sings*, they still occur with variation and creativity. The majority of headlines show *down the drain* in its full canonical form; however, variation appears with whether a verb is utilized with the expression, and if so, the type of verb that occurs. In (7a), no verb appears; the expression is simply

juxtaposed with *another season* to signal that the latest season is *down the drain*. This expression mostly occurs with generic verbs (e.g. *be* or *go*), indicating *the season* is simply lost or wasted, as shown in (7b).

- (7)
- a. *Another Season Down the Drain? NHL Negotiations Continue*
 - b. *Bettman pulls the plug and a new collective bargaining agreement goes down the drain*
 - c. *NHL season – slipping down the drain*
 - d. *Is the NHL throwing the season down the drain?*
 - e. *Possibilities of NHL season slowly washed down the drain*
 - f. *Bettman flushes the season down the drain*
 - g. *Negotiations, and the season, sliding towards the drain*
 - h. *Is this years NHL season headed for the drain?*
 - i. *Hopes of lockout-free season swirling around the drain as sides unable to find common ground*

Down the drain can also be utilized with very manner-rich verbs, seen in (7c–7i). These manner-rich verbs describe and elaborate on the way in which something abstract has become lost or wasted. This expression occurs with 10 different manner-rich verbs in the headlines, including two verbs which play on the literal meaning of the expression, *washed* and *flushed*, in (7e) and (7f). Other information within the headline can also allude to the literal meaning of the expression, such as incorporating another idiom, *pull the plug*, which is creatively employed to construe an intimately related literal and figurative reading of the headline, shown in (7b). Lexical variation is also observed, specifically altering the preposition, seen in (7g–7i). Using different prepositions provides a resourceful way to convey the delayed, drawn-out process of the context (i.e. problematic negotiations resulting in a lost hockey season).

3.1.5. Cost an Arm and a Leg

Some idioms, like *cost an arm and a leg* and *show one's true colours*, show a surprising amount of creativity and allusion. About half the headlines utilized the idiom in its full form, demonstrated in (8a), although some instances included someone being referenced within the idiom, such as *you*, shown in (8b). Lexical variation is also observed with this idiom, usually with the verb, seen in (8c). The remaining examples illustrate just how creative speakers can be. A variety of partial forms were observed with this idiom, such as the variant *an arm and a leg*, see (8d), or its plural counterpart, in (8e). Participants also used the verb *cost* as a partial form, with some additional referent, such as *limb* in (8f), or *two of each* in (8g). Finally, a few headlines do not contain any portion of the idiom, but simply allude to the idiomatic meaning using other words, typically *limbs*, as in (8h). These examples not only show exceptional creativity, but they also show extreme

allusion – reference to the idiomatic meaning with a minimal form only or by using no actual words from the idiom whatsoever.

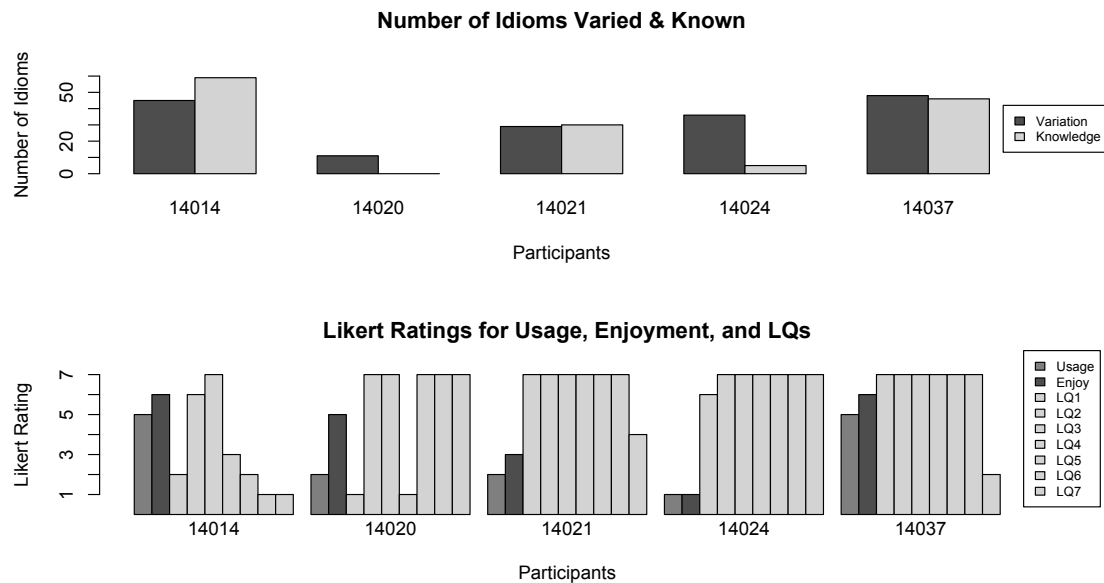
- (8) a. *Night on the town costs an arm and a leg*
- b. *Dinner in San Francisco can cost you an arm and a leg*
- c. *Date Nights Going for an Arm and a Leg in San Francisco’s Civic Center*
- d. *San Francisco date night receipt: An arm and a leg*
- e. *Forget losing your heart – dating takes your arms and legs*
- f. *Trip to Civic Center May Cost A Limb*
- g. *Thankfully you have two of each: Civic Center’s costly experience*
- h. *Is a night out worth the loss of limbs?*

This ‘extreme allusion’ (i.e. allusion to the idiom without using any formal portion of the idiom) is likely a task effect. Both the participants and the experimenter knew the idiom being referenced, as well as the context of the newspaper snippet. Therefore, accessing the idiom’s meaning from the allusion is still possible despite no formal portion of the idiom. If, for example, (8h) was a real headline in a newspaper, the idiomatic meaning would likely be lost on the audience. In fact, a quick search through 200 concordance lines for *limb* and *limbs* in the Strathy Corpus of Canadian English (Strathy Language Unit, 2013) and the Corpus of Contemporary American English (Davies, 2008) yielded zero instances where this word appears to be alluding to the idiom *cost an arm and a leg*. This suggests that extreme allusion is only possible when all parties involved have the same ‘shared knowledge’, making these allusions akin to inside jokes. This shared knowledge is what allows the idiomatic meaning to still be interpretable. Regardless of the limitations of this variant, it is impressive that speakers are able to be so exceptionally creative with idioms under the right conditions.

3.2. Speakers

We now turn our attention to speaker-specific headlines, exploring patterns observed in the headlines for certain participants, as well as discussing their responses to the additional questions included at the end of the experiment. For this section, we draw upon the “person-oriented approach” (Bergman and Lundh, 2015), which employs a methodology of focusing on the individual and studying patterns from an indivisible whole, rather than as part of an aggregate. This approach allows us to complement the idiom-specific discussion above and highlight patterns and strategies specific to certain individuals (i.e. to look at the individual differences of the participants; cf. Dąbrowska, 2012, 2015). Five speakers will be discussed in detail below. The results of the additional experimental questions (e.g. *Do you use idioms often?*) for all five speakers are illustrated in Figure 1 and shown in detail in the Appendix.

Figure 1.
Speaker response profiles



Note. The top panel illustrates the number of idioms (out of 60) which were varied by each speaker (‘Variation’) and that the speaker indicated knowing (‘Knowledge’). The bottom panel illustrates the Likert ratings (1 ‘lowest’ – 7 ‘highest’) for each speaker for how often they use idioms in general (‘Usage’), if they enjoy using idioms (‘Enjoy’), and their responses to each prescriptively incorrect sentence, or ‘Language Question’ (‘LQ’), shown in consecutive order.

3.2.1. Speaker 14020

Some speakers employ very little variation, preferring to use the canonical form (i.e. the form of the idiom that was presented to the participants). Speaker 14020 produced just 11 headlines that contained a deviation from the canonical form. The majority of these employed syntactic variation, modifying the tense or aspect. Example (9a) shows the verb in the progressive, the most common type of modification for this speaker, while (9b) occurs in the passive.

- (9) a. *Turning a blind eye on human rights issues*
 b. *Water Pipes being nipped in the bud for containing worse chemicals than cigarettes*

This speaker used a few variation strategies, but minimally, only showing one instance each. In (10a), a full noun phrase is integrated into the subject position, replacing *it*. (10b) shows the integration of additional information: *school* and *uniform*, which are incorporated into the idiom to describe the type of bandwagon that is being boarded. (10c) shows a partial form of the idiom, containing only the body parts of the expression. While (10d) uses the idiom as an adjectival modifier to modify the head noun. These examples illustrate that this speaker occasionally utilizes variation, but mostly prefers the idioms in their canonical form.

- (10) a. *The politics aren't over until the fat lady sings*
b. *Beaconsfield High School does not jump on school uniform Bandwagon*
c. *An Arm and A Leg for a Night at San Francisco's Civic Center*
d. *The San Francisco Fire Credit Union increases memberships through a no strings attached system*

We will now address the additional questions (see Figure 1) that were asked to obtain a better understanding of why the participants might respond the way they do – in line with a person-oriented methodology. The most striking observation is the fact that this speaker indicated that she did not know any of the idioms used in this experiment – she knew the first idiom in the practice and then not a single idiom afterwards. She also indicated that she does not use idioms often. This suggests one of two possibilities: 1) either she truly does not know the vast majority of idioms used in this study despite acquiring English as a first language; or 2) she does not use idioms very often and therefore was not confident in knowing their meanings. Definitions were only provided if participants indicated that they did not know an idiom. This speaker likely indicated ‘no’ for all idioms to ensure that she was subsequently provided with the definition for all (unfamiliar and semi-familiar) idioms. Her unfamiliarity and limited usage with idioms likely affected her desire to modify these expressions, opting to use the expressions exactly as they were presented to her, thereby producing headlines containing few variants.

This speaker rated LQ1 and LQ4 as being completely unacceptable, both of which contained a similar word in place of the ‘correct’ word: *amount* for *number* (LQ1) and *roof* for *ceiling* (LQ4). Perhaps this speaker prefers clarity – using the ‘correct’ word to avoid confusion. This preference may also explain why she employed minimal variation, opting to clearly convey the idiomatic meaning with the canonical form.

3.2.2. Speaker 14037

Some speakers use a vast amount of variation with a wide range of variational strategies. Speaker 14037 enjoyed altering the idioms and demonstrated how flexible and creative some speakers can be when using these expressions. This speaker used the canonical form twelve times; all other headlines contained some kind of variation.

The examples in (11) show instances of lexical variation. (11a) shows the alternation of a word to another largely synonymous word, while (11b) and (11c) illustrate semantically productive lexical variation, where contextual information is integrated into the expression (cf. McGlone et al., 1994). In (11b), *steam* has been replaced by a festival organizer’s name, *Serge*, suggesting that the festival is moving ahead with full force, but that it is largely due to the efforts of the organizer. In (11c) the verb *cut* has been replaced with *fix*, implying that shortcuts have already been made and repairs to those cuts are now underway.

- (11) a. *Cape Breton facing Brunt of storm* [bear the brunt of something]
b. *Full Serge Ahead* [full steam ahead]
c. *Fixing Corners postpones restaurant launch* [cut corners]

The examples in (12) blend elements from different expressions. Two idioms: *come to grips with something* and *come apart at the seams* are blended into the form *gripping at the seams* in (12a). This blend suggests that not only is the housing market having some difficulties, but that perhaps home sellers are not ready or able to accept it. Example (12b) blends two idioms (i.e. *have one's fingers in every pie* and *have your cake and eat it too*) while merging content from the newspaper snippet. Exchanging the verb of possession with a more contextually relevant verb, *design*, incorporates the business represented in the snippet (*Designer's Guild*), as well as the idea that one can be involved in everything, linking the meaning of the original provided idiom with the variant. The headline in (12c) semantically blends two expressions by juxtaposing them and referencing the provided idiom (i.e. *worth your salt*) within another similar idiom (i.e. *worth your weight in gold*).

- (12) a. *Gripping at the seems, House market benefits buyers*
[come to grips with something] & [come apart at the seams]
b. *Design your pie and eat it too; Guild spills on doing it all*
[have your fingers in every pie] & [have your cake and eat it too]
c. *No Salt needed at El Hihalguese, Their worth their weight in it*
[worth your salt] & [worth your weight in gold]

This speaker creatively plays on the literal meaning of an idiom. The literal meaning 'to allow water to flow down a drain' is referenced in (13a) by suggesting that Facebook *drowns*, or fails as a company, when staff are no longer allowed to check their accounts at work. (13b) juxtaposes the concepts of one playing with a water gun and the difficult topics discussed by the former president of the USA. These examples showcase the ability of some speakers to playfully manipulate semantic elements.

This speaker also utilizes allusion, often with a partial form of the idiom, though not necessarily a salient word. (13c) plays with the idea of *crow* as food while alluding to the idiomatic meaning of *eat crow*. In (13d), the word *mountain* is used to allude to the idiom *make a mountain out of a molehill*. This headline references the resultative state of the expression by indicating that the media has found itself in a 'mountainous' situation and now must dig its way out. In (13e), no formal words of the idiom are included in the allusion; instead, the words *clawing out* allude to a cat freeing itself, and a secret being revealed.

- (13) a. *Facebook drowns as company pulls plug on staff FB use*
b. *Shooting the Breeze with a Water Gun; Obama talks hard issues*
c. *Crows on the Menu for Rangel* [eat crow]

- d. *Digging its way out of a mountain, how the media is trying to reclaim respect* [make a mountain out of a molehill]
 e. *Advisors Clawing Out* [let the cat out of the bag]

As demonstrated by these examples, this speaker is quite playful with idioms and is willing to manipulate them in a variety of ways for various effects. She rated her enjoyment of using idioms quite high and indicated that she uses them fairly often. This greater enjoyment and increased usage may influence this speaker's desire to play with idioms more. Moreover, this speaker indicated that she knew the majority of idioms, potentially providing her with greater familiarity of idioms in general, and with each idiom in particular. Yet this speaker was still willing and able to creatively alter unfamiliar expressions, like *eat crow* (see 13c). Altering the majority of idioms to some degree, including novel expressions, further demonstrates the playful character of this speaker and shows this speaker's flexibility with idiomatic language.

This speaker's flexibility with language is also observed in her responses to the LQs. She rated almost all of them as being perfectly acceptable; only LQ7 received a rating of not acceptable. This sentence contains the word blend *irregardless*, combining *regardless* and *irrespective* – a form which sometimes elicits a strong reaction to its “non-word status”. This sentence is the only one that contains a non-word, suggesting that this speaker is accepting of manipulating and playing with language in novel and innovative ways, but only with ‘conventionalized’ words, or words already accepted in language. Thus, the playful quality of this speaker is guided by grammatical ‘rules’ of the language and the conventions of others.

3.2.3. Speaker 14024

The next three speakers have been chosen to illustrate that some speakers tend to rely on specific variational strategies in their headlines. These speakers all show moderate amounts of variation, with the majority of variants demonstrating a consistent type. Speaker 14024 modified approximately half of the idioms (i.e. 36 headlines contained variation), but the majority of these (29 headlines) contained syntactic variation, primarily inflecting the verb for progressive aspect, although occasionally other syntactic alternations were used, see (14).

- (14) a. *Kerr not cutting corners for the launch of his new restaurant!*
 b. *P.E.I. gaining ground in the medical field*
 c. *Ontario nurses chomping at the bit*
 d. *Cape Breton bearing the brunt of the winter storm*
 e. *Shouldn't have bit off more than one can chew*

Using syntactic variation with idioms does not seem very innovative. In fact, idioms altered for the progressive were rated as the most accepted syntactic variant (Gibbs and Nayak, 1989), while verb morphology (e.g. tense, aspect, mood) is the

most flexible element in an idiom (Wulff, 2008). This strategy may therefore seem like a safe way to use idioms.

This speaker indicated that she does not like using idioms nor does she use them very often. She also indicated that she did not know most of the idioms included in this study. Unfamiliarity with the expressions and a preference to not use them may have lead this speaker to minimally vary the idioms. Interestingly, this speaker finds all LQs acceptable. This finding may suggest that she is accepting and flexible with language in general, and does not necessarily mind grammatically ‘incorrect’ usage, but tends not to be too daring in her own usage, at least not with expressions that she does not enjoy using.

3.2.4. Speaker 14021

Speaker 14021 also primarily utilizes one variational strategy – the integration of additional information into the idiom. Approximately half of the headlines contained variation, and of these, 16 included modifiers inserted into the idiom. The examples in (15) illustrate the range of modifying information, from adjectives like *tough* (15a), *passionate* (15b), and *symphonic* (15c), to nouns like *meteorite* and *countryside* (15d), and *result* (15e), as well as one instance of an inserted phrase (15f).

- (15) a. *Habitat back to the tough drawing board*
[back to the drawing board]
b. *Dad tells son to keep his passionate nose to the grindstone*
[keep your nose to the grindstone]
c. *Zinman ain't beatin around no symphonic bush*
[beat around the bush]
d. *Beech set on finding meteorite needle in the countryside haystack*
[a needle in a haystack]
e. *The Chinese let the result cat out of the bag*
[let the cat out of the bag]
f. *Guild has her fingers in every sort of project pie there is*
[have your fingers in every pie]

This speaker indicated that he knew half of the expressions, but generally does not use idioms very often in his own speech, nor does he really like using idioms. This lower usage, but general familiarity, may make him more comfortable modifying the idioms with additional information, as opposed to altering the verb like the previous speaker. This strategy is quite common (cf. Gibbs and Nayak, 1989; Schröder, 2013), nevertheless the ability to integrate contextually descriptive elements, like *symphonic* or *meteorite*, is still creative.

This speaker's responses to the LQs are comparable to Speaker 14037 – all sentences are rated as perfectly acceptable, except for LQ7, which received mid-range acceptability. This suggests a similar interpretation – this speaker is generally accepting or ‘flexible’ with language usage, as long as the words are already conventionalized or accepted within society.

3.2.5. Speaker 14014

The final speaker uses variation in the majority of headlines (45 headlines contain variation), with the bulk of these containing some degree of allusion (28 instances). He tends to utilize a partial form of the expression to allude to the idiomatic meaning, shown in (16a–16e), but in some cases, alludes to the idiomatic meaning with no words from the idiom itself, see (16f).

- (16) a. *Rotten Grapevine Fingered as Source of Riot*
[hear something through the grapevine]
b. *No Bushes Stand in Zinman's Way* [beat around the bush]
c. *Coward Proves to be Anything But as he Bites Hands* [bite the hand that feeds]
d. *Chinese Officials Leave Ballots after Releasing Cat*
[let the cat out of the bag]
e. *Recent Resident Counts Himself Lucky to Still Have Nose*
[keep your nose to the grindstone]
f. *Kerr's Restaurant Definitely Not Rounded* [cut corners]

These examples show exceptional creativity, especially (16f), where the idiomatic meaning is alluded to through the use of a truncated form, single word, or no formal words of the idiom. Remarkably, the words included in the allusion do not have to be salient words, like *grapevine*, but can also be non-salient words like *nose*. Some cases likely require further clarification to understand the connection between the headline and the idiom (i.e. knowledge of the newspaper snippet); however, these examples still show how extremely clever some speakers are when using idioms. The rampant creativity and playful behaviour demonstrated by this speaker may be explained by the fact that he indicated knowing all idioms except one, and had high ratings of idiom usage and enjoyment. The fact that he enjoys using idioms, uses them often, and is familiar with almost all of the expressions, likely contributed to his increased use of variation and his increased use of allusion.

Interestingly, this speaker only rated two sentences as being acceptable: LQ2 and LQ3. This suggests that he has a more formal understanding of what is considered 'acceptable grammar'. Yet he appears very willing to alter idioms to the point of unrecognizability. Perhaps these are not mutually exclusive – one can be innovative and imaginative with language, as long as 'proper' grammar is used.

4. Discussion

This study explored how creative speakers can be with idioms when prompted. The results of this study are in line with previous corpus-based research and reveal that the range of idiomatic variation is quite extensive; for example, participants frequently produced syntactic variation (e.g. *the law is taken out of Harding's hands*), adjectival modification (e.g. *gains medical ground*), and partial forms (e.g. *media mountain more of a molehill*). It is worth noting, too, that our procedure for eliciting idiom variants has led to the discovery of variants that would be quite difficult to locate and retrieve through corpus searches, such as

partial forms or lexical variants containing non-salient words (e.g. *cost a limb* or *around the drain*). One would have to know which lexical items can reference an idiom (i.e. *limbs* for *an arm and a leg*), or search for common words in a context window (i.e. any preposition with *drain*), with no guarantee that an idiom variant will be found.

Extremely creative and novel uses were also observed, such as blending two distinct expressions (e.g. *crossing one bridge at a time* [cross that bridge when you come to it & one X at a time]). The existence of formal idiom blends among the results is an exciting discovery. These variants have traditionally been regarded as errors or ‘slips of the tongue’ (Fay, 1982; Cutting and Bock, 1997). Even Langlotz (2006, p. 204), who specifically researched idiomatic creativity, classified formal idiom blends as “non-intentional erroneous variants”. However, the results from this study suggest that while idiom blends are not very frequent, they are not simply errors, but can be one of the most imaginative variants. Idiom blends usually merge two idioms, like *spills of the bag* (*spill the beans* and *let the cat out of the bag*), similar to word blends. But they can also integrate contextual information into the blend, like *uniforms as the new bandwagon* (blending *jump on the bandwagon* and *X is the new black*, while integrating *uniforms*, the topic of the newspaper snippet, into the blend). According to Kemmer (2003), word blends merge both formal properties and concepts, and as evident in this study, the same can be said about idiom blends.

Allusions are another example of speakers’ originality and imagination. Some idioms, like *cost an arm and a leg*, were utilized extensively with allusion, sometimes exceptionally so, where no formal element of the idiom was used. This extreme use of allusion was likely a task effect – in other contexts and situations, alluding to an idiom through other words and no formal element of the idiom, the idiomatic meaning would likely be missed. Nonetheless, extreme allusion beautifully captures how flexible and innovative speakers can be with idioms under the right circumstances.

Subtle forms of creativity are also observed in the headlines. For example, playing on the literal meaning of a word from an idiom (e.g. *Dermatology student risks skin by keeping his nose to the grindstone*), playing on contextual elements from the newspaper snippet (e.g. *Klutts Promises Not to Live up to His Name Given How Full his Plate is*), and even the integration of additional concepts (e.g. *Full Serge Ahead*).

Looking specifically at individual idioms, we observed that idioms are utilized with different patterns of variation. Some idioms are utilized with few variants (e.g. *call the shots*), whereas others show a range of possible variants (e.g. *jump on the bandwagon*). More importantly, idioms show patterns as to how they are varied. Speakers prefer to preserve the salient word *bandwagon* if they truncate the expression *jump on the bandwagon* or alter it with adjectival modification. Compare this to *it’s not over until the fat lady sings*, which has multiple salient words: *fat*, *lady*, and *sing*. This idiom is either modified using a variety of partial forms, utilizing one or more of the salient words, or alters an element within the

idiom to a new concept. Finally, some idioms like *down the drain* predominantly occur in their canonical form with manner-rich verbs, but occasionally the preposition is altered for further elaboration. These observations illustrate that idioms are utilized and modified differently, likely influenced by their different syntactic structures.

We also looked specifically at individual speakers, who vary as to how creative they are willing to be with idioms. Some speakers alter idioms in various ways showing a playful quality and innovative flexibility with the language (Speaker 14037), while others seldom use variation and prefer to use expressions in their accepted and recognizable forms (Speaker 14020). Most participants, when they did vary the expressions, seemed to show a preference for one or a few types of variation. Speaker 14024 preferred syntactic variation, Speaker 14021 often utilized adjectival modification, while Speaker 14014 used partial forms to allude to the idiom. These results illustrate the individuality with which participants use idioms.

We asked participants about their knowledge and usage of idioms, as well as their acceptability of prescriptively ‘incorrect’ sentences (LQs), to explore whether these influenced how they altered idioms. Some generalizations can be made. For example, the more familiar the idiom (i.e. the more participants indicated that they knew the expression), the more they varied the expression in the headlines. The effects of idiom familiarity have been observed elsewhere (cf. McGlone et al., 1994; Titone and Connine, 1994), suggesting that knowledge of an idiom plays a fundamental role in idiom usage. In addition, the more the participants used idioms, and enjoyed using idioms, the more they varied the expressions in their headlines. This makes sense from a usage-based perspective – the more one enjoys using idioms, the more they will use them. And the more they use them, the more experience they have with them. The more experience they have, the more flexible they may become.

Looking at the headlines produced by individual speakers and for specific idioms nicely demonstrates that while speakers certainly differ in how and to what degree they prefer to alter idioms, they still show consistency in the way they vary certain idioms. Thus, the way individual speakers approached this task, shows their individual differences (cf. Dąbrowska, 2012, 2015), but their shared experiences with idioms led to similarities in how they modified them and resulted in a uniformity across speakers with specific idioms (cf. Divjak et al., 2016). It is important to include instances of individual differences in the discussion of language and not only focus on findings from aggregated data (Dąbrowska, 2016). We recognize that the latter is important for understanding generalizations about language, but we need to complement aggregated data by exploring individual usage to understand how one’s experience with language and even one’s attitudes towards language might influence their usage of language.

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Appendix

Table 1.
Speaker responses to additional experiment questions.

ID	Gender	Knowledge	Usage	Enjoy	LQ1	LQ2	LQ3	LQ4	LQ5	LQ6	LQ7
14014	m	59	5	6	2	6	7	3	2	1	1
14020	f	0	2	5	1	7	7	1	7	7	7
14021	m	30	2	3	7	7	7	7	7	7	4
14024	f	5	1	1	6	7	7	7	7	7	7
14037	f	46	5	6	7	7	7	7	7	7	2

Note. 'Knowledge' refers to how many idioms the speaker indicated they knew (out of 60). 'Usage' refers to how often the speaker uses idioms; 'Enjoy' refers to whether or not they enjoy using idioms in general; and each LQ (Language Question) is their response to each prescriptively incorrect sentence. These questions were rated using a Likert scale: 1 'lowest' to 7 'highest'.

LQ1: The only option the school board has is to lay off a large amount of people; **LQ2:** Slot machines are thought to be more addicting than table games; **LQ3:** The document had to be signed by both Susan and I; **LQ4:** While cleaning the kitchen, Sally looked up and saw a spider on the roof; **LQ5:** I thought it could've went either way; **LQ6:** She could care less what he had to say about it; **LQ7:** You have to balance your life, irregardless of what anybody thinks.

EMERGENCE AND DEVELOPMENT OF WH-QUESTIONS IN JORDANIAN ARABIC-SPEAKING CHILDREN: A LONGITUDINAL STUDY

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Abstract. The main objective of this paper is to examine the emergence and development of wh-questions in two Jordanian Arabic-speaking pre-school children. Specifically, it investigates (1) how these children interact with wh-questions; which questions they find easier and thus earlier to acquire and why, and finally (2) what symptoms one can identify as characteristics of the intra-stage development of such questions. The data of the study are a subset of a large body of a longitudinal audio-taped corpus collected by the principal author, who happened to be a psycholinguist and the children's grandparent, on the basis of three-day, weekly sessions over a period of five years. The recordings were made in the family home environment during routine activities, mainly after dinner, and mostly in the presence of family members. The findings reveal the acquisition of wh-questions is a complex process that supports a general cognitive maturity model interpretation. The acquisition of wh-questions that ask about concrete objects/entities, that is *mi:n* 'who', *we:n* 'where' and *ʔe:ʃʃu:* 'what' are produced and developed at an earlier stage than those questions which ask about abstract objects/entities, that is *le:f* 'why', *ke:f* 'how', *gadde:ʃʃkam* 'how many/much' and *wakte:ʃʃe:mta* 'when'. However, the subjects do not find the questions within each of the two sets equally easy/difficult. Put differently, in the first category, *mi:n* ranked first on the easy/difficult scale while *ʔe:ʃʃu:* ranked third. Moreover, the order of acquisition in the second category suggested that it is easier for Jordanian Arabic-speaking children to ask about reason (*le:f-why*) than about time (*wakte:ʃʃ-when*) and that to ask about quantity (*gadde:ʃʃkam-how many/much*) is more difficult than to ask about manner (*ke:f-how*). The study argues that the emergence of wh-words does not mark but the onset of an accumulative process which includes a host of symptoms on the way to adult-like acquisition.

Keywords: *acquisition, Arabic, longitudinal, wh-questions.*

Гамдан Джихад, Гамдан Хаді. Поява й перебіг опанування спеціальних питань йорданськими арабомовними дітьми: лонгітюдне дослідження.

Анотація. Головна мета статті – вивчити виникнення та вікові особливості процесу опанування спеціальних питань двома йорданськими арабомовними дітьми дошкільного віку. Зокрема, автори досліджують (1) як ці діти взаємодіють зі спеціальними питаннями; які питання їм легше зрозуміти, а, отже, якими питаннями їм легше оволодіти і чому, і

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нарешті (2) які симптоми можна визначити як характеристики внутрішньоетапного розвитку таких питань. Дані цього дослідження є частиною великого корпусу аудіозаписів, зібраного першим співавтором, який є психолінгвістом, а також дідусем дітей, на основі триденних щотижневих сеансів протягом п'ятирічного часу. Записи зроблені в родинному колі під час звичайних занять, переважно після обіду, і переважно у присутності членів родини. Результати дослідження засвідчили, що опанування спеціальних питань – це складний процес, який підтримує загальну інтерпретацію моделі когнітивної зрілості. Далі, висновки показують, що придбання спеціальних питань, що задають конкретні об'єкти / сутності, тобто *mi:n* 'хто', *we:n* 'де' та *ʔe:fʃu:* 'що' представлені і розвинені у більш ранньому етапі, ніж ті питання, які задають про абстрактні об'єкти/сутності, тобто *le:f* 'чому', *ke:f* 'як', *gadde:f/kam* 'скільки' та *wakte:f/ʔe:mta* 'коли'. Однак випробувані не знаходять запитань у кожному з цих двох наборів однаково легкими / складними. Інакше кажучи, у першій категорії *mi:n* посідає перше місце за шкалою легких / складних, тоді як *ʔe:fʃu:* посідає третє місце. Більше того, порядок здобуття в другій категорії передбачав, що для йорданських арабомовних дітей легше запитувати про причину (*le:f-чому*), ніж про час (*wakte:f-коли*), а про кількість (*gadde:f/kam-скільки*) складніше, ніж запитати про спосіб (*ke:f-як*). Дослідження доводить, що поява спеціальних слів означає не ознаку, а початок накопичувального процесу, який включає безліч симптомів на шляху до оволодіння, подібного до дорослого.

Ключові слова: опанування, арабська мова, лонгітюдне дослідження, спеціальні питання.

1. Introduction

Asking and answering questions is an important feature of child language, particularly 3–6 year olds. Apparently, children use them as a discovery tool to learn about or to show knowledge of their immediate environment, including, objects, people and events. This paper reports on the findings of a qualitative longitudinal study on the acquisition of wh-questions by two Jordanian Arabic-speaking children. It traces the emergence and development of each question, showing the age of intra-development within each question exemplar as well as the age of inter-development from one question type to another. Thus, it does not highlight frequencies but focuses on the transitional qualitative changes and the age associated with the onset and progress of each along the acquisition path.

Arabic, in its various varieties, is spoken by approximately 300 million people; however, its acquisition, particularly by native speakers, has not been well researched. Though still limited in scope and number, the acquisition of phonology and morphology has attracted more research attention than other aspects of language (Abulhaija, 1989; Abdo & Abdo, 1991; Amayreh & Dyson, 1998; Ravid & Farah, 1999; Hamdan & Amayreh, 2007; Kalalkeh, 2018; Ghodayyah, 2019).

The acquisition of wh-questions in many languages, other than Arabic, has been the subject of many studies over the past three decades. It has been perceived as a complex process that involves a host of considerations, mainly linguistic and cognitive. On the linguistic level, the child cannot ask questions before acquiring the concepts underlying their answers, e. g., time, reason, quantity, etc. Nor can this be possible unless the question words needed for asking have already been encoded, rightly or wrongly, in one's lexicon. On the cognitive level, question words which may not appear significantly different in terms of concreteness/abstraction and lexical complexity (length and syllable structure) are

more likely to be associated with varying complexity levels of cognition. Thus, it is quite reasonable to verify whether concrete concepts and question words associated with them are more likely to be acquired earlier and easier than abstract ones. Further, if the complete acquisition of wh-questions appears to be a complex process that extends over a number of years, can we identify a set of symptoms that characterize the intra-development of each wh-question?

Cairns & Hsu (1978) indicated that subjects aged 3;0 to 5;6 years did not find wh-questions equally difficult. It was argued that the variable difficulty of the various forms of *who* questions "supports a parallel model of information retrieval and processing during discourse" (p. 477). In contrast, the variable difficulty of *why* and *when* questions was ascribed to progression in the children's ability to encode the concepts of causality and time linguistically. Further, the study reported that the subjects' interaction with *how* questions was found to be difficult because these questions "involve a number of unrelated skills" (p. 477).

Bloom, Markin and Wooten (1982) were not convinced that the acquisitional sequence of wh-questions in children is solely dependent on cognitive development. They argued that an integrative model of acquisition which hinges on both linguistic and nonlinguistic cognitive factors would provide a more feasible interpretation of this sequence.

Radford (1990) argued that English-speaking children comprehended subject questions before object questions. Further, he added that children sometimes misinterpreted object questions, e.g., *who did you play with?* as subject questions, and hence their answer *Me*. Stromswold (1995) suggested that this type of comprehension-based evidence needs further verification (p. 16). On examining the results of Cairns and Hsu (1978) and Ervin-Tripp (1970), among others, Stromswold (1995, p.16) posited that "previous acquisitional studies do not uniformly suggest that children acquire subject matrix questions before object questions".

Li, Tse, Wong, Wong & Leung (2013) investigated the acquisition of interrogative forms and functions in Cantonese-speaking children beyond 3 years of age. Cantonese has six categories of questions. The first three are formed by adding simple interrogative words or rising intonation while the latter three involve the use of multiple question words, e.g. *where and when ...*, and more complex sentence structures. The researchers expected the latter three types to develop beyond age 3 (p. 170). The data were given by 492 Cantonese-speaking children belonging to three age groups (3;0, 4;0 and 5;0). All the six categories of interrogatives were produced by the three groups of children. Likewise, the children produced a total of 13 types of interrogative function that could classify into the three major categories: (1) information-seeking (request for information, RFI), (2) action-beseeching (request for action, RFA), and (3) non-information-seeking.

Specifically, the study reported here seeks answers to the following questions:

1. How do Jordanian Arabic-speaking pre-school children interact with wh-questions? Which questions do they find easier and earlier to acquire? Why?

2. What are the symptoms that characterize the intra-stage development of such questions?

2. Method

Subjects

Two normally developing male children named Jihad and Mohammad provided the data of the study. Jihad was born on 21 July 2002 and Mohammad on 19 October 2003. The children's nicknames, Juje and Ham will be used. In actuality, they were two siblings brought up in a middle class Ammani family whose native language is Jordanian Spoken Arabic (JSA). Further, it happened that Juje and Ham were the grandsons of the principal researcher and they lived with their parents and grandparents in the same family house. Two dialects, urban (by the children's mother) and rural (by all family members), were used at home; this explains why some sounds, particularly the velar voiced stop /g/ sometimes surfaced as a glottal stop /ʔ/ in their speech. The subjects were not exposed to any other language or regional Arabic variety before schooling, i.e., the age of 6 years when the data collection came to an end.

Data collection

The wh-question data of this study were a subset of a large body of longitudinal audio-taped corpus collected from the subjects by their grandparent, the principal author, who happened to be a psycholinguist on the basis of three-day, one-hour sessions per week over a period of five years. The recordings were made in the family home environment during routine activities, mainly after dinner, and mostly in the presence of family members.

For the purpose of this study, the whole set of data were carefully examined with a view to identifying all utterances that relate to subjects' actual production of, or response to wh-questions. This subset of data was extracted and saved in a separate file. The data were transcribed independently by the principal researcher and two research assistants with full observation and documentation of the date each wh-question was produced by each child. To examine transcription reliability, 20 percent of the sample was selected from the independently transcribed versions and examined against the audio-taped records. Most disagreements were resolved the first or second time the text was replayed. Transcription agreement between the three transcribers was 0.953 percent. The parents' informed consent to allow the collection of data from their children was obtained before the onset of the research.

2.1. Structure of wh-questions in Jordanian Spoken Arabic

First, it is important to observe that Arabic wh-interrogative pronouns serve the same discourse functions conveyed by their relevant English wh-question words. In terms of syntactic position, they generally preface questions whose main purpose is to seek information that goes beyond 'yes' or 'no' responses on issues related to things (physical or abstract), time, place, reason, manner, possession, quantity, etc. JSA tends to put interrogative words first in wh-interrogative

constructions. Although JSA allows for both VSO and SVO word order, it is believed that SVO is its more dominant and preferred order in declarative sentences among Jordanians, focus aside (Al-Momani and Al-Saidat, 2010). JSA which is spoken natively by around seven million speakers in Jordan is intelligible to a large number of speakers of Arabic, particularly in the Levant, Egypt, Iraq, Yemen and the Gulf.

JSA has eight *wh*-forms, viz., two nominals (*mi:n* 'who/whom' and *ʔe:f/fu:* 'what'), two adjectives (*ʔaj* 'which' and *kam* 'how many') and four adjuncts (*we:n* 'where' *wakte:f/ ʔe:mta:.*) 'when', *ke:f* 'how' and *le:f* 'why'). Below are illustrative examples of JSA *wh*-questions words in these three main categories. All exemplars appear in clause-initial position, i.e. the neutral and canonical word order marked with a falling intonation contour. Three levels of presentation will be used if necessary; otherwise, transliteration and translation will be displayed.

Nominal wh-words

These words can fill both subject and object positions. Further, they generally ask about persons and things or objects. Each question is followed by its answer.

Subject position

- (1) a. *salim saʔal salma.*
 'Salim asked Salma.'
 b. *mi:n saʔal salma? salim.*
 'Who asked Salma?' 'Salim.'
- (2) a. *l-ba:b ʔinfataħ.*
 the-door opened-passive
 'The door opened.'
 b. *ʔe:f/fu: ʔinfataħ? l-ba:b*
 what opened-passive the-door
 'What opened?' 'The door.'

Object position

- (3) a. *salim saʔal salma.*
 'Salim asked Salma.'
 b. *mi:n sa:lim saʔal? salma.*
 who(m) salim asked? salma
 'Who(m) did Salim ask?' 'Salma.'
- (4) a. *salim fara kursi.*
 'Salim bought a chair.'
 b. *ʔe:f fara sa:lim? kursii.*
 what bought salim? a chair
 'What did Salim buy?' 'A chair.'

Adjectival wh-words

These include *ʔaj* + N, e.g., *ʔaj findʒa:n* 'which cup' and *fu: + N*, e.g. *fu: l-lo:n* 'what colour'.

- (5) a. *fare:t l-findza:n li-kbi:r.*
 I bought the-cup the-large
 'I bought the large cup.'
 b. *ʔaj findza:n fare:t? li-kbi:r*
 Which cup you bought?' The large.
 'Which cup did you buy?' 'The large one.'
- (6) a. *lo:n gami:si ʔazrag.*
 colour shirt-my blue.
 'The colour of my shirt is blue'.
 b. *fu: lo:n gami:sak? ʔazrag.*
 what colour shirt-your? blue
 'What colour is your shirt?' 'Blue.'

Adjunct wh-words

These include *we:n* 'where' for place, *wakte:f* (= *ʔe:mta*) 'when' for time, *le:f* 'why' for reason and *ke:f* 'how' for manner.

Place adjunct

There is only one place adjunct, namely, *we:n* 'where'.

- (7) a. *mu:sa laga likta:b fi l-maktabi.*
 'Musa found the book in the library.'
 b. *we:n mu:sa laga likta:b? fi l-maktabi.*
 where musa found the-book? in the-library
 'Where did Mousa find the book?' 'In the library.'

Time adjunct

The time adjunct in JSA is *wakte:f* 'when' or its synonym *ʔe:mta*.

- (8) a. *mu:sa firib il-ħali:b gabil fwajji.*
 mu:sa drank the-milk before a while
 'Musa drank the milk a while ago.'
 b. *wakte:f mu:sa firib l-ħali:b? gabil fwajji.*
 when musa drank the-milk? before a while
 'When did Musa drink the milk?' 'A while ago.'

Reason adjunct

le:f 'why' is the only reason adjunct in JSA.

- (9) a. *sa:lim burgus laʔinnu mabsu:t.*
 salim dancing because he happy
 'Salim is dancing because he is happy.'
 b. *le:f sa:lim burgus? laʔinnu mabsu:t.*
 why salim dancing? because he happy
 'Why is Salim dancing?' 'Because he is happy.'

Manner adjunct: ke:f 'how'

- (10) a. *sa:lim ʔadza ho:n bi-ssajja:ra.*
 salim came here by-the car

'Salim came here by car.'
b. *ke:fsa:lim ʔadʒa ho:n? bi-ssajja:ra.*
how salim came here? by-the car
'How did Salim come here?' 'By car.'

3. Results and Discussion

As the study is based on two subsets of wh-question data, the first elicited from Juje and the second from Ham, the results pertinent to each subset will be presented and discussed separately before a systematic comparison between the two subsets is provided. The age at which the subject was able to comprehend a particular wh-question before actual production will be reported but the acquisition focus will be placed on the age at which each question form was actually produced. In this context, it is useful to observe that the complete acquisition of each form tends to undergo a number of sub-stages as will be shown in the course of presentation and discussion. Put another way, the emergence of the question or its first occurrence marks the onset of acquisition only. In light of this, a set of symptoms that characterize that characterize the intra-stage development of such questions will be suggested.

Juje's path of acquisition

The analyzed data consisted of 2219 wh-questions which were collected from age 1;4,3 to 6;0. Below is a brief account of Juje's acquisition path of wh-questions.

The acquisition of mi:n 'who' and lami:n 'whose'

The first wh-question attested in Juje's data was *mi:n* 'who'. It appeared in subject position as a one-word question at the age of 1;8, 2 when he responded to a knock on the main door of their flat by his grandmother who was visiting them. In fact, *mi:n* was mispronounced as *ni:m* providing an earlier example of metathesis. In this context, adults tend to use *mi:n* as a single word question or as part of a short question, i.e. *mi:n ʕa lba:b?* 'who's knocking at the door?' At this age, Juje was also able to answer *mi:n* questions that are not specifically used to identify door knockers.

(11) Grandpa: *mi:n maffat_lak?* 'Who combed your hair?'

Juje: *ha:di* 'Hady'.

At 2;1.3, Juje was able to answer prepositional *mi:n* questions, i.e. *maʕ mi:n* 'with whom' as in:

(12) Mom: *maʕ mi:n kunt barra?* 'With whom were you outside?'

Juje: *si:du* 'Grandpa'.

On examining all Juje's *mi:n* questions, none of the question words was found to be in the object position; actually all functioned as subject. However, the question constructions varied from verbless sentences to constructions with intransitive and transitive verbs as in:

- (13) Juje: *mi:n maratak si:du* 'Who's your wife, grandpa?' [Verbless at 2;9,20]
 Grandpa: *?illi ga:˘di* 'The one who is sitting'.
 Juje: *la? ?illi najmi* 'No, the one who is sleeping'.
- (14) Juje: *mi:n tabbil* 'Who's knocking?' [Intransitive at 2;2,15]
 Mom: *si:du* 'Grandpa'.
- (15) Juje: *mi:n tafa iddaw* 'Who turned off the light?' [Transitive at 2;9,11]
 Grandpa: *?ana. ?idwi:* 'It's me. Turn it on'.
 Juje: *dawe:tu. xalli:ni ?al˘ab* 'I turned it on. Let me play'.

The absence of object *mi:n* questions may be ascribed to the more complexity of this construction compared with their subject counterparts. The object form, unlike the subject *mi:n*, requires, inter alia, the obligatory use of the relative pronoun *?illi* 'that' and the retention of reflexive relative pronoun as in (15).

- (16) *mi:n (?illi) fa:f salma? sa:lim.* [Subject]
 who that saw salma? Sa:lim.
 'Who is the one who saw Salma?' 'Salim'.
- (17) *mi:n ?illi fa:fha sa:lim? salma.* [Object]
 who that saw-her salim? salma.
 'Who is the one that Salim saw?' 'Salma'.

At 2;4,25, Juje produced the prepositional question *lami:n*, literally 'to whom' which is equivalent to 'whose' in English as in:

- (18) Juje: [looking at a shirt held by his grandma] *lami:n il-?ami:s* 'Whose shirt is this?'
 Grandma: *la ha:di* 'Hady's'.

It is worth noting that *lami:n* in this sense can be viewed as a separate wh-word that indicates possession. An important feature of this question word is that it is always followed by a definitive noun, e.g., a noun preceded by the definite article *?il* 'the' as in *lami:n ?il-galam* 'whose pen is this?' Further, it is different from the literal combination of the preposition *la* 'to' and *mi:n* 'who' which exemplifies pied-piping as in *lami:n dzibit likta:b* 'To whom did you bring the book?' A possible answer to this question is *la sa:lim* 'to Salim'.

The acquisition of we:n 'where'

Juje showed comprehension that *we:n* 'where' questions ask about place or location. It appeared that the earliest forms of *we:n* questions Juje was introduced to were in the context of his mom's testing his knowledge of body parts, belongings and close family members. The analysis of data revealed that at the age of 1;4,14, Juje was able to respond correctly to such questions, by pointing, touching, etc., as in:

- (19) *we:n da:nak/ lu˘ibtak/ ma:ma?* 'Where's your ear/toy/mom?'

Body parts included, inter alia, ear, nose, mouth, hair, teeth, hand, finger, head, back and leg. Belongings and objects in the immediate environment included

socks, shirt, trousers, pillow, bed and toy car. Family members included dad, mom, brother and grandparents.

The data showed that Juje was able to produce and respond correctly to other *we:n* questions when he was around 1;10 as in:

(20) Juje: *we:n ba:ba?* 'Where's dad?'

Mom: *fi-ffukul* 'At work'.

Mom: *tajjib ?inta we:n kunit?* 'Ok! Where were you?'

Juje: *balla* [for barra] 'Outside'.

Sometimes, his answer was a whole sentence:

(21) Grandpa: *we:n il-galam?* 'Where is the pen?'

Juje: *zatte:tu bawwa* [for barra] 'I threw it outside.' [1;11,26]

Further, Juje was able to answer *we:n* questions which included a specific time reference:

(22) Grandpa: *we:n biddak tru:h bukra?* 'Where do you want to go tomorrow?'

Juje: *jawa* 'To Yara'. [1;11,26]

At a later stage, at the age of 2;3,6, he was able to answer prepositional *we:n* questions as in:

(23) Mom: *mi we:n bi:dzi iffita* 'Where does rain come from?'

Juje: *sama* 'Sky'. [Note the absence of the preposition *min* 'from' as Juje was in the telegraphic stage].

While the structural complexity of wh-question constructions tends to increase over time, a simple construction, sometimes the wh-word alone or combined with a noun or a pronoun, may also occur rather late on the path of acquisition as in:

(24) Juje (to grandpa while watching a man shooting with a gun on TV): *?inta ʿindak baru:di* 'Do you have a gun?' [3;8,13]

Grandpa: *?a:* 'Yes'

Juje: *we:nha* 'Where is it?'

Grandpa: *biddi:f ?agullak* 'I don't want to tell you'.

Here, the wh-question is part of a rich context which started with a yes/no question by the child. The wh-question unfolded as a follow up, and thus the simple and short construction.

Juje was also able to use *we:n* in indirect questions, a sign of developing an adult-like understanding and use of the function of this question word whether to ask for information or report it.

(25) Juje (to grandpa): *haj ?alam ?ahki:lak we:n la?e:tu* 'Here's a pen. Shall I tell you where I found it?' [4;9,23]

Grandpa: *ʔa*: 'Yes'.

Although Jordanian children are not formally introduced to Modern Standard Arabic (MSA) before schooling, Juje was able to perceive that *we:n* and its MSA *ʔajna* are free variants that ask about place.

(26) Juje: *ʔajna ʔanta muxtafi ja: si:du* 'Where are you hiding, grandpa?' [4;10]

Grandpa: *fil- h̄adi:qa* 'In the garden'. [Answer in MSA]

Juje's ability to use dialectal and standard forms may be taken as an indication of mastery of this question form.

The acquisition of ʔe:f/fu: 'what'

In JSA, *ʔe:f* 'what' has another dialectal variant, viz., *fu:*. Juje was able to answer *ʔe:f/fu:* questions in object position where the answer refers to a thing/object around 1;6 as in:

(27) Grandpa: *ʔe:f ʔakalit?* 'What did you eat?'

Juje: *ta:ta*. 'Potato'.

At 2;0,20, he was able to report actions in response to *fu:* questions as in:

(28) Grandpa: *fu: bisawwi il-walad?* 'What's the boy doing?'

Juje: *ʔukkud*. 'Running.'

Mom: *fu: bitsawwi?* 'What are you doing?'

Juje: *bamsaḥ itta:wli*. 'Cleaning the table'.

The first production of *ʔe:f* attested in the data was at the age of 2;2 when he was stunned by a loud sound on television.

(29) Juje: *ʔe:f ʔisso:t?* 'What's this sound?'

Grandpa: *min il- dziha:z*. 'From the device'.

Around three months later, Juje started to use *ʔe:f* with colour terms while his uncle was fixing the gas bottle.

(30) Juje: *ʔe:f lo:nha* [the bottle]? 'What colour is it?' [2;6,21]

Uncle: *ʔazrag*. 'Blue'.

Shortly afterward, Juje used *ʔe:f* or *fu:* to convey pragmatic functions other than mere asking for information, e.g. to show unease with something, seek clarifications a multi-purpose question, whether the focus is an object, colour, smell, clarification, protest, service, comment, etc.

(31) Juje (showing unease with a bad smell): *fu: ri:h̄a?* 'What's this bad smell?' [2;8,4]

Grandpa: *sama:d*. 'Fertilizer'.

(32) [Juje's father was saying something which Juje didn't understand and thus asked for clarification].

Juje: *ʔe:f ʔiḥki?* 'What did you say?' [2;8,9]

Dad: *halla bagullak*. 'I'll tell you right now'.

(33) Mom: *bala:f til^cab fi-ttra:b*. 'Stop playing with soil'.

Juje (protesting): *fu: daxlik ?inti?* 'What have you to do with this?' [This *fu:* is similar to *le:f*. Compare: *le:f btiddaxli?* 'Why are you interfering?'] [3;0,27]

(34) Juje (commenting on an English-speaking presenter on TV): *fu: bihki ha:ð ?izzalami?* 'What language does this man speak?' [4;2,13]

Grandpa: *?ingli:zi*. 'English'.

Juje also used *fu:* as part of a monologue/fake dialogue in which he imagined himself conversing with Mom who was about to go shopping.

(35) Juje impersonating Mom (as if offering a service)

Mpm: *fu: ?adz:blak ma^ci dzu:dzu?* 'What do you want me to bring you Juje?'

Juje: *ilki*. 'Gum'. [3;5,19]

Signs of complete mastery of *?e://fu:* questions might have shown up in Juje's use of the idiomatic expression *fu: ra:jak* 'what about', after turning five, to make suggestions or seek approval as in:

(36) Juje: *fu: ra:jak ja Ham nil^cab ha:ji illu^cbi?* 'What about playing this game Ham?' [5;2]

Ham: *e:f* 'What?'

Juje: *niftah ridzle:na he:k winharrikhum*. 'Open our legs this way and move them'.

Ham: *ma:fi*. 'Okay'.

The acquisition of le:f 'why'

The first adjunct *le:f* 'why' question was attested in Juje's data at the age of 2;4,10 when he saw his uncle Wael upset and sitting alone. Juje commented on his uncle's status then asked about the reason.

(37) Juje: *wa: ?il za^cla:n. le:f za^cla:n?* 'Wael is upset'. 'Why are you upset?'

Wael: *ru:h fik anni* 'Leave me and go away'.

Another *le:f* question using the same adjective *za^cla:n* 'upset' appeared a month later.

(38) Juje (while Ham was crying): *le:f hammu:di za^cla:n* 'Why is Ham upset?' [2;5,17]

Grandpa: *?is?alu*. 'Ask him'.

Juje: *hammu:di ... le:f bitsarrix?* 'Hammoud .. Why are you crying?'

Ham: *mif fu^blak*. 'None of your business.'

A third transitional *le:f* question attested in Juje's data was around the age of 2;6,10 when his uncle threw away Juje's toy. It seems that his uncle's behaviour was a reaction to Juje's noisy play around as revealed in the following exchanges:

(39) Uncle: *xalaş dzu:dzu. bikaffi li^oib*. 'Juje! Stop playing. Enough is enough' (and he threw away Juje's toy truck).

Juje (in an angry tone): *'le:f tzittu* 'Why did you throw it away?'

Uncle: *he:k*. 'Just like that'.

Juje: (burst into crying)

Apparently, the main function of Juje's question was to protest against his uncle's act rather than to seek its reason.

A further example was attested in another context at the age of 2;7. His mother was dressed and about to leave. He was watching, then he asked her a *we:n* question whose answer invited a *le:f* question.

(40) Juje: *we:n biddik tru:hi?* 'Where are you going?'

Mom: *°a-lbank*. 'To the bank'.

Juje: *le:f* 'Why?'

Mom: *°a fa:n ʔadzi:b masa:ri*. 'To get money'.

It seems that Juje at that point in time knew the word *bank* but he did not probably know why his mother wanted to go there.

In another context, at the age of 2;7, 10, Juje asked a *le:f* question and suggested an answer in a follow up yes/no question.

(41) Juje (watching his grandpa putting on his jacket): *le:f la:bis dzake:t? la ʔinnak barda:n?* 'Why are you wearing a jacket? Feeling cold?'

Grandpa: *mazbu:t*. 'Yes.'

It seems that Juje was not looking for a genuine reason but trying to confirm a hypothesis.

Although the timeframe of a large number of *le:f* questions was the present moment, Juje sometimes asked about events with a past time reference as in:

(42) Juje (to grandpa): *zama:n ʔinta ma^oallamtif ha:di ya si:du*. 'It has been a long time since you taught Hady'.

Grandpa: *sa^hi:h*. 'Right'.

Juje: *le:f?* 'Why?' [3;7, 11]

Grandpa: *ma^oalabif minni. bas jutlub*. 'He has not approached me. I'll do if he asks'.

As is clear, Juje recalled a past event that had not been repeated for a long time and asked about the reason.

Mostly after turning five, Juje used *le:f* to preface embedded clauses in indirect questions. When faced with a follow up *le:f* question by his mom, Juje provided information that showed his full understanding of the main function of this question type, i.e. to give reason.

(43) Juje: *ma:ma, ʔaḥki:lik le:f inna:s biḥib if-ṣatta?* 'Mom, shall I tell you why people like minced pepper?' [5;6]

Mom: *le:f?* 'Why?'

Juje: *la ʔinha btuktil il-jaraḥi:m* 'Because it kills germs'.

Before closing, one may wish to observe that Juje did not always accept the given answers; in effect, he sometimes showed his unease with some answers.

(44) Juje: *le:f^cammu ha:di ma: bila:^cibna?* 'Why doesn't uncle Hady play with us?' [5;7]

Grandpa: *tfa:ham ma^ca:* . 'Talk to him'.

Juje: *^cammu ha:di ma: bi^crif ittafa:hum.* 'Uncle Hady doesn't leave room for this'.

The acquisition of ke:f 'how'

The first *ke:f* 'how' question which Juje showed understanding of and was able to respond to verbally was the ritualized and routine question *ke:f ḥa:lak* 'how are you' as in:

(45) Grandpa: *ke:f ḥa:lak ja dzu:dʒ?* 'How are you Juje?'

Juje: *ḥamdulla.* 'Thanks to Allah'. [1;11]

At 2;3 Juje was able to engage in short exchanges beyond the ritualized *ke:f*. The example below included both *we:n* and *ke:f*.

(46) Grandpa: *we:n ruḥit ʔinta w ba:ba?* 'Where did you go with your dad?'

Juje: *^ca-ssu:g.* 'To the market'.

Grandpa: *ke:f ka:n il-mifwa:r?* 'How was the trip?'

Juje: *munta:z.* 'Excellent'.

The first *ke:f* question Juje produced was when he was nearing three [2;9,22] and it consisted of the wh-word only. Juje at the time was sharpening a pencil but with obvious difficulty.

(47) Grandpa: *xalli:ni ʔasa:^cdak* 'Let me help you'.

Juje: *ke:f* 'How?'

Grandpa: *ha:t ʔawardzi:k* 'Look! I'll show you'.

Shortly after that, Juje used *ke:f* in a complete sentence while he and his grandpa were picking figs in the garden.

(48) Juje: *ke:f biddi ʔagatti^c ti:n?* 'How can I pick figs?' [3;1]

Grandpa: *halla baḥimlak ^caṣa:n ittu:l.* 'Now I'll carry you up to reach the figs'.

Even more interesting is Juje's use of *ke:f* in fake dialogues imagining himself conversing with the bathroom as well as with his mother, a clear indication that *ke:f* questions became a vibrant component of his semantico-syntactic repertoire.

- (49) Juje [talking to the bathroom]: *ke:fak ja ĥamma:m? ifta?t illak. bididi ?armi:k fil-ĥa:wji*. 'How are you bathroom? I missed you. I want to throw you into the garbage container'. [3;3, 4]
- (50) [Part of a fake/imaginative dialogue with his mom]
 Juje: *ke:f ĥa:lik?* 'How are you?' [3;5,19]
 Mom: (taking her turn) *kwajsi*. 'Fine'.
 Juje was also able to use *ke:f* as a direct object clause, another indication of his understanding that *ke:f* expresses manner.
- (51) Juje: *bas ?akbar lim^calmi bit^dllimni ke:f ?aktub*. 'When I grow up the teacher will teach me how to write'. [3;4, 26]

3.1. The acquisition of *gadde:f/ kam* 'how many/how much'

When Juje was exposed to a *gadde:f* 'how many' question at the age of 2;6,7, he answered using the plural noun of the thing he was asked about (e.g. fingers) but he did not specify number.

- (52) Grandpa: (spreading his right hand before Juje) *?ittalla^c ĥa:n. gadde:f ĥa?o:l [?a?sa:bi^c 'fingers]?* 'Look here. How many are these?'

Juje: *?a?sa:bi^c*. 'Fingers'.

Either Juje did not perceive that *gadde:f* here requires quantity or he confused it with *?e:f* 'what', which requires mere nomination of substance/things. The confusion may be due to phonic prominence as both words have the same ending *e:f*.

Almost a year later, Juje's grandpa asked him to count and the latter counted from 1 to 5. [route memory], then he showed up two fingers to Juje and asked:

- (53) Grandpa: *gadde:f ĥa?o:l?* 'How many are these?'

Juje: *wa:ĥad* 'One'. [3;5]

Grandpa: *la? ?intabih kwajjis*. 'No, look carefully'.

Juje; *kta:r*. 'Too many'.

Grandpa repeated the *gadde:f* question with his three fingers up but received the same answer. This may explain why *gadde:f* is acquired rather late. Below is the first accurate use of *gadde:f* by Juje while communicating with Ham and grandpa. He was 3;8, 26.

- (54) Juje: *ĥam! ?ittalla^c gadde:f^c indi sajjara:t. kti:r*. 'Ham! Look how many cars I have. Too many'.

Juje: (to his grandpa): *fufillak sajjara ze:ti*. 'I found you a dark green car'.

Grandpa: *gadde:f ĥagha* 'How much is it?'

Juje: *ma: ba^crif. il-bajja^c bi^crif gadde:f ĥagha*. 'I don't know. The seller knows how much it is'.

On the second day, the following question was produced.

- (55) Juje: *gadde:f ĥa? liĥra:m?* 'How much is the blanket?' [3;8, 27]

Ham: *sitti* 'Six'.

The acquisition of *wakte:f/?e:mta* 'when'

Juje was able to show understanding of the concept of time when he was around two years. From a cognitive perspective, it is believed that such understanding is a prerequisite for initiating adjunct time questions. The following example illustrates Juje's correct use of time reference, *?imba:riħ* 'yesterday', when his mother offered him *kna:fi* 'type of sweet'.

- (56) Mom: *biddak kna:fi?* 'Do you want kna:fi?' [2;3,24]
Juje: *?akalit na:fi ba:wih [?imba:riħ]*. 'I ate kna:fi **yesterday**'.

At 2;4,2, Juje responded to a time question prefaced with *wakte:f* 'when' asked by his grandpa. He used a time reference in the answer, an indication of his awareness that *wakte:f* asks about time, though the answer is not fully accurate. In the family both *wakte:f* and *?e:mta* were used interchangeably.

- (57) Grandpa: *wakte:f ruħit °a-tta:dʒ?* 'When did you go to Taj?'
Juje: *jo:m* 'Today'. [In fact, it was a few days ago.]

The first occurrence of *wakte:f* questions attested in the data was at the age of 4;6.

- (58) Juje: *si:du zama:m ma ?idʒi:t °inna. wakte:f biddak ti:dʒi?* 'Grandpa, you haven't visited us for a while. When will you be coming?'
Grandpa: *mif°arif. jimkin bukra.* 'I don't know. Maybe tomorrow'.

Apparently, if no earlier examples were produced by the subject but missed by the data collector, then *wakte:f* was probably the last question word Juje had acquired.

The acquisition of *?aj/?anu:* 'which'

The question word *?aj* can be followed by both masculine and feminine nouns, e.g. *?aj walad/binit?* 'which boy/girl?' In contrast, *?anu:* is followed by masculine nouns only, e.g. *?anu: walad?* 'which boy?' while *?ani:* by a feminine noun, e.g. *?ani: binit?* 'which girl?'. An example of an adult *?aj* question is *?aj/?ani: fugga ftare:t?* 'which flat did you buy?' The answer often provides a description or further qualification of the noun, eg. *likbi:ri* 'the big one' or *?illi dʒanb il-madrasi* 'the one near the school'. This question construction emerged rather late in Juje's data.

- (59) Juje (to grandma): *?iza biddi:k tru:ħi °a ra:mi baru:ħ ma°a:ki.* 'If you want to visit Rami, I'll go with you'.
Grandma: *biddi.* 'Yes, I want'.
Juje: *?aj sa:°a?* [literally which hour?] 'What time?' [4;2,20]
Grandma: *bukra l-°asir* 'Tomorrow afternoon'.

- (60) Juje (watching a dog race on TV): *?anu: [kalb] ?illi fa:z?* 'Which dog is the winner?' [5;5,13]

Mom: *halla binsu:f*. 'Now we'll know'.

Ham's path of acquisition

The analyzed data consisted of 2008 wh-questions which were collected from age 1;2,26 to 6;0. Below is a brief account of Ham's acquisition path of wh-questions.

The acquisition of mi:n 'who'

Just like Juje, Ham's first wh-question was *mi:n* 'who' as a one-word question in subject position. It emerged at the age of 1;5,18 exactly in the same context it was produced by Juje, i.e. when he responded to a knock on the main door of their flat. However, it took Ham a few more months to produce *mi:n* in more complex constructions, particularly with the prepositions *la* 'to', *ma^c* 'with' and *min* 'from'.

- (61) Ham: *we:n ra:h ba:ba?* 'Where did dad go?'
 Grandpa: *ra:h ?idzi:b laban*. 'He went to bring yogurt'.
 Ham: *la mi:n?* 'To whom?' [2;1,2]
 Grandpa: *?ilak*. 'To you'.
- (62) Ham (to grandpa): *ma^c mi:n ?ihiti [?ihki]?* 'With whom are you speaking?' [2;5,15]
 Grandpa: *ma^c ?abu ?ija:d*. 'With Abu Iyad'.
 Ham: *mi:n ?abu ?ija:d?* 'Who's Abu Iyad?'
 Grandpa: *sahbi*. 'My friend'.
- (63) Ham: *ha:j hadijji. ?a?ullak min mi:n?* 'This is a gift. Shall I tell you from whom I got it?; [4;1,29]
 Grandpa: *?a:*. 'Yes'.
 Ham: *min ?il-miss*. 'From the teacher'.

On examining Ham's *mi:n* questions, one finds that the overwhelming majority of the question words functioned as subject or part of a prepositional phrase; only an insignificant minority functioned as object/object complement as in:

- (64) (Grandpa was in the bathroom and Ham's footsteps could be heard).
 Grandpa: *mi:n ha:ða illi dza:j?* 'Who is there coming?'
 Ham: *hammu:di, mi:n fakkartni?* 'Ham. Who did you think I was?' [4;3,26]
 Grandpa: *fakkartak ?arnab*. 'I thought you were a rabbit'.

The first prepositional question *lami:n*, 'whose', an independent question word was attested in Ham's speech shortly after he turned two.

- (65) Ham: *lami:n ha:j [ilbit bo:dra]?* 'Whose powder can is this?' [2;1,18]
 Grandpa: *ma ba^crif*. 'I don't know'.

The acquisition of we:n 'where'

Ham was able to understand and respond to *we:n* 'where' questions when he was around a year and a half. Just like Juje, he demonstrated ability to identify his main body parts (e.g. ear, head, hand), belongings (e.g. shirt, toy, socks) and close family members (e.g. dad, mom, grandma) when asked to do so. It seems that this type of question-answer exercise is a common Jordanian and probably Arab conversational practice which, as it happened, showed up here.

- (66) Grandpa: *we:n dzu:dʒ?* 'Where is Juje?'
Ham: *o:n [ho:n]*. 'Here]. *we:n ba:aba?* 'Where's dad?' [1;7,16]
Grandpa: *fī-ʃʃuʃul*. 'At work'.

A few months later, he was able to respond to and produce other *we:n* questions, including the use of *we:n* in final position, when he was between 2;0 and 2;6 as in:

- (67) Ham: *we:n wayih [rayih]?* 'Where are you going?' [2;1,20]
Grandpa: *?adzi:b sama:d*. 'To bring a fertilizer'.
(68) Ham (to grandpa): *?inta tunt [kunt] we:n?* 'Where were you?'
Grandpa: *fil-ħamma:m*. 'In the bathroom'. [2;6,15]

Prepositional *we:n* questions which are structurally and cognitively more complex than their plain counterparts were attested in Ham's data when he turned three years and eight months.

- (69) Ham: *ha:j ?il-barra:ʒji min we:n faritu:ha?* 'Where did you buy this sharpener from?' [3;8,1]
Grandpa: *min ?issu:g*. 'From the market'.
Just like Juje, Ham used *we:n* in indirect questions.
(70) Ham: *?ana ba^crif **we:n ra:h ba:ba***. 'I know where dad went'. [3;6,13]
Grandpa: *we:n?* 'Where?'
Ham: *ra:h ʒiftri sajjara*. 'He went to buy a car'.

At a later stage, Ham sometimes used *we:n* questions to confirm a hypothesis rather than to seek new information about location. This was usually done through a follow-up yes/no question.

- (71) Ham: *we:n ?il-kanabaja:t? wadde:thum ^cal be:t lidʒdi:d?* 'Where are the couches? Did you take them to the new flat?' [4;6,18]
Grandpa: *?a:*. 'Yes'.

Probably as a sign of mastery of a certain wh-question is its use with other wh-questions in the same exchange. Below are two examples of Ham's use of *we:n* followed by *min ʔaj* 'which' and *le:f* 'why'.

(72) Ham: *we:n ʔa:ħbak?* 'Where's your friend?' [3;8,12]

Grandpa: *ra:h*. 'Left'.

Ham: *min ʔaj ba:b ʔili?* 'Which door did he leave from?'

Grandpa: *min ha:ʔa lba:b*. 'From this door'.

(73) [Ham came to his grandpa's study room in the evening and found him well dressed]

Ham: *ʔa:lʔi:n we:n?* 'Where are you going?' [4;1,19]

Grandpa: *laʔ miʔ ʔa:lʔi:n?* No, we are not going anywhere?'

Ham: *le:f la:bis?* 'Why are you well dressed?'

Grandpa: *ʔafa:n ʔatnaʔfat*. 'To feel active'.

The acquisition of ʔe:f/ʔu: 'what'

The first *ʔe:f* questions attested in the data asked about things/objects in the immediate environment whose lexemes were known to Ham. Around 1;9, he was able to answer *ʔe:f/ʔu:* questions.

(74) Grandpa: *ʔe:f ha:j* 'What's this?'

Ham: *ħabbi [ħabbit ʔinab]* 'A grape'. [1;9, 7]

The first *ʔe:f* question emerged toward the end of the second year.

(75) Ham (looking at wrapped boots): *ʔe:f ha:d* 'What's this?' [1;12,10]

Grandpa: *bo:t* 'Boots'

Ham continued to use *ʔe:f* questions, particularly in game-like conversations which focused on naming and identifying body parts, e.g. eye, ear, head, face.

(76) Grandpa (touching his eye): *ʔe:f haj?* 'What's this?' [2;0,12]

Ham: *ʔe:n [ʔe:n]*. 'Eye'.

Ham (touching his ear): *ʔe:f haj?* 'What's this?'

Grandpa: *ʔa:n*. 'Ear'.

Further, Ham used *ʔu:* to seek answers to observations which he could not understand or explain.

(77) Ham (to his grandma who was not feeling well): *ʔu: ma:lit [ma:lik]?* 'What's wrong with you?' [2;3,23]

Grandma: *taʔba:ni*. 'Tired'.

Ham also used *ʔu:* in indirect questions.

(78) Ham: *si:di fi: namil ho:n. ʔaullak ʔu: lo:nu?* 'Grandpa! There are ants here. Shall I tell you what colour they are?' (offer information) [3;7,17]

Grandpa: *ʔa:*. 'Yes'

Ham: *ʔaswad*. 'Black'.

Eventually, Ham also used the idiomatic expression *ʃu: ra:jak* 'what about' to make suggestions and exchange views on imaginary/sophisticated matters.

(79) Ham: *si:du! ʃu: ra:jak ti^cti:ni ʔide:k w a^cti:k ʔidajji?* 'Grandpa! What about you give me your hands and I give you mine?' (make suggestions) [2;11,17]

Grandpa: *le:f*. 'Why?'

Ham: *liʔannu ʔide:k bardi:n*. 'Because your hands are cold'.

(80) [Fake telephone conversation with Yousef, an imaginary friend]

Ham: *ʃu: ra:jak ʔinhut xutta nsa:ʃir ^cala ʔamri:ka?* 'What about having a plan to visit America?'

[He didn't invent an answer but went on and on]

tidzdzawwaz? ʃu: ʔisim maratak? liana? walla zaj ʔisim ma:ma. 'Do you want to get married? What's the name of your wife? Liana? Just like my mom's name'. [5;1,18]

However, the main purpose of *e:f* questions was to seek information on events or phenomena whether in the immediate environment or not.

(81) Ham (to grandpa): *ʔe:f tabaxtu?* 'What did you cook?' [3;3,28]

Grandpa: *bando:ra, wintu?* 'Tomato and you?'

Ham: *ninda:n [ba:ðindza:n]*. 'Eggplant'.

(82) Hammoud (talking about a school trip): *ʔaʔullak ʃu: aktar li^cbi ʔa^cdzbatni?* 'Shall I tell you what game I liked most?' [5;7,0]

Grandpa: *ʔa:*. 'Yes'.

Ham: *ble: ste:ʃin*. 'Play Station'

The acquisition of le:f 'why'

The first adjunct *le:f* 'why' question was attested in Ham's data at the age of 2;5,15 when he saw his grandpa flipping through some sheets.

(83) [Grandpa flipping through some sheets]

Ham: *biddi*. 'I want (a sheet)'.
Grandpa: *daffirhin* 'Leave them'.
Ham: *le:ʃ?* 'Why?' [2;5,15]
Grandpa: *haðo:l la-ldza:m^ca*. 'These are university sheets'.

Ham was aware that *le:f* asks about reason. Further, he knew that in his dialect one can also ask about reason using *ma:l* [or *ʃu: ma:l*], a lexical synonym of *le:f*, as in:

(84) [Grandpa was laughing]

Ham (commented): *ma:l si:du bidħakk?* 'Why is grandpa laughing?' [2;6,7]

As is clear, Ham was a sharp observer of the conversation context. When he did not understand the reason underlying a certain phenomenon, he promptly asked about it.

(85) [Uncle Wael stepped in. He frowned at Ham and made loud and strange sounds]

Ham: *‘amma wa:ʔil le:f bitxawwif fiji?* 'Uncle Wael, why are you frightening me?' [3;3, 10]

Uncle: *ʔana balʕab maʕak.* 'I am playing with you'.

His late *le:f* questions showed Ham's more direct involvement in discussions and events, voicing his views, particularly when disagreeing, as in.

(86) [The maid was offering coffee to guests and family members. Some didn't take coffee and a discussion started on whether coffee was a healthy drink or not]

Ham: *le:f si:idi bithib ʔilʔahwi?* 'Grandpa! Why do you like coffee?' [4;3,11]

Grandpa: *laʔinha za:kji.* 'Because it's delicious'.

Ham: *laʔ ha:mda.* 'No, it's sour'.

When Ham turned five and went to kindergarten, he learnt *lima:ða*, the standard Arabic variant of *le:f* and started using it.

(87) [Juje appeared with a mask and started playing monkey]

Ham: *lima:ða: ʔinta he:k?* 'Why are you wearing a mask?' [5;1]

Juje: *munki munki jaʕni ʔird.* 'Munki munki. This means monkey'.

Ham also used *le:f* for purposes other than requesting an explanation or asking for a reason. Below is an example of using *le:f* to tease his grandpa, another manifestation of cognitive development.

(88) [After the sunset]

Ham: *saba:h ʔilxe:r.* 'Good morning'.

Grandpa: *la: masa lxe:r.* 'No, good evening'.

Ham: *le:f? hijji ʔiddinja lmasa?* 'Why? Is it evening?' [5;10]

Grandpa: *ʔa:.* 'Yes'.

Ham: *la ʔiddinja ssubuh. ʔitlaʕ fu:f.* 'No, it's morning. Go out and see'.

Grandpa: *btixawwath ja hammu:di?* 'Are you fooling me Ham?'

Ham: *laʔ badza:kir.* 'No, I am teasing you'.

Just like Juje, Ham used *le:f* in embedded clauses in indirect questions with a view to providing information that was not sought by his interlocutor.

(89) Ham: *btirif le:f ʔana basa:ʕdak?* 'Do you know why I help you?' [5;6,19]

Grandpa: *la?*. 'No'.

Ham: *ʿafa:n t̤i:r ħadi:qitku ʔaħla ħadi:qa*. 'So that your garden will become the most beautiful'.

Grandpa: *fukran*. 'Thanks'.

The acquisition of ke:f 'how'

Just like Juje, Ham showed a relatively early understanding of the ritualized and routine question *ke:f ħa:lak* 'how are you' and was able to respond to it verbally when he was two years old.

(90) Grandpa: *ke:f ħa:lak?* 'How are you?'

Ham: *ħamdulla*. 'Thanks to Allah'. [2; 0]

The first *ke:f* construction Ham produced was in an embedded nominal clause when he was around three, trying to reach a toy on a shelf.

(91) Ham (to grandpa): *ʔittallaʿ ke:f ʔaṭu:l ħaj. ʔana t̤awi:l*. 'Look **how I can reach this**. I am tall'. [2;11,18]

Grandpa: *mazbu:t*. 'Right'.

Shortly after that, he displayed sufficient awareness that *ke:f* is a manner adverbial when he used it to convey different pragmatic functions including to request clarification, check on someone, or ask about the weather, etc.

(92) Grandpa: *biddi ʔaħuttalak sawa:rib*. 'I want to make a moustache for you?' [3;1,22]

Ham: *ke:f biddak ħuttali sawa:rib?* 'How can you make a moustache for me?' (Request for clarification)

Grandpa: *baguṣ min sawa:rbi w baħuṭ ʿale:k*. 'I cut from my moustache and put on yours'.

(93) Ham: *ke:f ʔilħimmi?* 'How is your morale?' [4;6,5] (asking about one's psyche)

Grandpa: *ʿa:lji*. 'Great'.

(94) Ham: *ke:f ʔildʒaw?* 'What's the weather like?' [4;11,28] (Asking about the weather)

Grandpa: *da:fi*. 'Warm'.

Ham also used *ke:f* in fake dialogues (of his own creation) with his grandma.

(95) [Fake telephone conversation with his grandma]

Ham: *ʔalo:, ke:f ħa:lku? ke:f ħa:l dʒo:zik?* 'Hello, how are you? How is your husband?' [3;6,26]

Grandma: *kwajjis. fukran*. He is doing well. Thanks'.

Ham also used *ke:f* as a direct object clause to express manner and provide subsequent feedback.

- (96) Ham: *bti^crif ke:f tsawwi tajjara?* 'Do you know how to make a plane?' [5;2,7]
 Grandpa: *la?* 'No'.
 Ham: *?ana ba^crif*. 'I know'. [He drew a plane]

The acquisition of gadde:f/kam 'how many/how much'

When Ham was exposed to a *gadde:f* question, he answered, unlike Juje, using a specific number followed by the word *kti:r* 'a lot'.

- (97) Grandpa: *bithibni ja hammu:di?* 'Do you love me Ham?' [2;11]
 Ham: *?a:*. 'Yes'.
 Grandpa: *gadde:f?* 'How much?'
 Ham: *?tne:n. kti:r* 'Two, a lot'.

It seems that he was not sure that *gadde:f* does not require a specific number when it collocates with 'love' and thus he continued with a neutral term (*kti:r*) that can be used for both quantity and quality.

Analysis of Ham's data suggests that *gadde:f* is acquired rather late, not before turning four. Below is his first *kam/gadde:f* question which required a quantitative answer.

- (98) [Ham had a haircut]
 Grandpa: *na^ci:man ja hammu:di*. 'A very nice haircut, Ham'.
 Ham: *?alla jin^cim ^cale:k*. 'God may bless you'.
 Grandpa: *na^ci:man ja hammu:di*. 'A very nice haircut, Ham'.
 Ham: *kam marra ?ultilli?* 'How many times have you told me?' [4;3]

The acquisition of wakte:f/?e:mta 'when'

Although Ham was able to show understanding of the concept of time when he was around two years old, his first *?e:mta* 'when' question was attested after four.

- (99) Grandpa: *?ana bididi ?at^hammam*. 'I want to have a bath'.
 Ham: *?e:mta biddak tit^hammam?* 'When do you want to have a bath?' [4;5]
 Grandpa: *bas jidfa l^hammam*. 'When the bathroom becomes warm'.

Ham's late productions of *?e:mta* occurred in longer and more complex constructions.

- (100) Ham: *ba:ba, ?e:mta bidna nru:h^c ^ca da:r xa:ltu dja:la?* 'Dad! When do we want to go to Aunt Diala's house?' [5;10,26]
 Dad: *mif^ca:rif*. 'I don't know'.

3.2. The acquisition of ?aj/?anu: 'which'

The first *?aj* question emerged rather late in Ham's data.

- (101) Mom: *dzi:b ?il-mukinsi*. 'Bring the vacuum cleaner'.
 Ham: *fi ?aj kurfi?* 'In which room?' [3;2,16]
 Mom: *xalas bala:f*. 'Not needed any more'.

ʔaj + Noun is sometimes equivalent to *ʔe:mta* ‘when/what time’ as in:

(102) [Ham found that his favourite TV series episode is over]

Ham: *ha:da lmusalsal mxallis. ʔaj sa:ʕa bibda.* ‘This episode is over. What time does it start?’ [4;2]

3.3. Comparison between the two paths

Before we proceed, it is useful to observe that the age of first use is sometimes suggested as the acquisition criterion. In this context, Stromswold (1995, p. 28) considers the age of first use as "the most sensitive measure of acquisition because it measures the earliest age at which a child could be said to have acquired a construction." However, we think that acquisition is a long and complex process and thus the age of first use is better viewed as the emergence point of acquisition. To minimize the possibility that the first use is not a natural and spontaneous utterance, i.e. a speech error or a formulaic question or an imitation, the context of each occurrence was carefully checked. To answer the first study question on which wh-questions the subjects found easier and thus acquired earlier and the reasons underlying this sequence, one first needs to identify the first natural and spontaneous use of each question word and construction. Once this sequence is known, an interpretation will be provided. Below is a chronological order of the age of first use (emergence) of each wh-question by Juje and Ham.

Table 1

*Chronological order of the age of first use (emergence) of each wh-question by Ju:ju and Ham**

Wh-question	Juje (Y, M, D)	Ham (Y, M, D)
mi:n ‘who’	1;8,2 (1)	1;5,18 (1)
we:n ‘where’	1;10 (2)	1;7,16 (2)
ʔe:f/ʔu: ‘what’	2;2 (3)	1;12,10 (3)
le:f ‘why’	2;4,10 (4)	2;5,15 (5)
lami:n ‘whose’	2;4,25 (5)	2;1,18 (4)
ke:f ‘how’	2;9,22 (6)	2;11,18 (6)
gadde:f/kam ‘how many/much’	3;8,26 (7)	4;3 (8)
wakte:f/ʔe:mta ‘when’	4;6 (9)	4;5 (9)
ʔay/ʔanu: ‘which’	4;2,20 (8)	4;2 (7)

Note. *Rank order of each wh-question appears in brackets next to the age of first use.

The table shows that while mi:n ‘who’ was the first wh-question both Juje and Ham produced, *wakte:f/ʔe:mta* ‘when’ was the last. The former was acquired around age one year and a half and the latter around four years and a half. The other questions appeared in almost the same sequence with the exception of *gadde:f/kam* ‘how many/much’ which ranked seven for Juje and eight for Ham and *ʔaj/ʔanu:*

‘which’ that ranked eight for Juje and seven for Ham. These findings are not always in line with the data given by Marwan and Dima in Abdo and Abdo (1991). While Marwan acquired *we:n* ‘where’ first followed by *ʔe:f/ʃu:* ‘what’, Dima acquired both *mi:n* ‘who’ and *we:n* first and at the same age. However, the two studies showed more harmony with regard to those wh-questions that were acquired last or toward the end of the acquisition path, viz., *ʔe:mta* ‘when’ and *ʔaj* ‘which’. These differences might be a reflection of parental input, frequency of occurrence and acquisitional context. Marwan and Dima were brought up by Palestinian highly educated parents while they were working and residing as a nuclear family in Kuwait. In contrast, Juje and Ham were part of a large extended Jordanian family in Amman with frequent visitors knocking at the door or ringing the intercom bell who were requested to disclose their identity by responding to a *mi:n* question.

The early emergence of *mi:n*, *we:n* and *ʔe:f/ʃu:* questions is in line with the nature of children’s early and urgent communicative needs which include, among other things, learning the names of objects, people and places around them to make their lives easier and more meaningful. This is enforced by their care givers’ frequent use of these questions in the context of introducing names of objects, people and places or asking children to identify or verify them.

Apparently, the sequence of acquisition of wh-questions as revealed in the data supports a cognitive maturity interpretation regardless of language and culture. The acquisition of wh-questions that ask about concrete objects/entities, i.e. *mi:n* ‘who’, *we:n* ‘where’ and *ʔe:f/ʃu:* ‘what’ were emerged earlier than those questions which ask about abstract objects/entities, i.e. *le:f* ‘why’, *ke:f* ‘how’, *gadde:f/kam* ‘how many/much’ and *wakte:f/ʔe:mta* ‘when’. However, the questions within each of the two sets were not equally easy/difficult. In the first category, *mi:n* ranked first on the easy/difficult scale while *ʔe:f/ʃu:* ranked third. The order of acquisition in the second category suggests that it was easier to ask about reason (*le:f*) than about time (*wakte:f/ʔe:mta*) and that to ask about quantity and quality (*gadde:f/kam*) was more difficult than to ask about manner (*ke:f*).

Cairns & Hsu (1978) ascribed the variable difficulty of ‘why’ and ‘when’ questions in English-speaking children to progression in the children’s ability to encode the concepts of causality and time linguistically. This interpretation is supported by Juje’s and Ham’s late acquisition of *wakte:f/ʔe:mta* ‘when’ and *le:f* ‘why’ though to a lesser extent. It seems that children also encounter serious difficulty on their way to encode the concepts of quantity/numbering and quality scale. Further, Cairns & Hsu (1978) reported similar difficulty with *how* questions because they “involve a number of unrelated skills” (p. 477). In effect both Juje and Ham found *ke:f* ‘how’, the manner interrogative adverbial, relatively difficult as manner involves change of state and sharp observation of this change.

The cognitive maturity interpretation approach suggested by this study received support by the generally similar path of acquisition found in English-speaking children regardless of the different morphophonemic structure of wh-question words in Arabic and English, the two genetically unrelated languages.

While question words in English start with a round bilabial glide /w/ or a voiceless glottal fricative /h/ and consist of one syllable, and thus do not display variable linguistic difficulty, question words in JSA do not share the same initial sound nor do they consist of the same number of syllables. In this context, one may wish to observe that *mi:n*, *we:n*, *ʔe:f* and *le:f* start with sounds that young children usually find easy to produce in addition to the fact that these words are monosyllabic. In contrast, the (rather) late acquired words *ke:f*, *gadde:f* and *wakte:f/ʔe:mta* either start with velar sounds which Jordanian Arabic-speaking children tend to acquire rather late and/or consist of more than one syllable. Apparently, this morphophonemic difference has not significantly impacted the sequence of acquisition of these questions in the two languages. However, the late acquisition of /k/ and /g/ in JSA might have also contributed, together with their multiple syllable structure, to the late acquisition of *ke:f*, *gadde:f* and *ʔe:mta*.

An earlier study on the acquisition of wh-questions by English-speaking children highlighted that such a sequence was also a feature of their path of acquisition.

In light of the foregoing, one can claim that there seems to be a universal acquisition path of wh-questions regardless of language background and language-specific complexity.

Symptoms of complete acquisition of wh-questions

Careful analysis of the dynamic and detailed progress of wh-questions in the two children from the first use (emergence) of each question until the onset of schooling suggested that the following symptoms characterize the final or near-final stage of JSA children's acquisition of wh-questions.

1. Use of the wh-question complex and long constructions, e.g. object in indirect questions

The use of wh-questions in a complex sentence where the wh-word prefaces a clause with a grammatical function (object) is seen as an indicator of the child's ability to control the target question compared with initial use of it as a one-word question or a question in a short simple one clause sentence. Below are two examples extracted from the data presented earlier and repeated below for the reader's convenience.

(103) Juje: *bas ʔakbar lim^calmi bit^callimni ke:f ʔaktub*. 'When I grow up the teacher will teach me how to write'. [3;4,26] (51 above)

(104) Ham: *ʔana ba^crif we:n ra:h ba:ba*. 'I know where dad went'. [3;6,13] (70 above)

2. Use of the standard Arabic (SA) variant and the dialectal variant as alternates

The ability to alternate between the standard and vernacular forms before schooling where the official exposure to standard Arabic starts is seen as a sign of language maturity.

(105) (Juje using SA *ʔajna* 'when' for JSA *we:n*)

Juje: *ʔajna ʔanta muxtafi ja: si:du* 'Where are you hiding, grandpa?' [4;10] (26 above)

(106) (Ham using SA *lima:ða* ‘why’ and for JSA *le:f* wondering why Juje was wearing a mask playing a monkey)

Ham: *lima:ða: ?inta he:k?* ‘Why are you wearing a mask?’ [5;1] (87 above)

It seems that the use of Standard Arabic here is influenced by the children’s exposure to dubbed TV cartoons.

3. Use of the target wh-question with other questions in the same exchange

Juje used wh- and yes/no questions as in:

(107) Juje: *?inta ʿindak baru:di* ‘Do you have a gun?’ [3;8,13] (24 above)

Grandpa: *?a:* ‘Yes’

Juje: *we:nha* ‘Where is it?’

Grandpa: *biddi:f ?agullak* ‘I don’t want to tell you’.

Ham used *we:n* ‘where’ followed by *min ?aj* ‘which’ as in:

(108) Ham: *we:n sa:ħbak?* ‘Where’s your friend?’ [3;8,12] (72 above)

Grandpa: *ra:h.* ‘Left’.

Ham: *min ?aj ba:b tiliʿ?* ‘Which door did he leave from?’

4. Use of the target wh-question to convey different pragmatic functions

It is believed that the child’s ability to use the target wh-question to convey pragmatic functions other than seeking mere information is a sign of remarkable advancement along the acquisition path. This was evident in Juje’s 31–34 tokens above in which he showed unease with a bad smell (109 below), requested clarification, protested and made a comment.

(109) Juje (showing unease with a bad smell): *fu: ri:ħa?* ‘What’s this bad smell?’ [2;8,4]

Grandpa: *sama:d.* ‘Fertilizer’.

Likewise, Ham used using *ke:f* in tokens 92–94 to ask for clarification, one’s check on someone (110 below) and ask about the weather, among others.

(110) Ham: *ke:f ?ilħimmi?* ‘How is your morale?’ [4;6,5]

Grandpa: *ʿa:lji.* ‘Great’

5. Use of the target wh-question as part of an idiomatic expression

Idiomatic use of language is often viewed as a sign of acquisition. In this context, both Juje and Ham used the JSA expression *fu: ra:jak* ‘what about?’ (36 and 79 above).

6. Use of the target wh-question in fake or imaginary dialogues

The child’s ability to include a wh-question in an imaginary dialogue of his own creation in which he assumes two roles (he and another person) is a sign significant progress along the acquisition path. This was evident in Juje’s and Ham’s fake dialogues illustrated in 35, 49, 50, 80 and 95 above, among others.

7. Use of wh-word synonyms

Both Juje and Ham were able to use *?e:f* and *fu:*, the equivalents of ‘what’ as synonyms. This was illustrated in 29 vs. 31 (Juje) and 76 vs. 77 (Ham).

8. The use of the same wh-question in different structural constructions

The ability to use the same question word in different structural constructions (e.g. (verbless, intransitive, transitive, prepositional phrase) is viewed as a sign of acquisition.

Juje's use of *mi:n* 'who' in 12 (verbless), 14 (intransitive) and 17 (transitive) above is self-evident.

Ham also used the prepositional construction *min we:n* 'from where' in 69 above and repeated below for convenience:.

(111) Ham: *ha:j ?il-barra:ji min we:n faritu:ha?* 'Where did you buy this sharpener from?' [3;8,1]

Grandpa: *min ?issu:g.* 'From the market'

To conclude, these features need to be further examined on the basis of cross-linguistic data to decide whether they are language specific or show a tendency toward universality.

4. Conclusions and Recommendations

The longitudinal study reported here was solely devoted to offering a description of wh-questions in Jordanian Spoken Arabic in addition to investigating how these questions were acquired by Jordanian-Arabic speaking children residing in Amman, Jordan. It argued for a cognitive maturity approach to interpret the sequence of acquisition suggested by the data regardless of language and culture. The acquisition of wh-questions that ask about concrete objects/entities, i.e. *mi:n* 'who', *we:n* 'where' and *?e:f/fu:* 'what' were produced and developed earlier than those questions which ask about abstract objects/entities, i.e. *le:f* 'why', *ke:f* 'how', *gadde:f/kam* 'how many/much' and *wakte:f/?e:mta* 'when'. However, the subjects did not find the questions within each of the two sets equally easy/difficult. In the first category, *mi:n* ranked first on the easy/difficult scale while *?e:f/fu:* ranked third. The order of acquisition in the second category suggested that it is easier to ask about reason (*le:f*-why) than about time (*wakte:f*-when) and that to ask about quantity (*gadde:f/kam*-how many/much) is more difficult than to ask about manner (*ke:f*-how). The study also identified a set of features which may be used to judge how close the child is to native-like competence. The more features are available, the closer the child is to complete or almost complete acquisition of wh-questions.

Future research may examine the acquisition of these questions by speakers of other spoken varieties of Arabic. It may also focus on the acquisition of yes/no questions in JSA and beyond.

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FOREIGN LANGUAGES' INFLUENCE ON ALBANIAN POLICE LEXICON

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Abstract. In this study we attempted to thoroughly explain influences of foreign languages on police lexicon in Albanian language, with special focus on the influence of Serbian and English language in Kosovo, as well as the influence of Italian and English language in Albania. Influence of Serbian language only on police lexicon in Kosovo has been created due to historic circumstances of development of police activities under specific conditions. The impact of Serbian language on police lexicon in Albanian language in Kosovo was prevailing for a long period, during which Kosovo was under Serbian rule. This linguistic influence at its highest level in time period between 1970–1990, when Albanian language was used in police activities in Kosovo. In that time period most of the police officers were of the Albanian ethnicity and Kosovo had the status of autonomous province (1974–1990). English influence on police lexicon in Kosovo started in 1999 after liberation of Kosovo. From 1999 to 2008, English was used as the official language together with local languages Albanian and Serbian. This influence has not been limited only to police activities but it has spread widely into all fields of activities in Albanian language in Kosovo. Influence of English language in police lexicon is also evident in Albania, with words like: brifing (alb) – briefing (en), lidership (alb) – leadership (en), staf (alb.)– staff (en), task force (alb) – task force (en), etc. On the other hand Italian language is an influential language in police lexicon only in Albania due to historical, economic and cultural development. As a result, this is manifested by some basic words denoting police activities in Albania derived from Italian, like: komisiariati (alb) – commissariato (it), kavaleri (alb) – cavaleria (it), Policia e Shtetit (alb) – Polizia di Stato (it).

Keywords: Albanian, police lexicon, influence, Italian, English, Serbian.

Газірі Шемсі. Уплив іноземних мов на поліцейський лексикон албанської мови.

Анотація. У цьому дослідженні ми спробували докладно пояснити вплив іноземних мов на поліцейський лексикон албанською мовою, з особливим акцентом на вплив сербської та англійської мов у Косово, а також вплив італійської та англійської мов в Албанії. Вплив сербської мови лише на поліцейський лексикон в Косово був створений внаслідок історичних обставин розвитку діяльності поліції за певних умов. Вплив сербської мови на поліцейський лексикон на албанській мові в Косово переважав протягом тривалого періоду, протягом якого Косово було під владою Сербії. Цей лінгвістичний вплив на найвищому рівні був у період між 1970–1990 рр., Коли албанська мова використовувалась у поліцейській діяльності в Косово. У той період більшість поліцейських були албанцями, а Косово мало статус автономної провінції (1974–1990). Вплив англійської мови на поліцейський лексикон у Косово розпочався у 1999 році після звільнення Косова. З 1999 по 2008 рік англійська використовувалася як офіційна мова

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разом із місцевими мовами албанською та сербською. Цей вплив не обмежувався лише мовою поліції, він поширився на всі сфери діяльності албанською мовою в Косово. Вплив англійської мови в поліцейському лексиконі також видно в Албанії, наприклад, такі слова: *brifing* (alb) – брифінг (en), *lidershhip* (alb) – керівництво (en), *staf* (alb.) – персонал (en), робоча група (alb) – робоча група (en) тощо. З іншого боку, італійська мова є впливовою мовою в поліцейському лексиконі лише в Албанії завдяки історичному, економічному та культурному розвитку. Як результат, це проявляється деякими релевантними словами, що позначають діяльність поліції в Албанії, які походять від італійської, наприклад: *komisariati* (alb) – commissariato (it), *kavaleri* (alb) – cavaleria (it), *Policia e Shtetit* (alb) – *Polizia di Stato* (it).

Ключові слова: албанська мова, поліцейний лексикон, вплив, італійська мова, англійська мова, сербська мова.

1. Introduction.

1.1. Theoretical Background

During the historical development of police lexicon in Albanian language in Kosovo we observe that there has been continuous influence by foreign languages, like in all other areas of the society in development. Foreign languages with the highest extent of influence on police lexicon were as following: Serbian, in time period from 1970 to 1999, and English in post war Kosovo, 1999–2019, which played the leading role in all areas of society in Kosovo and in particular in the field of security. In Albania, we distinguish Italian as the most influential foreign language in period from 1920 to 1944. From 1945 to 1990 Russian had been the most influential language in Albania, whereas later on English and Italian language took the leading role. From 1990, after the collapse of communist system and the start of political pluralism in Albania, Italian regained its primary influential role, or in some cases, secondary, after English (Muceku, 2017). The influence of English has increased mainly in the last two decades when many words of English origin started to be used overwhelmingly due to global integration processes. This fact was highlighted by the researcher in the field of military terminology and the author of Albanian military dictionaries, Çipuri (2005, p. 250–263). Çipuri notes that loaning of English military terms, especially in the period of NATO influence, was done improperly, with the tendency of increasing the number of English loan words, “*even of other neo-Latinisms through English, as for example: brifing* (alb) – *briefing* (en), *lidershhip* (alb) – *leadership* (en), *kamping* (alb) – *camping* (en), *menaxhim* (alb) – *managing* (en), *menaxher* (alb) – *manager* (en), *staf* (alb) – *staff* (en), *implementoj* (alb) – *implement* (en), etc. (ibidem). Loaning of police terms in Albanian language in Albania and Kosovo in different time periods has led to the existence of different but synonymous words in the same language in two countries, Albania and Kosovo, as for example: *komesariat* (Albania) – *stacion policor* (Kosovo) for *Police Station*; *Policia e Shtetit* (Al) – *Policia e Kosovës* (Ks) for *Police*; *kryekomisar* (Al) – *kapiten* (Ks) for *Captain*; *drejtues* (Al) – *major* (Ks) for *Major*; *komisar* (Al) – *toger* (Ks) for *Lieutenant*, *nënkomisar* (Al) – *rreshter* (Ks) for *Sergeant*, etc. (Haziri, 2018a). The linguist Pasho (2017, p. 14) notes that in such cases of synonymous terms the principle one term – one concept and vice

versa does not apply. However, the phenomenon of synonymous terminology in the same language between Kosovo and Albania occurred because of historic circumstances in ethnic territories inhabited by Albanian population, and also the influences of different governing systems in both countries. Despite that, in general, synonymy plays an important role in enriching Albanian language (Haziri, 2018b). Taking into consideration a relatively small number of studies of this kind in Albanian language, we have used most of the available sources regarding the topic of police lexicon in Albanian language. However, several foreign authors with works relevant to this study have also been taken into consideration. In this respect, we distinguish the following authors whose works made a significant contribution to the discussed topic (ASHSH, 1989; 2005; Bajçinca, 2016; Bogdanović, 2002; Pllana, 2017; Çipuri, 2005; *Leksikologjia...* ; Duro, 2001; Muceku, 2017; Murati, 2016; Munishi, 2015; Nuhiu, 2013; Pasho, 2017; Zmijarević, 2007).

2. Method

In realization of this study, two methods have been used: comparative method and selection method. The comparative method has been used with the above mentioned literature and the comparison has been made between various terms in foreign languages (English, Serbian, and Italian) and Albanian police lexicon influenced by them. The selection method in this work has been used to identify specific studies and works which have served as the bases for identifying influences on Albanian police lexicon. In this way, it has been possible to collect the necessary data of the police lexicon from written documents in Kosovo and Albania (<https://www.asp.gov.al>; <https://www.kosovopolice.com>; <http://www.poliziadistato.it>).

3. Results and Discussion

3.1. English Influence on Albanian Police Lexicon in Kosovo

In Kosovo, similarly to other countries in the world during the globalization processes, the Anglicism's have entered and influenced the Albanian lexicon through different factors, with most important of them being administration of Kosovo by UNMIK Mission, which lasted for almost one decade. During this time period, 1999–2008, English was used as the official language together with local languages Albanian and Serbian. (Munishi, 2015, Haziri, 2015). According to Nuhiu (2013, p. 91) “*the process of adjustment during the first and second phase usually does not last long, because as soon as a foreign word enters in a new language, the adjustment phase starts and continues until full integration or assimilation*”. Even nowadays, approximately one decade since Kosovo declared its independence, English continues to be the most influential language in the field of security, including police. This is due to the fact that most of the official documents, including those in the field of police activities, are compiled with the support of the authorities of the USA, Great Britain, EU international missions, OSCE, which directly leads to Anglicism's entering into Albanian language. V. Nuhiu (2013, p. 123) notes the fact that in Kosovo due to the long post war international administration and presence of international missions with English

being their official language, loaning of Anglicism's became a widespread and uncontrolled phenomenon: *It is evident that after the end of war in Kosovo a great number of English loan words entered in Albanian language. After the arrival of international governmental and non-governmental organizations and changes in the social system, it was impossible to analyze and control foreign words. Most of the Anglicism's were unnecessarily loaned due to the high number of those words entering the language in a very short time period. In addition to this, linguistic authorities of the country were not ready to treat loan words properly (ibidem).* The influence of Anglicism's in police lexicon is evident in every official document of Kosovo Police, available in three languages, Albanian, Serbian and English. The practice of having translated versions of official documents started initially after the war in Kosovo, during UNMIK administration, and it continued even after declaration of Kosovo independence.

3.2. Serbian Influence on Albanian Police Lexicon in Kosovo

The influence of Serbian language on police lexicon in Albanian language in Kosovo was prevailing for a long period, during which Kosovo was under Serbian rule. This influence at its highest level in time period between 1970–1990, when Albanian language was used in police activities in Kosovo. In that time period most of the police officers were of the Albanian ethnicity and Kosovo had the status of autonomous province (1974–1990). In 1971, in Vushtrri, in Kosovo, “High School on Internal Affairs” started to function in two official languages, Serbo-Croatian and Albanian, where young police cadets were trained to become police officers. During the time Kosovo was an autonomous province the following documents, related to the work of police, were published in Albanian language: Constitution of the Autonomous Province of Kosovo (1974), Regulation in Internal Affairs (1975), Law on Internal Affairs (1981). Also, exercises of police duties in Kosovo were carried out using Albanian language. In his work, *Disa probleme të shqipes në ligjet e Kosovës (Several Problems of Albanian Language in Laws in Kosovo)*, Bajçinca notes numerous problems within legal texts, which in many occasions were translated unprofessionally and with the influence of Serbian language: *“The first issue is the terminology used in legal texts. Terms used in laws, in my opinion, since they were published in Pristina, are translations from Serbian language and there are a lot of terms which are new words used for the first time and they do not fit to the nature of Albanian language. In this context I will give an example of the word kryes (alb) – offender of a crime, instead of autor (al) – author, a word which is used in other fields as well, like construction, production...”* (Bajçinca 2016, p. 293). Murati (2016: 487–494) gives examples of Serbian and Macedonian influence, like: *“në lojën ftohtë-nxehtë”(alb) – “toplo-hladno” (Slavic); in Albanian “ngrirë-shkrirë” (alb) – frozen-melted; “fiton në peshë (alb)” – “dobija vo tezina” (Slavic).* Therefore, it is clear that influences in lexicon were present in all fields of knowledge, like judiciary, police, society, culture, etc. During the above-mentioned period police lexicon in Kosovo was influenced to quite a high extent by Serbian language, since all documents of police scope were translated from Serbo-Croatian language, as an important language not only in Ex-Yugoslavia but even further. There are numerous examples of loan translations of police ranks

during the time period between 1976–1991, like: *mladi inspektor (srb) – inspektor i ri (alb)*, *glavni inspektor (srb) – inspektor kryesor (alb)*, etc. (Bogdanović, 2002). The influence of Serbian language, or Serbo-Croatian which was the official name of the language at that time, on Albanian language was present also in the names of positions in police (called *milicia* at that time), like: *komandir stanice milicije (srb) – komandant i stacionit të policisë (alb)*; *sektor za sigurnost (srb)– sektori i sigurisë (alb)*; *jedinica za vlakoprtnju (srb) – njësia e trenit (alb)*, etc. (Zmijarević: 2007, p. 217). Some of the police terms like: *komandant i stacionit, sektor policor, njësi policore*, are still being used in the organizational structure of Kosovo Police.

3.3. English Influence on Albanian Police Lexicon in Albania

In Albania, similarly to Kosovo, the influence of English language has been taking a dominant role. Taking into account the processes of European integrations, as well as the membership of Albania in NATO alliance, in the last decade English language has become the most dominant and influential language in the field of security in Albania. In the last two decades Albanian State Police has been cooperating with international partners like: PAMECA, ICITAP, OSCE, Swedish Program of Community Policing and Police forces of EU countries. Communication with them is performed in English, which then has an impact on police lexicon. There are many examples of terms directly influenced by English, as for example: *investigim (alb) – investigation*; *vetingu (alb) – vetting*, *implementim (alb) – implementation*, etc. Munishi (2015: 30), notes that Albanian language has entered the globalization era and it has been loaning words of different social fields, as for example: *menaxhim (alb) – managing*, *menaxhment (alb) – management*, *privatizim (alb) – privatization*, *partner (alb) – partner*, *partnership (alb) – partnership*, *auditim (alb) – auditing*, *ndërtim i kapaciteteve (alb) – building capacities*, *resurse humane (alb) – human resources*, *qëndrueshmëri buxhetore (alb) – budget stability*, *politika publike (alb) – public policies*, *administrim biznesi (alb) – business administration*, etc. The linguist Gani Pllana (2017) performed a research in regards to adaptation of terminology of Albanian language to its overall lexicon, and in particular of technical terminology, which we took as a basis during this study. On the other hand the linguist Agron Duro (2011) conducted a research in the field of the theoretical system of terminology of Albanian language, which was also useful for this study. Besides these two authors we also consulted other relevant Albanian authors of similar fields of study (*ibidem*).

3.4. Italian Influence on Albanian Police Lexicon in Albania

Influence of Italian language on Albanian police lexicon in Albania has been since the time after the declaration of independence of Albania in 1912. In that time the National Guard of Albania was called “*Kavaleri*” (Italian: *Cavaleria*) – meaning *Cavalry*. During the time when Albania was a monarch state, under the reign of King Zog (1928–1939), numerous Italian loan words were part of Albanian police lexicon, like: *Arma e Karabinierisë, karabinieri*,

Trupi i Armatosur i Policisë së Shqipërisë, Drejtoria Qendrore e Policisë së Shqipërisë, postat e kufirit, drejtori i Drejtorisë Qendrore të Policisë, këshilltari i përhershëm, nëkuestori, funksionar i sigurimit publik, agjent i sigurimit, Trupi i Gjindarmërisë Mbretnore (TGJM), Arma e Karibinierisë Mbretnore, komandant i Armës së Gjindarmërisë, etc. During the post second world war period, in communist Albania, the Italian influence decreased, whereas there was an increase of influence by Russian language. Since 1990, besides English, Italian has become again the most influential language in all areas of society in Albania, especially in the field of security. Even the name of the police force of Albania “*Policia e Shtetit*” – *State Police* was loaned directly from Italian language *Polizia di Stato*. This can be checked by visiting the official website of Italian Police force: <http://www.poliziadistato.it>. Also the term *Commissariato (it)* – *Komisariat (alb)*, meaning *police station*, is a direct loan from Italian. In the law on State Police (2014) there are numerous loan words from Italian language, with the influence including their stress and pronunciation, like for example: *impianto stazionario (it)* – *impiant stacionar (alb)*, meaning *stationary equipment*. (Haziri, 2015).

In Kosovo there was the influence and dominance of Serbian / Serbo-Croatian language in the time period of 1970–1990, which used to be an important language in Ex-Yugoslavia and in the region of South-East Europe. We will mention several translations of names and functions in police lexicon in the time period between 1976–1991: *mladi inspektor (srb)* – *inspektor i ri (alb)*, *mladi milicionar (srb)* – *milicioner i ri (alb)*, *milicionar (srb)* – *milicioner (alb)*, *stari milicionar (srb)* – *milicioner i vjetër (alb)*, *visi milicionar (srb)* – *milicioner i lartë (alb)*, *visi inspektor (srb)* – *inspektor i lartë (alb)*, *glavni inspektor (srb)* – *inspektor kryesor (alb)*, etc. The names of all positions in police (*milici*), like: *načelnik služba javne sigurnosti (srb)* – *kryeshef i shërbimit të sigurimit publik (alb)*, *komandir stanice milicije (srb)* – *komandant i stacionit të policisë (alb)*, *sektor za krim (srb)* – *sektori i krimeve (alb)*, *sektor za sigurnost (srb)* – *sektori i sigurisë (alb)*, etc. Furthermore, some positions like: *komandant i stacionit*, *sektor policor*, *njësi policore*, are still in use in the current organizational structure of Kosovo Police. English influence on Albanian police lexicon in Kosovo in the time period between 1999–2019 is evident due to its wide usage in all areas of Kosovo society. We can distinguish the influence through word for word translation of some terms, like: *police officer (en)* – *zyrtar policor (alb)*, *local police station (en)* – *stacionet policore lokale (alb)*; *civilian staff (en)* – *stafi civil (alb)*, etc. There are also examples of adaptation into Albanian of original loan words, as for example: *supplementary (en)* – *suplementar (alb)*; *proportionality (en)* – *proporcionaliteti (alb)*, *performance (en)* – *performanca (alb)*, *implement (en)* – *implementim (alb)*, etc.

In the tables below there are shown names of police ranks and positions in Albanian language in Kosovo, which differ due to different influences on police lexicon during different time periods.

Table 1.

Police Rank Names in Kosovo in Different Time Periods

1970–1990	1999–2008	2008–2020
Milicioner i ri	Polic (pjesëtar) i SHPK-së	Polic i ri
Milicioner	Polic (pjesëtar) i SHPK-së	Polic
Milicioner i klasës së parë		
Milicioner i vjetër	Polic (pjesëtar) i SHPK-së	Polic i lartë
Milicioner i vjetër i klasës I		
Milicioner i lartë	Rreshter	Rreshter
Inspektor i ri	Toger	Toger
Inspektor	Kapiten	Kapiten
Inspektor i vjetër	Major	Major
Inspektor i pavarur	Nënkolonel	Nënkolonel
Inspektor i lartë	Kolonel	Kolonel
Inspektor i lartë i klasës I	Asistent i Komesarit – gjeneralmajor	Ndihmësdrejtor i Përgjithshëm/Drejtor Departamenti
	Zv. Komesar – gjeneralnënkolonel	Zv. Drejtor i Përgjithshëm
Inspektor Kryesor	Komesar – gjeneralkolonel	Drejtor i Përgjithshëm

Table 2.

Police Positions in Kosovo in Different Time Periods

1970–1990	1999–2008	2008–2020
Kryeshef i Drejtoratit të Milicisë	Komandant Regjional i Shërbimit Policor	Drejtor Rajonal i Policisë
Postkomandant i Milicisë	Komandant i Shërbimit Policor	Komandant i Policisë
Zëvendëspostkomandant i Milicisë	Zëvendëskomandant i SHPK-së	Zëvendëskomandant i Policisë
Ndihmëspostkomandant i Milicisë	Shefi i Operativës së Stacionit të SHPK-së	Shef i Operativës së Stacionit të Policisë
Sekretar Krahinor i Punëve të Brendshme	Shef i Shtyllës së Parë të UNMIK-ut	Ministër i Punëve të Brendshme
Sekretar Krahinor i Punëve të Brendshme	Komesar i Policisë së UNMIK-ut	Drejtor i Përgjithshëm i Policisë
Vrojtës i Milicisë	Pjesëtar patrullues i SHPK-së	Zyrtar i Ekipit Reagues i Policisë

In the lexicon of Albanian Police Force (*Policia e Shtetit*) there are many words and terms of English origin, like: *investigim (alb) – investigation (en)*;

implementim (alb) – implementation (en), veting (alb) – vetting (en), efekt (alb) – effect (en), etc. The influence of Italian language in police lexicon in Albania has early roots, because of the relationships between two nations during many centuries. We may distinguish some police terms which have been loaned directly from Italian, like: *Kavaleria (it) – Kalorësia (alb)*, in the time of Vlora Government in 1913, *Arma dei Carabinieri (it) – Arma e Karabinierisë (alb)*, *aspirante (it) – aspirant (alb)*, etc., in the time of monarchy, etc. Currently, we distinguish some terms like: *Komesariat (from Italian commissariato), Policia e Shtetit (from Italian Polizia di Stato), inspector (Italian Ispettore), etc.* The following are example of police lexicon comparisons between Kosovo and Albania:

Table 3.

Comparison of Police Ranks in Kosovo and Albania

Ranks	Kosovo	Albania
	1. Kadet policor	1. Kursant
	2. Polic i ri	
	2.1. Polic	2. Inspektor
	2.2. Polic i lartë	
	3. Rreshter	3. Nënkomisar
	4. Toger	4. Komisar
	5. Kapiten	5. Kryekomisar
	6. Major	6. Drejtues
	7. Nënkolonel	7. Drejtues i parë
	8. Kolonel	
	8.1. Drejtor i Departamentit	8. Drejtues i lartë
	8.2. Zv. Drejtor i Përgjithshëm	
	9. Drejtor i Përgjithshëm i Policisë së Kosovës	9. Drejtues madhor (Drejtor i Përgjithshëm i Policisë së Shtetit)

Table 4.

Police Positions and Functions in Kosovo and Albania

Police Positions and Functions	Kosovo	Albania
	Staf Civil	Punonjës administrativ
	Komandant i Stacionit Policor	Shef i Komisariatit
	Kryeshef i Inspektoratit Policor të Kosovës	Drejtor i Shërbimit për Çështje të Brendshme dhe Ankesa

Mbikëqyrës i Ekipit Reagues	Shef i Seksionit të Patrullës së Përgjithshme
Komandant i Njesisë Rajonale të Komunikacionit Rrugor	Shef i Komisarariatit të Policisë Rrugore
Hetues i Sektorit për Hetimin e Narkotikëve	Specialist i Sektorit për Hetimin e Narkotikëve dhe Trafiqeve
Hetues i Sektorit të Hetimeve – Stacioni Policor	Specialist i Seksionit për Hetimin e Krimeve – Komisarati i Policisë
Operator i Njesisë Speciale Intervenuese – NJSI (FIT)	Punonjës i Repartit të Forcave Speciale – RENE A
Hetues i Departamentit të Hetimeve	Specialist i Byrosë Kombëtare të Hetimit

4. Conclusion

To sum up, in Kosovo, during the time period 1970–1999, Serbian language was the most influential language. We have presented numerous examples of loan translations of names and functions in police activities (*milici*) during the time period 1976–1991. Furthermore, some names of positions are still in use in the current organizational structure of Kosovo Police. The influence of English language in Kosovo during the time period 1999–2019 is evident because of its dominant role in all areas in Kosovo, including the area of security, part of which is Kosovo Police. The influence of Serbian language on Albanian language in Kosovo has come as a result of its official prestige of being the most dominant language (Serbo-Croatian) in ex-Yugoslavia and in the South-Eastern Europe. This was the case due to great industrial and economic development, education system, great success in sports activities, etc., during that time period (1970–1990). On the other hand, the influence of Italian language onto the vocabulary of State Police of Albania dates from the establishment of Albanian state and continues until nowadays thanks to close neighborly relationships for a long time between Albania and Italy. The influence of English language on police lexicon in Albanian language is obvious and evident in Albania and Kosovo, taking into consideration integration processes and the prestige of English language as a global language.

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AN INHERENT BOND: EXTERNAL VISUAL AID HAS A MINOR EFFECT ON THE RATE OF CO-SPEECH GESTURES

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Abstract. Traditionally, the purpose of representational co-speech gestures is to repeat or represent the semantic content of accompanying speech and so to facilitate speech comprehension. To test this belief, each of 22 participants was asked to deliver an informative speech once with the support of visual aid in the form of data-show (DS) projector slides and then to deliver the same speech without using any visual aid (NDS) in a different session; the purpose was to see if using visual aid had any significant effect on gesture rate during speech production. The theoretical framework of the study is based on findings in the Information Packaging Hypothesis, the Gesture as Simulated Action framework and relevant findings in cognitive psychology and neuroscience. The results showed that all participants used gestures during both sessions; the average number of co-speech gestures was 7.2 during the NDS and 6 during the DS sessions. This shows that using visual aid that supports the semantic content of speech did not lead to a significant reduction in the number of co-speech gestures in the DS sessions; it also indicates that the role of co-speech gestures is not merely to repeat the semantic content of accompanying speech. These results confirm previous findings in cognitive psychology that speech and accompanying gesture are cognitively and instinctively connected as one unit and that co-speech gestures possibly have an essential role in facilitating speech conceptualization and production. Speech and co-speech gestures are neurologically interconnected and they are impulsively produced whenever a speaker intends to communicate a message. These findings also add further evidence to relevant research which emphasizes that co-speech gestures are not produced merely as visual aid that aims to supplement speech.

Keywords: *co-speech gestures, speech conceptualization, visual aid, Information Packaging Hypothesis.*

Джарбоу Самер Омар. Інгерентний зв'язок: зовнішній візуальний засіб має незначний вплив на кількість жестів, що супроводжують мовлення.

Анотація. Традиційно метою репрезентативних жестів, що супроводжують мовлення, є повторення або репрезентація його семантичного змісту для полегшення розуміння. Щоб перевірити цю ідею, кожного з 22 учасників попросили генерувати змістовне повідомлення спершу зі візуальним супроводом у вигляді слайдів проєктора для демонстрації даних (ДД), а потім генерувати те саме повідомлення, але вже без використання будь-яких візуальних засобів (НДД) під час іншої сесії. Мета полягала в

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тому, щоб побачити, чи користування візуальними засобами має якийсь значний вплив на швидкість жестів під час породження мовлення. Теоретичні основи дослідження базуються на висновках гіпотези способів подання інформації, теорії жесту як модельованої дії та відповідних висновків у царині когнітивній психології та нейронауки. Результати засвідчили, що всі учасники використовували жести під час обох сеансів; середня кількість жестів, що супроводжувала їхнє мовлення, становила 7,2 під час сеансу НДД та 6 під час сесій ДД. Це показує, що використання наочних засобів, що підтримують семантичний зміст мовлення, не призвело до значного зменшення кількості жестів, що супроводжують мовлення на сесіях ДД. Крім того, це також вказує на те, що роль жестів під час породження мовлення полягає не лише у повторенні його семантичного змісту. Одержані дані підтверджують попередні висновки представників когнітивної психології про те, що мовлення та жести, що його супроводжують, когнітивно та інстинктивно пов'язані як одне ціле, і що жести при цьому відіграють важливу роль у концептуалізації та продукуванні мовлення. Мовлення та жести нейрологічно взаємопов'язані, і вони виникають у мовців спонтанно щоразу вони мають намір передати повідомлення. Ці висновки також слугують додатковим свідченням тих досліджень, які підкреслюють, що супровідні жести виробляються не лише як візуальний засіб доповнення мовлення.

***Ключові слова:** жести, що супроводжують мовлення, концептуалізація мовлення, візуальний засіб, гіпотеза способів подання інформації.*

1. Introduction and Background

Empirical evidence shows that humans produce gestures intuitively and spontaneously during speech even when the addressee cannot see them. Iverson and Goldin-Meadow (1998) found that blind participants gesture while talking to other blind participants even though they have never seen such gestures; people produce gestures (co-thought gestures) when they solve problems silently (Chu & Kita, 2011), and even babies would use gestures (Kelly, McDevitt, & Esch, 2009; Bates & Dick, 2002).

Research that investigates the interaction between gesture and speech has been dominated by the following two aspects: 'timing' (integration) and 'meaning' (function) (Abner et al., 2015). 'Timing' basically relates to the observation that gestures are synchronized and integrated with their respective utterances. 'Meaning' focuses on the issue that gestures have a role in facilitating the listener's comprehension of the intended meaning. Within this latter area of research, another area that has gained recent consideration is that co-speech gestures are cognitively helpful to the speaker as well since they facilitate conceptualization of a message (Chu & Kita, 2011; Kelly et al., 2009; Bates & Dick, 2002)

Most research on co-speech gestures typically focuses on the effect of gestures on the addressee's perception of a message (e.g. Kang & Tversky, 2016; Ping & Goldin-Meadow, 2008). However, since communicative events also involve the producer of a message, it is necessary to investigate why speakers produce gestures. According to the Information Packaging Hypothesis (henceforth IPH) (Kita, 2000; Alibali, Kita, & Young, 2000; Hostetter et al. 2007), "speech and gesture interact at an earlier stage when information is packaged, organized and distributed across the modalities" and so this suggests that gestures are interconnected with conceptualization and production of speech (Wagner, 2014, p. 216). Research in

cognitive psychology that focused on this innate synchrony (McNeill, 2014) of speech and co-speech gestures has shown that gesturing reduces cognitive load and so facilitates thinking and memory retrieval during speech production (Goldin-Meadow & Wagner, 2005). The IPH suggests that gesture is associated with preverbal processes related to speech conceptualization as a link has been assumed to exist between increase in cognitive load during speaking and increase in gesture rate.

1.1. Gestures are an innate component of speech production

Neuroscience research suggests that language is processed by a general system of communication with, in Broca's words, "the ability to make a firm connection between an idea and a symbol, whether this symbol was a sound, a gesture, an illustration, or any other expression" (cited in Xu et al. 2009, p. 20668). Research in neuro-psychology, especially that using fMRI (functional Magnetic Resonance Imaging), has experimentally shown that brain regions and systems that are responsible for speech production and comprehension are the same as/intersect with those regions that are responsible for the initiation or comprehension of spatio-motor stimulus (i.e. gestures) (Rizzolatti & Craighero, 2004; see also Schippers et al., 2010; Dick et al., 2009).

Since gestures as action are stimulated by the same brain regions responsible for language conceptualization and perception, this suggests a link between conceptualization of speech and gesture production. Xu et al, (2009) have found that gesture (as behaviour) processing takes place in Broca's and Wernicke's areas in the brain (brain areas associated with language processing), which are the same areas humans use for language comprehension and production. To emphasize the neurological connection between gesture and speech more, research in fMRI has shown that Broca's and Wernicke's areas are connected by a bundle of nerve fibers referred to as the 'arcuate fasciculus' (Bernal & Nolan, 2010); and an overlapping neural network involving Broca's area, Wernicke's area, and the premotor cortex shows more neurological activity when speech is accompanied with gestures than when only either of them occurs (Schippers et al, 2010; Dick et al., 2009). All of these findings are "evidence that action and language processing share a high-level neural integration system" (Willems et al. 2007, p. 2322). This intersecting, interactive networking in the brain enhances language production and comprehension (Vainger et al., 2014; Dick et al., 2009).

According to McNeill (2014), gesture and speech form a 'gesture-speech' unit even before they are expressed externally. McNeill (1992) maintains that speech and accompanying gestures are phonologically synchronous where the gesture 'stroke' is synchronized with the most accentuated syllable, they are semantically synchronous as they are related to the same idea, and are also pragmatically synchronous as they share the same pragmatic function in context. For instance, it has been found that the stroke phase of a gesture "is the most effortful and most meaningful phase of the gesture" and is paralleled to the nucleus of a syllable (Abner et al., 2015, p. 438).

Speech and gesture share a neural system that integrates information from both modalities (Willems et al., 2007) and so gesture and speech can be thought of as forming “a single integrated system” in which they collaborate to express meaning (Goldin-Meadow & Wagner, 2005, p. 238). In addition, the semantic interpretations of speech and accompanying representational (i.e. that embody the meaning of accompanying words) gestures are strongly interconnected in the neural processing of both modalities in the human brain (Kelly et al. 2004). Speech and co-speech gestures can be looked at as what Clark (1996) describes as ‘composite signals’ (p. 161); this interconnectedness has its “origins in early hand-mouth linkages,” and “it is the initial sensorimotor linkages of these systems that form the bases for their later cognitive interdependence” (Iverson & Thelen, 1999, p. 19). Besides, Bates and Dick (2002) found that gestures and language are so closely connected during early developmental stages for both deaf and hearing children.

Gestures also aid the speaker’s thinking and memory retrieval during speech production. Goldin-Meadow and Wagner (2005) found that their participants remember letters and words better when they gesture than when they do not. Goldin-Meadow et al. (2001) describe how participants remembered more words when they gestured during their math explanations than when they did not. According to Kelly et al. (2009, p.330), the reason their participants remember foreign words better when accompanied with gestures is because representational gestures make a deeper ‘imagistic trace’ in the brain for a new word as these gestures embody meaning non-arbitrarily. This result generally applies not only to new words of a foreign language but also to words in the speaker-addressee shared native language (Kelly et al. 2009, p.330). It seems that co-speech gestures help speakers remember the points they want to discuss and also help them remember how to do that in an effective manner as it has been found that “gesturing while speaking frees up working memory resources” which can “then be used for other tasks, such as learning how to solve a new problem” (Ping & Goldin-Meadow, 2010, p. 603).

The spontaneous unintentional production of gestures facilitates speech conceptualization (Chu and Kita, 2011; Goldin-Meadow & Wagner, 2005). The cognitive interconnection between gesture and speech has been mainly focused on by two modes of research in cognitive psycholinguistics; these are the Information Packaging Hypothesis (IPH) and the Gesture as Simulated Action framework (GSA). The IPH holds that “producing gestures helps speakers organize and package visuospatial information into units that are compatible with the linear, sequential format of speech” (Goldin-Meadow & Alibali, 2013, p. 258); findings in the IPH suggest that gesture rate increases according to increase in cognitive demands (see 1.3 below). According to the Kita (2000), during speech conceptualization, gestures help speakers parse spatio-motoric images into smaller chunks to lighten cognitive load on them. These smaller chunks are easier to linearize in articulated speech than a whole multidimensional mental image. Similarly emphasizing the cognitive connection between gesture and speech, the GSA framework (Hostetter and Alibali, 2010) postulates that speaking

conceptualizations motivate simulations of action and perception and then these simulations activate corresponding motor and premotor brain areas responsible for providing gestures according to individual and contextual factors. Reflecting on this interconnectedness between the two modalities, Iverson and Thelen (1999) believe that this linkage of speech and gesture is a “manifestation of the embodiment of thought” as both “hand and mouth are tightly coupled in the mutual cognitive activity of language.”

These findings suggest that co-speech gestures would be initiated in any context where a person is involved in speech production; this connection is formed mostly regardless of environmental stimulants since these two modalities are mutually and intuitively stimulating as one cognitive and neurological unit.

1.2. Gestures are Recipient-Designed

The findings that gesture and speech are naturally interconnected suggest benefits for both the speaker (see 1.3 below) and the addressees. But as has been discussed above, in most situations of their occurrence, co-speech gestures are spontaneously, rather than intentionally, produced and so any benefits gained will be the result of this spontaneity of their production.

Thus, recent research in neuroscience has shown that the perception of gestures accompanying speech by an addressee activates specific regions in their brains that are activated when a speaker performs these gestures. Findings in cognitive psychology have shown better learning outcomes, better memory retrievals, and increased brain activity for both speaker and receiver when the two modalities co-occurred (Melinger et al., 2007; Hostetter et al., 2007). According to Kang and Tversky (2016, p.3), gestures “can map meanings more directly than language” (p.3). They add that gestures are more effective than a flat diagram, for instance, in representing actions more directly as gestures “are themselves actions and can be three-dimensional” and so gestures are more capable of expressing visuo-spatial information than speech (Kang & Tversky, 2016, p.12).

We can conclude that in virtue of their natural and impulsive co-occurrence with speech, gestures participate in, and so facilitate, the comprehension of a message and so improve the audience’s attention and conceptualization with regard to speech content.

1.3. Gestures Decrease the Speaker’s Cognitive Load during Speech Production

Some mental tasks are more cognitively demanding than others. Research in this area also emphasizes the link between gesture production and both of thinking and speech production. The results of Alibali et al. (2000), for instance, show that explanation tasks involved high demands on conceptualization processes of what should be said. The task of providing information to others is cognitively and psychologically demanding especially with regard to the processes of ‘linearization’ (i.e. order of ideas), ‘focus’ (i.e. what to mention and what to ignore), and memory retrieval (Hostetter et al., 2007).

Research found an increased rate of gestures during tasks that involved more speech conceptualizations than other ones; and the results link the increased production of gestures to spontaneous effort to lighten cognitive load (Melinger & Kita, 2007; Goldin-Meadow & Wagner, 2005). Cognitive processing of data is expectedly laborious as the speaker is mostly explaining, ordering, and connecting a multitude of ideas, relevant logical arguments, and their supporting major and minor details into a general comprehensible whole that aims to communicate a message.

Goldin-Meadow and Wagner (2005, p.237) suggest that gesturing lightens cognitive load by shifting the load “away from a verbal store into a visuospatial store” and this would make “it easier to perform a verbal task simultaneously”; they add that the cognitive effects of gestures are direct and relate to the point that they reduce cognitive effort since they help externalize ideas (p. 234). Iverson and Goldin-Meadow (1998, p. 228) conclude that co-speech gestures facilitate “the thinking that underlies speaking.” This suggests that since speaking is accompanied by (subconscious) thinking, so speech will be always interconnected with gesture conceptualization and production since the link between the two is inevitable (Iverson & Thelen, 1999; Willems et al., 2007; see 1.1 above).

1.4. The Present Study

The findings of many studies in cognitive psychology and neuroscience establish that speech and gesture are intuitively and innately interconnected. The present study compares gesture production during two speech tasks where visual aid as data-show slides is used in one session (hereafter ‘DS’) and not used at all in the other session (hereafter ‘NDS’) though each presenters delivered the same informative speech in each session.

We can expect that the DS slides can easily and more vividly represent the images, shapes, sizes, and movements that are related to descriptions mentioned during informative speech. But if speakers are able to enrich their informative speech by depicting visual aid such as showing pictures, drawings, and motion diagrams representing their speech content, would this mean that co-speech gestures would become redundant and so drastically reduce in number during speech production? The Hypothesis in this research is that the participants would still produce a substantial number of representational gestures during the DS session as gestures are instinctively and impulsively interconnected with speech conceptualization regardless of the existence or absence of visual aid in the speech environment. I also hypothesize that gesture rate would be slightly higher in the NDS sessions than in the DS sessions. It is hoped that the results and analysis in this study will contribute to a better understanding of gestural behavior in human communication.

2. Method

Data collection for purposes of this research depended on observation of gestural behaviour during the actual tasks of presenting informative speech.

Observation was performed by three female coders who counted and wrote down the number of observed representational gestures made by each participant. The coders had not been informed about the purpose of data collection.

The data regarding each speech was written down in tabulated format showing only the number of each speaker (to maintain anonymity of the participants), as it appeared in the attendance sheet, in addition to the number of gestures observed during each speech. Participants were instructed to deliver the same informative speech during two separate sessions; each one had her own topic. They were asked to use visual aid to support explanation of their ideas in the DS session while in the NDS session they were not allowed to use any visual aid. Visual aid consisted of data-show slides (the device is controlled by a computer) showing pictures, diagrams, drawings, or motion pictures. In the NDS session, participants could only use an outline printed on a sheet of paper and which participants were asked to place on the table in front of them; this was intended to make sure that their hands were free to express gestural behavior without being hindered. Participants received course credit for the speech presentations. No training, recommendations, or mentioning with regard to gestures were given before the speech sessions. After data collection, participants were informed about the data collection performed by the coders and gave their informed consent that collected data be used on condition of anonymity.

Participants have been divided into groups A and B. Group A (numbers 1–11 in Table 1 below) had to give their DS speech in the first session and the NDS speech in the second session. Group B (numbers 12–22 in Table 2 below) did the opposite and so had to give their NDS speech in the first session and the DS speech in the second session. This was designed to make sure that increase or decrease in gesture rate did not happen because participants got used to one mode of presenting information than the other. For each participant, observation of representational gestures took place only during the first three minutes of her informative speech in each session. The number of participants was 29; they were all females, and their ages ranged from 18 to 21 years. However, the data analysis focused only on data collected with regard to 22 participants. Data collection for the remaining 7 participants was disregarded for several reasons: coder discrepancy with regard to number of observed gestures or due to technical issues. The gesture rate numbers in Tables 1 and 2 represent the average of the numbers of gestures as observed by each coder; whenever there was an apparent discrepancy with regard to the number recorded by one of the coders, it was disregarded and an average was taken with regard to the other two coders' numbers.

McNeill (1992) classifies gestures into 'representational' (also called 'iconic') gestures, deictic gestures, emblems, and beats. Representational gestures resemble the meaning of co-occurring expressions. Deictic gestures, on the other hand, accompany expressions (e.g. 'this' and 'that') that point to referents. Emblems, such as the 'OK' gesture, are conventionalized or 'standardized' (unlike representational gestures) and have a common meaning across the same culture. Beats are hand gestures that are "tightly synchronized with the prosodic contour of

the discourse” (Biau et al., 2016, p. 129). Focus in this research was only on representational gestures; an example on representational gestures is when one of the participants moved her forefinger as if repeating the shape of two circles in the air while uttering the word ‘repetition’. Another participant used the same gesture while uttering the word ‘turn’ in ‘the turbines would start to turn’.

Video recording had not been used for data collection because we believe that using video-recording or similar instruments would have led to varying degrees of inhibition with regard to verbal and non-verbal behaviors. Each method of data collection seems to have its own advantages and disadvantages. Video-recording for instance can capture full details of the observed audio-visual behaviour; it can be played at slow motion, replayed, paused, clipped, etc. These features are clearly lacking in human observation, but the spontaneity of speech and gesture behaviour can be impaired when the speaker is aware that he/she is being recorded.

3. Results and Discussion

As can be seen in Tables 1 (group A) and 2 (group B) below, the number of representational gestures occurring during the NDS speeches is slightly higher than that occurring during the DS speeches for most participants in both groups; the mean average of the representational gestures produced by participants in both groups was 7.2 in the NDS speech sessions in comparison to 6 in the DS speech sessions.

Table 1.

The number and average of co-speech gestures produced by participants in group A during the DS session (delivered first) and the NDS session (delivered second)

No. of Participant	No. of Gestures in the DS session (delivered first)	No. of Gestures in the NDS session (delivered second)
1.	7	8.6
2.	3.6	5.3
3.	7.3	7.6
4.	5.6	7.3
5.	8.3	10.3
6.	4	5.6
7.	3.6	5.3
8.	5.6	5.3
9.	8.6	9.6
10.	6.3	4.3
11.	8.3	9
Total	68.2	78.2
Average	6.2	7.1

Table 2.

The number and average of co-speech gestures produced by participants in group B during the NDS session (delivered first) and the DS session (delivered second)

No. of Participant	No. of Gestures in the DS session (delivered second)	No. of Gestures in the NDS session (delivered first)
1.	5.6	7.6
2.	4.3	6
3.	5.6	8.3
4.	4.3	3.6
5.	7.3	9.3
6.	4.3	7
7.	7	8.3
8.	8.3	6.6
9.	5.3	7.3
10.	7.3	10.3
11.	5.6	7.3
Total	64.9	81.6
Average	5.9	7.4

Participants in group A produced an average of 6.2 representational gestures in the DS session and an average of 7.1 gestures during their NDS session. Participants in group B produced an average of 5.9 gestures during their DS session and 7.4 gestures during their NDS session. As a total view point, therefore, the existence of visual aid content supporting the semantic content during the DS sessions did not lead to the disappearance, or a drastic reduction in the number, of representational co-speech gestures during speech production. This confirms the first part of the hypothesis in this research (see 3.1 below). On the other hand, confirming the second part of the hypothesis, the participants produced a slightly higher number of gestures in the NDS sessions than in the DS sessions (see 3.2 below).

3.1. Gestures are instinctively associated with speech conceptualization

The finding that the participants' gesture rate in the DS sessions was not drastically reduced in comparison to that in the NDS confirms the first part of the hypothesis that participants would still produce a significant amount of gestures during the DS speech despite the existence of visual aid (i.e. pictures, drawings, motion diagrams). Based on the findings in the literature that speech and gesture are functionally, physiologically, and cognitively interdependent (see 1.1 above), we can understand why co-speech gestures did not disappear in the DS sessions despite the use of external supportive visual aid. The finding in this research that all participants still produced a significant number of gestures during the DS sessions is evidence that gestures are instinctively produced during speech conceptualization and production.

Since findings in the literature suggest that speech and accompanying gestures form bonded cognitive units, we can assume that regardless of whether the speaker uses external visual aid during speech, gestures ‘will still leak onto a speaker’s hands’ (McNeill, 2014). Since the findings in IPH (Kita, 2000; Alibali et al., 2000), cognitive psychology (Wagner, 2014; Goldin-Meadow, 1998; Chu & Kita, 2011; Kelly et al. 2009) and neuroscience (Xu et al. 2009; Dick et al. 2009) suggest that gestures are cognitively and neurologically interrelated with conceptualization and production of speech, we can assume that gesture production as in the DS sessions cannot be replaced by external visual aid. The speakers were aware that the visual aid tools that they used represent their speech content; however, they did not stop producing gestures simply because producing or not producing co-speech gestures is not an intentional behaviour that is performed willingly. Since “gestures exist internally and form gesture-speech units” (McNeill, 2014, p.139), they were intuitively associated with speech conceptualization in both the DS and NDS speech sessions. The motor coordination and mutual co-occurrence of hand and mouth (Iverson & Thelen, 1999), their cognitive interdependence that “stays throughout a person’s lifespan” (Wagner, 2014, p. 216), and the structural and functional synchrony of gesture and speech (McNeill, 1989, 1992) all support the findings in this study that gestures would still be produced regardless of the presence of visual aid since the role of gestures is not merely to represent semantic content to the addressee.

Speech and gesture are physiologically bonded to the extent that their shared co-existence “transcends the intentions of the speaker to communicate” (Iverson & Thelen, 1999, p.19). Speakers produce co-speech gestures not merely because they intentionally aim to make their speech content more comprehensible. One of the observations during the participants’ speech tasks was that representational gestures have been mostly associated with spatio-motoric content related to descriptions of shapes, sizes, and movements. According to Melinger and Kita (2007, p.25) the linearization and focusing components of speech conceptualization are both susceptible to such a cognitive load “when planning an utterance with spatio-motoric content.” Since gestures have been associated with decreasing cognitive load during speech conceptualization (Kang & Tversky, 2016; Goldin-Meadow et al., 2001; Melinger & Kita, 2007), and because gesture is the natural imagery with language (McNeill, 2014), we can assume that gestures would decrease cognitive load regardless of the presence or absence of external visual aid. The justification for this conclusion is that gestures have been found in situations where the speaker knows that the addressees cannot see him/her such as in the case of blind speakers addressing blind listeners (Iverson and Goldin Meadow, 1998), when thinking silently (Chu & Kita, 2011), while talking on the phone (Bavelas et al., 2008), or nowadays, based on personal experience, when some instructors are teaching live online classes (without using camera). Morrel-Samuels and Krauss (1992) found that the planning of a gesture precedes the planning of the speech it accompanies as the preparatory movement for a gesture typically precedes the onset of the semantic co-expressive word by an average of almost one second. This suggests how the

conceptualization of a gesture is interconnected with that of spoken words especially those with spatio-motoric content. The findings in this study, therefore, emphasize those in the IPH (Wagner, 2014; Abner et al., 2015), the GSA framework (Hostetter & Alibali, 2010), and relevant cognitive psychology (McNeille, 2014) and neuroscience research (Dick et al. 2009), that gestures have an intuitive role in preverbal conceptualization during speaking.

Co-speech gestures are produced spontaneously. One of the indications of these findings with regard to the interconnectedness between gesture and speech is that even if a speaker intentionally decides not to produce co-speech gestures, he/she will continue to produce them impulsively as they are cognitively merged with speech conceptualization.

3.2. A Higher Cognitive Load on Conceptualization Increases Gesture Rate

The result that the participants produced a slightly higher gesture rate in the NDS sessions than during the DS ones confirms the second part of the hypothesis and agrees with those from recent research that suggests a link between increase of cognitive demands and increase in gesture rate (see 1.3 above).

As predicted by the IPH (Kita, 2000; Melinger & Kita, 2007), participants produced more gestures during the NDS speech sessions than during the DS sessions since not using data-show slides as visual aid seems to have made speech production more cognitively demanding than during the DS sessions despite the fact that the participants delivered the same speech. It can be assumed here that the absence of visual data in the environment had increased the cognitive load for the participants during their NDS speech.

However, if we consider the findings in the IPH that gestures help a speaker “organize and package visuospatial information into units that are compatible with the linear, sequential format of speech” (Goldin-Meadow & Alibali, 2013, p. 258), we are more inclined to believe that the slight decrease in gestures in the DS sessions takes place because the accompanying visual aid makes it easier for the speaker to conceptualize some of her own preverbal ideas rather than because the speaker is aware that the audience can now comprehend the speech content as shown in the visual aid. That is, the role of gestures that they help the speaker break apart imagined conceptions into smaller chunks (Kita, 2000) was, in a few instances in the NDS speech, taken over by the visual aid images thus easing the process of conceptualization for the speaker herself with regard to some speech content.

It is noticeable here that gestures were still abundantly produced during the DS sessions. We assume that this mostly happens regardless of the intention to present comprehensible information to the audience. Since the decline in gesture rate during the DS sessions is not drastically significant in comparison to the NDS, we are motivated to believe that the bond between gesture and speech conceptualization is much stronger than to be disintegrated by the mere presence of external visual aid. Speech cannot dis sever from gesture and freely reconnect with another element in context; it is intrinsically connected with gesture production.

Though cognitive load seems to have eased a little in the DS sessions, we assume that it had remained relatively high simply because speech, with which gesture shares co-existence, was still produced in the DS sessions.

4. Conclusion

The use of visual aid did not lead to an absence of, or a substantial decrease in, the number of representational co-speech gestures during speech in the DS speech sessions. Representational gestures had been substantially produced in the DS speech sessions. This result supports research in cognitive psychology and neuroscience that gestures are an integral, impulsive, and intuitive part of speech and that gestures and speech share a synchronous interdependence. As for further research, this topic can be investigated with regard to the effect of co-speech gestures on audience comprehension during speech presentations similar to these discussed in this study; the aim in such future research can be to study the effect of the combination of visual aid with gestures on audience conceptualization of communicated messages. Another area for further research would be to compare results concerning gesture production between male and female participants speaking to an audience of the same or the opposite gender to know if gender differences have an influence on both language production and comprehension.

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PSYCHOMETRICS, RHETORIC, NARRATIVE IN MEDIA PSYCHOLINGUISTICS

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Abstract. The paper is focused on the critical exploration of an experiment held in the Ukrainian media environment. The results of the experiment are reflected in the book *Freedom of Speech Against Fear and Humiliation* published by Savik Shuster (2018), the Ukrainian political journalist and the *Freedom of Speech* TV talk show host. The study aims to define factors and predictors of the Ukrainian audience's social behavior. In this regard, narrative, conversational, and intent analyses of his talk show participants' conflict interaction described in the book, were applied. These tools made it possible to explicate his narratives' main topics, their prominence, role positions, archetypal patterns of the participant, and host's behavior. The narrative structure of "negative" scenarios of the talk show described in the book enabled defining the host as the encourager of the speakers' conflict behavior, high tension of their discourse that leads to deconstructing, discrediting, and demonizing the opponent's political party image. Although Schuster's conclusions were full of dramatic statements and almost apocalyptic predictions, their reinterpretation was necessary. The application of *F*-test as a measure of testing statistical hypotheses relevant to empirical data, allowed to search for additional political and psychological explanatory models of the "emotional map of Ukraine". The results of the study demonstrate hidden suggestion of hopelessness, feelings of betrayal, protest moods inspired by the speakers invited to the TV show. This adversely affects the critical understanding of current social processes along with the radicalization of public sentiment by shifting the locus of control to the outside, when the audience invited to the show delegates responsibility for the state of affairs in the country and their well-being to their political leaders.

Keywords: *narrative, media, individual behavior, conversational analysis, intent analysis, mass emotions.*

Карпенко Зіновія. Психометрика, риторика, наратив у контексті медіапсихолінгвістики

Анотація. Статтю присвячено критичному дослідженню організації, представлення і тлумачення результатів тривалого експерименту в медіасередовищі. Результати експерименту відображено в опублікованій 2018 року книзі «Свобода слова проти страху і приниження», автором якої є український політичний журналіст та ведучий ток-шоу «Свобода слова» Савік Шустер. Метою дослідження є визначення чинників соціальної поведінки української аудиторії. Серед методів застосовано наративний, конwersаційний та інтент-аналіз конфліктної взаємодії учасників політичного ток-шоу. Ці інструменти дали змогу експлікувати провідні теми, смисли, рольові позиції, архетипні патерни поведінки учасників та ведучого. За матеріалами рефлексивного дискурсу самопрезентації автора книжки встановлено, що провідним видом описаних ним наративів є деструктивно-

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конфронтаційний, тематичне ядро якого становить інспірування непримиренного суспільного протистояння й делегітимізація державної влади. Наративна структура «негативних» сценаріїв ток-шоу, описана в книзі, дала змогу визначити ведучого як підбурювача конфліктної поведінки спікерів, високу напруженість їхнього дискурсу, що призводить до деконструкції, дискредитації та демонізації іміджу політичної партії опонента. Хоча висновки Шустера насичені драматичними висловлюваннями та майже апокаліптичними передбаченнями, необхідним є їхнє критичне осмислення. Застосування ϕ^* -критерію Фішера як методу перевірки статистичних гіпотез дало змогу встановити додаткові політичні та психологічні пояснювальні моделі «емоційної карти України». Результати дослідження демонструють безнадійність, почуття зради, протестні настрої внаслідок сугестивного впливу з боку запрошених до телешоу спікерів. Це в свою чергу погіршує критичне осмислення актуальних суспільних процесів поряд із радикалізацією суспільних настроїв з перемиканням локусу контролю назовні, коли запрошеним на шоу лідерам громадської думки глядачі делегують відповідальність за стан справ у державі та власне благополуччя.

Ключові слова: наратив, медіа, поведінка особистості, конверсаційний аналіз, інтеннт-аналіз, масові емоції.

1. Introduction

Individual social behavior is the object of numerous interdisciplinary studies. The search for objective-materialist (neurophysiological, economic) factors and mechanisms of this behavior is shifted towards the creation of cognitive-evaluative, interpretive models. Psycholinguistic studies of such phenomenological correlates of social behavior as emotions, feelings, traumatic experiences, have intensified of late. Scholars found a link between the intensity of emotions and the lexical modalities of their expression (Argaman, 2010). A new methodology for measuring negative bias using the positive and negative vocabulary of emotional words used in autobiographical stories has been applied (Cohen, 2011). Bartczak & Bokus (2017) measured the semantic distance between the ‘Self’ and five conceptualized concepts of past, future, joy, sadness, and happiness. Gawda (2013) analyzed the emotional vocabulary and narratives of people with an antisocial personality disorder, while (Voyer & Vu, 2016) determined the conditions of perception of sarcasm.

Moïsi (2010) in his theory of mass emotions attempted to link large-scale geopolitical transformations with dominant emotions typical of large communities was the theory of mass emotions. In Moïsi’s opinion, mass emotions of fear and humiliation are a source of interethnic, racial, religious and ethnocultural hostility leading to destructive practices (terrorism, war, genocide). These emotions are actually markers of unrealized motivations of large communities and serve as predictors of social unrest (revolutions, wars, riots). The only emotion that can resist the outbreak of violence against a properly identified or misdiagnosed hostile group suffering and persecution is the emotion of hope, supported by liberal-democratic legal norms and procedures, which gives a chance for a peaceful, constructive solution to pressing social problems and conflicts.

Moïsi believes that the modern globalized world is divided into three cultures – of fear (dominates in the United States and Western Europe), of humiliation

(predominant in Muslim Arabic cultures), of hope (India, China, the countries of the East Pacific).

This theory inspired the famous Ukrainian journalist Shuster (2018) to test it empirically in Ukraine. In his book, the journalist tried to fill a vacant niche in Moisi's proposed global map of emotions.

With this goal in mind, Shuster asked a question about the place of Ukraine on the global geopolitical map of emotions, since the fact of revolutionary, fateful events that took place and are taking place in Ukraine and other countries today is undeniable. It is worth paying tribute to the journalist's civic initiative and scientific interest that brought significant results: for the first time ever, a live socio-psychological experimental study has been held during a year and a half (from October 2015 to December 2016) embracing 46 talk shows "Shuster-Life". The study involved 4,600 people (100 people for each TV show lasting 4 hours). A team of sociologists ensured an even quota distribution of the TV show participants by their place of residence (region, city/village), age, and gender. As a result, a huge array of empirical data was collected, which has so far been only superficially statistically processed but has been hermeneutically elaborated in sufficient detail and insight. The research intuition of the author and TV show host enabled him to distinguish three emotional zones on the map of Ukraine: stability, borderline state, instability.

2. Methods

The article is the result of critical methodological reflection and a comparative, interdisciplinary approach to the interpretation of descriptive statistical characteristics. Among the main theoretical sources were works in media psychology (Winterhoff-Spurk, 2007; Hutsuliak, 2016; Naidonova, 2013; Petrunko, 2010; Vartanova, Zinchenko, & Mironova, 2011), psycholinguistic aspects of media functioning (Kompantseva, 2018; Kosmeda, 2000; Mezhov, Navalna, & Kostusiak, 2020), political psychology (Kaldor & Vejvoda, 1999; Karpenko, 2015; Pocheptsov, 2015; Pavlova, Grebenshchikova, 2017).

The goal purpose of this study is 1) to check the statistical significance of the general indicators of the emotional well-being of Ukrainians and on this basis to clarify the factors and predictors of their social behavior. To do this, we used the percentage data published in Schuster's book (2018), placed in the relevant statistical tables (see tabs between pages 256 and 257); 2) to carry out a narrative analysis of Schuster's description of his experience of conducting political TV talk shows; 3) with the help of conversational analysis to illustrate the psycholinguistic features of the conflicting interaction of TV talk show participants; 4) apply intent analysis to identify the motivational and value orientation and dispositional characteristics of the narrator.

Next, I will focus on some important omissions in the analysis of the emotional state of the Ukraine citizens made by Schuster, due primarily to the insufficient level of statistical provability of his research results. It should be emphasized that the verification of the statistical significance of the percentages

was taken from open sources, which allowed us to apply Fisher's angular transformation criterion ϕ , which is used to compare two samples by frequency of observed effects (Sidorenko, 1996, p. 157–171). The formulation of conclusions would be premature without careful verification of the differences of the samples with an empirically fixed answer to the host's (experimenter's) questions, as such conclusions could show bias, personal values, and subjective preferences of the researcher (Druzhinin, 2000).

Methodological triangulation (Flick, 1998; Johnson & Onwuegbuzie, 2004; Terrell, 2012; Dvornik, 2013; Karpenko, 2017) was used to gain consistent psychological knowledge about the possibility of direct fixation of human emotional experience in the media environment, understanding, interpretation of the received artifacts during a public discussion on TV. A hermeneutic method in its variants, such as narrative analysis (Crossley, 2013; Kellett, 2010), partly conversational analysis (Ulanovsky, 2016), discourse analysis (Kalmykov, 2017) in their relation to conflict communication and information and psychological warfare (Balyasnikova, 2015; Pryscheпа, 2017; Knyazeva, Tikhonova & Kurbakov, 2019) are supplementary tools.

3. Results and Discussion

The book contains answers to the question: "With what emotion do you leave the studio: the emotion of fear of tomorrow, hope for tomorrow or humiliation because of the conditions in which you live?"

Verification of the statistical significance of differences in the indicators of the evaluation construct "hope" by Fisher's criterion ϕ in the transgenerational dimension showed that there is a significant difference at 0.02 between the generation of millennials (18–29 years) and the active generation (30–44 years): the former are more optimistic than the latter (66 % vs. 62 %). The active generation differs slightly from the mature (45–59 years) ($p = 0.07$); while "mature" participants are somewhat more optimistic than "active" ones (65 % vs. 62 %). Also, there is a statistically significant difference at the level of 0.02 (65 % vs. 61 %, respectively) between the mature and older (over 60 years) generations. A comparison of the youngest and most mature participants shows almost identical data – 66 % and 65 % respectively. The statistical inaccuracy of the differences in the optimistic attitude to the future of the generations 18–29 and 45–59 indicates the semantic similarity of these different age tasks of life. The similarity is observed between generations 30–44 and over 60 years (62 % and 61 %, respectively). Such results can be interpreted in the sense of alternation of ontogenetic rhythms when the onset of adulthood (millennials) and the maximum of self-realization (45–59 years) are marked by faith in good prospects for their lives. However, the age periods of 30–44 and over 60 are characterized by a critical assessment of the implemented plans and, possibly, a reduction in the level of demands due to limited personal resources (intellectual, educational, professional, material, and physical) to achieve goals.

For obvious reasons, Schuster did not provide an ontogenetic explanation based on the transgenerational comparison of the experience of hope, but this explanation cannot be rejected. On the contrary, modern developmental psychology lacks works with large-scale comparisons of representative samples formed by age. A simple calculation shows that the sample of each generation was represented by 1,150 participants, since the whole sample was represented by 4,600 participants). Schuster was more interested in the political and psychological motives of this state of affairs. He draws a disappointing conclusion about the lack of hope among Ukrainians, who need to demonstrate a result of at least 75 % to achieve optimal viability (Shuster, 2018, p. 277–278). His ideal distribution of mass emotions was as follows: hope – 76 %, humiliation, and fear – 12 % each, while actual indicators the Ukrainian participants showed were as follows: hope – 63.7 %, humiliation – 18.8 %, fear – 17.5 % (Shuster, 2018, p. 277–278). The researcher bases his conclusions on his personal life experience, intuition, own firm belief in the ideality of such a phenomenological standard for effective progressive changes in society.

However, a strict approach to the research procedure reveals a number of errors that cause incorrect conclusions made by Schuster. A fundamental error is the semantic polarization of emotions as phenomena of reflected experience. From this standpoint, the emotion of hope opposes the emotions of fear and humiliation as both sthenic (evoking activity) and asthenic (blocking energy) poles of a single personal construct of self-experience in the world. Thus, the participants of the TV show actually had to make not a one-time choice, but a choice that consisted of two steps: 1) choosing the positive (wall, optimistic) or negative (asthenic, pessimistic) pole of the personal construct of attitude to life/experience of life; 2) determining the modality of the negative pole – fear or humiliation if the negative pole of this semantic opposition was chosen. Fear symbolizes a protective motivational tendency (fear of failure, fear of "not being even worse!"). Humiliation is associated with self-suppression and compulsive accumulation of envy and anger at subjects unfavorable for a particular person (community) comparisons of achievements, skills, competencies, power. From these considerations it follows that the theoretical probability of choosing hope is one chance out of two, i.e. 50 %; a similar probability of choosing fear or humiliation is one chance out of four, i.e. 25 %, and not 33.3 % if the choice was made once. In fact, the obtained indicators of diagnosed emotions are significantly higher as for hope and lower as for fear and humiliation.

Below are percentages for both negative emotions (Schuster considered them as independent characteristics) among the participants: millennials – 34 % (20 % fear and 14 % humiliation), active generation – 38 % (19 % of both emotions), mature generation – 35 % (16 % and 19 % respectively), older generation – 38 % (15 % fear and 23 % humiliation). The result of checking the significance of intergenerational differences in the recorded indicators of the negative emotional spectrum and pessimistic life orientation reproduces the rhythmic fluctuations of the emotional state of hope, only in a complementary (mirror) reflection. Thus, millennials differ significantly ($p = 0.02$) from the active generation, whose mode

of life contains more protective and depressive features. No significant differences in the negative pole of emotional well-being ($p = 0.06$), but significant subsystemic differences at the level of 0.03, achieved by reducing fear in adulthood, are found out between the active and mature. No differences between the mature and older generations, but the redistribution of negative emotions is increasing with older people fearing less but feeling more humiliation (these emotions' polarization is significant at $p = 0.00$). This result is more than convincing: fear of the future fades their helplessness, lack of subjectivity, physical and material ability to change the course of events, to improve their living conditions.

As we see, the reinterpretation of the results obtained by Schuster became possible due to applying the method of testing statistical hypotheses relevant to empirical data, namely Fisher's criterion ϕ , which allowed searching for additional political and psychological explanatory models of "emotional map of Ukraine" while avoiding radical one-sided conclusions, disappointing forecasts. Instead, Schuster's conclusions are full of dramatic statements and apocalyptic predictions.

Although Moïsi in his theory uses no traditional socio-psychological methods, like surveys, expert assessments, experiments, and quantitative analysis of empirical data, he substantiates his theory not nomothetically, but ideographically by considering unique representative cases, and not with the involvement of representative samples. Moïsi's extensive political discourse analysis serves to accumulate historical analogies and phenomenological reduction as a specific hermeneutic procedure "dries up" recurring events, behavioral patterns of human communities, elites, and leaders to their most essential intentional and emotional core of social and political transformations. It should be noted that Moïsi nowhere violates the "purity of the genre", i.e. does not apply mixed methodology, or use methodological triangulation in understanding the complementarity of hermeneutic-interpretive and experimental-statistical strategies for building his theory of mass emotions. In this respect, the attempts of Shuster to apply methodological triangulation to the construction of a holistic descriptive-explanatory-prognostic model of mass emotions of Ukrainian citizens cannot be considered successful due to certain shortcomings in determining the statistical norm of mental development and individual health (Morgun & Titov, 2009, p. 75-76). Schuster supports rather a socio-psychological norm, advocating for the desired, ideal order of things (as he understands it). However, he uses for this purpose superficial and not very carefully worked out diagnostic and statistical procedures, which ultimately lead him to arbitrary, biased conclusions and utopian recommendations. Among them is the immediate introduction in Ukraine of unconditional basic income (Shuster, 2018, p. 280–282) guaranteed to all citizens of the country regardless of whether they work (worked) or not, whether they are sick or healthy, children or adults.

The shortcomings of the psychometrics of mass emotions analyzed above, which led to speculative conclusions, are not the only problem that causes insufficient validity and representativeness of the experimental study. The narrative structure of the talk show, which is formed by several important topics for

discussion by authoritative speakers associated with the most resonant events that took place in a certain period, also leads to biased conclusions in the form of the Pygmalion effect and their large-scale manipulative influence on public consciousness (Barnum effect). The host (and simultaneously observer-researcher, interpreter, narrator, and transmitter of subjective "truth") is responsible for talk show drama: selecting and sequencing of topics and events, inviting speakers as voices of different ideological trends, regulating the order of giving a floor to speak or comment, demonstrating videos that provide an associative order of meanings in the case of "historical" truth (presentation of objective facts) or metaphorical synchronized meanings that symbolize a social problem and contain an *archetypal code* of its predominant solution in a certain society (the so-called narrative truth). As a result of the active involvement of the host as a narrator, the talk show participants construct a usually negative conflict narrative that not only reflects the value positions of the participants, but also helps their public "crystallization", the polarization of vision, evaluation, and approaches to solving problems. This actualizes the chain of opposition to the rhetorical transactions of political opponents, whose ultimate goal is to struggle for power by imposing one's narrative on the recipients of media products and gaining the widest possible circle of supporters. According to Kellett, the plots of almost all conflict narratives play on competitive themes of power and domination, personal independent influence, on the one hand, and pertaining, adaptation, attachment to a group and traditions, on the other hand (Kellett, 2010). It is this axiological dilemma that serves as a universal driving force of social discourses and narratives, from individual life-creation to global civilizational transformations.

Schuster's book contains 7 examples of narratives consisting of a description, author's commentary, and a more or less detailed interpretation of the discussion of current issues with their extrapolation to public sentiment, which was recorded at the beginning and end of the talk show. Significantly, only one of the seven narratives selected for the case study had an optimistic finale (increased hope and reduced fear and humiliation), while the other six reflected the above-mentioned trend of growing insecurity and humiliation while despairing of "bright prospects."

The narrative structure of "negative" scenarios of the talk show described in the book enabled defining the host as the encourager of the speakers' conflict behavior, high tension of their discourse that leads to deconstructing, discrediting, and demonizing the opponent's political party image. The purpose of such a narrative is to discredit the enemy by one-sided and distorted coverage of his activities and delegating to him the exclusive responsibility for the state of affairs in the country. The "enemy" in the narrative is endowed with such negative features as "corrupt", "thief", "thug", "bandit", "oligarch" – a semantic syncret of greed, monopoly position in business, the power to influence media content, to bribe deputies for promoting their business interests. The typical discourse of opponents is formed by the accusations of predecessors, which, on one hand, establishes a conflicting narrative in the past, and on the other – deprives the alternative narrative of reconstructive, life-giving force, since the condition of its

constructiveness is the historical longevity dialogue, finding opportunities for cooperation with the inevitable concessions to each other. Nurturing value-oriented unity of citizens (with respect for them as the antithesis of humiliation and a sense of existential security that awakens initiative being the antithesis of fear) on the crucial issues of state-building and strengthening the economic foundations of life will be able to combine two motivational tendencies. They are a drive for power (control) as isolated from the plebs domination and a drive for acceptance/love as involvement in the group, commitment to people in a solid dialectical core of future social change.

Taken together, it is worth rethinking both the narrative role and the rhetorical function of the talk show host, which is to move from a purely psychoanalytic position of an attentive but detached, “neutral” listener to a facilitator position. In the first position, the host uses appropriate conversational moves to emphasize the contradictions in the participants' discourses, encouraging them to express their idealized projections in the form of selfless pursuit of the public good and the role of advocate of justice in their political power. The confrontation of the participants intensified in this way, which sometimes reaches the heights of theatrical action, is stopped by the format of the show in the genre of satire. It is worth recalling here that White singled out four basic emplotments provided by the archetypal genres of romance, comedy, tragedy, and satire (Crossley, 2013, p. 84). Satire does not recognize interdependence and shared empathic responsibility, because it is a work of exposing character. “The object of satire is the antipodes of universal morality; hyperbolization and grotesque are widely used here (Gromyak & Kovaliv, 1997, p. 624–625). For example, the escalation of confrontational tensions between “the righteous” and “the criminal” has led to the following fact:

“Oles Donii, a member of the Verkhovna Rada, an “educated nationalist”, one of the active participants in the student actions of the struggle for independence in the late 1980s – early 1990s, went on a provocation:

– The one who shoots Yanukovich and Zakharchenko will perform an act of humanity. 74 % of the audience support this and applaud”¹ (Shuster, 2018, p. 82).

The extrapolation of “satirical” programming has grown into its critical manifestation of life, which served as a turning point in the development of the real confrontation on the Maidan in February 2014:

“One of the centurions, 26-year-old Volodymyr Parasyuk, broke into the microphone on the stage and presented an ultimatum:

– No Yanukovich will rule for another year! He has to leave by ten o'clock tomorrow! If by ten o'clock in the morning our politicians do not make a statement that Yanukovich should resign immediately – you hear, immediately! – then we go on the assault with weapons! I swear to you!

¹ All translations are made by the author of this article.

The Maidan supported the centurion in tears and excitement” (Shuster, 2018, p. 81–82).

Realizing his personal responsibility for the limited programming of talk shows and the materialization of a possible future, Shuster is filled with remorse:

“I still can’t get rid of the feeling that contributed to the emergence of Parasyuk's ultimatum. The program was watched at 7:30 p.m., it was watched on the Maidan. At 20:22 my question about Yanukovych’s voluntary resignation sounded, and at 20:30 Parasyuk moved onto the stage: either resignation or lynching!” (Schuster, 2018, p. 83).

Here is another reflection that shows the synchronicity and reciprocity of transitions between media, virtual, and real fact:

“In order for a political talk show to immediately attract viewers, an overture or an acute conflict is needed in the overture, the initial part of the program. But on this day the most important thing was to learn the information first hand. I decided to give the first word to Pavel Sheremet, my old acquaintance, a friend of Boris Nemtsov. A year after this program, Boris was first shot next to the Kremlin, and two years later Pavlo was blown up with a small one in the center of Kyiv”(Shuster, 2018, p. 80).

It is important to note that the semantic center of Schuster's book is the discourse of the journalist’s self-presentation as the author of a reflective description of the events that took place on his talk show. The personality of the host as a reference object of outward and inward intentions plays a mediating role in the discussion of current issues that have been the subject of discussions on television.

Intent analysis of self-presenting rhetorical figures used by Schuster indicates the emphasis on its public significance and influence:

“Perhaps it was not worth leaving Kyiv and thus tempting Yanukovych's loyal hawks, who wanted to get rid of me at any cost!”(Schuster, 2018, p. 60).

The following excerpt of the conversation shows the reliability of his expert judgment:

“There will be blood, and we in Europe will have enough,” I told Peter. “You're exaggerating,” he replied, like a typical British journalist who sticks to the facts, not intuition” (Schuster, 2018, p. 72).

Thus, the author of the book claims the superiority of his prediction as a more reliable over the forecast of a typical representative of the Western media. An

excerpt from another conversation in the book aims to convince the reader of the author's geopolitical insight, again by contrasting a single argument, in the irrefutable provability of which the journalist has no doubt, the interlocutor's weak attempt to deny him:

"You'll see, they will take Crimea, and the war will begin," I understood that the law of the first murder had already come into force and the fate of Crimea had already been decided.

"No, there may be casualties, but there will be no war," my friend said firmly. We met again four months later, he was on his way to war in the Donbass" (Shuster, 2018, p. 77).

A strong subconscious desire for comprehensive control is evidenced by the following nostalgic memory of Schuster, who quotes his friend about the "strategic" location of his apartment in Florence:

"If you put a machine gun here, you'll be able to control the whole block!" (Schuster, 2018, p. 61).

His courage manifestation is aimed at awakening readers' faith in the selfless subordination of their professional activities to the social mission of journalism, based on the ideas of freedom, justice, and humanism:

"... If you are afraid of the wrath of presidents, you should not be a journalist" (Shuster, 2018, p. 94).

Shuster's personal self-affirmation through his subjectivity, feeling of power and control, is conveyed in the following experience:

"For me, the studio is the most comfortable place in the world. Actually, the studio is my world. But I spent a few hours in the strongest tension: you keep in mind the reaction of the audience and the guests' remarks, so as not to miss important accents, filter the information from the editor on the "ear", follow the news coming during the program, and combine all these parties into a single drama show" (Shuster, 2018, p. 104).

Unsurprisingly, the intention of one's competence, influence, and subjective grandeur leads to the fact that only POWER as a collective image of institutional power and administrative resource turns out to be worthy (not in the ethical sense of the word), actually, a moderate rival of an individual (here – unique), whose vision unites the claims of a huge number of oppressed, robbed, deceived citizens.

It should be noted that Shuster rarely uses direct invectives (Mezhov et al., 2020) aimed at his ideological opponents in the live course of the show; exposure of "criminal power" is carried out indirectly, through the selection of topics, stories,

speakers, whose role in the show is determined by the clan-oligarchic interests of representatives of various political forces invited to participate in the show. However, the intention of rejection and disgust for the “usurper of the people’s hope” – the then incumbent President Poroshenko was conveyed through the depiction, for example, of the following household details:

“I was taken to a guest room on the president’s sixth floor. Unlike the modest office where Poroshenko and I met in the spring, there was an expensive distaste: a chandelier overloaded with crystal curls hung over the gilded furniture. The wallpaper was pressed with its bulky ornament” (Shuster, 2018, p. 121).

After such a massive self-presentation and depiction of the confrontation with the already post-Maidan authorities, the author of the book allows himself a cunning confession:

() “I do not overestimate the importance of my person. I haven’t needed to prove my courage or anything to anyone for a long time. But it so happened that many people know me personally, and my murder would be loud news in Ukraine. It was in the interests of the authorities to ensure the safety of our film crew” (Shuster, 2018, p. 124).

Imitation of modesty is an attempt to conform to the socially acceptable pattern of a simple Hero, loved by the people and chosen by them, fighter against Evil. Thus, the second half of the book is full of the author’s intentions of self-confidence, which is supported by an appeal to the arguments concerning objective things, a balanced analysis of situations. Schuster’s discourse becomes less emotionally charged, but the appeal to statistical analysis was still unsuccessful, despite the author’s belief in his scientific knowledge, which led him to speculative conclusions (which I drew attention to above).

The increase in initiatives, recommendations, and appeals addressed primarily to the generation of 30–44-year-olds eventually led Schuster to a populist project of unconditional basic income:

“Basic income is a form of social protection that provides each citizen of the country with the amount of money needed for normal daily life. Such money is paid by the political community (in the case of Ukraine – the state, region, or city) to each of its members, regardless of what he owns and whether he works or not”. (Shuster, 2018, p. 281).

In his substantiating his own “plan for the survival of Ukraine”, Schuster resorted to some economic calculations, which obviously have the same “scientific validity” as speculative conclusions made based on a totally subjective assessment of the emotions of talk show participants. The lack of response from authoritative

experts in the field of economics indicates that the declaration of Shuster in the arrangement of public life does not deserve serious attention.

How does a narrative with an optimistic ending differ from a narrative of the type described above? The answer is found in an excerpt from the book with the eloquent Chapter “Babyn Yar. Hope Is Born in Tragedy” (Shuster, 2018, p. 247–256). With a strong reliance on historical facts and the presence of living witnesses to the distant events of September 1941, the host’s confrontation as a rhetorical figure is transformed into a convincing argument aimed at entering the hermeneutic circle of common discourse: acceptance of responsibility – awareness of guilt – repentance and forgiveness. Shuster states:

“When I saw that after such a difficult, painful, and acute topic, the audience's hope increased by 25 %, I was once again convinced that the most important thing for the people is to know the truth. When they are honest with him, then they respect him. Then he is ready to hear and take responsibility for his past, present, and future” (Shuster, 2018, p. 255–256).

The effect of catharsis came at the end of the talk show. It symbolized the huge illocutionary potential of this dialogically directed by the host as a facilitator of conflict discourse tolerant respect and joint efforts for a better future free from racial, ethnic, and national prejudices including anti-Semitism, various forms of hatred, enmity, and revenge. Here the intentions and discursive actions of the participants were balanced and symmetrical.

4. Conclusions

The conceptual and methodological flaws described in this article do not in any way underrate Moïsi and his follower Shuster’s contribution to the study of the driving forces of social transformations in the modern globalized world. Instead, we should speak about the urgency of complex, interdisciplinary studies of the raised problem. This needs a combination of qualitative (hermeneutic and phenomenological, existential, conversational, intentional analyses) and quantitative (observational-experimental-psychodiagnostic methods with application of statistical procedures) tools of studying emotions as drivers and predictors of social behavior of individuals and communities.

Comparative research using a set of tools to study emotional motivators of social behavior of different state institutions, regional communities, ethnocultural enclaves, etc. would be useful. The procedure for selecting and approving the list of questions for participants of political talk shows should be improved. For example, the final tables included self-assessments of emotions experienced at the end of the show, which were usually more pessimistic than at the beginning of the show. This could be the result of the hidden suggestion of hopelessness, feelings of betrayal, protest moods inspired by the invited speakers. Similarly, this could be a consequence of planning the show by the host and editorial board, in which the

quantitative balance of opposing views increases intellectual tension and constructs a field of conflicting personal meanings of program participants and its viewers.

This adversely affects the critical understanding of current social processes along with the radicalization of public sentiment by shifting the locus of control to the outside, when the audience invited to the show delegates responsibility for the state of affairs in the country and their well-being to their political leaders. It follows that the effective direction of the show, which provides a high and stable rating of the program, must be complemented by effective sociotherapy (Kellet, 2010), which would ensure productive facilitation of social dialogue, achieving value-oriented unity of citizens on key issues of statehood and solidarity. the state of affairs in the state and the immediate social environment.

It would be possible not to impose such strict requirements on the journalistic publication of even a famous journalist, if not for its wide advertising, ubiquitous presence in bookstores (circulation of the book for some reason is not specified), and, most importantly, the remarkable ambitions of the author, expressed literally in the first sentence of the book abstract: “In his authorial debut, Savik Shuster builds the emotional map of Ukraine” (Schuster, 2018, p. 2). Given the renewal of the journalist's author's program today and the numerous examples of the shortcomings of quantitative and qualitative analysis of the collected empirical data discovered here, the socio-psychological expert environment, the Association of Political Psychologists of Ukraine, the domestic media community should unite their efforts to establish dialogue and correct coverage of the results of such “live social experiments”.

This research has thrown up many questions in need of further investigation of the author's principle of integral subjectivity, most fully presented in the second edition of the monograph *Axiological Psychology of Personality* (Karpenko, 2018) and its contribution to the realm of mass emotions. Further research might test the hypothesis of the hierarchical representation of the considered key emotions and their semantic antipodes regarding the presence of a human in different natural and socio-cultural contexts of existence and in their temporal landmarks.

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A PSYCHOSEMANTIC STUDY OF COMPENSATION PSYCHOLOGICAL DEFENSE MECHANISM IN THE NOVICE MILITARY LEADERS

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Abstract. The aim of the article is to study the formative impact of the defense mechanism “compensation” on the leader’s personality. The research is based on the axiological semantic research method created due to the development and application of experimental psychosemantics to the issue of leadership. An experiment was conducted with the view of confirming the fact of impact of the defense mechanism “compensation” on the leader’s personality formation. This experiment involved 30 students undergoing leadership training for tactical officers at the Heroiv Krut Military Institute of Telecommunications and Information Technologies. A test-questionnaire was created to experimentally substantiate the reliability of the proposed conjecture. At the outset of the experiment, the participants were asked to note in the test-questionnaire the basic postulates they rely on when forming relationships in the military community. For the purpose of creating a relaxed atmosphere the postulates (60 units) were presented in the form of posts (quotes and aphorisms) which are most often posted on social media pages. Based on the methods of psychological subjective semantics and psychosemantics, we established the predominance of a certain form of defence mechanism “compensation”. Then followed the assessment of the leadership role preferences displayed by the participating pilot students, this providing the basis for drawing conclusions as regards the tendency for a particular form of leadership. Matching of the obtained results revealed correlations between mental reflections of various phenomena. Although correlational study has a lower degree of confidence in predicting cause and effect, it can provide strong indications that relationships exist. Results and discussions. The defense mechanism “direct compensation” correlates with the kind of “fighter” leader, “overcompensation” correlates with the kind “father”, “decompensation” correlates with the kind “tyrant”. To conclude, trend to use a certain type of defense mechanism affects the acceptance and assimilation of a certain role type of leader. In addition, the use of information which are most often posted by social media users on their personal accounts as a content for the test-questionnaire allows us to conclude about the possibility of using social media

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account to determine the psychological type of personality by analyzing posts, likes, and comments.

Keywords: *experimental psychosemantics, leadership, psychological defense mechanism.*

Храбан Тетяна, Храбан Ігор. Психосемантичне дослідження психологічного захисного механізму компенсації у майбутніх військових лідерів.

Анотація. Мета статті – вивчення впливу захисного механізму «компенсація» на формування особистості лідера. Дослідження ґрунтується на аксіосемантичному методі, який створено завдяки розвитку та застосуванню експериментальної психосемантики до проблематики лідерства. Для підтвердження впливу захисного механізму «компенсація» на формування особистості лідера був проведений експеримент, в якому взяли участь слухачі курсів лідерства офіцерського складу тактичного рівня у Військовому інституті телекомунікацій та інформатизації імені Героїв Крут. Для експериментального обґрунтування достовірності запропонованої концепції було створено тест-опитувальник. Спочатку слухачам курсів лідерства офіцерського складу було запропоновано відзначити в тест-опитувальнику основоположні постулати, на які вони спираються при створенні взаємовідносин в колективі. Для створення невимушеної атмосфери постулати (60 одиниць) було представлено у вигляді дописів (цитат і афоризмів), яких найчастіше викладають на сторінках соціальних мереж. Шляхом факторизації семантичних дескрипторів було встановлено переважання певної форми захисного механізму «компенсація». Потім було здійснено оцінку преференції для суб'єкта функцій лідера, на підставі чого зроблено висновки щодо прагнення до визначеної форми лідерства. Кореляція отриманих даних дала змогу виявити зв'язки між психічними відображеннями різних феноменів. Наприклад, механізм психологічного захисту «пряма компенсація» корелює з типом лідера «воїн», «надкомпенсація» – з типом лідера «батько», «декомпенсація» – з типом лідера «тиран». Тенденція використовувати певний тип психологічного захисту «компенсація» впливає на засвоєння і прийняття суб'єктом певного рольового типу лідера. Крім того, використання як наповнення тесту-опитувальника дописів, що найчастіше виставляють користувачі соціальних мереж на своїх сторінках, дає змогу зробити висновок про можливість використання особистих акаунтів в соціальних мережах для визначення психологічного типу особистості шляхом аналізу публікацій (дописів), коментарів і «лайків».

Ключові слова: *експериментальна психосемантика, лідерство, механізми психологічного захисту.*

1. Introduction

One of the main problems of the modern army as a union with the century-long tradition of leadership is training true leaders who are able to effectively cope with the military task and challenges of the day. Armed Forces' practical experience in combat operations during armed conflicts and peacekeeping operations has shown that command as a process at any level of military management is a combination of leadership and management (Allen, 2006). The reality of enormous constant risks incurred during wars and the critical situations entailed creates a situation when the military system goes beyond rationally organized operational patterns, and the time comes for someone who knows what to do, what resources and where to allocate, as well as what consistency is required and what outcomes are to be achieved. It is a military leader who can be critical of what has been achieved and is able to analyse what is lacking to improve the collective result. And only a military leader can motivate and inspire the others

towards the final victory by setting an example (Bojko, 2019). Thus, a leader is one who determines the activities of the group, has a significant impact on the behaviour of the group's members, and is able to organize people around a goal. A leader is person whose right to make responsible decisions is recognized by the rest of the group. In this context, leadership is a modern ideal of behaviour (Cutler, 2014; Blanshard, 2019), which is based on one's personal and professional preferences rather than on one's origin and status (Zankovsky, 2011, p. 6). Leadership is a socio-psychological phenomenon (Laurence, 2011; Bass, 2008), which within the military specifics is defined as an effect on people through the definition of goals, directions of its achievement, motivation to accomplish the task and improve the military organization (Field Manual, 2015). Military leadership differs significantly from other forms of leadership in a situational context provided by an extreme situation. Since dangers and stress arising under these extreme situations are a common and widespread occurrence in the military profession, it is necessary to teach future officers to how handle them (Bergman et al., 2019). It is indisputable that this factor determines the relevance of leadership studies. However, it should be taken into account that not only the leader's personal qualities determine the effectiveness of the military group (Taylor & Rosenbach, 2005). The behavioral approach to the study of the phenomenon of leadership, which focuses on the image of the leader as a mechanical set of characteristics, largely devoid of psychological content, ignores issues concerning the subjectivity of the leader, his/her consciousness as a higher form of mental reflection. From that, a line of research based on modern developments in the field of psychology and psycholinguistics seems to be promising. This approach makes it possible to actualize the impact of psychological factors on the mechanism of formation, development and dynamics of the leadership phenomenon, to understand why leadership is not only a form of behavior in certain organizational conditions but it is also a complex mental phenomenon that carries social experience, models and reshapes the individual inner world and capable of development and self-development (Zankovsky, 2011, p. 7–8). In this case, special consideration should be given to the presence of specific needs that urge an individual to to exercise leadership (Avolio, 2007). Thus, according to the theory of Adler, two innate and unconscious feelings – inferiority and the desire for superiority, are the sources of individual's energy which is necessary for personal development. If the feeling of inferiority affects a person, causes to feel a yearning to overcome shortcomings, the urge for superiority causes a desire not only to overcome the shortcoming as wells to be top of the league (Adler, 2019, p. 185). Thus, Adler notes the role played by the defense mechanism “compensation” in the regulation of the leadership behaviour: such factors as certain needs inducing the dominant behaviour, motives realized by means of such behaviour impact the personal qualities displayed in the relationship between the leader and group members, the desire to strengthen a leadership position, set goals and mobilize group members to implement a task and hence to enhance the effectiveness of the leader (Adler, 2019). The study of the defense mechanism “compensation” aiming to help stabilize self-esteem through

forging specific relationships with other members of the group (Demina & Ralnikova, 2004) casts a new light on leadership, allows one to take into account the role of defense mechanisms in regulating leadership behaviour and makes it possible to increase leadership effectiveness.

The phenomenon of leadership is a relevant subject of interdisciplinary analysis. Research on leadership is undertaken within such areas of knowledge as psychology, sociology, philosophy, pedagogy, political science and so on. This problem is especially relevant in the field of military science and education. This has resulted in a body of research in military psychology, namely: Baran & Scott (Baran & Scott, 2010) (the research paper highlights leadership as a collective sensemaking process in which ambiguity is reduced and resilience promoted in the face of danger via interaction among and between leaders and followers); Laurence (Laurence, 2011) (the sociocultural knowledge gaps in leader development are highlighted, as are prescriptions of the trait and situational approaches to leadership. Military leaders' dual responsibility for their own troops and the local population requires them to shift interpersonal relationships and leadership styles as the situation demands); Sweeney (Sweeney, 2010) (the study holds that the majority of soldiers reconsider trust in their leaders prior to combat operations, to ensure that they have the competence and character to meet the greater demands of leading in combat); Wong, Bliese, McGurk (Wong et al., 2003) (the research paper reviews the literature on military leadership and highlight research opportunities for leadership scholars. The review uses a context specific approach and turns to a simplified version of Hunt's extended multilevel leadership model as a template to examine the many facets of military leadership). Also important for this article are research papers in the field of psychology and psycholinguistics, namely: Cramer (Cramer, 2015) (the research examines defense as an unconscious mechanism); Burgo (Burgo, 2012) (the research paper adapts the basic strategies of psychodynamic psychotherapy to a guided course in self-exploration, elucidating the universal role of defense mechanisms in warding off emotional pain) and other research efforts. This article highlights the fact that the features of compensatory processes in the system of defense mechanisms lead to the formation of certain psychological types of leaders.

The aim of the article is to study the formative impact of the defense mechanism "compensation" on the leader's personality.

2. Methods

The research is based on the axiological semantic research method created due to the development and application of experimental psychosemantics to the issue of leadership (Zankovsky, 2011). Psychosemantics helps to reveal deep, unconscious structures which are considered not an independent psychological reality contrasting consciousness but the lower levels of consciousness characterized by less fragmentation and reflectivity (Petrenko, 2010). The psychosemantic approach to leadership studies helped to emphasize the reconstruction of individual systems of values and meanings in accordance with the way the leader perceives the world

(Fomina, 2019). An experiment was conducted with the view of confirming the fact of impact of the defense mechanism “compensation” on the leader’s personality formation. The experiment involved thirty students undergoing leadership training for tactical officers at the Heroiv Krut Military Institute of Telecommunications and Information Technologies. A test-questionnaire was devised to experimentally substantiate the reliability of the proposed conjecture. By means of methods of psychology subjective semantics and psychosemantics the predominance of a certain form of defense mechanism “compensation” was established. Then the participating pilot students’ preferences of leadership roles was assessed, on the basis of which conclusions were drawn about the tendency for a particular form of leadership. In order to clarify the qualities and abilities of a leader we refer to the classification of leader types offered by Wong, Bliese, McGurk (Wong et al., 2003). In their work a context specific approach was used that extended multilevel leadership model as a template to examine the many facets of military leadership. Matching of the obtained results revealed correlation between mental reflections of various phenomena. “Although correlation does not mean causation, it can show strong relationships between variables. It can show the direction and magnitude of a relationship, yet still cannot predict cause and effect with 100 % accuracy. A correlational design will provide relationship direction and degree. Although correlational studies have a lower degree of confidence in predicting cause and effect, it can provide strong indications that relationships exist” (Adams, 2009).

3. Results and Discussion

One of the most common type of defense mechanisms in the system of adaptive human reactions is “compensation”, which manifests itself in three meta-forms: “direct compensation”, “overcompensation” and “decompensation”. In all cases one way or another “compensation” solves the problem of harmonizing the communicative world of the individual (Gladyshev, 2001, p. 25) by overcoming and compensating for shortcomings in the process of development of partially preserved functions in the affected area (overcompensation) or intensive development of abilities in another area (compensation) (Vaughan, 1926).

A survey was conducted with the view of finding out what type of defense mechanism “compensation” is preferable for the individual. Initially, students of leadership course were asked to note in the test-questionnaire the basic postulates on which they are based while creating relationships in the military collective. For the purpose of creating a relaxed atmosphere the postulates (60 units) were presented in the form of posts (quotes and aphorisms) which are most often posted on social media pages of various individuals and which effect on people’s behavior basing mainly on socio-psychological contacts and socio-psychological methods of management.

Preference of those postulates that at the language level reflect the concentration of the individual on his interests, feelings and needs, reflect consumerism: *Я розмовляю сам з собою, тому що я єдина людина, чії відповіді мені подобаються* (Eng. *The reason I talk to myself is because I'm the only one*

whose answers I accept) (FB, 2020) indicates the involvement of the defense mechanism “direct compensation”, which is innately adaptive and does not take the individual beyond the usual (familiarized) communicative world, does not contribute to his personal growth (Gladyshev, 2001, p. 17).

The preference for those postulates which employ the crystallized image (real or illusory) to enhance the individual’s power, significance, value, that is for self-affirmation and improvement of the status: *Коли в компанію приходять одна розумна людина, незабаром з’являється і інший – талановиті люди люблять працювати в колі собі рівних; Навіть в компанії двох чоловік я неодмінно знайду, чому у них повчитися* (Eng. *As soon as one smart person comes to the company another one soon appears since talented people like to work among equal to themselves; Even in the company of two people I will definitely find something to learn from them*) (FB, 2020) demonstrates the use of defense mechanism “overcompensation”, which is associated with maladaptive forms of activity and is realized by relying mainly on secondary, additional compensation (in its creative, exploratory forms). Communicatively, “overcompensation” promotes personal growth and radical transformation of the personality through dialogic affirmation (Gladyshev, 2001, p. 17). Preference for postulates characterized by the fault-finding when another person’s imaginary or real shortcomings are emphasized or exaggerated: *Іноді я думаю, що Бог, створюючи людину, переоцінив Свої можливості; Всі ми народжуємося божевільними. Деякі ними і залишаються* (Eng. *Sometimes I think that God in creating man somewhat overestimated His ability; We all are born crazy. Some of us remain that way*) (FB, 2020) confirms the call to the defense mechanism “decompensation”. “Decompensation” aims at balancing the changes that occur in a dynamic system and unbalance it. The action of defense mechanism leads to a new state of dynamic equilibrium at a more elementary level of order, complexity and organization. As a means of compensatory communication “decompensation” ultimately leads to the destruction of the social actors and the deformation of the communication sphere in which they are included (Gladyshev, 2001, p. 17; Haynes, 2017).

In the second part of the test-questionnaire the students of leadership were asked to note what functions, in their opinion, a leader should perform, for example: to make all important decisions independently; to carry out the decisions by military superiors; to share responsibility for decision-making with others; to monitor the progress of the work done by their subordinates; to help others; to stimulate self-control; to fulfil the role of an expert who single-handedly finds solutions to any problem; to act as a facilitator who asks questions and elicits answers from other group members; to draft tasks and rules; to shape their subordinates’ worldviews; to administer punishment for breaches of discipline; to protect the subordinates’ interests; to support the initiative; to promote competitiveness; to organize cooperation; to encourage teamwork; to create conditions for productive and successful work; to assist the subordinates in resolving issues relating to social and living conditions; to help organize and rationalize the subordinates’ leisure; to share the responsibility and power; to

supervise the implementation of instructions; to support stability; to support transformation.

In matching the results of the first part of the test-questionnaire to the second part, it was concluded that the tendency to use a certain type of defense mechanism “compensation” impacts the acceptance and assimilation of a certain role type of leader (Table 1).

Table 1.

Correlation between the defense mechanism “compensation” forms and particular forms of leadership

Postulates featuring certain defense mechanisms	Percentage of preferable postulates (%)		
	Leader “fighter”	Leader “father”	Leader “tyrant”
1. “Direct compensation”	69	31	22
2. “Overcompensation”	10	67	5
3. “Decompensation”	21	2	73

The defense mechanism “direct compensation” correlates with the type of “fighter” leader. This is a strong-willed, self-confident person: *Ніколи ні на кого не надійся. Люди, на яких ти сподіваєсиця, можуть підвести, зрадити, забути про тебе. Сподівайся тільки на себе!* (Eng. *Never rely on anyone. People you rely on can let you down, betray you, forget about you. Rely only on yourself!*) (FB, 2020) who meets danger or uncertainty without fear and does not hesitate to join a fight: *Якщо мене щось і рухає вперед, то тільки моя слабкість, яку я ненавиджу і перетворюю в мою силу* (Eng. *If anything moves me forward, it is only my weakness that I hate and turn into my strength*) (FB, 2020), defends his believes: *Я бажая робити в своєму житті те, що я люблю. А не те, що є модним, престижним чи встановленим* (Eng. *I want to do in my life what I like. Not what is fashionable, prestigious or established*) (FB, 2020), reluctant to compromise: *Я зовсім не хочу знати, що говорять за моєю спиною – я і без того про себе достатньо високої думки* (Eng. *I do not want to know what is being said behind my back since I have a high opinion of myself*) (FB, 2020).

Interrelation can be traced between defense mechanism “overcompensation” and the type of “father” leader, which is characterized by such descriptors: individual perceives needs of the team as his own and he is active to meet needs of all his subordinates: *Бути людиною – це відчувати свою відповідальність. Відчувати сором перед убогістю, яка, здавалося б, і не залежить від тебе. Пишатися кожною перемогою, здобутої товаришами* (Eng. *To be a human is to feel responsibility, to feel ashamed of poverty, which seemingly isn't up to you. Be proud of every victory won by comrades*) (FB, 2020), he is optimistic, confident and believes that most problems can be fully resolved: *Тренуйся – щоб бути рівним суперником, настройся – щоб перемогти!* (Eng. *In order to be an equal opponent you should train, in order to win you should set the mood on victory!*)

(FB, 2020), he knows how to persuade, tends to encourage and expresses disapproval without affecting the subordinates' dignity: *Якщо ти віриш у себе – до тебе тягнуться й інші, якщо ти вселяє віру в інших – ти стаєш ще більш впевненим у собі, а значить – ще більше удачливим і успішним* (Eng. *If you believe in yourself others are drawn to you, if you inspire faith in others you become even more confident, and therefore you become even more successful*) (FB, 2020).

Causal relations were found between the defense mechanism “decompensation” and the type of “tyrant” leader, whose features are dominance in communication, the desire to suppress and subdue the interlocutor personality, communicative aggression: *Ну не мінятися ж мені через кожного ідіота!* (Eng. *Well, I do not change for the sake of idiot!*) (FB, 2020), cognitive egocentrism: *Себе треба любити і хвалити – не доручати ж таку відповідальну справу чужим людям!* (Eng. *You must love and praise yourself because it is impossible to trust so great matter to strangers!*) (FB, 2020), unwillingness to understand the interlocutor, disrespect for another's point of view, communicative rigidity: *Хто цінує людську думку – надає людям занадто багато честі!* (Eng. *Who values human thought gives people too much credit!*) (FB, 2020).

4. Conclusions

Psychological defense mechanisms play an important role in regulating leadership behaviour. The tendency to use a particular type of defense mechanism affects the acceptance and assimilation of a particular leadership role type. Thus, the defense mechanism “direct compensation” correlates with the kind of “fighter” leader, “overcompensation” correlates with the kind “father”, “decompensation” correlates with the kind “tyrant”. In addition, the use of information which are most often posted by social media users on their personal accounts as the content for the test-questionnaire allows us to conclude about the possibility of using social media account to determine the psychological type of personality by analyzing posts, likes and comments. The advantage of such testing is the openness (availability) of information on social networks as well as the quality of the analyzed material. Unlike information in questionnaires, which can be distorted due to nervousness arising during filling in the questionnaire (especially for career growth) or unwillingness to reveal the true nature of one's identity for various reasons, information obtained from social media is reliable and sincere.

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STRATEGIES FOR DETERMINING GERMAN NOUNS' GENDER BY COLLEGE STUDENTS

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Abstract. The article is dedicated to the study of strategies for determining the gender of nouns of the German language by Ukrainian-speaking first-year-students at the Yuriy Fedkovych Chernivtsi National University, Ukraine. The purpose of the study is to establish the strategies for determining the gender of nouns on the basis of phonetic, morphological, and semantic criteria and experimentally trace the impact of interlingual and intralingual interference in the process of gender categorization of nouns. The material of the study included 60 nouns, out of which 30 were phonetic equivalents and 30 – semantic ones. Each group contained 10 nouns of the masculine, feminine, and neuter gender respectively, with the same number of structurally different nouns among them, which were selected according to semantic, morphological, and phonetic rules of gender identification. To identify strategies for determining the gender of German nouns, two psycholinguistic experiments were held with a month interval. The experiments involved 30 first-year-students at the University of Chernivtsi (German department), who had to decide whether the noun gender specified in DMDX program is correct. Thus, the article in half of the given nouns was set incorrectly in the program. The obtained results indicate that the gender of the noun of the native language significantly affects gender determining of the German phonetic equivalent (85 % of all mistakes in determining the gender in Experiment 1 and

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47 % – in Experiment 2). The students also focus on the suffixes or endings of German nouns when choosing the correct gender. Phonetic or semantic rules for determining gender play a secondary role. The gender of a noun in the native language prevents the correct choice of the gender in the German language, which is twice as often recorded for phonetic equivalents.

Keywords: *gender of noun, strategies for determining gender, interference, phonetic, morphological, and semantic principles, the German language.*

Кійко Світлана, Кійко Юрій, Дребет Віктор. Стратегії визначення роду німецьких іменників університетськими студентами.

Анотація. Статтю присвячено стратегіям визначення роду іменників німецької мови україномовними студентами першого курсу Чернівецького національного університету імені Юрія Федьковича. Мета дослідження – встановити стратегії визначення роду на основі фонетичних, морфологічних та семантичних критеріїв і експериментально прослідкувати вплив міжмовної і внутрішньомовної інтерференції в процесі категоризації іменників за родом. Матеріалом дослідження слугували 60 іменників, з них 30 фонетичних і 30 семантичних відповідників. Кожна група містила по 10 іменників чоловічого, жіночого і середнього родів, серед яких – однакова кількість структурно різнотипних іменників, відібраних відповідно до семантичних, морфологічних і фонетичних правил визначення роду. Для встановлення стратегій визначення роду німецьких іменників здійснено два психолінгвістичні експерименти з одномосячним інтервалом. В експериментах взяли участь 30 студентів, які мали вирішити, чи вказаний у програмі DMDX рід іменника правильний. При цьому у половині запропонованих іменників артикль був заданий у програмі некоректно. Отримані результати свідчать про те, що рід іменника рідної мови істотно впливає на визначення роду німецького фонетичного відповідника (85 % усіх помилок на визначення роду в Експерименті 1 і 47 % в Експерименті 2). Студенти орієнтуються при виборі правильного роду також на суфікси або закінчення німецьких іменників. Фонетичні або семантичні правила визначення роду відіграють другорядну роль. Рід іменника в рідній мові перешкоджає правильному вибору роду в німецькій мові, що вдвічі частіше зафіксовано для фонетичних еквівалентів.

Ключові слова: *рід іменника, стратегії визначення роду, інтерференція, фонетичні, морфологічні та семантичні принципи, німецька мова.*

1. Introduction

The grammatical category of gender, called by Köpcke (1982, p. 4-5) one of the least logical and most unpredictable categories, is a characteristic feature of the grammatical structure of almost all Indo-European languages. Problems of a gender category are closely related to many important aspects of the methodology of learning foreign languages, the interaction of different language levels and the relationship between lexical and grammatical meanings of the word, and therefore are the focus of modern research.

It is widely believed that the study of the gender of German nouns creates significant problems for students and even a high level of German language skills does not guarantee the absence of mistakes in choosing the gender or agreement of adjectives with nouns (Bordag, 2006, p.103; Menzel, 2004, p. 55). In a survey of German language teachers conducted by Sperber (1989, p. 148), mistakes in determining gender are considered one of the most important sources of mistakes in teaching German, as the gender of nouns is an arbitrary category. Although a number of phonetic, morphological and semantic rules for determining the gender

of nouns is put forward in many German grammars. Helbig and Buscha (2001, p. 245) note that it is impossible to “establish easy-to-use rules for determining gender” for the vast majority of nouns. It is true that a lot of nouns in the German language may end the same, but belong to different genders, such as: *der Mantel* (masculine) – *die Fabel* (feminine) – *das Mittel* (neuter), *der Junge* (masculine) – *die Rose* (feminine) – *das Auge* (neuter). Despite the coincidence of natural and grammatical genders such as *der Mann* (masculine) – *die Frau* (feminine) – *das Kind* (neuter), *der Bulle* (masculine) – *die Kuh* (feminine) – *das Kalb* (neuter), cases of their differences are possible as well, such as: *das Weib* (neuter), etc. Most grammar guides recommend memorizing a noun at once with the appropriate article, which makes the study of gender in German a difficult and time-consuming process. This means that gender in German belongs to those grammatical categories that complicate the process of language learning, slow down the reproductive characteristics of speech and serve as an indicator for native speakers to recognize foreigners.

Several domestic and foreign authors (Doleschal, 2004; Kiyko, 2017; Köpcke, 1982) tried to formulate unambiguous phonetic, morphological, and semantic rules for determining the gender of nouns. Phonetic rules are based on the number of syllables and characteristics of sounds. Thus, one-syllable nouns ending in /t/ with the previous non-syllabic fricative belong to the feminine gender: *die Schlucht, die Luft, die Fracht* (Doleschal, 2004, p. 4). One-syllable nouns beginning with *kn-* or *d/t+r-* are usually of masculine gender: *der Knopf, der Draht*. The more consonants at the beginning or end of a word, the more often the noun belongs to masculine gender: *der Strumpf* (Köpcke, 1982, p. 88). However, there are numerous exceptions to these rules, in particular, only 63.6 % of one-syllable nouns ending in /t/ with the previous non-syllabic fricative (35 nouns out of 55 analyzed) are feminine: *die Fahrt, die Schlacht, die Kunst*, but: *der Durst, der Frost*, etc. Among one-syllable masculine nouns beginning with *kn-*, there is one exception – *das Knie*, but the number of nouns under this rule is only 15. Two- and multi-syllable nouns ending in schwa mainly belong to the feminine gender (*die Flasche, die Scheibe*), but there are numerous exceptions to the masculine and neuter genders (*der Hase, das Auge*). In this regard, Bewer (2003, p. 90) notes that phonetic rules help not to identify the gender of a noun, but rather to exclude one of the genders, so nouns are still difficult to divide between the other two genders, often between masculine and neuter.

Morphological rules refer to the derivational affixes of nouns. Spitz (1965, pp. 35–43), based on ten academic grammars of the German language, identified 127 formal rules for determining the gender. According to these rules German nouns with suffixes *-s, -er, -ig, -(l)ing*, borrowings ending in *-ant, -är, -ent, -et, -eur, -ist, -löge, -iker, -ismus, -or, -us, -tum* and non-suffixal deverbals belong to masculine gender. Nouns of the feminine gender have suffixes *-in, -ei, -heit, -keit, -schaft, -ung*, also borrowings ending in *-age, -ät, -anz, -enz, -ie, -ik, -ion, -ur* belong to this group. Nominalised words are of neuter gender, nouns with suffixes *-chen, -lein, -icht, -tum*, borrowings in *-ett, -in, -il, -(g)ma, -o, -ment, -um*, collective nouns with

prefix *Ge-* and most often nouns with suffix *-nis*. However, nouns in *-el* may be either of masculine (*der Löffel, der Apfel*) or feminine (*die Gabel, die Tafel*) or neuter (*das Mittel, das Rätsel*) gender. Doleschal (2004, p. 3) highlights in this regard that purely a formal classification system that can cover all nouns does not exist, so it is necessary to use the semantic categories for determining gender of nouns.

According to semantic criteria, there are groups of nouns that correlate with the one of three genders. Thus, the names of the cardinal directions, celestial bodies, precipitation and winds, minerals, seasons, months, days of the week, alcoholic beverages, coffee and tea varieties, cars, currency issues, etc. belong to masculine gender. Nouns of feminine gender denote tree names, fruit, flowers, numbers, scientific disciplines, ships, aircraft, cigarette brands. Neuter gender covers nouns denoting physical mass, chemical elements and metals, colors, languages, letters, games, cities, islands and continents, cafes and restaurants, beer varieties, hotels, cinemas, medication, detergents (Köpcke, 1982, p. 71; Menzel, 2004, pp. 63–64). However, such reference of the gender of a noun to its semantics is applicable only to some lexical groups. Nouns with a high frequency of usage, as a rule, are not grouped semantically according to gender, for example: names of the parts of face (*der Mund, die Nase, das Ohr*), cutlery (*der Löffel, die Gabel, das Messer*), tools (*der Nagel, die Schraube, das Brett*).

In the analysis of the category of gender, a question that arises constantly is which criteria students use to refer a particular noun to one of the three genders. Thus, the goal of our research is to establish the principles of assigning gender to German nouns by students, whose native language is Ukrainian. Here it is important to identify the relation between phonetic, morphological or semantic features of a noun and its gender.

Various studies on gender of German nouns (Hunt 2018; Onysko et al. 2013; Schwichtenberg and Schiller 2004; Steinmetz 1986; 2006; Zubin and Köpcke 1984) provide explanations of the gender of loan words in German excluding the psycholinguistic factor. Many of these explanations fall into one of two areas: morphology (including morphemes with specified gender) or semantics (including assignment of gender according to semantic field, animacy, or lexical-conceptual equivalence). Often a combination of these is offered. A further explanation is the status of masculine as the default gender. Such accounts often refer to language-internal gender assignment processes. However, there is still no research on the principles of choosing the gender of nouns in German by Ukrainian-speaking students.

In our research we hypothesize that Ukrainian-speaking students are guided primarily by suffixes or endings of German nouns in choosing the correct gender. The mentioned above gender principles show that Ukrainian and German belong to the languages that assign nouns to gender on the one hand through formal and on the other hand through semantic criteria. However, the role of the individual assignment rules, their productivity, and their types differ significantly in both languages. In German, for example, a hierarchy of gender assignment rules is

assumed: the assignment of gender using real word-formation suffixes dominates semantic and phonological principles. Semantic assignments are, in turn, stronger than the other phonological assignment tendencies. Such a hierarchy of gender allocation rules is observed: (1) morphological, (2) semantic, (3) phonetic. In Ukrainian language Filatova (2007, p. 141) offers the following hierarchy: (1) morphological, (2) phonetic, and (3) semantic rules. Therefore, we hypothesize that Ukrainian students when choosing gender to inanimate nouns in German are primarily based on the formal criteria and give priority to the morphological indicators over the phonetic and semantic regularities. The last ones have the lowest gender predictive power for inanimate nouns in Ukrainian, so it can be assumed that they are also dominated by morphological regularities when acquiring gender in a foreign language, where semantic or phonetic regularities are decisive.

2. Material and Methods

The material for the study was based on 60 nouns written out from the textbook *Login 1: Deutsch für Germanistikstudenten* (2009). These nouns are divided into two groups: 30 phonetic equivalents such as *die Idee* (engl. *idea*), *das Problem* (engl. *problem*), *der Kaffee* (engl. *coffee*) and 30 phonetically different nouns, such as: *der Tee* (engl. *tea*), *die Frist* (engl. *deadline*), *das Gebäude* (engl. *building*) and more. Each group contains 10 nouns of masculine, feminine and neuter gender, among which is the same number of root, derivative and complex nouns. All nouns are selected to meet certain semantic, morphological and phonetic rules of gender. Twelve nouns (6 equivalents and 6 phonetically different pairs of words) were selected separately for the training exercises.

To identify what criteria students use in determining the gender of German nouns, we conducted two psycholinguistic experiments with a month interval (February & March, 2020). Each experiment included 30 Ukrainian first-year-students of the German Department (Chernivtsi University) with A2-B1 German level. Students were tested separately one by one. They were given the task of determining whether the noun gender specified in DMDX program (<http://www.u.arizona.edu/~kforster/dmdx/download.htm>) was correct. Thus, in half of the given examples the article did not correspond to the grammatical gender of a noun.

In the beginning, all students received instructions orally, which emphasized the importance of a quick response to a noun and, if possible, giving correct answers. The experiment itself consisted of two stages: in the first stage, students were trained to work with the program and determine the gender of nouns on the example of 12 nouns. Presentation of nouns and counting of reaction time took place automatically with the help of DMDX program. Nouns with articles had a sufficient size on the screen (each letter – 7 x 8 mm), students sat at a distance of 50 cm from the screen. The obtained results were not taken into account if the answer followed 4500 milliseconds after the presentation of a noun. The experiment lasted about 25 minutes. The time and correctness of the answers were summarized in the tables.

3. Results and Discussion

3.1. Experiment 1 with phonetic equivalents

A total of 900 measurements were made, but 13 of them (4.3 %) were invalid due to non-compliance with the time allotted for response. As a result, 887 answers were received, 442 of which were the answers for nouns with the correct article and 445 answers for nouns with incorrect articles. Correct answers of students were recorded in 654 cases (73.7 %), mistakes – in 232 cases (Table 1).

Table 1

The results of experiment 1 (in ascending number of mistakes)

Word-stimulus	Gender			Coincidence			Number of mistakes
	German language	Ukrainian language	DMDX program	of gender in Ukrainian and German	of article in the program and gender in Ukrainian	of article in the program and gender in German	
<i>Bibliothek</i>	f	f	f	+	+	+	0
<i>Idee</i>	f	f	f	+	+	+	0
<i>Situation</i>	f	f	f	+	+	+	0
<i>Kritik</i>	f	f	f	+	+	+	1
<i>Kurs</i>	m	m	n	+	+	+	1
<i>Maschine</i>	f	f	n	+	–	–	1
<i>Methode</i>	f	m	f	–	–	+	1
<i>Kultur</i>	f	f	f	+	+	+	2
<i>Computer</i>	m	m	m	+	+	+	2
<i>Rhythmus</i>	m	m	n	+	–	–	2
<i>Kontakt</i>	m	m	m	+	+	+	3
<i>Plan</i>	m	m	n	+	–	–	3
<i>Temperatur</i>	f	f	f	+	+	+	5
<i>Kalender</i>	m	m	n	+	–	–	5
<i>Problem</i>	n	f	f	–	+	–	5
<i>Rahmen</i>	m	f	m	–	–	+	5
<i>Kaffee</i>	m	f	f	–	+	–	6
<i>Institut</i>	n	m	n	–	–	+	7
<i>Referat</i>	n	m	n	–	–	+	9
<i>Nummer</i>	f	m	m	–	+	–	10
<i>Chat</i>	m	m	n	+	–	–	10
<i>Plakat</i>	n	m	n	–	–	+	13
<i>Instrument</i>	n	m	m	–	+	–	13
<i>Tennis</i>	n	m	m	–	+	–	14
<i>Dach</i>	n	m	m	–	+	–	15
<i>Prozess</i>	m	m	n	+	–	–	18
<i>Talent</i>	n	m	m	–	+	–	18
<i>Horoskop</i>	n	m	m	–	+	–	20
<i>Protokoll</i>	n	m	m	–	+	–	21
<i>Region</i>	f	m	m	–	+	–	22
Total							232

The analysis of mistakes in determining the gender allows dividing them into 4 groups – mistakes due to: 1) interlingual interference – 10 nouns, 117 mistakes; 2) intralingual interference – 2 nouns, 20 mistakes; 3) interlingual or intralingual interference – 12 nouns, 80 mistakes; 4) other mistakes, the cause of which is difficult to identify unambiguously – 6 nouns, 15 mistakes.

Interlingual interference happens when incorrectly determined gender of nouns coincides with the gender of the Ukrainian equivalent. There were 8 monosyllabic nouns with different gender in German and Ukrainian in the experiment – *die Methode*, *das Problem*, *das Institut*, *das Tennis*, *das Dach*, *das Horoskop*, *das Protokoll*, *die Region*, to which the students gave a total of 105 incorrect answers. Most mistakes are found in nouns without explicit morphological indication, such as: *das Tennis* (14 mistakes), *das Dach* (15), *das Horoskop* (20), *das Protokoll* (21), *die Region* (22). In this case, students are forced to either use their knowledge (if they have memorized the noun together with the article), or rely on the gender of the Ukrainian equivalent. Interlingual interference is also observed in cases of determining the gender of English borrowings such as **das Computer* and **das Chat*. Both words belong to the masculine gender in the Ukrainian language, and the neuter gender is assigned to them based on the English language.

Some mistakes in determining the gender are due to the phenomenon of formal and semantic rules overgeneralization, i.e. intralingual interference established for two nouns (a total of 20 mistakes). The students assigned the wrong gender to nouns due to their suffixes and endings. Thus, Latin borrowings in *-us* belong, as a rule, to the masculine gender, but some nouns (*das Genus*, *das Plus*, *das Minus*, *der/das Rebus*) have the neuter gender. The noun *der Rhythmus* belongs to the masculine gender in Ukrainian and German, but is twice marked as a neuter gender noun, apparently based on *-us* ending. The same is applied to the noun *der Prozess*, which, in spite of the masculine gender, is 16 times referred to as the neuter gender nouns in both languages (with reference to *das Business*), and twice to the feminine nouns (cf. *die Fitness*).

The influence of both interlingual and intralingual interference is observed in seven nouns – *die Nummer*, *der Kaffee*, *das Talent*, *das Instrument*, *das Plakat*, *das Referat*, *der Rahmen*, as here both the influence of the gender of the Ukrainian equivalent and the overgeneralization of morphological rules is found. Thus, the erroneous masculine gender in the noun *die Nummer* is due either to the influence of the gender of the Ukrainian equivalent, or to the overgeneralization of the typical masculine ending *-er*. The suffix *-ee* in the word *Kaffee* corresponds to the morphological features of the neuter gender in the words *das Gelee*, *das Resümee*, rarely feminine – in the words *die Armee*, *die Tournee*, *die Livree* etc. The erroneous gender **die Kaffee* can be explained by analogy with *die Armee*, *die Tournee*, as well as the influence of the native language in which the noun ukr. *kava* is feminine.

Many mistakes are especially caused by Latin borrowings with suffixes *-at*, *-ent*, *-en*: *das Plakat* (13 mistakes), *das Instrument* (13), *das Talent* (18), *der Rahmen* (5). The suffix *-at* vaguely indicates the gender: nouns of the neuter gender to denote a place or institution are formed with it (*Konsulat*, *Sekretariat*, *Notariat*),

also those denoting process (*Diktat, Telefonat, Testat*), result (*Konzentrat, Filtrat*) and collective nouns (*Proletariat, Prekariat*), and much more frequent denotations of males (*Stipendiat, Kandidat, Soldat*), which cause erroneous determining of the gender in the nouns **der Plakat, *der Referat*. The cause of mistakes in determining the gender is incorrect analogy in the nouns **der Talent, *der Instrument* (cf. *der Student, der Dozent, der Konkurrent*), **der Klingel* (cf. *der Löffel, der Deckel*), etc. The rest of the mistakes are due to incorrect (arbitrarily assigned) gender in the program DMDX. Thus, the masculine gender nouns *der Kurs* and *der Plan* were interpreted by most students as nouns of the neuter gender according to the program data, despite clearly expressed phonetic criteria. Nouns *die Kritik, die Kultur, der Kontakt* and *die Temperatur* students erroneously assigned to the neuter gender because they considered them abstract nouns. In general, the obtained results indicate that the gender of the noun of the native language significantly affects the determining of the gender of the German phonetic equivalent (197 mistakes, i.e. 85 % of mistakes caused by interlingual interference).

Our results correlate with the results of checking the exercise books of students who participated in the experiment: the most numerous are mistakes in determining the gender of nouns in German that do not have a clear morphological link, such as: *Jeder braucht *seinen Dach über dem Kopf. Diesem Bild liegt *der religiöse Sujet zugrunde. Man muss *eine aktuelle Passfoto zeigen. In der Sitzung hat man *einen genauen Protokoll geführt.* In terms of the frequency of mistakes nouns with a clear morphological indication are in the second place, but the gender of the phonetically similar noun in the Ukrainian language is attributed to the German noun: **Der Universität hat drei Fakultäten. Die besten Chancen auf dem Arbeitsmarkt haben die Absolventen *der Gymnasium. Die Schüler wollten gestern *ihren Referat halten, aber der Unterricht fiel aus.*

Mistakes in nouns, the gender of which coincides in the Ukrainian and German languages, are also interesting. Obviously, morphological indicators in the German language are the causes of the mistakes, such as: *Wir sind in *die Café gegangen* (cf. *die Garderobe, die Anprobe*, etc.).

Proper nouns of foreign origin with their gender in Ukrainian are usually used when translating into German, such as: **Der schöne Berlin ist 800 Jahre alt. Die Geschichte *der modernen Europa beginnt im Mittelalter. Berlin liegt an der Mündung der Spree in *den Havel.*

It is especially difficult to eradicate mistakes caused by the interfering influence of the native language on German, which are additionally supported by morphological factors of the German language, such as: **Der Wintersemester beginnt im Oktober* (based on the typical masculine gender ending *-er*). **Der künstlerische Talent des Meisters war groß* (based on the typical ending of masculine gender borrowings *-ent*: *Student, Dirigent, Konkurrent*, etc.). At the same time, students sometimes adapt German endings to the corresponding Ukrainian ones: *Die Hypnose ist *der Lieblingsmethod-ø vieler Ärzte. Das Bild umgibt *eine schöne Rahme. *Der Visit-ø endete spät.* All this additionally testifies in favour of the native language interference when learning a foreign language.

3.2. Experiment 2 with semantic equivalents

There were 30 phonetically different pairs of semantic equivalents selected for experiment 2. 900 measurements were performed, during which the time limit was not exceeded. As a result, students gave 450 answers for nouns with the correct and incorrect article. The number of correct answers is 711 cases (78.8 %). During the experiment, 189 mistakes were recorded, which is 43 mistakes less than in the experiment with interlingual phonetic equivalents (Table 2).

Table 2.

The result of experiment 2 (in ascending number of mistakes)

Word-stimulus	Gender			Coincidence			Number of mistakes
	German language	Ukrainian language	DMDX program	of gender in Ukrainian and German	of article in the program and gender in Ukrainian	of article in the program and gender in German	
<i>Bier</i>	n	n	n	+	+	+	0
<i>Mannschaft</i>	f	f	f	+	+	+	0
<i>Mensa</i>	f	f	f	+	+	+	0
<i>Mitternacht</i>	f	f	f	+	+	+	0
<i>Tee</i>	m	m	m	+	+	+	0
<i>Blick</i>	m	m	m	+	+	+	2
<i>Zeuge</i>	m	m	m	+	+	+	2
<i>Wecker</i>	m	m	m	+	+	+	3
<i>Gebäude</i>	n	f	f	-	+	-	4
<i>Traum</i>	m	m	m	+	+	+	4
<i>Fisch</i>	m	f	m	-	-	+	4
<i>Urlaub</i>	m	f	n	-	-	-	4
<i>Gefühl</i>	n	n	f	+	-	-	5
<i>Name</i>	m	n	f	-	-	-	5
<i>Glück</i>	n	n	m	+	-	-	5
<i>Ort</i>	m	f	m	-	-	+	6
<i>Geschenk</i>	n	m	m	-	+	-	6
<i>Unternehmen</i>	n	n	m	+	-	-	6
<i>Regel</i>	f	n	f	-	-	+	8
<i>Käse</i>	m	m	f	+	-	-	9
<i>Ende</i>	n	m	f	-	-	-	9
<i>Pflicht</i>	f	m	f	-	+	-	9
<i>Heirat</i>	f	n	m	-	-	-	9
<i>Ticket</i>	n	m	n	-	-	+	10
<i>Mitglied</i>	n	m	n	-	-	+	10
<i>Beschwerde</i>	f	f	n	+	-	-	12
<i>Vorwahl</i>	f	m	m	-	+	-	13
<i>Herkunft</i>	f	n	n	-	+	-	13
<i>Frist</i>	f	m	m	-	+	-	15
<i>Millieu</i>	n	n	m	+	-	-	16
Total							189

Similarly to mistakes in determining the gender of phonetic equivalents, we have divided the mistakes recorded in Experiment 2 into 4 groups due to: 1) interlingual interference – 10 nouns, 89 mistakes; 2) intralingual interference – 5 nouns, 33 mistakes; 3) interlingual or intralingual interference – 2 nouns, 12 mistakes; 4) other mistakes, the cause of which is difficult to identify unambiguously – 12 nouns, 55 mistakes.

The results show that 47 % of all mistakes are due to interlingual interference (see nouns *der Fisch*, *das Geschenk*, *die Pflicht*), for which the students chose the neuter gender. Intralingual interference is observed in the nouns *der Zeuge*, *der Name*, *der Käse*, *das Ende*, which students attributed to the feminine gender, apparently based on the typical suffix *-e*. The noun *die Regel* is erroneously classified as masculine based on the typical suffix *-el*. The influence of both types of interference is recorded in the nouns *das Gebäude* and *das Ticket*, which are assigned the wrong gender either based on the gender of Ukrainian equivalents, or given the morphological structure of nouns. However, the largest number of mistakes was found in nouns without explicit morphological indicators, such as: *die Pflicht* (9 mistakes), *die Heirat* (9), *die Vorwahl* (13), *die Herkunft* (15). In these cases, students had to rely on their knowledge or decide in favor of a certain gender intuitively. Phonetic inconsistency of semantic equivalents does not allow using the gender of Ukrainian nouns as widely in determining the gender in German as in Experiment 1. In some cases it is difficult to unambiguously identify the factor that influenced the choice of gender, especially in nouns with the same gender in both languages and explicit morphological marking, such as *der Wecker*, *die Beschwerde*, *das Milieu*. For example, the noun *die Beschwerde* is erroneously ascribed the neuter gender because it is abstract. The noun *das Milieu* was interpreted by students as a French borrowing and, based on the two-member French category of the gender, was erroneously defined in 16 cases not as a noun of the neuter gender.

Additionally, students received questionnaires after the experiment, in which they had to indicate the reasons for their choice in favor of a certain gender of a noun in German. This allowed us to determine the strategies that guide students in determining the gender of a noun (Table 3)

Table 3.
Strategies for determining the gender of nouns

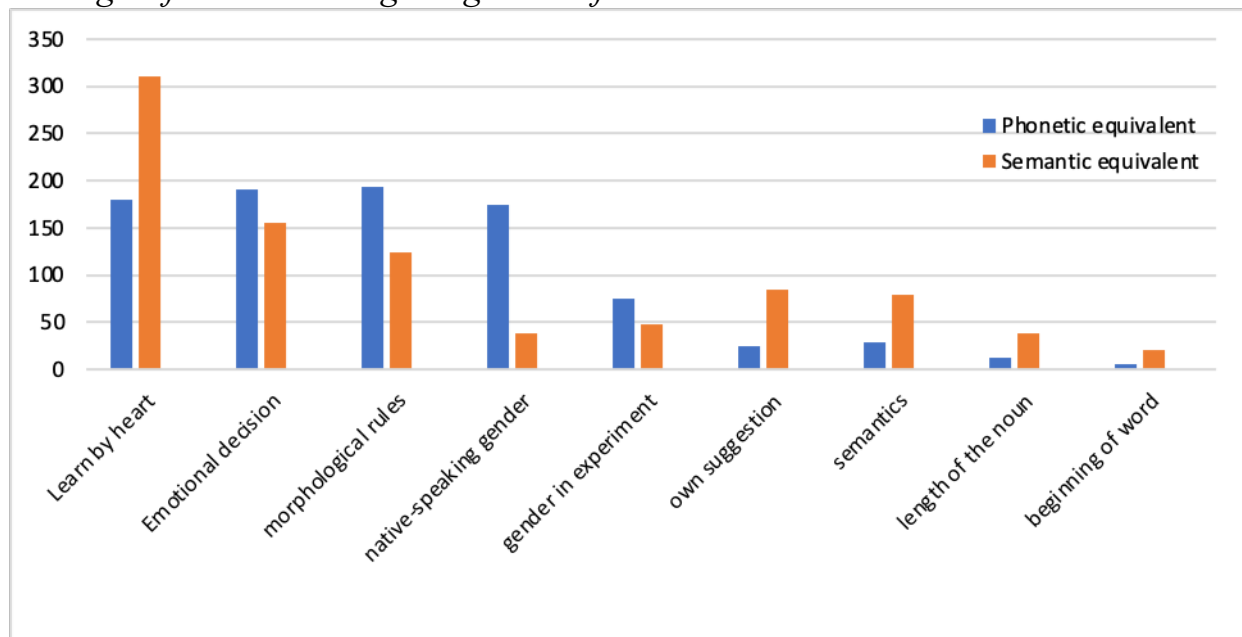
Strategies for determining the gender of nouns	Phonetic equivalents	Semantic equivalents	Total
learned by heart	180	311	491
emotional decision	191	155	346
phonetic rules (the beginning of the word)	6	21	27
morphological rules (the end of the word)	193	124	317
meaning of the noun	29	79	108
length of the noun	13	39	52

gender of the noun in Ukrainian	175	39	214
gender of the noun in the experiment	75	48	123
own answer	25	84	109
Total	887	900	1787

Analysis of the questionnaires showed that in most cases (491) students memorized the words with the specified article. In 346 cases, students admitted that they acted based on their own feelings, which indicates uncertainty or ignorance of the rules for determining the gender of nouns. It should be noted that students assigned gender to nouns, as a rule, according to the Ukrainian language. This fact is also confirmed by many mistakes in the gender of phonetically similar nouns. In 317 cases, students focused on the endings of nouns in German, i.e. relied on the morphological indicators. Students used the semantic rules of determining the gender only in 108 cases, most often to identify the gender of abstract nouns and nouns denoting drinks. In this case, borrowings from the English language were assigned, as a rule, the neuter gender. The length of the noun and phonetic rules relating to the beginning of the word, play a secondary role in determining the gender of nouns. Students guess that short nouns are most often of masculine gender, but rarely use this rule. The attention is paid to the beginning of the word only when it comes to the prefix *Ge-*, for example: *das Geschenk, das Gefühl*. In 123 cases, students chose the gender proposed in the experiment because it seemed plausible or convincing.

Figure 1 shows a strong focus on gender in the Ukrainian language while determining the gender of phonetic equivalents and the significant role of learning words together with the article in semantic equivalents.

Figure 1.
Strategies for determining the gender of nouns in German



The question on “the assignment of gender to a particular noun by default when it is impossible to rely on any other gender determination strategies” (di Meola 2007, p. 87), which is considered in a number of works, remains unsolved. Thus, it was noted in the hypothesis in the work of the Italian researcher di Meola that such default gender is neuter, which is assigned in the mental lexicon to foreign words (*Handy*) or words that are rarely used with the article (*Tennis*). Another approach is taken by Steinmetz (1986, p. 214), which highlights the following hierarchy in the assignment of the gender: masculine > feminine > neuter. If it is difficult to find rules for determining the gender, then the noun is automatically assigned to the masculine gender. Additional research is needed to determine whether Ukrainian-speaking students follow this principle.

4. Conclusions

Previous studies on noun gender in German have focused on the printed word, highlighting the importance of semantics over morpho-phonological analogy in gender assignment to foreign nouns (Onysko et al. 2013). The results of two experiments indicate that the Ukrainian students of the Chernivtsi University (German department) are guided primarily by suffixes or endings of German nouns in choosing the correct gender. Phonetic or semantic rules for determining gender play a secondary role. Interference phenomena are observed in determining the gender: the gender of a noun in the native language prevents the correct choice of gender in German, which is twice as often recorded in phonetic equivalents. Therefore, the results of the present study demonstrate the importance of morphological factor above all others in the gender assignment to German nouns.

Overall, based on the critical appraisal of previous research, and based on the findings of the present research, it may be concluded that an exhaustive theory regarding the assignment of gender to German nouns is yet to be formulated. However, this paper has attempted to show that gender choosing for German nouns adhere to the overall patterns of the native Ukrainian gender paradigm.

The prospects for further study lie in the development of a system of exercises to determine the gender of nouns in German, taking into account the results, which will contribute to successful work with the language material, systematize and generalize existing knowledge and skills to use phonetic, morphological and semantic indicators of nouns in German, form skills of counteracting the impact of interlingual interference.

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THE TATAR-RUSSIAN BILINGUALISM IN EARLY CHILDHOOD

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Abstract. The paper presents findings from psycholinguistic research with normally developing preschool Tatar-Russian bilingual children between the age of 4;0 to 6;0 years old. Forty children in total- twenty children between the age of 4;0 –5;0, and twenty children between the age of 5;0-6;0 were tested. Children with language impairment and mental disabilities were excluded from the study. All children attend a polylingual kindergarten, where the children learn in organized way the following three languages: their mother tongue – the state language of the Tatarstan – the Tatar language, Russian – the official language of the Russian Federation to which Tatarstan belongs, and English. The children were tested with two types of language tests: Syntactic test (wh-complement tests) and mix Tatar-Russian vocabulary test (comprehension and production). They were also tested with a psychological non-verbal Knock Tap test. All children were tested individually in a separate room by a native Tatar speaking and Russian speaking researcher. In order to avoid the influence of the language of testing on the results half of the children were tested with part of the tests in Tatar language and the other part in Russian language. The next day they were changing the languages and the tests. The research question we try to answer is: Do the children develop balanced bilingualism in the kindergarten age having in mind the educational system they are involved in or they are dominant in one of the two languages. The results of the children are analyzed with the ANOVA and SPSS Statistics. They show that the older children are better in all tests. Regarding the language the younger children show poor results in Tatar and better results in Russian. The older children show equally good results in both languages. The paper discusses the classical theory of Skutnabb-Kangas (1981) and newest findings of Bialystok (2020) regarding the bilingualism and bilingual education from

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early ages and which factors play important role in successful development of balanced bilingualism from early age.

Keywords: *Tatar language, Russian, balanced bilingualism, early childhood.*

Ключуков Христо, Ушакова Оксана, Газізова Фаріда. Татарсько-російський білінгвізм у ранньому дитинстві.

Анотація. У статті представлено результати психолінгвістичного дослідження дітей віком 4–6 років, які розмовляють російською і татарською мовами. Загалом було протестовано сорок дітей – двадцять дітей у віці від 4 до 5 років та двадцять дітей віком від 5 до 6 років. Дітей із порушеннями мови та психічними вадами було виключено з дослідження. Усі діти відвідують багатомовний дитячий садок, де вони організовано вивчають такі три мови: рідну татарську як державну мову Татарстану, російську – офіційну мову Російської Федерації, до якої належить Татарстан, та англійську. Дітей тестували з двома видами мовних тестів: синтаксичним тестом (тести на доповнення) та тестом на змішану татарсько-російську лексику (розуміння та породження). Крім того, їх були продіагностовано за допомогою психологічного невербального тесту Knock Tap. Усі діти пройшли індивідуальне тестування в окремій кімнаті дослідником – носієм татарської та російської мов. Щоб уникнути впливу мови тестування на результати, половину дітей тестували з частиною тестів з татарської мови, а іншу частину з російської мови. Наступного дня було змінено місцями мови й тести. Дослідницькими питаннями, на які автори намагалися відповісти, були: чи розвивається у дітей збалансований білінгвізм у дитячому віці на основі освіти, що вони здобувають, чи в дітей домінує одна з двох мов. Результати піддавалися аналізу за допомогою програм ANOVA та SPSS Statistics. Аналіз засвідчив, що старші діти кращі в усіх тестах. Щодо мовних аспектів, то молодші діти показують погані результати з татарської та кращі результати з російської. Діти старшого віку демонструють однаково добрі результати в обох мовах. У статті обговорюється класична теорія Skutnabb-Kangas (1981) та нові результати Bialystok (2020) щодо білінгвізму та двомовної освіти з раннього віку, а також те, які чинники відіграють важливу роль в успішному розвитку збалансованого білінгвізму з раннього віку.

Ключові слова: *татарська мова, російська мова, збалансований білінгвізм, раннє дитинство.*

1. Introduction

One of the problems of some bilingual speakers, among many others, is their decision which of the languages they speak is their first language, and which is second. Very often they cannot decide which is their mother tongue if they grow up in an environment with two or more languages (Skutnabb-Kangas, 1981). One of these languages is dominant and it is considered to be the first language, but not always is this their mother tongue (home language). Very rarely both languages spoken by the bilinguals are balanced. A balanced bilingualism shows the ability of the speaker to use both languages equally well and to have the ability to switch from their first language (L1) to second language (L2) and back again to L1.

De Houwer (2020) terms it “Harmonious Bilingual Development”. In her view, if the “families with young children in a language contact setting do not experience any problems because of bilingual situation or have a positive subjective experience with bilingualism” (p. 63), they can be considered to be in subjective well-being. The author provides examples with different bilingual speakers where their bilingualism in family settings is well-received albeit by contrast not well-received in the wider society. This naturally influences the feelings towards the languages the speakers use. When the attitudes of society towards the languages the child speaks are positive, this

generates a feeling of well-being, and by contrast, when the attitudes towards the languages the child speaks are negative, such children do not feel well. Language use is always interconnected with the emotions.

In her study, Bialystok (2020) writes that since 2000, bilingual research “has demonstrated systematic change to cognitive and brain systems across the lifespan that can be traced to bilingual experience” (p. 9). The author also claims that bilinguals perform better on the tests than monolinguals because they operate with two language systems. The fluent bilinguals use both languages regularly, both languages are active and available when one of them is being used (Bialystok, 2009). According to de Houwer (2005), in order to reach that level, the Separate Development Hypothesis can help in that process. This hypothesis states that from an early age, the child acquires two morphosyntactic systems of two languages, and the development of morphosyntactic system from one language does not have any fundamental effect on the morphosyntactic development of the other language.

Serratrice (2019) differentiates bilingual first language acquisition (BFLA) and early second language acquisition (ESLA). In the case of BFLA, the child treats the two languages as two first languages. In the case of ESLA, the children acquire their first language and later are then exposed to a second language. Regardless of how the two languages are acquired, the author notes that “the bilingual language experience can and, indeed, should be viewed in its own right and not just as an atypical case of language development” (p. 16).

Another important factor for the development of the bilingualism from early childhood is input. De Houwer (2018) differentiates:

- Relative timing of input in two languages when the input starts in two languages;
- Cumulative and absolute frequency of language input;
- “Reduced input”;
- Relative input frequency;
- Input frequency of linguistic categories.

However, together with the language input, an important role is also played by the language status in the society. Serratrice (2020) writes about the status of the languages bilingual children grow up with. One language can have official status and there will be an educational support for it, but the second language could be a minority language or language of migrants/refugees, and commonly there is no educational support for it.

Russian kindergartens are bilingual and multilingual (Kyuchukov, Ushakova, & Yashina, 2015). Tatarstan as part of Russian Federation follows the recommendations of the Russian Ministry of Education in respect to language education. In Tatarstan, Tatar and Russian are recognized as official languages of the country, but Russian has a dominant role. In most of the institutions and public spheres, Russian is used. Russian has a higher status. Tatar is a Turkic language and the grammatical structure of Tatar is similar to other Turkic languages (Berta, 1998; Johanson, 2006). Tovar-Garcia and Podmazin (2018) show that although Tatar is the official language, Russian is considered to be the language of greater socio-economic status and prosperity. The author reports that most families in big cities such as Kazan use Russian at home with

their children from an early age. Our observations also show that the families in villages and small towns will use more Tatar in their communication with the children or parents from a low socio-economic status. But families with a better financial status and in large towns and cities use Russian in the main as a tool of communication with their children.

In Tatarstan the children attend kindergarten from an early age. The activities in the kindergarten are mainly in Russian, however there are also activities in the Tatar language, where the children learn to speak Tatar. The teachers of the Tatar language lessons are native Tatar speakers with a university degree in Tatar philology. There are textbooks for children and methodology books for the teachers of Tatar language. The children are also studying English intensively. The time for attendance in the kindergarten is from 7.30 am until 6 p.m. The children attending the kindergarten are grouped in a multilingual environment, because they learn Russian, Tatar and English from a very early age.

The reason for conducting this study was our curiosity about the level of mastering the two languages which are the official languages of the country. English is considered to be their first foreign language. How good are the children in Russian and Tatar, and at what age do they turn out to be balanced bilinguals? These are the questions which we seek to answer in this paper.

2. Methodology of the Study

The research was done with two age groups normally developing Tatar-Russian bilinguals. The total number of the children in the study is 40 and their age range is as follows:

1 gr. 4–5 years old – 20 children

2 gr. 5–6 years old – 20 children

All children in the study attend a multilingual kindergarten in the city of Yelabuga in the Tatarstan Republic of the Russian Federation, where they live with their families. The children learn Tatar, Russian and English in an organized form in the kindergarten.

The children were tested employing the following tests:

Knock-Tap Task

The Knock-Tap Task required children to be able to switch from imitating hand actions to doing the opposite action (Korkman, Kirk, & Kemp, 1998). First the children were asked to imitate the examiner by either knocking with a closed fist or tapping with an open palm on a box for eight trials. Then for eight pseudo-random opposite trials the children had to tap when the examiner knocked and knock when the examiner tapped. Thus, in this task the children had to inhibit the prepotent response of imitating the tester's hand action, the response that had just been primed. The percentage of correct responses over eight opposite trials was recorded for each child.

This test was done once at the beginning of the study to identify the children who do not have psychological deficits. The testing was done in the language in which the child feels comfortable – with some in Tatar, with others in Russian, as the goal was the task to be understood.

Wh- complements questions test

The wh-complements questions test is a comprehension test and had eight items and they were translated into Tatar and Russian languages. The children were shown pictures and asked a question such as:

The woman said her husband caught a fish, but it was really an old boot. What did the woman say that her husband caught?



In order to avoid the influence of the language on the results, half of the questions were asked in L1 and the other half in L2. The following day the questions which were asked in L1 were asked in L2, and the questions asked in L2 were asked in L1.

Vocabulary test

The vocabulary test is a comprehension and production test, and the children are shown 10 items from the surrounding world. First the children name the items in their mother tongue Tatar, then they name them in Russian. Then two puppets are introduced. They start to ask questions, naming half of the items in their mother tongue and asking the child to respond how they name it in the official language. And the second part of the items are named in Russian by a second puppet, and the child is asked to answer how they would call the items in their mother tongue. For example:

*Puppet 1 says: "I call this a shoulder" (L2)
"What does your puppet say?"..... (shoulder) in L1.*

The children involved in the study are healthy, and do not have disorders or delays in their development.

All tests were done in the kindergarten in a separate room where only the child and the reserachers were present. Every child was tested individually. The questions were asked by a native Tatar speaker and Russian speaker. All the answers were written on protocols and after that analyzed using SPSS and ANOVA analyses.

The research question we seek to answer with this study is following: *Are the children balanced bilinguals from an early age, when they are trained in the kindergarten settings in their mother tongue of Tatar and in their second langauge Russian. If they are not balanced bilinguals, what is the dominant langauge?*

3.Results

Knock-Tap Task

The results for the first test are show in the Figure 1.

Figure 1.
Total scores on the Knock Tap Test as a function of age group



The figure shows that the age of the children is a factor influencing the results of the children. The older children perform the test better than the younger children, which is natural. However, this shows that both groups of children are psychologically healthy, and they do not have any developmental delays or disorders. The children from both groups who could not follow the instructions and the task were excluded from the study. The results are statistically significant. This is shown in Table 1.

Table 1.
Total scores on the Knock Tap Test

Univariate Tests of Significance for Total scores on the Knock Tap Test (Tatarstan Knock Tap Test) Sigma-restricted parameterization Effective hypothesis decomposition					
	SS	Degr. – of Freedom	MS	F	p
Intercept	1008.200	1	1008.200	576.1143	0.000000
Age group	12.800	1	12.800	7.3143	0.015627
Home language	0.800	1	0.800	0.4571	0.508618
Age group* Home language	0.200	1	0.200	0.1143	0.739712
Error	28.000	16	1.750		

From the table it is clear that the language used for testing of the children is not important. So the language is not a factor but age is, and the differences between the two groups are statistically significant $F(1,16) = 7.3143, p = 0.015627$.

Wh-complements questions

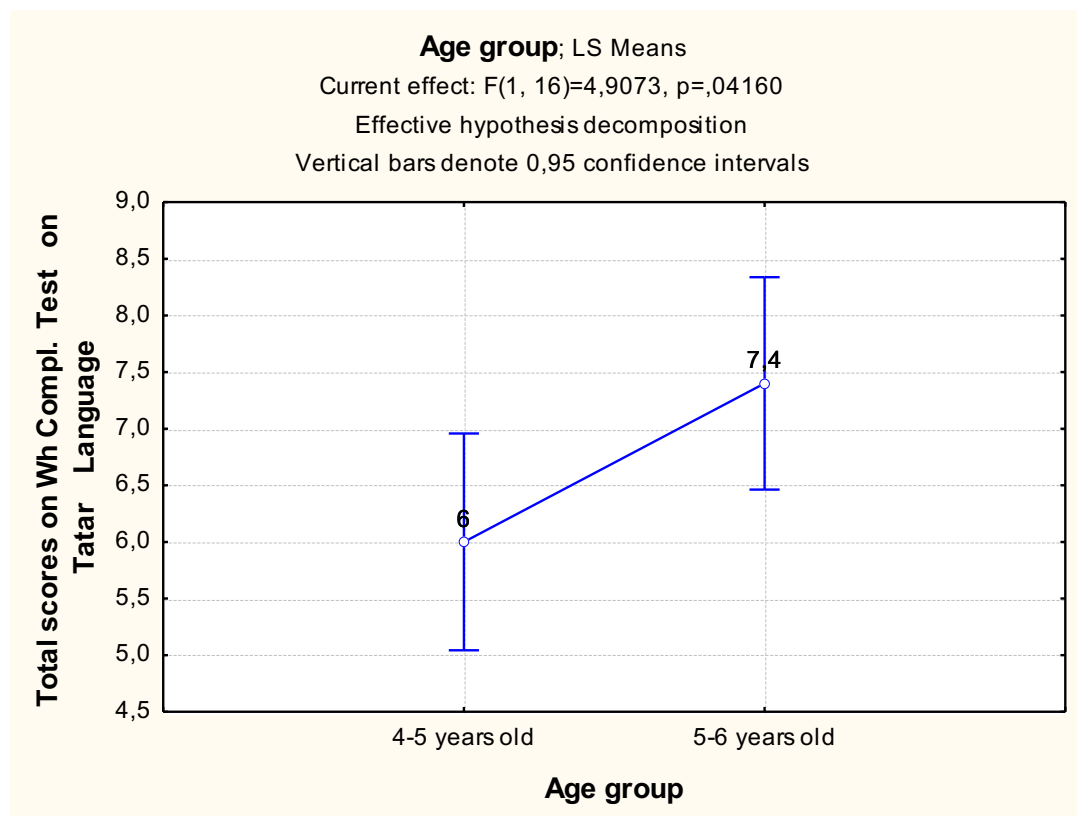
The test on wh-questions had eight items. In order to avoid the influence of the languages on the result we used an approach allowing us to use half the questions in the mother tongue and the other half in the second language. The following day the order of languages was switched. Here we present the results in both languages.

Results in Tatar

How the children performed the test on wh-questions in Tatar is shown in Figure 2.

Figure 2.

Total scores on Wh-complements questions test on Tatar as a function of age group



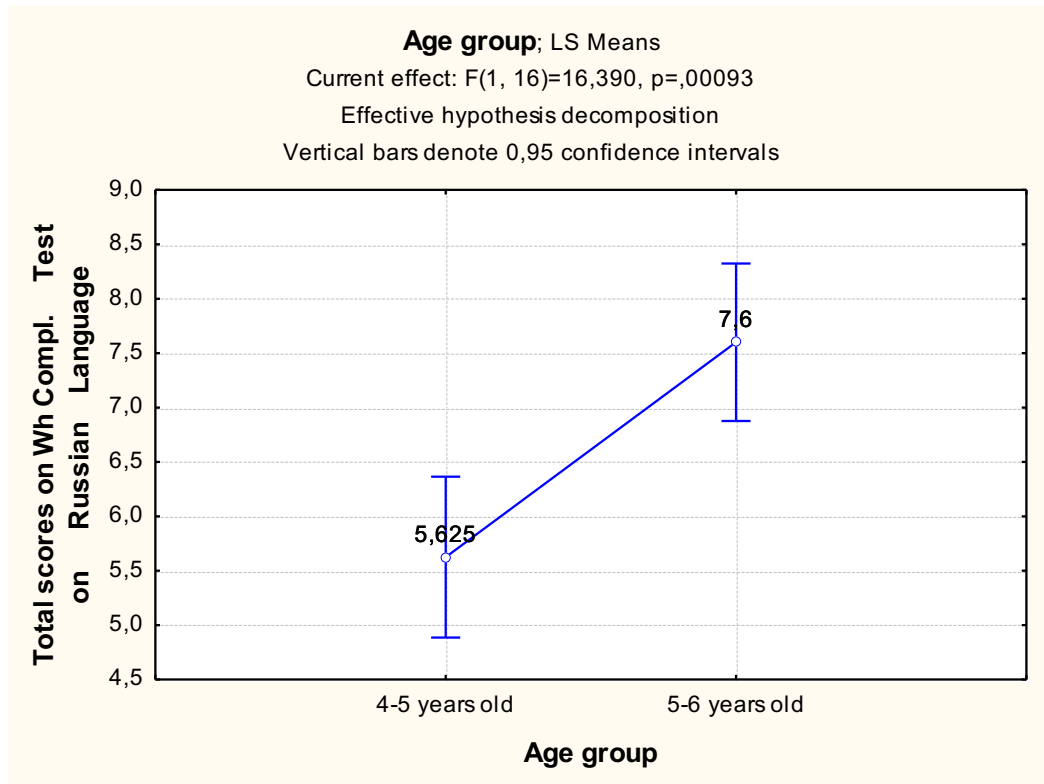
The results show that children 5–6 years old are much better in comprehension of the syntactic structures in Tatar. The differences between the groups are statistically significant $F(1,16) = 4.9073, p = 0.04160$.

Results in Russian

The results in Russian performing this test are given in Figure 3.

Figure 3.

Total scores on Wh-complement questions test on Russian as a function of age group



As can be seen from Figure 3, again the older children perform better on the test. They are better in Russian as well. The young children’s knowledge of Russian is much less than their knowledge of Tatar. The differences between the groups are statistically significant $F(1,16) = 16.390, p = 0.00093$.

Vocabulary test

As mentioned the vocabulary test has two parts: comprehension and production.

Comprehension Tatar language

As can be seen from Table 2, between the groups there are no statistically significant differences in the comprehension of the vocabulary in Tatar as a mother tongue. Both age groups understand the vocabulary equally well in their mother tongue.

Table 2.

Vocabulary comprehension in the Tatar language

Univariate Tests of Significance for sum comprehension Tatar language (Vocabulary Richness) Sigma-restricted parameterization Effective hypothesis decomposition

	SS	Degr. of – Freedom	MS	F	p
Intercept	1481.486	1	1481.486	492.9728	0.000000
Age group	3.200	1	3.200	1.0649	0.317441
Home language	0.327	1	0.327	0.1088	0.745829
Age group*Home language	0.572	1	0.572	0.1903	0.668529
Error	48.083	16	3.005		

Russian language

The two age groups are also equally good in the comprehension of the vocabulary in Russian as their second language. This is shown in Table 3. There are no statistically significant differences between the groups in comprehension.

Table 3.

Vocabulary comprehension in the Russian language

Univariate Tests of Significance for sum comprehension Russian language (Vocabulary Richness) Sigma-restricted parameterization Effective hypothesis decomposition

	SS	Degr. of – Freedom	MS	F	p
Intercept	1495.717	1	1495.717	1679.402	0.000000
Age group	2.574	1	2.574	2.891	0.108447
Home language	0.150	1	0.150	0.168	0.686962
Age group*Home language	0.885	1	0.885	0.993	0.333763
Error	14.250	16	0.891		

*Production**Tatar language*

In connection with the production of the vocabulary in Tatar, there is a relation between the age group and the language. This is shown in Table 4.

Table 4.

Production in the Tatar language

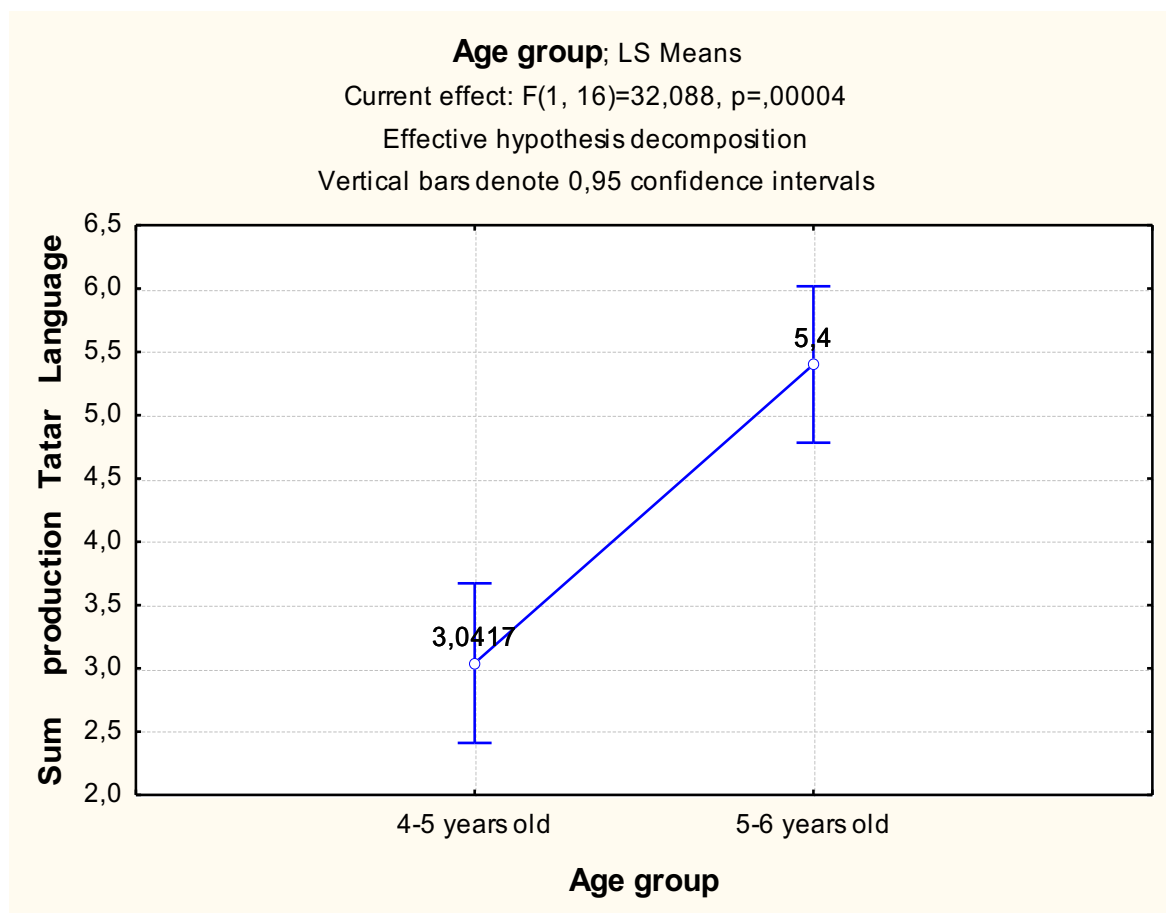
Univariate Tests of Significance for sum production Tatar language (Vocabulary Richness) Sigma-restricted parameterization Effective hypothesis decomposition

	SS	Degr. of Freedom	MS	F	p
Intercept	349.0371	1	349.0371	411.1357	0.000000
Age group	27.2412	1	27.2412	32.0877	0.000035
Tatar language	4.8167	1	4.8167	5.6736	0.029977
Age group*Tatar language	1.7146	1	1.7146	2.0197	0.174469
Error	13.5833	16	0.8490		

Let us look on the production of the age groups. This is shown in Figure 4.

Figure 4.

Production in the Tatar language as a function of age group

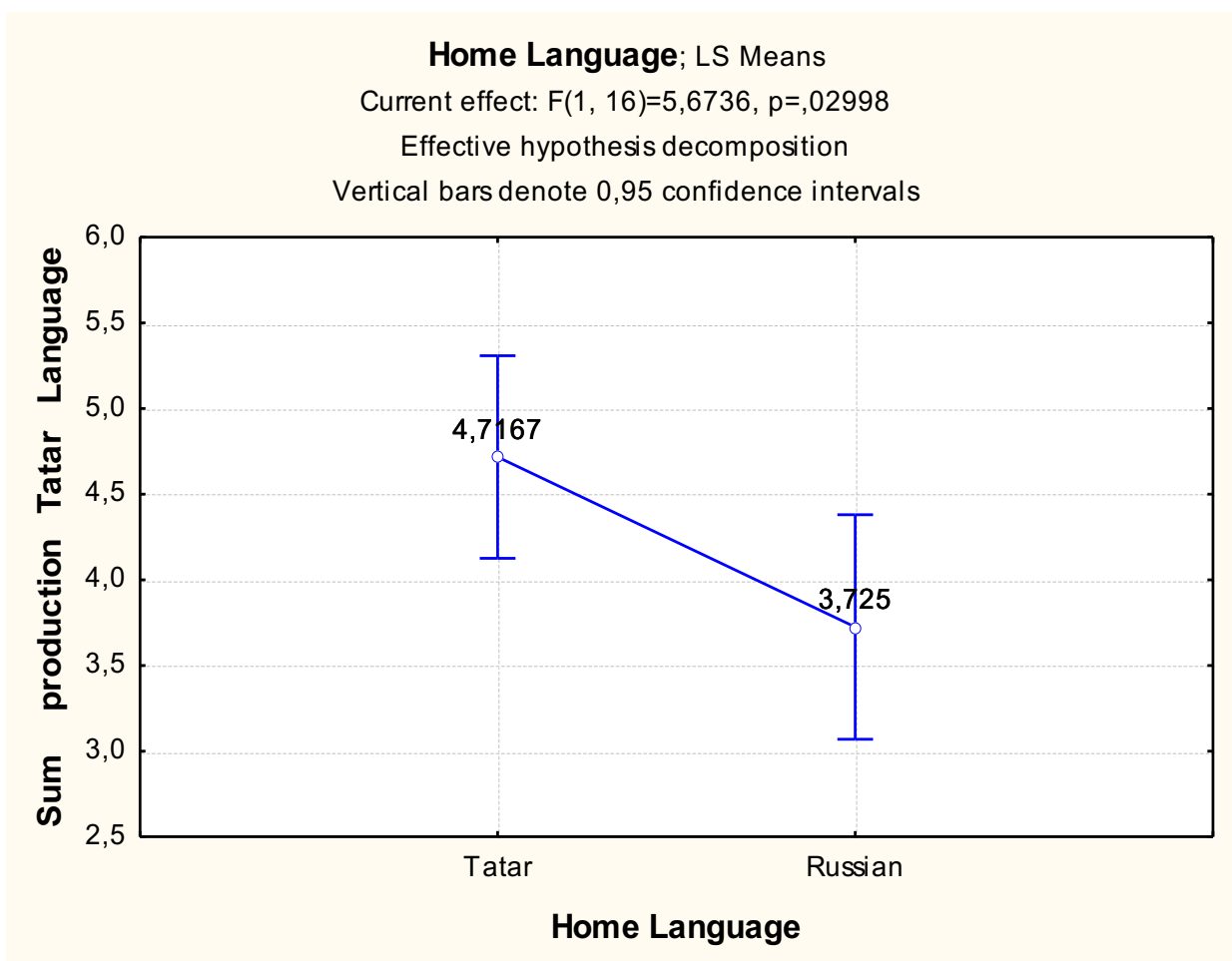


The children 5–6 years old have better results than those 4–5 years old. The differences between the two age groups are statistically significant $F(1,16) = 32.0888$, $p = 0.00004$. The richness of vocabulary of the older group of children in the Tatar language is greater.

If we compare the languages, the children show better production in Tatar language, especially the older group. This is shown in Figure 5:

Figure 5.

Production in the Tatar language as a function of home language



The differences between the production in both languages are statistically different. The children's knowledge in the vocabulary of Tatar is greater than their knowledge of Russian vocabulary $F(1,16) = 5.6736$, $p = 0.02998$.

Russian language

The production in Russian is shown in Table 5. It is clear from the table that there is a relation between the age groups and Russian language production.

Table 5.
Production in the Russian language

Univariate Tests of Significance for sum production Russian language (Vocabulary Richness) Sigma-restricted parameterization Effective hypothesis decomposition					
	SS	Degr. of Freedom	MS	F	p
Intercept	597.1514	1	597.1514	1126.258	0.000000
Age group	4.4983	1	4.4983	8.484	0.010169
Russian language	6.0167	1	6.0167	11.348	0.003911
Age group*Russian language	0.4656	1	0.4656	0.878	0.362618
Error	8.4833	16	0.5302		

How did the groups perform the production part of the test in Russian? This is shown in Figure 6.

Figure 6.
Production in Russian as a function of age group

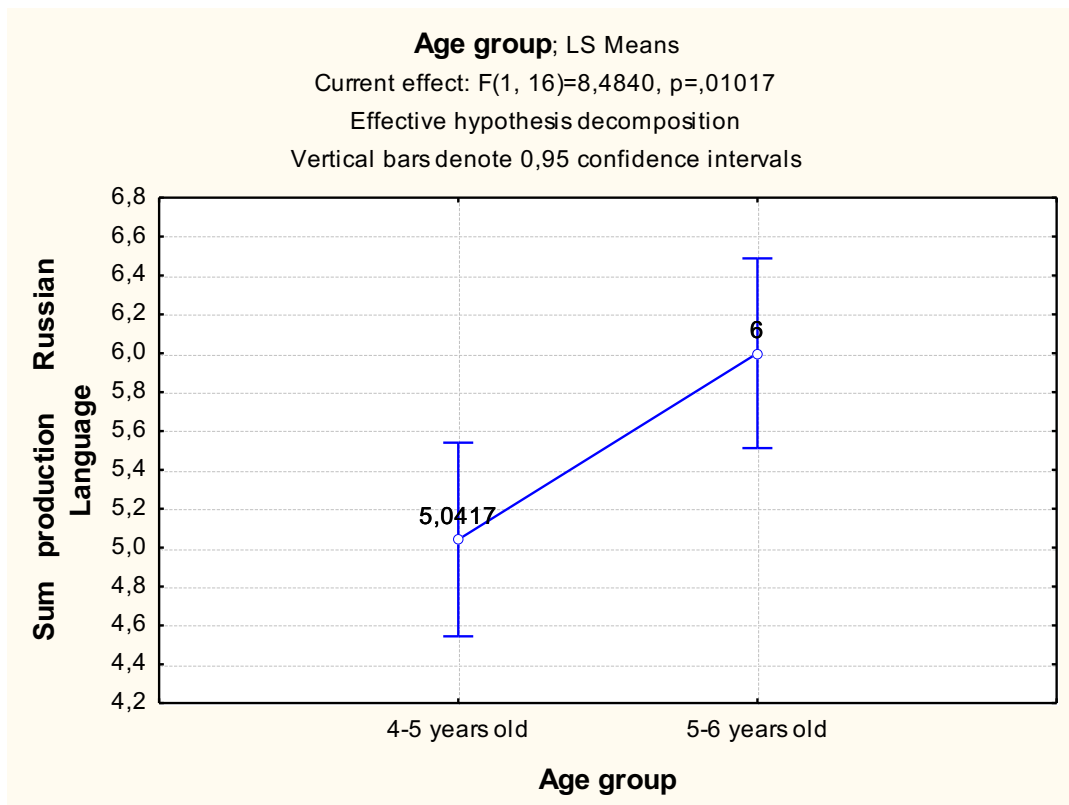
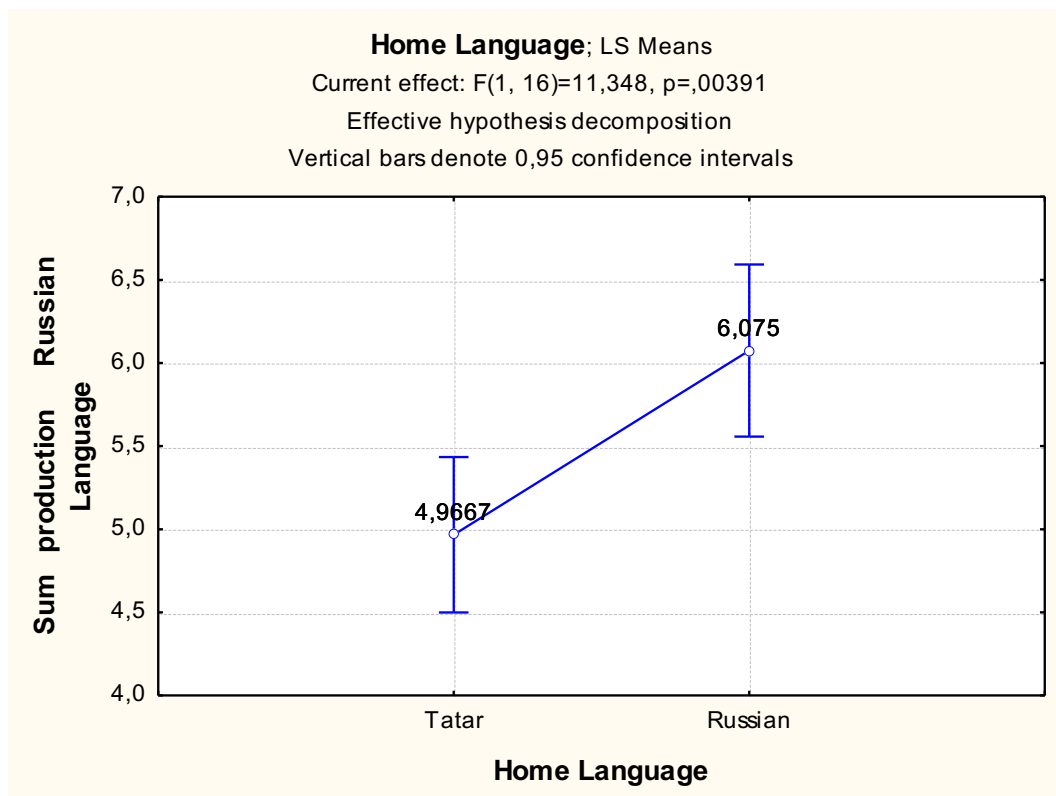


Figure 6 shows that the children 5–6 years old have a better knowledge of the Russian vocabulary in comparison with the younger children 4–5 years old. The differences between the groups are statistically significant $F(1.16)$, $p = 0.01017$.

Figure 7 shows the production in Russian as a function of the second language.

Figure 7.

Production in Russian as a function of second language



The production in Russian is greater than the production in Tatar. The differences between the knowledge in Russian and Tatar are again statistically significant $F(1.16) = 11.348$, $p = 0.00391$. The high production of Russian vocabulary is typical for the children from the second group – 5–6 years old.

4. Discussion and Conclusion

As Armon-Lotem and Meir (2019) note: “measuring young children’s language exposure and input is not only of interest to better understand the bilingual development process, but also to be able to evaluate whether any finding of delayed language acquisition by a bilingual child is due to limited exposure or to language impairment” (p. 193). It is known that many bilingual children are wrongly diagnosed with language impairment and with language delay and in many cases such as the case with Roma children in Europe, they are even considered to be mentally retarded (Kyuchukov, Ushakova, & Yashina 2017; 2018)

As Nicoladis (2018) points out, depending on the age and the form of acquisition of the language (simultaneous or sequential), there are differences in the use and knowledge of the languages (p. 81). It influences the knowledge of the language likewise at a later age when the speaker is an adult.

Thus, how the language was learned and what the consequences of language acquisition are influences how good a speaker will be later in life. On the other hand, it is very important to know at what age the bilingual speaker became a balanced bilingual. Balanced bilingualism helps for reading and comprehension of the text, for oral and written communication, for being able to switch from one language to a second in any situation in life.

The study here, although limited, shows the following tendencies:

1. The comprehension of the wh-complements questions are an important part of the syntax development of Tatar-Russian bilingual children. The wh-complements questions are difficult in Turkic languages because of the special structure of the syntax and because of the position of the verb in the sentence (Herkenrath, 2011). The children acquire the wh-complements questions in both languages at an age of 5–6 years old.
2. The comprehension of the vocabulary is acquired in both Tatar and Russian languages at an age of 4–5 years old, but the production is acquired a bit later – at an age of 5–6 years old.

In conclusion we can say that the Tatar-Russian bilingual children become balanced bilinguals at an age of 5–6 years old. The grounds for it are the family input of the languages on one hand, but on the other the influence of the preschool educational system in Tatarstan, where the Tatar and Russian languages are introduced and taught on an equal level.

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A PSYCHOLINGUISTIC ANALYSIS OF THE FIRST UKRAINIAN SYLLABI ON GENERAL AND SPECIAL METHODOLOGY OF TRANSLATION BY MYKHAILO KALYNOVYCH AND MYKOLA ZEROV

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Abstract. The article studies and discusses the programs of interrelated lecture courses on General and Special Methodology of Translation, developed for the Ukrainian Institute of Linguistic Education by its professors Mykhailo Kalynovych and Mykola Zerov in September 1932. This material is analyzed from the perspective of psycholinguistic text theory, according to which the text is the basic unit of discourse that, in turn, is a component of communicative action, along with the situation. The study focuses on the micro- and macrotext structure of the above programs and highlights the peculiarities of their communicative intentions in the political and social reality of early Stalinism. It features the unique, innovative elements in them, but also those that were typical of the early Soviet theory of translation. For the first time not only in Ukrainian but also in the All-Union thought on translation, Kalynovych and Zerov presented in their integrated courses the ramified structure of Translation Studies as a multifaceted discipline. They introduced into the discipline novel methodology and new research directions, particularly by creating such areas as the history of translation studies and translation management. The material of Zerov's syllabus on Special Methodology of Translation is first published and discussed in this article. The typewritten text of the syllabus remained unknown until the author of the article found and identified it in the Archives of the Literary Museum of Hryhoriy Kochur, who had been a student of Zerov at the Kyiv Institute of Public Education and further remained his faithful follower. During the Khrushchev thaw, Kochur made many efforts to rehabilitate the name of Zerov – a distinguished literary scholar, lecturer, and poet-translator. The syllabus on General Methodology of Translation outlined by professor Kalynovych was found earlier in the same Archives and published in 2015. However, this article pioneers its presentation and analysis in mutual complementarity with the syllabus by Zerov.

Keywords: *general and special methodology of translation, psycholinguistic analysis, translation studies as a discipline.*

Коломієць Лада. Психолінгвістичний аналіз перших українських програм з методології та методики перекладу, напрацьованих Михайлом Калиновичем і Миколою Зеровим.

Анотація. У статті комплексно досліджуються програми взаємопов'язаних лекційних курсів з методології та методики перекладу, розроблені для Українського інституту

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лінгвістичної освіти його професорами Михайлом Калиновичем та Миколою Зеровим у вересні 1932 р. Цей матеріал проаналізовано з точки зору психолінгвістичної теорії тексту, згідно з якою текст виступає основною одиницею дискурсу, який поряд із ситуацією є складовою комунікативної дії. Аналіз зосереджується на мікро- та макротекстовій структурі вищезазначених програм і висвітлює особливості їх комунікативних намірів у політичній та соціальній реальності раннього сталінізму. В статті представлені унікальні, інноваційні елементи цих програм, але також ті, що були типовими для радянської теорії перекладу. Вперше не лише для української, а й для загальносоюзної думки про переклад професори Калинович та Зеров представили в своїх інтегрованих курсах розгалужену структуру перекладознавства як багатогранної дисципліни. Вони впровадили в цю дисципліну нову методологію та нові напрямки досліджень, зокрема, створивши такі школи, як історія перекладознавства та керування перекладами. Матеріал програми лекційного курсу Зерова з методики перекладу вперше публікується та обговорюється в цій статті. Машинописний текст програми залишався невідомим, доки авторка статті не знайшла його й ідентифікувала в архіві Літературного музею Григорія Кочура, який був студентом Зерова в Київському інституті народної освіти і залишався його вірним послідовником. Під час хрущовської відлиги Кочур доклав багато зусиль для реабілітації імені Зерова – видатного літературознавця, лектора та поета-перекладача. Програму курсу з методології перекладу, напрацьовану професором Калиновичем, було знайдено в тому ж архіві раніше й опубліковано 2015 року. Проте в цій статті програма лекцій Калиновича вперше подається й аналізується у взаємодоповненні з лекційною програмою Зерова.

Ключові слова: методологія та методика перекладу, психолінгвістичний аналіз, перекладознавство як дисципліна.

This article is dedicated to the 130th birth anniversary of the prominent poet, translator, lecturer, historian of Ukrainian literature and translation Mykola Zerov

1. Introduction

The early 1930s saw the flourishing of Ukrainian translation thought. In the academic year 1932–33, the Ukrainian Institute of Linguistic Education (Ukrainskyi Instytut Lingvistychnoi Osvity, UILO) introduced into its curriculum two consecutive and integrated disciplines, *General Methodology of Translation* and *Special Methodology of Translation*, which were developed by the Institute professors Mykhailo Kalynovych (1888–1949) and Mykola Zerov (1890–1937) respectively¹. Contemporary researcher Mysechko (2007) argues that even though the initial level of knowledge of students entering the Institute was rated as very low, the teaching there in general was conducted at a high level.

As was observed by Mysechko (2007), from the early 1933 the UILO began to be sharply criticized by the governing bodies of public education for its “unfounded and excessive orientation ‘to the West,’” apolitical study of professional languages or, vice versa, reference to a “harmful ideology” in the teaching process and usage of “counter-revolutionary examples,” etc. (TSDAVO; cited in Mysechko, 2007, p. 37). Due to ideological pressure on the Institute, the course *General Methodology of Translation*, taught by Kalynovych during the fall semester in 1932, and the course *Special Methodology of Translation*, which was designed by Zerov as a

¹ The UILO was opened in Kyiv in October 1930. As a special linguistic education institution, it embodied a new form of training of foreign language teachers in Ukraine. In the academic year 1931–32, the study period at the Institute was extended to a 4-year foreign language education (Mysechko, 2007, p. 36).

continuation of the Kalynovych course², remained unnoticed and unappreciated not only by their contemporaries but also by the new generations of translation teachers, theorists, and practitioners.

Meanwhile, these sequential programs of training translators represent a unique holistic approach to studying the field and scope of translation, teaching translation to Ukrainian students, and advancing linguistic, literary, cultural, and historical knowledge as integral constituents of Translation Studies. Together with the new branches of research, Kalynovych and Zerov introduced new terminology into the translation discourse and systematized the relationship of certain terms and concepts in this area. Concurrently, the thematic content and the lists of required and recommended reading for each topic in Kalynovych and Zerov not only reflect the authors' individual view of Translation Studies as a discipline in the early 1930s, but also point to the condition and status of the early Soviet theory of translation.

All that said, the Kalynovych and Zerov syllabi are a valuable source of information about the state of Ukrainian translation thought, its professional language, relation to and interaction with the Russian translation thought, as well as about ideological constraints at the time of forced politicization of all public domains. A psycholinguistic analysis of these important documents of the early Stalinist period as an integral text within the framework of translation studies discourse and at the intersection with socio-political, national, cultural, and historical discourses will help to shed more light on the Ukrainian translation scholar's agency within and beyond the ideological frame of that time, the socio-political and cultural aspects of educating a national and Soviet translator at once, forming his/her working terminology, proficiency, psychological attitudes and esthetic tastes. The psycholinguistic study of these materials will also contribute to a better understanding of the mechanisms of the Communist Party's exercise of power over national and cultural processes in the Soviet republics. Therefore, this study may be of interest not only to linguists, translators, and literary critics, but also to political scientists, sociologists, and culturologists.

2. Methods

The research methodology in this article relies on the premises of psycholinguistic analysis of the text, which is viewed as result of linguistic and mental activity and, simultaneously, as a unit of communication. After all, the primary goal for the developers of professional disciplines was the communicative goal, i.e., information transfer and an impact on the student-recipient. According to psycholinguist Krasnykh (2005, p. 258–261), the text is the basic unit of discourse, while the discourse itself together with the situation are components of the

² English translations from Ukrainian of all terms and quotations in this article were made by me. – L.K.

The typewritten versions of both syllabi are stored in the Archives of Hryhoriy Kochur Literary Museum in the city of Irpin (Kyiv Oblast). The Kalynovych syllabus on general methodology of translation has been found and made public by Dzhuhastrianska & Strikha (2015).

The syllabus by Zerov on special methodology of translation, which is the continuation of the Kalynovych syllabus, was found by the author of this article. I express my sincere gratitude to the Literary Museum of Hryhoriy Kochur for the kind opportunity to work with the text of the program by Zerov.

communicative act, which, in turn, is the main unit of communication. In my study of the syllabi of Kalynovych and Zerov, I will apply the model of psycholinguistic analysis of the text by Krasnykh (2005). The following text parameters will be analyzed: extralinguistic reality, or the *consituation* in which the communicative act takes place; specific subject, or the author, communicator, who generates a specific speech-thinking product; stimulus to speech activity and the intention to generate speech; verbal form of the product of speech-thinking activity, i.e., the text itself in the direct presentation; text structure – microtexts and macrotexts; logical-semantic structure of the text (logical-semantic blocks, which are, according to Krasnykh, certain fragments of communication); specific speech action as a mini-fragment of communication; connections between speech actions of communicators.

In a broader methodological dimension, the article draws on 1) communicative-pragmatic analysis, or intent-analysis of discourse, aimed at identifying the intentions of the lecturer as communicant in the process of interaction with the student audience; 2) semiotic analysis of the *text* as specific speech-thinking product and the *consituation*, in which the communicative act of teaching takes place; specifically, the study is based upon the works on textual theory of the Bakhtin circle, in particular on the monographic research by Voloshinov (1986)³; 3) advances in cultural historiography of the 20th-century translation thought, set out in the works of contemporary Ukrainian and Russian historians of translation, particularly the history of methodology of Russian translation illuminated by Azov (2013).

3. The Study

This part of the article will be devoted to the study of methodological and terminological novelty of the course programs, worked out by Kalynovych and Zerov for the Ukrainian Institute of Linguistic Education. The syllabus on general methodology of translation, *Metodolohiia perekladu*, designed by Kalynovych for the 2nd-year students of Translation Department (date of signing: September 5, 1932), takes 20 academic hours and covers eight thematic blocks:

1. *The essence and purpose of translation.*
2. *Translation studies is the science of translation.*
3. *Stages of translation history.*
4. *Stages of the history of translation studies.*
5. *Translation studies at the service of proletarian society.*
6. *Class function of translation during the dictatorship.*
7. *The problem of accuracy in translation.*
8. *Organization of work around translation.*

The syllabus on special methodology of translation, *Metodyka perekladu*, developed by Zerov for the same-year students of that Department (date of signing: September 9, 1932), takes 50 academic hours and consists of two sections and seven topics altogether:

SECTION I. General Methods of Translation.

³ First published in Russian in 1929 (the main part of the text belongs to Mikhail Bakhtin).

Topic 1. Main Features of Typology of Translation.

Topic 2. Translation of Prose Non-Artistic Text.

Topic 3. Translation of Prose Artistic Text.

Topic 4. Translation of Poetry.

SECTION II. From the History of Ukrainian Translation.

Topic 5. Translation in Ukraine during Feudal Formation.

Topic 6. Translation during Industrial Capitalism and Imperialism.

Topic 7. Translation during the Dictatorship of the Proletariat.

These syllabi are complete macrottexts with a similar microtext structure. Both begin with an explanatory note, which clarifies the purpose of the course, explains its structure, and emphasizes the need for students to take notes of teacher's lectures and use the notes as the main textbook required for study due to the lack of sources, particularly those written in accordance with the "Marxist-Leninist methodology."

Each lecture topic is a standardized microtext, which consists of an indication of the number of hours devoted to the topic, a rather detailed lecture plan on the topic and a list of required readings as well as optional, or recommended, sources, though not for all topics. The programs include two conferences – in the middle and at the end of the course. Zerov's program also presupposes extracurricular preparation and presentation by students of two independent reports on lecture topics.

The discussed syllabi show the tradition and context of Ukrainian school of translation. They mutually complement each other, and together they give a holistic view of the ramified structure of Ukrainian translation studies in the early 1930s. According to Zerov, "the special translation methodology course is a direct continuation of the general translation methodology course. Its target tendency is predetermined by the tendency of the course on general methodology" (1932, p. 1 of typescript).

Cognitive mapping of the syllabi, based on logical analysis of text content and building associative fields, allowed the author of this article to draw a chart of Translation Studies as a discipline in the terms and the form in which it was presented by Kalynovych and Zerov. A comparative textological analysis enabled consolidation of their syllabi into a single schematic map of the discipline, generated by reason of correlation between their intertextual coherence and mutual integrity (see Figure 1).

Intertwining in one text of the discourse of Ukrainization and development of Ukrainian national culture with the discourse of proletarianization of national art and way of thinking was a sign of the early Stalinist period. The researched programs were not an exception to the process of forced Sovietization of educational discourse. Professional language terminology is interspersed in them with ideological patterns, which came from the *consituation* of ideological bias in the educational program at the UILO, as elsewhere in Soviet educational institutions. Political idiom of Marxist-Leninist ideology is particularly abundant in the text of Kalynovych because of its general methodological orientation.

As a verbal form of the product of speech-thinking activity, the discourse in Kalynovych aims to create a new, proletarian theory of translation. In this effort, the author pinpoints the multiple tasks of translation such as spreading the ideas of socialist construction and soviet technology, literature, and the arts all over the world; development of the proletarian artistic style; elevation of those nations and ethnic groups that lagged behind economically and culturally (because of the “class policy of the bourgeoisie”) to higher levels of development; revival of the pace of Ukrainization and construction of Ukrainian culture – “national by form and socialist by substance”; integration of linguistic ideological superstructure of the world proletariat; construction of world proletarian culture and new life.

A builder of the proletarian theory of translation, whose ultimate purpose was to integrate proletarian ideology worldwide through translation, must have had a strong confidence in translatability. In this regard, an approving attitude towards the translation (of proletarian art) into Esperanto was the marker of this theory. At the same time, the significance of Indigenization (Ukrainization) constituted an integral part of the theory of proletarian translation in the early 1903s. Linguistic Ukrainization, as well as the Communist Party’s policy of Indigenization on the territories with predominant non-Russian-speaking population at large, was basically aimed at Socialist reformation of national cultures.

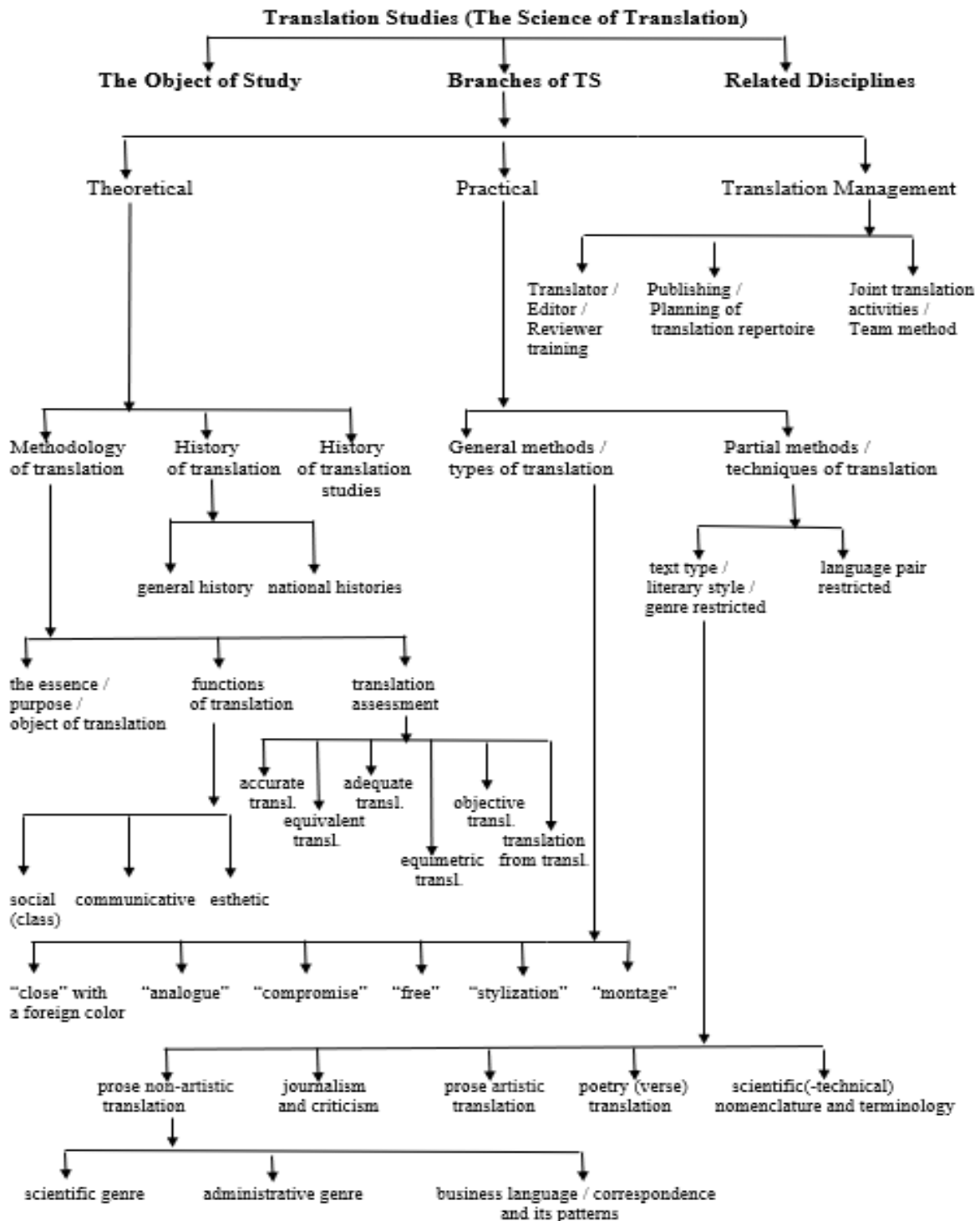
The policy of Ukrainization served, above all, to establish Stalin’s dictatorship in the Ukrainian SSR, despite the appearance of restoring justice towards the Ukrainian-speaking population. In the late 1920s-early30s, Ukrainian intelligentsia was forced to seek a compromise between the hope for revival of Ukrainian language and culture after the centuries of colonial stagnation in Russian Empire and the interests of the Bolsheviks’ government in Soviet Ukraine. Kalynovych, as many cohorts of Ukrainian intellectuals of his time, attempted to build Ukrainian science amid the rising campaign of Stalin’s terror. A part of the compromise was in accepting Russian view of the history of Ukraine as well as Russia’s cultural dominance. Such an attitude can be tracked in the theme “Stages of translation history,” in which the preindustrial Ukraine is vaguely represented as a territory of “the East Slavs” (Kalynovych, 1932, p. 3 of typescript). A generalizing attitude to the early history of Ukraine, inherited from the time of colonial dependence on Russian Empire, was reinforced under the Communist regime. Mandatory sociological bias sounds particularly harsh in the theme “Stages of the history of translation studies,” which represents a discussion of the classical and romantic theories through a sociological prism.

However, the professional terminology used by Kalynovych and Zerov in the most part remains important and relevant to contemporary discourses on translation. Certain terms and concepts should be mentioned in the first place. This is primarily the term *perekladoznavstvo* (verbatim “translation studies”) applied by Kalynovych as the name for the academic discipline which concerns itself with the study of translation at large. The term *Translation Studies* proved to be the most widely used designation of the discipline today.⁴

⁴ It was first suggested by Holmes in his pivotal article “The Name and Nature of Translation Studies” as the standard term for the discipline (1972/1988, p. 67–80).

Figure 1.

A Summary Chart of the Discipline of Translation Studies (Based on the Syllabi of General and Special Methodology of Translation, Designed by Professors Mykhailo Kalynovych and Mykola Zerov)



The structure of the discipline *Translation Studies* coincides in its basic components in Kalynovych with the structure of this discipline in Holmes, who “is

credited with the first attempt to chart the territory of translation studies as an academic pursuit” (Baker, 1998 [2000], p. 277). Holmes’ map of the domain of *Translation Studies* (TS) is now commonly recognized as a framework for organizing research and teaching activities within this discipline (Baker, 1998 [2000], p. 278). In addition to his scheme, Holmes mentions two important areas of inquiry: the study of Translation Studies itself (such as the history of translation theory or the history of translator training, etc.) and the study of the methods and models of specific types of research in the discipline (Baker, 1998 [2000], p. 279).

Forty years before the appearance of Holmes’ chart in 1972, Kalynovych worked out a view of the territory of Translation Studies, which substantially corresponds to the map of the discipline promoted by Holmes. Just like Holmes does, Kalynovych divides the discipline, which he concomitantly refers to as the *Science of Translation*, into two major branches: Theoretical Translation Studies (in Holmes: Pure TS) and Practical Translation Studies (in Holmes: Applied TS). The branch of Theoretical TS is further subdivided in Kalynovych into three sections: Methodology of Translation, History of Translation (General and National Histories), and History of Translation Studies. Highlighting the history of translation studies as a separate branch and the subject matter of translation studies testifies to the maturity of Ukrainian translation thought in the early 1930s. The branch of Practical TS is further subdivided in Kalynovych into two sections: General Methods of Translation and Partial Methods of Translation (for a specific language pair, etc.).

It is important to note that the division of the field of Translation Studies into the major areas in Kalynovych is more detailed than that of Holmes. Kalynovych partitions the territory of *Translation Studies* into the Object of Study, the Branches of the Discipline, and Related Disciplines. By including the domains of related disciplines in the field of Translation Studies Kalynovych anticipated contemporary approaches to TS as an interdisciplinary science by nature, which embraces a spectrum of methods and models from other disciplines. An integrated approach to Translation Studies, envisaged by Kalynovych, enables adding a supplemental branch to TS, which is the branch of Translation Management that consists of such subbranches as Translator /Editor /Reviewer training, Publishing /Planning of translation repertoire, and Joint translation activities /Team method.

The map of the discipline advanced by Kalynovych has the triple objective of 1) clarifying the nature (or “essence”) of translation, its purpose, and the unit (“object”); 2) identifying the functions of translation, among which Kalynovych and Zerov together listed the following ones: social (“class”), communicative, and esthetic; 3) developing principles for proper evaluation of the strategy and result of translation (in particular, using such characterizing terms as *accurate /equivalent /adequate /equimetric /objective translation; translation from translation*, etc.).

Zerov filled the section of general methods of translation, which belongs to the branch of Practical TS in Kalynovych, with descriptions of specific types of translation resulting from the various translation techniques known at the time.

Within the section, he singled out a foreignizing translation (or “close” with a foreign color), an “analogue,” a “compromise,” as well as the strategies of stylization, free translation, and “montage.” Based on the text type, literary style, and genre restrictions, Zerov also split the section of partial methods of translation up into such sectors as the prose non-artistic (non-fiction) translation; journalistic translation and the translation of essays and (literary) criticism; the prose artistic (fiction) translation; the translation of poetry (verses); the translation of scientific-technical nomenclature and terminology. The sector of prose non-fiction translation, in turn, is subdivided in accordance with further genre and stylistic distinction into the following components: scientific genre; administrative genre; business language /correspondence and its patterns.

The integrity of *Translation Studies* as a university discipline outlined by Kalynovych and Zerov hinges on the relationship between theory, practice, and management of translation, with each branch providing logic and reasons for the other two. The joint endeavor to create a complete delineation of the discipline and to teach it at the UILO was an important achievement of the early Soviet theory of translation and a significant contribution to the 20th-century European translation thought, still underestimated. A holistic view of TS introduced into teaching, as well as a range of professional concepts and specially coined terms, is an outstanding achievement of Ukrainian translation thought, still relevant and attractive in many respects against the background of modern ideas about translation.

The chart of TS drawn by the author of this article aims to show multiple connections between the content and composition of the discussed syllabi. In view of their mutual complementarity and intertextuality, the written plan of each lecture should be considered as a minifragment of intended classroom communication, which was to unfold in a series of full-time lectures.

Oral communication as a type of speech-thinking activity dominated in classroom, and the syllabi constituted only a significant part of specific speech actions of the professors-communicators of knowledge. In this regard, lecture notes should be viewed as the product and interpretation of speech-thinking activity of the lecturer. It is worth mentioning that the main form of required literature in Kalynovych and Zerov were lecture notes made by their students during the lectures. And for a large part of lectures in their syllabi making notes was the only written source for students to learn the classroom material.

Although spoken mediation of knowledge should not be underestimated, the student notes have not survived, and the only remaining evidence of this verbal form of knowledge acquisition is the course program, apart from separate scattered lecture notes that Zerov made personally during the preparation for lectures.⁵

⁵ Several dozen unnumbered and scattered sheets with translation comments and fragments of various (mostly) poetic works in different languages for comparison, handwritten by Zerov, are stored in the Archives of Hryhoriy Kochur Literary Museum.

Translation terminology in Zerov is organically national and largely based on the Ukrainian-language models of term formation. Concurrently, it remains relevant to contemporary discourses on translation. For instance, Zerov opposes the translator's orientation towards target language and its originality (his term: *svoiemovnist'*) to the focus on source language peculiarities (his term: *chuzhomovnist'*). This conceptual opposition of the native language-centered strategy to the foreign language-centered approach correlates with *domesticating* vs. *foreignizing* strategies in Western translatology.

The prioritization of *foreignizing* strategy in the 1920s had been justified by evaluating the accurate translation above the approximate one and by acknowledging the fact of only limited translatability of certain semantic, poetic, and cultural features of literary works. But in the early 1930s, the Soviet theory of translation started rationalizing both domestication and foreignization by purely political motives. The Bolsheviki sensed danger in the strategy of domestication and began to associate it with a "bourgeois-nationalist" love of the vernacular, while foreignization applied to scientific and technical terminology and nomenclature, on the contrary, was correlated with proletarian internationalism. Zerov's syllabus displays such an opposition of the "bourgeois-nationalist" orientation towards vernacular originality (*svoiemovnist'*) to the "proletarian translator's orientation at internationality" in rendering foreign terminology (1932, p. 3 of typescript), although under the slogan of linguistic internationalism the Party's policy of Russification of the peoples of Soviet republics was hidden.

Despite the mandatory application of Marxist-Leninist idiom to linguistic phenomena, for example, searching for the "class-based emotional coloring" in synonyms, Zerov made a huge contribution to the development of Ukrainian (and Soviet) Translation Studies by introducing into this new discipline numerous terms and concepts from related fields, especially from the theory and history of literature, linguistics, and art history. These are concepts like "social dialect," "social and cultural relief of the word," its "associative saturation," stylistic techniques of variation, explication, gradation, etc.

4. Results and Discussion

In view of the above study, consolidated efforts of Kalynovych and Zerov to develop the structure of Translation Studies as an integrated discipline culminates in detailed mapping and significant expansion of its territory. Special emphasis must be placed on the branch of Translation Management pioneered by Kalynovych. Along with the task of translator training, the author raises the issues of organizing the work and cooperation in the field of translation, together with the issues of editing and reviewing the translated texts. This branch also deals with the problem of joint translation activities: the team method ("the brigade form of translation") – pairing a translator who knows the language of the translation better,

with a translator more familiar with the language of the original, a translator with the author.

The team method as a creative cooperation of a tandem of translators, their interpretive dialogue and the result of joint intellectual efforts is a common phenomenon in world translation practice. Among the most famous examples is the experience of the Toledo School of Translators.⁶

Among the Ukrainian translation tandems of the late 1920s–early 1930s, the names of Veronica Hladka and Kateryna Koriakina are worthy of mentioning. As a poetess, Hladka had an impeccable sense of the Ukrainian language, and Koriakina, being a Russian, was brilliant in the Scandinavian languages. Their fruitful cooperation has brought the Ukrainian reader an opportunity to enjoy high-quality translations, primarily from Scandinavian languages as well as from English. In the first quarter of the 20th century, several families of Ukrainian writers worked as translation teams. Among them were Modest and Zinaida Levytsky, Dmytro and Maria Lysychenko, and others (Kolomiyets, 2015, p. 186–192; 202–203; 266–269).

Thus, viewed from translation history, the brigade method of translation as a collective activity was not actually a communist invention, although it received a fashionable name for the time, which was associated with workers' brigades. For Kalynovych, this term refers to the cooperation of independent intellectuals who work between cultures for the sake of their more fruitful dialogue, and the ruling circles of the Soviet system and its party-state apparatus saw in this method primarily the possibility of mechanically increasing translations as a collectively produced product that would testify to the active cultural interaction between the Soviet republics.

Another important area in the translation management industry is publishing and planning of translated publications. These issues are discussed in both Kalynovych and Zerov. An intense dialogue about the ways of translating foreign classics started in the Russian communist state at the turn of the 1920s, after the appearance of the publishing house “World Literature” in Petrograd in September 1918.⁷ The publishing house was founded under the auspices of People’s Commissariat for Education. It was supposed to translate and publish all foreign classics of the 18th–20th centuries. Accordingly, at least some guidelines had to be outlined on how these works should be translated. Contemporary historians of translation tie the beginning of Soviet translation thought to the appearance of this publishing house and more precisely to the commentaries of best Russian poets

⁶ A group of scholars who worked together in the Spanish city of Toledo in the 12th–13th centuries AD over the translations of philosophical and scientific works from classical Arabic into Latin and starting in the 13th century into Castilian. The Toledo translators worked in tandem in the following way: one person translated from an Arabic source for another person, who recorded the final translation in the target language, clarifying in the dialogue with his partner the interpretation of difficult places and opaque meanings.

⁷ At that time, during the Hetmanate (May 1918 – December 1918), there was a total of 169 publishing houses in Ukraine (Murakhovskiy, 2014, p. 2).

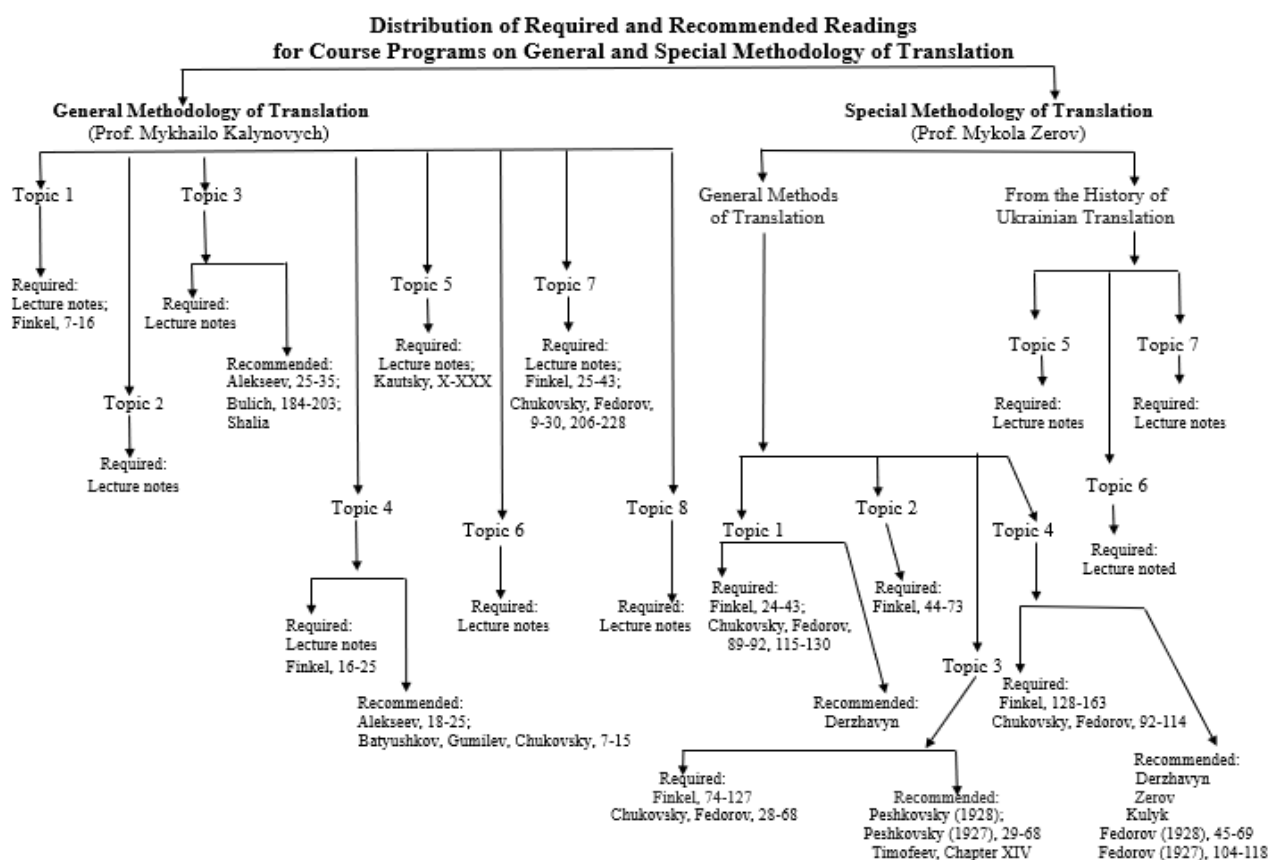
Aleksandr Blok, Nikolay Gumilev, Mikhail Lozinsky, philologists Fyodor Batyushkov, Alexander Smirnov, critic Korney Chukovsky, and other participants in its work (Azov, 2013).

In Soviet Ukraine, the idea of outlining a strategic general plan for the translators of world literature was partly realized in the 1920s by private and co-operative publishers, such as the Chas literary circle in Kyiv, the Rukh publishing house, the Knyhospilka cooperative union, although by the year 1931 all private and co-operative publishers became either banned or converted into state enterprises, and book printing passed into the hands of the state. The most grandiose plan of publishing all foreign classics in Ukrainian was put forward in March 1930 by the Cabinet of Comparative Studies of Literature at the Institute of Taras Shevchenko, which had been founded in 1926 in Kharkiv at the All-Ukrainian Academy of Sciences, a republican branch of the Academy of Sciences of the Soviet Union. The Cabinet focused its research activities on Russian-Ukrainian literary relations, translations of the classics of world literature in connection with the question of their impact on the Ukrainian literature, and the study of fiction of the modern West. The Chairman of the Cabinet Oleksandr Biletskyi and its members Aleksandr Leites and Mykola Zerov compiled a list of works of foreign literature—from ancient times to the twentieth century inclusive – that were to be translated preferably in the first place (Zerov, 1930, p. 1 of typescript). Their intentions were more ambitious than those of the Petrograd publishing house “World literature” editors. Such grandiose plans required a holistic map of the territory of Translation Studies, which would help to analyze, typologize, and produce translations.

In a lecture course, lecturing as spoken mediation of knowledge comes before the written text, although the written form of knowledge transfer is essential for students to fully master the content of the discipline. Therefore, it is important to look closely at the lists of required and recommended readings in Kalynovych and Zerov with the objective to briefly review the included sources and analyze their basic premises, as well as the reasons for the selection of these works. Certain of the included titles are surely of a broader interest not only to historians of translation in the early Stalinist period, but also to sociologists and psychologists, the researchers of dominant powers and ideas of that period.

Table 1 (see Appendix) exhibits the incorporated list of all printed literature for both syllabi. Distribution of required and recommended readings from the above list between the syllabi on general and special methodology of translation is shown in Figure 2, indicating pages from the relevant sources.

Figure 2.
Distribution of Required and Recommended Readings for Course Programs on General and Special Methodology of Translation



The Russian-language sources seem to prevail in the lists of non-required (additional) reading in both programs. Ukrainian translation thought was in the orbit of Russian thought, although in the 1920s Ukrainian literary translation and, respectively, theory of translation developed more intensively than Russian. This trend is noticeable due to the large number of critical publications about translated works and reviews of them in Ukraine (see Kalnychenko & Poliakova, 2011; 2015).

In the face of possible political accusations Kalynovych justifies his selection of reading by claiming that he recommends only the best and most accessible literature, while stressing the point that his selection is based exclusively on the objective reason of accessibility of the printed material related to the topics of his course. Professor's self-justification does not look like an unnecessary precaution, considering his recommendation of the collection of essays "Principles of Literary Translation" (Batyushkov, Gumilev, & Chukovsky, 1920). One of its co-authors, the poet and translator Nikolay Gumilev, who had been shot by the Bolsheviks in 1921, was not supposed to be mentioned among reliable sources. Another co-author, the leading literary historian and critic Fyodor Batyushkov, who died in

1920, shortly after being fired from his post of the head of the Saint Petersburg State Theatres committee, was not considered a sufficiently reliable source either.

The collection addressed the problems of limited translatability in both poetry and fiction. Batyushkov (1920, p. 10) raised a question of ineffability of certain elements of a foreign language in translation. Based on this assumption, he stated that no translation could replace the original. Along similar lines, the other two contributors, Gumilev and Chukovsky, advocated accuracy in representing the source-text linguistic form.

The early Soviet translation thought arose out of a lively discussion about selective accuracy and the limits of translatability in literary translation, as well as the need to reproduce the author's style. However, the process of ideological struggle has significantly influenced the formation of Translation Studies in the Soviet Union and the 1920s' literary debates between the supporters of foreignizing (literalist) translation and the champions of domesticating (adaptive) approach. By the early 1930s, Soviet theory of translation has become practice-oriented, aiming at learning a craft of translation and equipping the translator with clear principles. It gravitated towards predominantly non-individualistic pole intended for the general reader and learner. Searching for the best translation method and teaching translation as a teamwork was a priority.

Although in the 1930s the struggle against formalism and formalists prevailed, in the twilight of the 1920s the form of poetry and fiction was still central to many literary and translation studies. The research work of Russian linguist Peshkovsky was among the most authoritative and scrupulous examples of the study of artistic form in fiction.

Ukrainian literary scholar Derzhavyn took the most radical position in upholding the linguistic accuracy of translation. He instructed literary translators to follow the style of the original with the greatest possible accuracy. The foundation for the linguistic branch of Soviet thought on translation was laid by his theory of homological, or stylizing, translation (Derzhavyn, 1927), which would be evicted from the discourses on literary translation and forgotten by the mid-1930s.

Zerov as literary critic was particularly concerned with the burning questions of trends and development prospects for Ukrainian literature and translation as an integral part of it (Zerov, 1928).

Towards the late 1920s, voices justifying deviations from the source text by orientation at the "contemporary and Soviet" reader became clearly heard. Literary critic and translator Ivan Kulyk put forward "a different psychology" and socio-cultural background as an argument for replacement: "The verses of American poets, translated accurately, would have had one sense in New York and another in Kharkiv" (Kulyk, 1928 [2011], p. 486).

The monograph *Theory and Practice of Translation* by Ukrainian scholar and translator into Russian Finkel (1929), the first academic book on translation not only in the Ukrainian SSR but also in the entire Soviet Union, is referred to as the

basic manual in Zerov and Kalynovych. The book made Finkel one of the leading Soviet translation scholars, although it was a result of various translation controversies that took place in the 1920s. Similarly, the book by Chukovsky and Fedorov *The Art of Translation*, which appeared in print a year after the monograph of Finkel, is consistently alluded to by both scholars.

Ukrainian and Russian linguist Ivan Shalya raises an array of topical issues for the Soviet theory of translation emerging in the late 1920s, such as the task and method of translation, the role of literary, cultural, social, and other contexts of translation. For Shalya the historical-cultural worth of translation prevails over its sociological characteristics and accommodation to political agenda. It can be argued, thus, that the linguistic direction in the early Soviet theory of translation was not established exclusively by Fedorov in his chapter “Techniques and tasks of literary translation” of the book “The Art of Translation” (1930), but also by the earlier work of Shalya “On the question of the language means of translators of the 18th century” (1929). This article demonstrates that at the turn of the 1920s to the 1930s a particular attention in the linguistic branch of Soviet theory of translation was drawn to translations which are accurate in wording and style but at the same time comprehensible and able to develop the target language and literary system.

Treating foreignizing translation as an act of violence, the Irkutsk University lecturer Alekseev builds up a sociological approach to translational activity. He views translation as an engine of development of the receiving literature and linked the quality of translation primarily with its ability to appeal to a certain social group. Being innovative in its orientation at the target reader’s psychology of perception, Alekseev’s extended lecture “A Problem of Artistic Translation” (1931) eventually corroborated a turning point in the history of Soviet translation of the early 1930s towards a gradual reorientation from the dominant of accurate, source-oriented translation to the dominant of creative adaptation to the Soviet reader.

5. Conclusion

Although the course programs *General Methodology of Translation* and *Special Methodology of Translation* were not disseminated outside the Ukrainian Institute of Linguistic Education or introduced in other educational institutions, nor did they have further development due to the country's entry into the active phase of Stalin's purges, the directions of translation studies outlined in them were largely rediscovered by Western translators and proposed as a subject of study and teaching in the last quarter of the 20th – first quarter of the 21st century.

A range of terms and developments had been brought in by Kalynovych and Zerov long before the similar trends appeared to be widely discussed in the Western schools of translation. Conceptually, terminological formulations of Kalynovych and Zerov would be particularly reverberating in the later theoretical frameworks such as: 1) descriptive translation studies and especially James Holmes’ inquiry into the name and nature of translation studies as a discipline and

his pivotal chart of its territory as the groundwork for a retrospective and comparative content analysis of terminological units, definitions, and statements (Holmes, 1972 [1988], p. 67–80; Baker, 1998 [2000], p. 277–280); 2) the polysystem theory as formulated by Itamar Even-Zohar (1990); 3) the theory of foreignization – from Walter Benjamin and Martin Heidegger to Antoine Berman and Laurence Venuti (Benjamin, 1923 [1969]; Heidegger, 1975; 1982; Berman, 1992; Venuti, 1995; 1998); 4) the theory of domestication, particularly as it is viewed by Anthony Pym (1998), aimed at the preservation and development of minor ethnic groups, their tongues, and cultures.

Simultaneously, psycholinguistic analysis of the academic discourse in both programs as communicative actions, which are the conceptual core of two consistent and closely related lecture courses, reveals a chain of interlocked psychological premises inherent for the Soviet translation thought of the early Stalinist period. These assumptions, which are especially noticeable in the selection of texts proposed for study, can be reduced to the following preconceptions: 1) persisting political and cultural dominance of Russian patterns modelled on imperial relationship of the center with its colonies, and simultaneously, 2) the idea of building a new and culturally homogeneous society based on the dictatorship of the proletariat, and respectively, 3) the need to create a new type of reader, grafted with a class-biased psychology of artistic perception.

Nevertheless, the individual voice of the author-communicator as generator of innovative, unique, and integral speech-thinking product is clearly traceable in each of the two syllabi discussed in this article. Indicative of these texts is the fact that they fit into the paradigm of the discourse of Ukrainian national and cultural revival, and thus, develop Ukrainian translatology as a nationally oriented, albeit socialized and ideologically motivated, discipline. The main motivation for Kalynovych and Zerov in their lecturing activities consisted in the following: 1) intention to generate academic communication on the topical issues of translation, 2) orientation towards formation and development of the Ukrainian school of translation, together with 3) the prospect of rapid emergence of the works of world literature in high-quality Ukrainian translations.

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Source

TSDAVO of Ukraine (Central State Archive of the Supreme Bodies of Government and Administration of Ukraine). F. 166. Op. 11. # 325. Sheet 20a-22, 41–47.

Appendix

Table 1.

The Summary List of Required and Recommended Readings for Course Programs on General and Special Methodology of Translation

Alekseev, Mikhail. *Problema khudozhestvennogo perevoda* [A problem of artistic translation]. Irkutsk: Irkutsk University publication, 1931, 50 p. (In Russian)

Batyushkov Fyodor, Gumilev Nikolay, and Chukovsky Korney. *Printsipy khudozhestvennogo perevoda* [Principles of Literary Translation], 2nd supplemented ed. Petrograd: Gosudarstvennoe izdatel'stvo, 1920, 60 p. (In Russian)

Bulich, S. Ocherk istorii yazykoznaniiya v Rossii [An essay on the history of linguistics in Russia]. St. Petersburg: Printing House of M. Merkushev, 1904, XI, 1248 pp. – Ocherk istorii yazykoznaniiya v Rossii, p. 149-1228. Chapter 4: “Znakomstvo s yazykami v drevnei i moskovskoi Rusi i prepodavanie ikh” (Acquaintance with languages in ancient and Moscow Russia and teaching them), p. 184-203. (In Russian)*

Chukovsky, Korney and Andrey Fedorov. *Iskusstvo perevoda* [The Art of Translation]. Leningrad: Academia, 1930, 236 [3] p. (In Russian)

Derzhavyn, Volodymyr. “Problema virshovanoho perekladu.” *Pluzharyn*, nos. 9-10 (13-14), 1927, pp. 44-51. (In Ukrainian)

Fedorov, Andrey. “Problema stikhotvornogo perevoda” [The problem of verse translation]. *Poetics*. A Magazine of the Department of Verbal Arts of the State Institute of Art History, Vol. II, 1927, pp. 104-118. (In Russian)

Fedorov, Andrey. “Zvukovaya forma stikhotvornogo perevoda” [Sound form in verse translation]. *Poetics*. A Magazine of the Department of Verbal Arts of the State Institute of Art History, Vol. IV, 1928, pp. 45-69. (In Russian)

Finkel, Olexander. *Teoriia i praktyka perskladu* [Theory and practice of translation]. Kharkiv: DVU Publishers, 1929, 166 p. (In Ukrainian)

Kautsky, Karl. Introduction to “Das Kapital. Kritik der politischen Ökonomie” by Karl Marx, 1st volume, 7th ed. Moscow: GIZ (State Publishing House), 1930, pp. X-XXX. (In Russian)**

Kulyk, Ivan. [Peredmova] / “Antolohiia amerykanskoï poezii. 1855-1925” [Foreword to the *Anthology of American Poetry. 1855-1925*]. Kharkiv, 1928, 313 p. (In Ukrainian)

Peshkovsky A. M. “Printsypy i priomy stilisticheskoho analiza i otsenki khudozhestvennoi prosy (kak i khudozhestvennoi rechi voobshche)” [Principles and techniques of stylistic analysis and evaluation of fiction (as well as artistic speech in general)]. Moscow: State Academy of Arts, 1927, pp. 29-68. (In Russian)

Peshkovsky A. M. “Ritmika “Stikhotvorenii v proze” Turgeneva” (Rhythm of “Poems in Prose” by Turgenev). First published in the collection: “Ars poetica,” issue 1-2, Moscow, 1927-28. Reprint in the collection: Russian speech. New series Moscow, 2, Leningrad, 1928. (In Russian)

Shalya, I. K voprosu o yazykovykh sredstvakh perevodchikov 18 stoletiya: Trediakovskiy kak perevodchik (On the question of the language means of translators of the 18th century: Trediakovskiy as translator). Article in “Proceedings of the Kuban Pedagogical Institute,” Krasnodar: [n.p.], 1929, p. 215-240. Bibliography in footnotes and in text. A separate reprint from the 2nd and 3rd issues of “Proceedings of the Kuban Pedagogical Institute”. (In Russian)

Timofeev, Leonid. *Problemy stikhovedeniya: Materialy k sotsiologii stikha*. [Problems of prosody: Materials for the sociology of verse]. Moscow: Federation, 1931, 227 [5] p. (In Russian)

Zerov, Mykola. “U spravi virshovanoho perekladu. Notatky” [On the Case of Verse Translation. Notes]. *Zhyttia i revoliutsiia*, vol. IX, Sept. 1928, pp. 133-146. (In Ukrainian).

* In these Chapters, Bulich focuses on lexicons, grammars, ABC-books, and various kinds of dictionaries in the framework of Russian imperial historiography.

** Direct translations of the book from German into Ukrainian were also available (see Карл Маркс. До критики політичної економії / Пер. з нім. М.Порша за ред. Є.Касяненко. – Харків-Берлін-Нью-Йорк: Українсько-американське видавництво «Космос», 1923. – 204 стор. Карл Маркс. До критики політичної економії / Пер. з нім. М.Порша за ред. Є.Касяненко. – Харків: Державне видавництво України, 1926. — 198 стор.), but for objective reasons professor Kalynovych could not refer to them because of the political persecution of the editor, Yevhen Kasianenko, which began in the early 1930s (Kolomyiets, 2015, p. 262).

A METHODOLOGICAL FRAMEWORK FOR THE INTERDISCIPLINARY LITERARY TEXT ANALYSIS

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Abstract. All scientific endeavours require researchers to develop an understanding of the available methodological tools to perform the needed studies. These tools can be applied depending on the field, purpose and context of the study. This article outlines and argues for ways to construct methodological framework appropriate for an in-depth interdisciplinary analysis of a literary text. The purpose of this study is to build the interdisciplinary methodological framework for literary text analysis using approaches of two humanities sciences – pedagogy and philology (linguistics and literature). The material for the research is a contemporary fairy tale *Bunny Non-Hopper and His Brave Mommy* by Oksana Drachkovska, the Ukrainian writer and journalist. Relevance, innovation, importance and complexity of the author's fairy tale theme, which appears both in the field of modern pedagogy and current philological interpretations justified our choice. Among the methods applied in the paper are literary studies interpretation that outlines a place of the fairy tale in the context of similar Ukrainian and foreign literature and reveals features of the its gender constructions; linguistic analysis based on communicative-pragmatic and conceptual approaches that focus on the text-discursive level along with pedagogical approaches that enable the representation of the text's educational potential. The suggested framework consists of two levels – general scientific and specific scientific. On the general

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scientific level, it deploys systematic, synergetic, and paradigmatic approaches, whereas on the specific scientific level – linguistic approaches (communicative pragmatic and conceptual), literary studies approaches (intertextual and gender), and pedagogical approaches (integrated, inclusive, humanistic, empowerment), thus employing knowledge and specifics of each science. Besides a system-building function aimed to obtain comprehensive information about the object of the study, the proposed methodological framework for the interdisciplinary literary text analysis embraces an anthropocentric paradigm centred on children with special educational needs.

Keywords: *methodological tools, literary studies, linguistics, pedagogy, interdisciplinary literary text analysis, special educational needs, modern Ukrainian fairy tale, inclusion literature.*

**Лабінська Богдана, Осовська Ірина, Матійчук Оксана, Виспінська Наталія.
Методологічний інструментарій міждисциплінарних досліджень тексту.**

Анотація. Умовою розвитку будь-якої науки і досягнення значущих результатів є її методологічна озброєність. Методологічне обґрунтування визначає загальний підхід до дослідження й розкриває водночас більш конкретні положення, які виступають методологічними орієнтирами, що розвивають лінійну або кумулятивну систему наукового знання. Необхідність міждисциплінарної методології досліджень конкретних об'єктів викликана глобалізованою та міжкультурною взаємодією в гуманітарних науках, зокрема об'єднання кількох спеціальностей (наприклад, мовознавства з літературознавством; соціальної, вікової педагогіки з лінгводидактикою) в окремі наукові сфери. Виходячи з цього, методологічний інструментарій розширюється, взаємодоповнюється, інтегрується за рахунок залучення підходів, методів, принципів різних наук, що уможливує глибший та усесторонній аналіз об'єктів досліджень. Мета цього дослідження полягає у створенні міждисциплінарної методики аналізу тексту з використанням інструментарію двох гуманітарних дисциплін – педагогіки та філології (мовознавства й літературознавства). Матеріалом для дослідження обрано сучасну казку української письменниці та журналістки Оксани Драчковської «Зайчик-нестрибайчик та його смілива мама». Наш вибір був зумовлений актуальністю, інноваційністю, важливістю та комплексністю теми авторської казки, яка фігурує як у площині сучасної педагогіки, так і актуальних філологічних проєкціях. Послідовність роботи визначають літературознавча інтерпретація, яка окреслить місце твору в контексті подібної української та зарубіжної літератури й виявить деякі особливості гендерних конструкцій казки; лінгвістичний аналіз із застосуванням комунікативно-прагматичного та концептуального підходів, що детально зосереджуються на текстово-дискурсивному рівні; педагогічні підходи, що уможливають репрезентацію виховного потенціалу досліджуваного тексту-дискурсу. Слід зазначити, що загальнонауковий рівень цього інтегрованого міждисциплінарного дослідження складають системний, синергетичний та парадигмальний підходи. Запропонований міждисциплінарний інструментарій вибудований на антропоцентричній парадигмі, в центрі якої є людина – дитина з особливими освітніми потребами. Літературознавчі, мовознавчі, та педагогічні методологічні орієнтири виступають інтелектуальною схемою послідовності та зв'язку підходів, методів, принципів. Інтегруючи знання різних наук з урахуванням специфіки кожної, міждисциплінарний інструментарій виконує системотвірну функцію з метою отримання різнобічних відомостей щодо об'єкта дослідження.

Ключові слова: *методологічний інструментарій, літературознавство, мовознавство, педагогіка, міждисциплінарне дослідження тексту, особливі освітні потреби, сучасна українська казка, інклюзивна література.*

1. Introduction

A precondition for the development of any science and achievement of significant results is the methodological framework. Without methodological knowledge, which includes: methodological reflection (ability to analyse personal scientific activity), capacity for scientific substantiation, critical understanding and creative employment of certain concepts, forms and methods of cognition, management and design, it is impossible to competently conduct scientific research. (Kraevskij, 2009). Ziaziun emphasizes that the set of ideas, theories and approaches that are chosen as a methodological basis of a scientific investigation, constitutes a “prism” which enables clarification of the essence of the research object, shaping notion about it, selection of means and conditions of improvement as well as effective development (Ziaziun, 2011, p. 7). It allows scholars to balance the system of scientific research results, which is why the methodological basis of any research is understanding that science is a developing system as well as a special type of systematic organization of scientific works.

The modern methodology includes a system of knowledge of the objective laws of the development of the studied object, as well as the outlook system on future research, which has a significant impact on its progress (Shchukin, 2008, p. 157).

The methodological substantiation defines universal approaches to research and at the same time reveals more specific propositions that serve as methodological guidelines which enable the linear or cumulative system of scientific knowledge. The development of knowledge goes in the direction of facts accumulation, their inductive generalization to theory (Pozdniak, 2006, p. 21). All components of the system are interconnected and outline the context within which a particular problem is being studied.

The methodological framework for modern scientific research is predominantly interdisciplinary. As Mogilnitskij argues, there is no single model of interdisciplinary synthesis, as there can be no single set of disciplines involved in it. It depends on the subject of the study and its scale (Mogilnitskij, 2002). Hence we propose that multidisciplinary should be considered as a social paradigm of research in linguistics, pedagogy, other humanities, and social sciences, which determine the priorities of methodological relations in this scientific field.

Globalized and intercultural interaction of the humanities largely the integration of several specialties (e.g. linguistics with literary studies; social, age-appropriate pedagogy with linguistics) into separate scientific fields causes the need to create an interdisciplinary methodological framework for the study of specific objects. Therefore, methodological tools expand, complement each other, integrate through various approaches, methods, principles of different sciences, enabling deeper and more comprehensive analysis of the objects of research.

The purpose of this study is to create an interdisciplinary methodological framework for literary text analysis using the humanities approaches.

2. Methods and Materials

The contemporary fairy tale *Bunny Non-Hopper and His Brave Mommy* by a Ukrainian writer and journalist Oksana Drachkovska (Drachkovska, 2019), is selected as the material for this research. Our choice was influenced by the relevance, innovativeness, importance, and complexity of the theme of the author's fairy tale, appearing in modern pedagogy and linguistics. Drachkovska's book is one of the very few fictional representations of so-called inclusive fiction in the contemporary Ukrainian literary world, raising the question of children's inclusion in the school environment. The tale, at first glance, is within the field of pedagogical and educational sciences. However, it is by no means limited to the walls of educational institutions and in recent years has gradually become a part of the scientific and public discourse in Ukraine.

Inclusion is a process of building close, interpersonal relationships among society members – those who are the “regular” majority and those who are “different” and have special needs. As a post-totalitarian society, Ukrainian society continued the tradition of isolation, segregation, and marginalization of people with physical or intellectual disabilities. More than twenty years have passed from the time of the adoption of the Salamanca Declaration (UNESCO, 1994) to the real steps towards the implementation of inclusive education in Ukraine¹, and now one can speak only of its initial stage and gradual introduction of this topic into the broad public discourse. However, this process is of vital importance and, hopefully, irreversible, because “education determines the degree of the development of a state, while inclusive education determines the degree of the development of the society we live in. And this is [...] the level of humanity and tolerance for “those different from you” (Poroshenko, 2019).

It is well known that literature is a significant constituent part of the educational process. Fiction can provide everything a contemporary and a future person needs, regardless of the sphere of his/her activity: flexibility of thought, imagination, fantasy, feelings, empathy.

A very convincing argument for this gives the British writer Gaiman in one of his lectures. In 2007, he participated in the first party-approved science fiction and fantasy convention in China, and concluded that the event was of national importance and took place due to the inability of the Chinese to think innovatively:

“The Chinese were brilliant at making things if other people brought them the plans. But they did not innovate and they did not invent. They did not imagine. So they sent a delegation to the US, to Apple, to Microsoft, to Google, and they asked the people there who were inventing the future about themselves. And they found that all of them had read science fiction when they were boys or girls. Fiction can show you a different world. It can take you somewhere you've never been. Once

¹ Much time has passed since the adoption of first legislative acts in Ukraine, ratification of international treaties, the publication of the first theoretical scientific works until actual implementation. The most important of them, which permit to trace the main stages of theoretical and practical development, are collected in the bibliographic guide.

you've visited other worlds, like those who ate fairy fruit, you can never be entirely content with the world that you grew up in" (Gaiman, 2013).

High-tech creators, Silicon Valley scientists, founders of, for example, Amazon, SpaceX, or Microsoft are eager to confirm Gaiman's thesis about the important influence science fiction has made on them (Livni, 2018; Baer, & Lebowitz, 2015).

However, reading from childhood does not only enhance the development of imagination and thinking. Gaiman mentions another essential skill namely social competence, for the development of which reading is also indispensable:

"And the second thing fiction does is to build empathy. When you watch TV or see a film, you are looking at things happening to other people. Prose fiction is something you build up from 26 letters and a handful of punctuation marks, and you, and you alone, using your imagination, create a world and people in it and look out through other eyes. You get to feel things, visit places and worlds you would never otherwise know. You learn that everyone else out there is as me, as well. You're being someone else, and when you return to your own world, you're going to be slightly changed" (Gaiman, 2013).

German educators also emphasize the role of literary reading in literacy development, which is largely focused on purposeful acquisition and application of information (Hennies, Ritter, 2015, p.262). The experience of teaching in inclusive classrooms proves that the processes of forming meanings, which arise during the discussion of the story and are influenced, among other things, by the imagination and empathy of readers, their subjective use in the text and literary-aesthetic sensitivity to speech sound and rhythm, are of paramount importance (Hennies, Ritter, 2015, p.262).

Empathy is one of the competencies that are also indispensable in the implementation of the principles of inclusive education and understanding of special needs. The story for the youngest readers, proposed for analysis, aims to form, among other things, social and emotional empathy.

Given the specific nature of the topic, we believe that the combination of selected approaches in the fields of pedagogical and philological sciences will be especially productive for the research. The sequence of the article is determined by literary studies interpretation (to estimate the role of the story in similar Ukrainian and foreign literature and reveal some features of the fairy tale gender constructs); linguistic interpretation (to analyse the fairy tale using communicative-pragmatic and conceptual approaches that thoroughly focus on the text-discursive level); pedagogical interpretation (to select approaches which enable the representation of the educational potential of the text-discourse studied).

The general scientific level of this integrated interdisciplinary study consists of systematic, synergetic, and paradigmatic approaches.

The systematic approach facilitates the identification of all the constituent elements of the studied process or phenomenon; study of the relationships, the interdependencies among compound elements, and, thus, identification of the main elements with the leading relationships; construction of a model characterized by

the three parameters: organization, integrity and hierarchy; disclosure of the dependence of the defined system on external conditions, since only then the system can function; description of a particular component in a continuous whole with the system, and, also, its general and specific functions within a single whole; identification of the properties of the studied process, including the sum of the properties of its constituents as well as the features and structure of the system itself. The systematic approach to the story ensures the complexity of the analysis embracing all the factors identified.

Synergetic approach, which emerged in the 60s and 70s of the XX century, declares the knowledge of the general laws and principles that form the basis of the processes of self-organization of complex systems of diverse nature as its main task (Gao, et al., 2014, p. 2). In particular, *the principle of instability*, a state of readiness of the system for changes and the moment of choosing their direction, means that at the point of unstable equilibrium (bifurcation point) the system is characterized by high sensitivity to weak signals, and the future of the whole system may depend on their accidental influence. The system becomes most sensitive to them only during certain stages of its development – during the periods of instability dominance over the stability of its structure when the system is already objectively forced to abandon the old trajectory of development, and the new one is just beginning (Nesterenko, 2006, p. 41). The *principle of self-organization* of systems is defined as a set of processes in the course of which the structure of the system is created, maintained, reproduced, improved, and which are aimed at preserving the integrity (Nesterenko, 2006, p. 43). According to *the principle of self-reproduction* of systems, preserving of parameters is a problem and task of the system itself, since all its functions are ultimately directed to its reproduction and restraining the growth of entropic (variable, rotated) processes (Nesterenko, 2006). The *principle of resonance influence* allows us to understand how to manage self-organized systems more effectively. Closely related to the synergetic ideas of multivariate evolutionary trajectory, choice of alternatives, irreversibility of progress and its pace is the *principle of nonlinearity* (Serezhnikova, et al., 2015, p. 149). According to this principle, the system can be restored by completing the old order and creating a new one, revealing an unexpected trajectory of systems' development which cannot be extrapolated from the linear deterministic analysis (Vozniuk, 2009, p. 11).

The synergetic approach is needed to analyse the problem of the study, as it reveals the principles of instability, self-organization of systems, non-linearity, etc., arising in the system of education with a socially significant problem – education of persons with special needs and requires creating conditions for adequate teaching. Functional orientation of the whole system towards the fulfilment of the main tasks – the formation of an educated person, preparing him/her for full social activity and, consequently, ensuring the transmission of culture to the next generation as well as the inclusion of each individual in this culture.

Since we consider the paradigm to be a set of theoretical propositions and applied components of the actual functioning system of a certain activity, we apply

the paradigmatic approach to understand the integrative design of the story, its conformity, and adequate reflection of reality and specific life-educational conditions (Phoenix, et al., 2013).

To present specific research methodology, we need to consider current trends in two humanities we have chosen for the prism, which will determine the focus of the study – philology (linguistics and literary studies) and pedagogy.

2.1.Literary Studies Approaches: Intertextual and Gender

Among the many opportunities for analysis of the text used by contemporary Ukrainian literary studies, we choose, first of all, two, due to their novelty. Obviously, one can speak of the author's intention, which is to “encode” a multi-layered associative series of titles for a Ukrainian-speaking reader. We will try to “decode” them using intertextual analysis and elements of feminist criticism.

Although literary studies in Ukraine began to introduce these approaches into active scientific circulation only since the early 1990s when Soviet ideological obstacles disappeared, there are now a number of works illustrating the scale of their use and the potential for new readings of Ukrainian literature and reception of foreign authors in Ukraine as well.

The theoretical basis of *the intertextual approach* was introduced by a Soviet scientist Bakhtin (Bakhtin, 2000), and became widely employed by Western literary critics Kristeva, Barthes, Bloom, Lachmann, Pfister, Allen. Many modern Ukrainian literary critics (Rykhlo, Dzera, Perelomova, Shapoval, and others) devoted their monographs to the issue of intertextuality. Researches on intertextual interactions at all levels of literary fiction have given a new impetus to the interpretation of classical works and literature prohibited for decades due to ideological issues, revealed the typological and genetic affinity of phenomena between literatures, the relationship between literatures, extended the theoretical basis, etc. The potential of intertextual analysis given the vast array of fiction that is invariably being updated with the new works is almost inexhaustible. Studies on the history of literature that deploy elements of intertextual criticism are prevalent in Ukraine.

The methodological tools for gender literary studies or feminist criticism (in Ukrainian discourse these terms are often used as identical) became available to national literature critics in the post-Soviet era. Ageeva (Ageeva, 2003), Uliura (Uliura, 2015), Zborovska (Zborovska & Ilnytska, 1999), Hundorova (Hundorova, 2002), Filonenko (Filonenko, 2006), and others use the approaches of feminist criticism in their scientific works.

The two starting points of gender studies were the works of Simone de Beauvoir “*Le Deuxième Sexe*” and Kate Millett's “*Sexual Politics*”, and various aspects were revealed by Butler, Gross, Moy, Walker, and many others. In Ukraine in the early 1990s, “a prominent figure in this sense was Pavlychko” (Plakhotnik, 2011). However, “the actual equation between feminist and gender approaches to the study of literature, the lack of a clear understanding of the tasks and the methodology of gender literary studies itself make “feminist / gender-critical” national discourse “amorphous” (Shaf, 2018).

In our paper, we employ feminist criticism to analyse the key character of the story – Mommy Bunny, since it combines stereotypical feminine traits and signs of a non-classical female gender.

2.2.Linguistic approaches: communicative-pragmatic and conceptual

Philological analysis of the studied text encompasses communicative-pragmatic and cognitive-discursive paradigms of modern linguistics.

The communicative-pragmatic approach was formed in the 60–70s of the XX century on the principle of integrative anthropocentricity, system-centricity, and functionality, where idea moves from functions, notions, communicative goals, and intentions to the means available in the language (Susov, 2007, p. 29). The main unit of verbal communication is a speech act – an expression in its procedural aspect, the sequence of speech acts forms a discourse – “live” event of reality. The communicative-pragmatic method is presented as an interdisciplinary integration of the methods, techniques and procedures aimed to study how a speaker uses language in the process of communication in combination with the pragmatic properties of linguistic units manifested in the situation of communication, to achieve success, regulate linguistic (and not only linguistic) behaviour of a person and coordinate his/her activities. The communicative-pragmatic analysis of the text exposes its compositional, semantic, and pragmatic properties defining the type of the text, its theme, structure, lexical grammatical outline, features of intertextual relations, stylistic means, pragmatic essence, features of communicative linguistic behaviour, intentions, strategies, and tactics (Samender, 2016).

Linguistics is now undergoing the formation of the cognitive (or cognitive-discursive) paradigm (Maslova, 2008, p. 9; Golovanova 2011, p. 6; Sirojiddinov & Normurodova, 2019; Leezenberg, 2009; Ito, 2013). Its main task is to build a model of language communication as a basis for knowledge sharing (Maslova, 2008, p. 12). Each object is subject to multivariate analysis (Luzina, 2008, p. 43) and the cognitive method is considered to be interdisciplinary integrity of the methods, techniques, and procedures used to study the linguistic representation of mental processes and their results, shaped in the human mind in the form of knowledge. The basic unit of knowledge is a concept, which analysis methods are different: profiling, Gestalt approach, description through images, pictures, schemes, description of core-peripheral structure, description through the container model, description of the interlayer structure of a concept (Maslova, 2008, p. 113–119). The most popular methods are *conceptual analysis* (Boldyrev, 2004, p. 26) (focuses on the expression of meanings conveyed by individual words, phrases, typical sentences ..., as well as individual texts and even whole works (Jackendoff, 1996) and cognitive analysis that integrates the methods of category analysis (Rosch’s prototype semantics, Langacker’s cognitive grammar, Fillmore’s frame semantics, Jackendoff’s cognitive semantics) and views categories as conceptual sets of objects or sets of objects based on a common concept (Hart & Lukeš, 2009).

Thus, we believe that an adequate linguistic basis for the study of text-discourse is communicative-pragmatic and conceptual analysis, which will enable identification of the specifics of its conceptual-communicative palette.

2.3. Pedagogical Approaches: integrated, inclusive, humanistic and empowerment

The integrated approach in the education system incorporates the creation of a single educational space where general and special education, as well as the education of children with psycho-physical disabilities, converge. It is quite common to associate “integration” with mainstreaming where a child is in a group with other pupils most of the time and segregated only for a while in a specially adapted environment. It is believed that in this way children will accept the rules, comply with them and be equal with everyone. However, to achieve this they have to put considerable effort and time to adapt to the environment (Kuzava, 2015, p. 120; Úcar, 2013).

The inclusive approach to education implies respect, understanding and assurance of diverse activities (education system, teachers, students), as well as real equal access to the educational institutions for every child without exceptions. It is important to realise the idea of "inclusion" in the educational process, the socialization of a child, not out of pity or charity, but in the interests of society, guided by regulatory documents. Therefore, it is quite legitimate to claim that the inclusive approach is a strategy based on the theoretical principles of inclusive education, which involves joint training and education of people with different mental and physical abilities on the basis of equality of rights and tolerant attitude towards each other (Kuzava, 2015, p. 118–119; Florian & Black-Hawkins, 2011).

The humanistic approach is person-centred since a person is the highest value of society and has a sufficient degree of freedom to choose his/her pursuits. In particular, the philosophy of existentialism offered a new perspective on persons with disabilities, their individual, and social existence. The central premise of existentialism is existence (from Latin *existentio*), the central core of the human being, according to which each individual is a unique and free person held responsible for his/her actions (self-esteem) and the surrounding world (social interaction skills) (Nazarova, 2010). Inclusive education of children with psycho-physical development peculiarities is a higher degree of integration, where all educational institutions and educational philosophy adapt to the needs of all children. It is a kind of approach that seeks to develop a child-centred methodology meeting various educational needs. The inclusive approach involves a wide range of actions and initiatives (in particular, creating opportunities to fully meet the children’s needs), while integrated learning enables creation of special conditions in the current education system for such persons (Lemberger & Hutchison, 2014).

For this study, we also employ *empowerment* – a direction of pedagogical research based on giving motivation and inspiration to act. It was developed by Swedish academic Mellander, who applied the ideas of Johnson, Johnson-Holoubek, Dewey, Kolb, Latyshyn, Radugin, Fokin to form an educational cycle that became one of the areas of the humanistic pedagogy of empowerment.

The main principles of empowerment pedagogy consist in creating conditions for psychological comfort in the educational process, increasing confidence and responsibility for its results, gaining the ability to monitor, and control learning

processes, generating enthusiasm and a sense of satisfaction from the group and individual work and its results. Empowerment is a support language aimed at the awakening of internal energy (Vovk & Zhukova, 2016, p.40).

The main aims of empowerment are to create the conditions for a child to develop confidence in his/her abilities and responsibility for learning outcomes, ensuring psychological comfort for children in a class, employing special methods and content capacity (every child can choose which steps to take), creating conditions for enthusiasm and satisfaction from the group and individual work, performing actions and building behavioural models focused on sustainable development, achieved primarily via constant positive (both in form and content) feedback (Harmony Child Development Centre, 2017).

The proposed interdisciplinary methodological framework for literary text analysis allows illustrating the formation and reception of the mentioned notions. Intertextual and gender approaches provide opportunities for the reception, based on possible and/or present experience of a Ukrainian-reader. Communicative-pragmatic and conceptual linguistic approaches help identify the main strategic-tactical and conceptual text formats of the discourse. To reveal the educational potential of the story we apply modern pedagogical approaches.

3. Results and Discussion

3.1.Literary Studies Interpretation

The difficult topic of “otherness” in Ukrainian literature, which is central to Drachkovska’s story, has existed for a long time, as in other national literatures. However, it is different and new, as it “aims at perceiving personal diversity” (Inclusive Ambassador Network) by the readers and forming their positive attitude towards those who, by some criteria, are labelled as “different”, “special”, and it does not aim to be sympathetic or sorry for them. Over the last four years, more than two dozen works of inclusive literature have appeared, for example, on the portal *Inclusive Ambassador Network*.

The thematic range of special topics for more mature readers is complemented by numerous translations into Ukrainian of works by foreign authors, such as Alan Marshall’s “I Can Jump Puddles”, Andreas Steinhöfel’s “The Center of the World”, Raquel J. Palacio’s “Wonder”, Daniel Keyes’s “Flowers for Algernon”, “The Gray House” by Mariam Petrosyan, Audhild Solberg’s “Who is Against the Supercool”. Even this small list illustrates a wide range of authors' geographical origins and the variety of topics through which they reach contemporary readers.

At the beginning of 2020, “Literature and Inclusion” by Derkachova and Ushnevich was published, which included selected works of foreign and Ukrainian inclusive literature. This is an innovative pedagogy proposal for the use of fiction in inclusive education.

The fairy tale “Bunny Non- Hopper and his Brave Mommy” is a kind of animalistic fairy tale whose characters are solely animals and which is an allegory (Kovalenko & Baranova, 2016). The name itself implies an intertextual dimension, which is known to Ukrainian readers from kindergarten. It is a poem “In the dark

dark woods” (“A Song of the Christmas tree”) written by Nehoda in Soviet times, which has become one of the essential attributes of New Year celebrations. It is about “Bunny Hopper” – an invariable character of New Year’s holiday in Ukraine whom Santa Claus (Ukrainian: Did Moroz) takes to the New Year’s party. In the title of Drachkovska’s book, we observe the phenomenon of the negation of the property, which is understood as an immanent feature of this animal, associated with its intrinsic ability to jump. A simple word-making decision to use the negative prefix “non” for the diminutive “bunny” causes the recipient’s perception ambiguity: on the one hand, the character invokes specific associative connections and contextual assumptions, on the other – it is identified by an atypical trait, and thus is absolutely different from a collective image of this animal, whose image may already be formed in the mind of an experienced reader. Bunny Non-Hopper does not have a proper name (like the rest of his large family), and in this case, the negative form plays the role of an anthroponym that evokes unambiguous connotations. “Only then has a proper name a certain meaning for the participants of a communicative act when the named object is well known to them. Consequently, it may receive some additional connotations. To be able to name and identify the character, the proper name must refer to the most essential characteristics of its medium in the recipient’s mind” (Slavova, 2002, p. 48).

The title of the story as a para-textual element, as defined by Genette and Hoek, “is an artificial object, an artefact of reception or commentary” (Genette, 1997, p. 55–56), it conveys “many appended bits of information” (Genette, 1997, p. 56). In the case of the Drachkovska’s tale, the extra connotations are formed not only because of the neo-logistical “non-hopper” but also the second component of the title – “*his brave mommy*”. Here we find the second hidden negation of the implicit meaning: bunny as a fairy-tale hero provokes in a Ukrainian reader a set of associations primarily as a cute, fast, active but timid and defenceless animal: a “fairy tale bunny” is a model of “humility and defencelessness” (Pokhodenko, 2012, p. 114). Therefore, “brave” in relation to the mother-bunny also forces the recipient to rethink the implicit features of this traditional fairy-tale image: the author goes beyond the stereotypical model often used in the fairy-tale genre.

It is especially interesting to observe Mommy Bunny character development: initially, it appears typically feminine, her reaction to the diagnosis of the doctor Owl that the bunny will never be able to hop, is classically female: “mommy cried” (Drachkovska, 2019); this emotional state is prolonged, as the reader learns, it does not change until the next day when daddy successfully tested his hand-made wheelchair and pushed the Bunny around the lawn: “Even mommy stopped sobbing and smiled” (Drachkovska, 2019). Another stereotyped element is the behaviour of Mommy Bunny, who, when getting dressed to the Forest Board, “put on her best dress” (Drachkovska, 2019). We can talk about a gender construct that reflects societal stereotypes (Ermolayeva & Schwab, 2017). As classified by Kanter, it is a stereotypical image of a “mother” who is expected to give emotional support – the text provides us with another argument for such an interpretation, because “Mommy Bunny was comforting and entertaining all day” – not an active

position, or, according to Ukrainian social realities and Kis's typology – an icon of femininity known as Berehynia (Kis, 2003). It should be noted that gender stereotyping is consistently and clearly reflected and illustrated. The author of the drawings, Drachkovska Junior demonstrates proficiency in modern illustration techniques, colour, and visual solutions. The most prominent gender marker for masculine and feminine characters is primarily clothing: men suits, ties, and pants and shirts versus skirts, dresses, and necklaces. The standard image of societal and gender stereotyping is an illustration depicting the Mommy Bunny in the Forest Board: notwithstanding the Mouse, who has business-style women's clothing on and presumably is a secretary, she is one of the twelve characters wearing a dress. All other characters are male, gender disproportion reflects, as we believe, another rooted stereotype, and often a real picture of male-dominated governance structures. The plot of the fairy tale also visualizes traces of bureaucracy of the institution and bureaucratic indifference: "Animals wearing business suits and carrying multiple folders and sheets of paper were seen everywhere. No one noticed Mommy Bunny, passing her deftly in the narrow passageways" (Drachkovska, 2019).

The metamorphosis experienced by Mommy Bunny destroys the original stereotyped idea that may emerge at the beginning of the story: from the classical mother role, she assumes "*the role of social mediator*" (Rana, 2017, p. 38) and becomes a social activist who is fighting for the rights of children with special needs, helping create conditions for their education and a barrier-free environment: "taking care of her son, she decided not to stop and help other forest animals. Thus, the first lift was installed in the forest – in the tree where the squirrel with injured paws lived [...] in the main forest street a sound traffic light was installed, and the blind hedgehog could now safely cross it" (Drachkovska, 2019). Inner experiences, motivational beliefs, or psychological factors that contribute to the evolution of this character are completely omitted in the story, as well as – and this may be the only compositional and structurally weak point that can be indicated – any rationale for the cause and effect of events, which facilitated the successful resolution of the request that Mommy Bunny had made to the Chairman of the Forest Board, who understood that "this lady is not kidding and has to be listened to very attentively" (Drachkovska, 2019) is absent. On the tale level, the author uses ellipsis techniques, and the reader immediately learns that just in a few days animals begin to build a bridge on which students and Bunny Non-Hopper will be able to get to the forest school in a wheelchair and that the efforts Mommy Bunny had made were highly successful. Such decision of the author, however, results in the omission of an important content element that is also present in the fairy tale genre: overcoming obstacles to achieve the goal, especially, considering the fact that in the real world the struggle for creating an inclusive environment means a confrontation with numerous problems and often misunderstandings from society.

Obviously, simplistic approaches to storytelling, character design, and illustrations are conditioned by the genre and age of the target audience. Author's tales as well as ancient folktales tend to generalize, stereotype, simplify meanings,

and images. In Drachkovska's fairy tale, we have a happy ending, typical for this genre; however, we state that the specificity of the theme and the clear didactic focus of the work could deepen another, socially critical dimension, providing a more differentiated picture of difficulties and obstacles.

Drachkovska's story will undoubtedly raise questions and reflections in a young recipient, who seeks a dialogue with an adult to hear explanations of things and phenomena that are yet to be experienced. However, this is a perspective on the perception of a regular, "normal" child, whom the fairy tale presents a mini-model of a family and community facing the challenge of meeting the special needs of one of its members. Therefore, the other special inhabitants of society become "visible" against the background of normal society and also get a chance for a more fulfilling life.

3.2.Linguistic Interpretation

Linguistic interpretation allows to demonstrate certain communicative-pragmatic and cognitive-discursive features of the text-discourse.

The communicative-pragmatic analysis shows the presence of communicative acts, first of all assertives (all new-born bunnies looked like tiny bundles) as they predominate in narratives, but also directives (we need a bridge over the stream near the school; well, it's time we went) and expressives (welcome everybody). Most communicative acts are explicit with distinct markers of linguistic action. Regarding strategic and tactical configurations, narrative and cooperative strategies predominate, which corresponds to the genre affiliation of the text. We note the absence of a manipulative strategy, which is widely common in most texts, obviously due to the age-specific and educational purpose of the tale. The communicative and pragmatic outline of the text highlights the communicative roles of "an active business mom", "caring father", "a child with special needs", "fair leader" which are motivated by social environment and reproduce typical strategic-tactical configurations, conventional language acts and their markers.

The cognitive-discursive paradigm allows to consider the analysed story to be an example of a fairy-tale discourse – the thinking and speech activity of fantastic events and characters. From this perspective, it is seen as a space in which specific cognitive domains and discursive concepts are activated within: family (MOTHER, FATHER, CHILD, BROTHERS AND SISTERS), movement / process / action (BIRTH, DREAM, HOPPING, CRAFTING, RIDING, PUSHING, LOWERING, LIFTING, CONSTRUCTION, GAME, CARRYING ON SHOULDERS, RESTLESSNESS), mental activity (DREAMING, IMAGINING, IMMERSION IN THOUGHTS, TO COMPREHEND, TO FEEL), defects (ILL, BLIND), verbal activities (EXPLANATION, COMFORTING, BODY LANGUAGE), physiology, social activity and collaboration (GREETINGS, LISTENING, TEAM, FRIEND, HELP), social sector (DOCTORS, TEACHERS, LESSON, BELL, FOREST BOARD, FOLDER, ASSESSMENT, CLASSROOM, SUBJECT, RESCUE TEAM) feelings and emotions (SADNESS, GRIEF, CONFUSION, LAUGHTER, SOBS, JOY, SOLEMNITY, ENTHUSIASM, CURIOSITY, PAIN, INSULT, BOISTEROUSNESS, IRRITABILITY, RUDENESS), qualities and features

(INTELLIGENCE, OBSERVATION, CREATIVITY, EFFICIENCY, CHEERFULNESS, TALKATIVENESS, PRUDENCE, OBEDIENCE) things and objects (WHEELCHAIR, LIFT, TRAFFIC LIGHTS), place and time, clothing (SUIT, DRESS, SHOES), landscape (STREAM, GREAT GULLY, DEEP WOODS, STREAM, PATH, WAY, ROUTE, BANK, OBSTACLE, HILL, FOREST, DELL, LAKE, THICKET), buildings (HOME, SCHOOL, BRIDGE, MOTORWAY), leisure activities (SPORT, RELAY, SCOUTING, THEATRE CLUB, STAGE, ACTOR, ADVENTURES, RIDING, HIKING).

The defined concepts form the stable characteristic of this kind of discourse relations between the established information categories: inclusion (man (personified animal) \in physiology (when it was time for the kids to jump a little, it turned out that one bunny wasn't able to do it), person \in character trait (like all kids, Bunny Non-Hopper was a little imp and took active part in various adventures), person \in emotions and feelings (Mommy Bunny and Daddy Bunny were very upset; mommy was crying, daddy was deeply worried), man \in social sphere (the doctor quickly arrived .. checked the Bunny), person \in leisure (daddy took his tool box from the pantry and started doing something), movement \in obstacle (it was not even a large stream, the bunnies crossed it easily, jumping from stone to stone: but even with daddy's help the wheelchair could not overcome this obstacle), social cooperation \in help (when the trail ended, all bunnies carried Bunny Non-Hopper on their shoulders taking turns), causation (action = \rightarrow emotion (daddy put the bunny in it and started pushing it around the lawn, the bunny laughed with happiness), physical defect = \rightarrow facilities (so the first lift appeared in the forest – in the tree where the squirrel with injured paws lived. And then a sound traffic light was installed on the main forest street, and the blind hedgehog could now safely cross the street), coordination (citizens \leftrightarrow authorities (Animals wearing business suits and carrying multiple folders and sheets of paper were seen everywhere. Nobody noticed Mommy Bunny, passing her deftly in the narrow passageways), creativity \leftrightarrow physical defect (when he recited monologues during the performances, everyone stood transfixed, and nobody seemed to notice that the young actor was sitting in a wheelchair), consequence (a child \rightarrow a school (the Bunny dreamed of attending forest school), event \rightarrow experience (since then the Bunny became more prudent and obedient), problem \rightarrow action (the mother's heart felt and understood everything... and the next day she put on her best dress and went to the Forest Board; later, forest school teachers learned body language and several animals with hearing impairments also became students).

The analysis (including quantitative) of discourse-forming concepts and the connections between them suggests that the researched contemporary social moral-ethical fairy-tale discourse has a regular conceptual system, which attests to the relevance of personal (physiological and emotional) and social information, whose elements enter into many permanent inter-conceptual relations creating its unique discursive cognitive framework, which can be interpreted as follows: if a person with physical disabilities is growing in a good, caring community, which has realized the uniqueness of one of its members and tries to create all the necessary

conditions, tackling many related elementary household and social issues, using ingenuity and skills, he/she will be realized and be able to discover his/her talents and feel happy.

Linguistic paradigms-specifiers, as well as individual linguistic branches (dialectology, etymology, onomastics, linguostylistics, applied linguistics, etc.) that create multiple methods (sociolinguistic, ethnolinguistic, linguistic geography, psycholinguistics, neurolinguistics, paralinguistic method, linguistic-cultural, intercultural communication, etc.), could provide additional angles of the studied story, but this is a topic of another research.

Thus, it can be argued that the studied story, despite the traditional genre modification of modern moral and ethical fairy tale, represents and emphasizes the important problem of the present, engages a reader in reflection, empathy, and, consequently, makes readers co-participants, projecting their possible response to a specific social problem in the future.

3.3. Pedagogical Interpretation

The pedagogical interpretation of the study allows us to draw some conclusions from the standpoint of general scientific and specific scientific approaches.

From the standpoint of a systematic approach, we conclude that in the autobiographical fairy tale story for children by Drachkovska's, "Bunny Non-Hopper and his Brave Mommy" the constituent parts are the family and children/students, teachers of the school, and the phenomenon – the disability of a child. The dependency of each of the elements, that is, the help of each fairy tale character – parents, siblings provides the opportunity to Bunny Non-Hopper to go to school, gain the education, that is, develop and socialize properly. Mommy Bunny, applying to all the necessary administrative institutions (in the fairy tale, of course, they were all imaginary – Doctor Owl, the Forest Board) tries to do everything possible so her son, Bunny Non-Hopper, could get a decent education. All the efforts – wheelchair building by Daddy Bunny, mommy's help in tackling issues in eligible institutions, support of siblings, their kindness, responsiveness, and desire to help contribute to the main goal – to study at school with all children in equal conditions. In this case, all the elements of the system converge to solve the problem in the autobiographical story.

Analysing the methodology of the systematic approach to the fairy tale story about a child with special educational needs, we consider statements that will help establish the properties of the system objects: teaching a child with special educational needs is a relatively independent range of issues, but is studied in close connection with the social order of a society, goals of education and training, content, principles of learning; the system of education in primary school is regarded as a multilevel hierarchical structure, within which the nature of the interaction of all its elements is determined.

In this fairy tale, a number of principles of the synergetic approach are implemented. The instability principle emerges as a new challenge in pedagogy created by students with special educational needs who should study with other students, but a new trend in education is only emerging and adequate learning

conditions have yet to be created. The principle of self-organization of systems is reproduced in the self-organized system, which is caused by social needs, supported by the Ministry of Science and Education of Ukraine, implemented in the institutions of secondary and higher education, being improved by scientific research and experience of teachers and preserves the integrity of the education system in Ukraine. The principle of self-reproduction of systems is seen in a study where a self-organized system of teaching students with special educational needs in primary school is transferred to education in secondary and senior school, where their problems and tasks become important for further education of people with special educational needs. Another important principle – the principle of resonant influence, which helps to understand how to manage self-organized systems more effectively, is manifested through the actions of the protagonist's mother – Mommy Bunny, who had the courage and great patience to apply to the eligible administrative institutions (in the fairy tale – the Forest Board) and obtain the right to have her child educated and have adequate conditions created (such as the bridge over the stream, the first lift in the woods, the sound traffic light) so he (and later other children with special needs) would be able to attend school. In addition, caring friends, classmates help Bunny Non-Hopper, despite his physical disabilities, to get to school in the wheelchair, carry him on their hands during the trips, disregard the wheelchair, enjoying his monologues in a theatre club and more. In the text we also notice the reproduction of the principle of non-linearity, because the unexpected trajectory is that the bunny has the opportunity to go to school, his dream to attend school with his sisters and brothers and acquire knowledge comes true. Gradually, the Bunny learns how to wheelchair and participate in all active games with his siblings, lead a lifestyle similar to other children. Teachers learn body language which helps them in selecting the right forms of work for children with special educational needs.

The paradigm approach is reproduced in the description of the educational institution – the school, with its inherent model of learning. It is worth considering whether the educational system is already established and practices according to the general philosophical and methodological categorical and special conceptual bases, which can be regarded as the one that is representing its model, or it is still in the mode of innovative search and developing. In this fairy tale story that, actually, virtually depicts the real problems in the organization of educational conditions for students with special educational needs, describes lessons in Physical Education, Language and Literature, theatre club, teachers' mastering of new approaches, principles, and methods for professional skills.

The integrated approach in our study is the right and the ability of the main character to study at school with all students, to take an active part in all types and forms of social life alongside and equally with others, and the readiness of an educational institution to accept a child with special educational needs, to develop appropriate learning strategies.

Integration means adapting of a child (Bunny Non-Hopper) to the existing educational system, while inclusion involves adapting the education system to the

needs and capabilities of each individual, which is an important requirement for quality education.

Through empowerment, we interpret the fairy-tale character Bunny Non-Hopper, who embodies a student with special educational needs in real life, as an active creative personality with inner strength, energy, the inspiration to act, who can learn and develop in different forms of learning, get high grades in all subjects, to wheelchair skilfully and play basketball well, to participate in performances. At the same time, the main task of the teacher for such a student is the desire to promote self-study, to encourage, to guide a child in his/her efforts, which is traced through the successful learning results of Bunny Non-Hopper. An important empowerment approach is to motivate the learner to do each follow-up task or activity which arises from the information about the results and purpose of the previous actions. In this learning process, the teacher plays the role of a master who sets an example of behaviour and develops students' thinking, creativity, and communication skills. Task giving leads students to find independent solutions. They use the knowledge they have gained to face new challenges and make the next steps.

Thus, the theoretical and methodological verification of the literary text analysis is interdisciplinary, based on literary, linguistic, and pedagogical spheres and, accordingly, integrates a number of interdisciplinary approaches that outline the contours of the study (see Table 1).

Table 1.

Methodological framework for the interdisciplinary literary text analysis

Research projections	Methods/methodological approaches
	General scientific level
Literary Studies, Linguistics, Pedagogy	<ul style="list-style-type: none"> • systematic • synergetic • paradigmatic
	Specific scientific level
Literary Studies	<ul style="list-style-type: none"> • intertextual • gender
Linguistics	<ul style="list-style-type: none"> • communicative and pragmatic • cognitive-discursive
Pedagogy	<ul style="list-style-type: none"> • integrated • inclusive • humanistic • empowerment

4. Conclusions

The proposed interdisciplinary methodological framework is built on an anthropocentric paradigm centred on a person – a child with special educational needs. Literary studies, linguistic, and pedagogical methodological guidelines serve

as an intellectual scheme of consistency and interaction of approaches, methods, principles. The set of methodological approaches used in the study should not include mutually exclusive approaches. The methodological approaches used in the study should complement each other, permitting to consider and study the particular object in a comprehensive and interrelated way. Integrating knowledge of the various sciences, incorporating the specifics of each, the interdisciplinary methodological framework performs system-building function aimed to obtain comprehensive information about the object of the study.

Every science has the general scientific level of research. It has the status of universality and is a component of cognitive processes intrinsic to any field, the results of its knowledge constitute the methodological canvas of a science. Consequently, from a synergetic perspective, we consider the analysed text as a complex system that develops structurally, cognitively-discursively, communicatively-pragmatically, self-organizes, re-organizes itself intertextually by the interaction of elements and parts of the whole, and can be analysed through the synthesis of the humanities.

The paradigmatic approach allows us to present a text as a verbal representation of the problem-solving model, as an interdisciplinary object that thematises and problematizes the specifics of academic requirements for children with special educational needs.

The specific scientific level served as a presentation of specific approaches to each field of knowledge, with specific guidelines and means of expression.

The literary studies approaches allowed to outline the thematic context of a fairy tale work in literary production on “otherness” and its perception and to find some intertextual connections, especially with the source to which the title appeals. There are stereotyped constructions, the presence of which is conditioned by the genre and age of the primary target group (children of preschool and primary school age) and, it is possible, partly by deep-rooted stereotyped perceptions of gender roles in Ukrainian society and the innovativeness of the author’s approach to the building of the key character Mommy Bunny, which is, as we assume, a consequence of the biographical situation, since the author herself is the mother of a child with special educational needs and social activist fighting for the rights of children with special educational needs, but, also, the creative intent of an experienced journalist who is aware of gender inequality issues and seeks to draw attention to the opportunities and activities of contemporary women in Ukrainian society.

Linguistic projection, represented by communicative-pragmatic and cognitive-discursive approaches, enabled us to find in the text the main cognitive properties of the studied discourse, which outline the awareness of the problem by the speaker and form the necessary mental framework for its understanding, which mirrors his/her/their actual behaviour in this type of discourse.

The pedagogical perspective allowed us to conclude that the selected approaches shape general, scientific worldview position, methods, and strategy of revealing the content of the autobiographical fairy tale story. The system of

research actions and procedures of scientific explanation of pedagogical reality revealed normative and descriptive functions, features of education and training processes, allowed to systematize the whole volume of scientific knowledge, and create the conditions for the development of further effective directions of research.

The result of the integration of these approaches is the methodological framework for philological and pedagogical in-depth analysis of the literary text.

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MANAGING KNOWLEDGE AT THE TIME OF ARTIFICIAL INTELLIGENCE: AN EXPLORATIVE STUDY WITH KNOWLEDGE WORKERS

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Abstract. In the evolutionary context of Industry 4.0, where machine learning and machine to machine technology are powerful tools for the maintenance and replicability of knowledge, the implementation of hybrid systems based on the use of Artificial Intelligence (AI) represents the key to organizational innovation and to the capitalization of knowledge. At the same time, the benefits of digital transformation for individuals and teams are often not so clear - and uncertainty surrounding the future often results in fear in those being impacted. Humans feel fear of changes to their job, fear of a job role change, job losses, being faced with learning new skills, new technology or new ways of working. Therefore, to secure the transition to the digitization organizations need to carefully support their human resources and to provide them with the reasons why they need to commit to change. In this perspective, the study aimed to investigate how high-qualified knowledge workers cope with this new situation. Yet, participants were a group of project managers, employed in some knowledge-based organizations, in which AI and digitalization systems are going to be introduced to improve replicability, circulation and storage of knowledge. The choice of this peculiar target of participants was guided by the acknowledgement of their important role within the organization, being project managers generally considered as agents of change. In view of the above, the main goal was to collect project managers' expectations and fears about the upcoming integration of secularized company flows with performing process automation strategies. In-depth individual interviews were conducted and diatextual analysis was used to approach the discursive data collected. Results showed interesting insights both in terms of organizational management implications as well as of future research development. Participants showed clear awareness about the need to "go digital" to improve organizational performance and to stay competitive. However, they underlined the importance of parallel invest on human capital, improving crucial soft skills such as: openness to change, flexibility and the ability to work in a team, that could concretely support digital changes in procedures and work processes.

Keywords: *knowledge management, Artificial intelligence, knowledge workers, organizational development.*

Мануті Амелія, Моначіно Даліла. Керування знаннями в добу штучного інтелекту: дослідження інформаційних працівників.

Анотація. В еволюційному контексті промислової революції 4.0, де машинне навчання та технології передавання інформації від машини до машини – потужні інструменти підтримки та відтворення знань, впровадження гібридних систем, заснованих на використанні штучного інтелекту (ШІ), є ключем до організаційних інновацій та капіталізації знань. Водночас, переваги цифрової трансформації для індивідів та команд невизначеність щодо майбутнього часто не є настільки очевидними, що часто призводить до страху у тих, хто зазнає впливу. Люди відчувають страх перед зміною своєї роботи, посади, втратою роботи, потребою вивчення нових навичок, технологій або нових методів роботи. Тому для забезпечення переходу на цифрові технології організації повинні надавати підтримку своїм кадрам, пояснювати, чому їм потрібно змінюватися. Із цієї перспективи, дослідження мало на меті дослідити, як висококваліфіковані інформаційні працівники здатні впоратися з новими реаліями. Проте учасниками дослідження була група менеджерів проєктів, зайнятих у компаніях зі сфери інформаційних технологій, де готові впровадити системи штучного інтелекту та цифрові технології для поліпшення відтворення, поширення та зберігання знань. Цих учасників вибрано з урахуванням їхньої важливої ролі в організації, оскільки керівників проєктів, як правило, розглядають як агентів змін. З огляду на вищевикладене, основним завданням було з'ясувати очікування та побоювання менеджерів проєктів щодо майбутньої інтеграції інформаційних потоків компаній зі стратегією автоматизації процесів. Було проведено серію індивідуальних інтерв'ю з використанням діатекстового аналізу дискурсивних даних. Результати засвідчили про наявність ідей і щодо ефективності менеджменту організацій, і щодо подальших досліджень. Учасники продемонстрували чітке усвідомлення необхідності «переходу на цифрові технології» для покращення організаційних показників та збереження конкуренції. Однак вони підкреслили важливість паралельних інвестицій у людський капітал, вдосконалення таких важливих м'яких навичок, як відкритість до змін, гнучкість та здатність працювати в команді, які могли б конкретно підтримати зміни в робочому процесі.

Ключові слова: керування знаннями, штучний інтелект, інформаційні працівники, розвиток організації.

1. Introduction

In the past sixty years, the introduction of information and electronic technologies has brought about a substantial change to production and business. Technological and social changes have intertwined in an indissoluble continuum in which our society has engaged in following this evolution by adapting to new practices and lifestyles. Similarly, to ensure their survival and competitiveness in the global market, organizations have profited from the advantages highlighted by the digital revolution and have rapidly learnt how to use technology specifically to capitalize their most precious resource: knowledge (Schilling, 2013).

Therefore, knowledge management has become a crucial process to adapt existing knowledge to business challenges, contextually studying new procedures to share and replicate knowledge. Knowledge Management nowadays aims to collect and manage knowledge connected to a company, eliminating redundancies and cognitive gaps, which can be created when the documentation remains separate between company departments. *Artificial Intelligence* systems are the most prominent new knowledge management procedures, being designed to facilitate company processes "replicating" mechanisms, normally adopted by human

resources, to carry out company tasks immediately and efficiently (Amigoni, Schiaffonati, & Somalvico, 2008).

Within the organizational contexts, knowledge is transferred, acquired, exchanged, discovered, generated and used in work (Davenport & Prusak, 2000). In order to make this knowledge shareable with greater immediacy, it is therefore necessary to understand the forces that guide knowledge and the technologies that can be used as a support to its implementation and circulation (Davenport & Prusak, 2000).

This change in the form and substance of *Knowledge Management*, however, may pose an obstacle for organizational processes whenever knowledge management is not supported by training activities and bottom-up change strategies addressed to reduce workers' resistance to change attitudes and behaviors.

Moving from these premises, the main aim of this study was to collect the expectations and fears of a group of high-qualified knowledge workers, namely project managers, and professional figures who coordinate project management activities in knowledge-based organizations. The choice of this special target of participants was addressed to outline the trends of digitalization in organizations, the human capital's perception with respect to the growing automation of the procedures and the best practices that could be introduced in the workplace to support the staff in the technological transition.

1.1. Theoretical framework

The fourth industrial revolution puts us in the face of a digital transformation process whose main objective is to provide the company with an organizational structure capable of rapidly and continuously introducing new technologies to support innovation in the field of knowledge sharing and replicability.

There is a spontaneous knowledge market within organizations, that is, what some economists call "near market", since many of the concluded transactions do not refer to formal contracts (Davenport & Prusak, 2000). Sometimes, the sharing of knowledge within the "near market" can be cumbersome and complex, and this inefficiency could be overcome through the correct use of information technology, which is able to create infrastructures for the transfer of knowledge and information related to it (Schilling, 2013).

Among the several scientific contributions in the field, one of the most prominent one was provided by a study led by Prahalad and Hamel (2000) entitled *Strategic Learning in Knowledge Economy: Individual, Collective and Organizational Learning Process*. The authors explained how digitalization and the widespread diffusion of technologies could influence the sharing of knowledge in an organization. The core of Prahalad and Hamel's work was the development of a business model based on the capitalization of knowledge in terms of economical investments. The authors showed how the development of information technology and expert systems for knowledge management could be a distinctive value for the organization, increasing its competitiveness even in a fast-changing and turbulent socio-economic scenario like the present one (Prahalad & Hamel, 2000).

In this light, technology is proved to be an ally to those organizations who wish to transform themselves into knowledge systems to better manage the asset of data, information and knowledge possessed. However, this positive relationship between technology and performance is not simply a matter of economical investment and to invest in information technology could not be sufficient for organizations to obtain appreciable results (Davenport & Prusak, 2000). What makes the difference is the ability of the organization to connect these investments to an organizational culture of knowledge management, that is having a clear plan of the knowledge that better serve to the organizational scopes and therefore that should be coded, shared and replicated. This will allow a to connect organizational knowledge to technological platforms and tools that could support knowledge circulation in relation with the organizational objectives (Seghezzi, 2015).

Knowledge, therefore, does not generate value automatically but as the result of the relationship between all the elements of the supply chain, from the manufacturer to the user. The basic idea that inspires this new managerial discipline is that each organization, within it, produces original and distinctive knowledge which, if properly valued, can contribute to the competitiveness of the company, nowadays thanks also to the help of technologies (Rullani, 2000; Parente, 2008). When talking about knowledge management technologies, generally the term knowledge management systems (KMS) recurs to underline that it is a category of information systems dedicated to the management of organizational knowledge or rather of architectures and IT applications developed to support and enhance KM processes.

In this perspective, knowledge management systems aim to make knowledge a controllable resource and to make knowledge a content that can be replicated and disseminated (Parente, 2008). Shared knowledges are propagated in the social communication network without being confined in too rigid material containers but becoming the object of a communication flow in which the tasks are carried out through the sharing of data and information (Parente, 2008).

Nonetheless, a knowledge management system should support communities and groups in the autonomous management of their knowledge, and parallel should favor interoperability processes between different communities (Boland, Tenkasi, Dov Te'eni, Bonifacio, & Bouquet, 2002). This implies the configuration of a corporate knowledge network in terms of autonomous knowledge nodes that coordinate with each other, exchanging information using *Artificial Intelligence* (AI) and Machine Learning technologies and supports.

The use of these tools facilitates the acquisition, display, search and sharing of content and files, improving communication both within the work team and outside. Text mining and semantic research, self-learning technologies, cognitive computing, process-based methodologies for managing data flows, increasingly intuitive and social user interfaces, are the peculiar aspects of the new generation knowledge management platforms, at the basis of the digital workplace (Consoft Sistemi, 2019).

Innovation management in terms of accompanying change, introduction of new practices, implementation of the replicability of knowledge and use of technological tools, supports knowledge management in pursuing the competitive advantage of organizations.

However, special attention must be paid not only to the hard components of the introduction of technologies in organizational contexts, but above all to the development of strategic knowledge management systems for human capital. There is no evidence of the real availability of individuals to share their knowledge through systems and infrastructures, until the device is built, and the reaction of the organization becomes observable. Therefore, the orientation towards digital evolution must be accompanied by a change in the organizational culture. The management should be aware that individuals, as knowledge repositories, are the key to the success of knowledge digitization procedures (Prahalad & Hamel, 2000) and therefore should prepare human resources to embrace this radical transformation and to collaborate with it.

The company staff who work and deal with Artificial Intelligence is an interpreter called to make a real transition between one semiotic system and another. Whatever the degree of automation, *Artificial Intelligence* always includes the involvement of people: it is the Human-in-the-loop (HITL), the approach according to which machine and human being coexist within the same sense system, system that every innovation must be re-meaning, according to a typically human type of learning. The above approach is a philosophy of AI which focuses on creating workflows where an AI learns from the human operator while intuitively making the human's work more efficient (Amigoni, Schiaffonati, & Somalvico, 2008). The Artificial Intelligence system based on the HITL approach learns from the feedback it gets and begins to serve human experts through increased quality and faster speed of executing operations. Processing operations and organizational actions through HITL systems therefore requires workers to be trained in learning new practices and managing change.

Therefore, strategic change management represents the core for effective digital oriented change. An inefficient infrastructure system is not the only cause of the failure of technological innovation, but the factors related to the corporate and individual culture, the relationship dynamics of the work team and the feelings triggered by the change can determine a disappointing economic and strategic effort (Gast & Lansink, 2015). Participation and large-scale commitment by the workforce require, first, a solid knowledge of organizational culture and its social dynamics, in addition to understanding, from a psychological point of view, what determines the new behaviors in people who have to deal with change (Gast & Lansink, 2015). Therefore, new management styles need to be adopted. The management should be capable of accompanying the staff through change, overcoming the feelings of bewilderment and uncertainty that could be generated and the consequent dynamics of resistance to change which, in the long run, would undermine the success of digitalization (Ahmad, 2014).

2. Materials and Methods

The aim of this research was to investigate the expectations, fears, resistances and opinions of project managers and staff with a professional support framework for project management activities with respect to the orientation towards digital by organizations. The tool used to collect data was an individual in-depth semi-structured interview built around some key thematic areas useful for research objectives.

More in detail, the topics addressed were: the contribution that digital devices can make to corporate knowledge management; the reasons why organizations are facing a structural change in procedures; the ways in which organizations are accompanying change; and the teams' perception with respect to the introduction of IT innovations in structured work processes. The complete outline of the interview is shown in the appendix.

Research participants were ten project managers: five men and five women, aged on average 38 years old. As for their organizational tenure, two of them had more than twenty years of working experience while three over ten years and five worked since less than ten years. The common feature to all participants was that they were employed in knowledge-based organizations, a quite new typology of organizations engaged in the knowledge management sector with the common goal of streamlining practices and procedures in order to reduce energy expenditure in terms of time, costs and resources.

The organizational contexts in which the participants operated were mostly immature as regards the integration of digitized procedures into secularized working practices, therefore, it was valuable to examine the expectations on the one hand, and the concerns, on the other, relating to the inclusion of Artificial Intelligence, cloud computing and machine learning technologies in structured work teams.

The research adopted a qualitative methodology to analyse the data. More specifically, a diatextual analysis of the narratives collected was performed adopting the *SAM model*, an acronym whose initials refer to salient aspects of the speech on which the analysis was based, namely the *Subjectivity*, the *Argumentation* and the *Modality* (Mininni, 2003). This model allowed scholars to analyze the identity profile of the enunciator by focusing on the use of these specific indicators and therefore reconstructing first of all the characteristics of "who says what", the network of arguments on which the subject bases his position and finally the ways in which this position is conveyed in the discourse with respect to the interlocutor, the object of discussion and the discursive context in which the relationship is placed (Mininni, 2003). The term "*diatext*", in fact, from the Greek "*dia*" or "*through the text*", recalls the dialectic and the dialogue of the co-construction of meaning that occurs in communicative events and in organizational contexts and is capable of highlighting the nature of the meaning as an organizational network of cultural units (Eco, 1975) and the intentional topic of linguistic action (Anolli, 2012).

Therefore, in relation to the objectives of this research, the choice of this methodology was guided by the awareness that the way in which participants

discursively told their experience could be a significant indicator of the sense attributed to the management of digital change and the transformations of their own role that guided behavior in the workplace. In concrete terms, among the *diatextual markers* useful for unveiling the discursive profile of speakers, this research has focused attention on the use of *markers of agency, affectivity and meta-discursive markers*.

3. Results

The qualitative explorative analysis performed using diatext as a tool to investigate participants' discursive strategies showed interesting results with special reference to project managers' attitude toward the digital change they were experiencing.

From a *diatextual* perspective, the mostly positive attitude toward digital change was constructed above all through the use of *agency markers*, such as "I", "we", "they" (Donzelli & Fasulo, 2007). However, these discursive makers could have different functions within discourse. Sometimes they could be functional to mark the borders of discourse signalling competing positions (I versus they) about the object of discourse. The "I" is strategically used to create identification with the company (the ingroup) and a difference with the competitor (the outgroup) or with some most resistant employees. This is a common trait both in employees' (ex. 1, 3, 4) and management (ex. 2) discourses.

"I am smiling while hearing your question, because most companies say they are moving in this direction, but in my humble opinion, I think that they are switching to the digital because it is mostly a fashion (...)" (woman with twenty years of service seniority in HR and training consulting).

"We think that learning is a strategic asset, because being a company working with innovation it should be taken for granted that employees should update their expertise this is a priority for us to be competitive" (man with twenty years of service seniority, CEO of a training consulting).

"Yes, today we were studying the use of a portal that could simplify our (...) clearly this is a new phase for us" (man with over twenty years of seniority in training and financial consulting).

"(...) As a private company we must cross initiatives with social sustainability with those that are economically sustainable (...)" (man with six years of service seniority in training consulting).

The personal pronouns "I"/"We" were also investigated as *markers of affectivity*, when used by participants while reporting their opinion on the subject under investigation.

"I am technologically skeptical even though I have been working on it for twenty five years but compared to what you ask me I see only positive I think it has contributed" (woman with over fifteen years of service in training consulting).

"We are in favor of a learning model indicated as 70–20–10, i.e. in the workplace 70 % of people learn from on the job training, 20 % from expert colleagues and only 10 % formal learning" (man with twentyfive years of service seniority in training consulting).

The analysis of some of these diatextual cues within the discourses collected allowed to point out two different rhetoric about digital transformation and knowledge management.

On the one hand, there was the *"enthusiastic"* rhetoric conveyed by the "digital natives", namely younger managers, who described technology as a precious tool to perform their tasks efficiently and transparently. Accordingly, they considered digitization as an integral part of the job.

"(...) is a tool that helps you with your tasks (...); we are young, we seek, we inform ourselves we try to introduce tools from below based on utility (...)" (male project manager with four years of service in gamification consulting).

"we are superconvinced that a cahnge could only have a positive impact also because we provide this kind of solutions to the companies, therefore we also use those technologies to train our employees" (man wih twenty years of service seniority, CEO of a training consultuing).

On the other hand, there was a *"cautious"* rhetoric conveyed by "mature managers", those aged between 40 and 50, who although perceiving innovation as a positive change, tended to underline the need to take time to gradually "get used" to the change as long as technology use implies also "extra-work" to manage new processes.

"Immediately appreciated as an idea (...)" (male project manager with over twenty years of service seniority in training and financial consulting);

"(...) sometimes there are reworkings of the processes, I do it as I am used to and then it becomes digital, it is more an overload of work than a facilitation " (woman with seventeen years of seniority in HR and financial consulting).

4. Discussion

Results coming from this explorative diatextual study accounted for project managers' perceptions about digital innovation and change management and showed some interesting insights that could be used to plan future organizational development actions, addressed to a more efficient digitalisation of knowledge management.

The first evidence referred to the widespread awareness of the participants involved that technological innovation is an unavoidable change mostly driven by external factors such as globalisation and competitiveness:

10) *"(...) from the company's need to maintain a competitive advantage on the market. We are constantly looking for new methods and models especially applied to staff development because only in this way we can be competitive in a global market in which we participate as a company"* (male project manager with twentyfive years of seniority in training consulting).

Furthermore, most organizational indications and prescriptions about digital innovation and change were top-down processes coming from the management and not fully shared with all workers. Moreover these changes were perceived as attempts to improve organizational performance and thus to reduce time and costs.

11) *"(...) certain processes that have been streamlined and therefore have greatly shortened the time (...) the company does it is with a view to optimizing the timing and to ensure that you can do your job well and in the best possible time (...)"* (male project manager with twentyfive years of service seniority in training consulting).

With respect to the topic of resistance to change, most participants remarked a double trend within the organizations, namely the convinced resistance manifested by more aged workers and the proactivity of younger colleagues:

12) *"As usual in companies there are two factions that of the new entries, the young population who promotes the new tools and the elderly population, the veterans, who are reluctant to change"* (male project manager with four years of seniority in race office).

With respect to the future, project managers were quite uncertain: some of them trusted the positive effects that technological innovation would produce: *"we were super convinced that it is an improvement for the very fact that we provide solutions of this kind (...)"* (male project manager with six years of service in training consulting)", while others were more cautious since the direction of change is still unknown according to them *"I am quite confident that it will propose new technologies (...)"* (female project manager with fourteen years of service seniority in training consulting)".

Therefore, if, on the one hand, the introduction of digitized knowledge sharing systems showed a significant reduction in terms of time and costs, on the other, a massive investment in terms of employees' training is required to overcome resistance to change.

Furthermore, according to some of the organizations involved in the study, there was an evident digital divide between digital natives and older workers, who showed uncertainties regarding the adoption of new working modalities and practices. In light with these results, most participants agreed about the central role played by some intangible dimensions of the person/organization relationship such

as for instance identification, engagement and commitment to technological change. Therefore, organizations should invest in the construction of a common vision about technology that could be drive of positive organizational behavior and consequently could make training not only an economical investment rather an intangible but mostly precious capital for the actual trasformation of the working context.

5. Conclusion

The explorative results coming from the study highlighted the human dimension of organizations experiencing the digital revolution. This huge change has upset the organization of ordinary working practices as well as human resource management. This change is harder for those organizations basing their core business in knowledge management as long as their main drive is the intangible human capital of their employees and managers. This is the case of project management organizations. In force of this evidence, the study has contributed to give voice to some of these workers, shedding light on their resistances and on their attitudes toward technology and change, underlining the possible challenged that could hinder a positive transition to the digital. Furthermore, diatextual analysis allowed to catch these attitudes discourse showing the existence of two different rhetorics about technology acceptance: a cautious one versus an enthusiastic one. The first was best expressed by mature workers scared about the possibility to attune with the radical and rapid changed imposed by digitization, the second voiced by digital natives, namely by the younger generations who are familiar with the use of technology also beyond the professional domain. However, although challenging in terms of human resource management practices this opposition could be turned into an opportunity to exploit informal training across generation creating for instance virtual communities of practices sharing knowledge and expertise and showing the benefits of using technology for the sake of the organization. By this, mature workers could be ambassadors of the organizational culture for the younger colleagues who in turn could be coaches to them supporting their transition to the digital. Certainly, the top management should be aware about these dynamics and should share the cultural project behind these training practices. Change is not possibile without the convinced commitment and sponsorship of the so-called agents of change, namely the managers, who can transform what could be perceived as a threat into a real opportunity.

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Appendix

Interview

1. Which company do you work for and which is your role?
 2. Which is your job role seniority?
 3. Gradually the use of Artificial Intelligence (AI) systems is involving many business areas, in particular that knowledge sharing. In your opinion, can AI be a support for knowledge management in the organizational context?
 4. Can digitalisation favor or hinder the circulation of company knowledge in your opinion?
 5. Is your company facing these changes? If so, how? If not, why?
 6. Which challenges are emerging from the automation of some working procedures?
 7. How did work teams in your organization are reacting? Are they actively promoting change or are they undergoing this situation? Are they resisting to change or not?
 8. Is this transition, from a knowledge management by word of mouth or paper and pencil to a diffusion of knowledge through AI technologies, causing changes in work organization in your opinion?
 9. During this transition between traditional to digital knowledge management, is the staff being accompanied through training activities?
 10. Which skills do you think are needed in a team to manage and deal with these changes?
 11. Are there already procedures in which the use of automation is securing higher effectiveness and efficiency to the organization?
 12. Is your organization planning further changes in the direction of AI?
-

VERBAL EXPRESSION OF PREPAREDNESS IN RETIREMENT PLANNING INTERVIEWS

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Abstract. Conceptualization of retirement requires interdisciplinary research, which is represented by psycholinguistic approach in the present paper. The study takes a first step to explore conceptualization of retirement by individuals with different levels of retirement preparedness. The study applies *Psychological Preparedness for Retirement Questionnaire* (Zasiiekina & Mahdysiuk, 2018) to assess levels of preparedness; semi-structured interviews to focus primarily on concerns related to planning postretirement period; Linguistic Inquiry and Word Count (LIWC) (Tausczik & Pennebaker, 2010) to reveal psychological categories and explore conceptualization of retirement. By the end of the assessment, data had been collected from 117 workers who were at preretirement period. The sample was weighted by age and

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occupation in order to improve its representative of the total population 22 (18.8 %) – university staff, teachers at colleges, 18 (15.4 %), nurses in kindergartens, 8 (6.6 %), healthcare staff, 18 (15.4 %), government officials, 28 (23.9 %), workers from private sector, 23 (19.7 %) lawyers. The final weighted sample includes 65.8 % females, average age 54.52, (SD=6.21). The results indicate that 8.5 % respondents have a low level of preparedness, 61.5 % – a medium level of preparedness and 30 % – a high level of preparedness. Interestingly, the highest percentage of categories of *affect* and *positive emotions* were observed in the group with a medium level of preparedness, whereas the highest percentage of categories *cause, focus on present, and family* were captured in the group with a high level of preparedness. Taken together, these results suggest that the high level of retirement preparedness is associated with active cognitive reappraisal of retirement as a period of family activities.

Keywords: *preparedness for retirement, retirement planned interviews, conceptualization, psychological meaning.*

Магдисюк Людмила, Тригуб Галина, Дучимінська Тамара, Кульчицька Анна, Засєкіна Лариса. Вербальні маркери готовності до виходу на пенсію в інтерв'ю.

Анотація. Проблема концептуалізації виходу на пенсію вимагає міждисциплінарних досліджень, які представлені психолінгвістичним підходом у цій роботі. Праця є першим кроком на шляху вивчення концептуалізації виходу на пенсію особами з різним рівнем готовності до цієї події. У статті використано авторський опитувальник «Психологічна готовність до виходу на пенсію» (Засєкіна & Магдисюк, 2018) для оцінки рівня такої готовності; напівструктуровані інтерв'ю, спрямовані головним чином на проблеми, пов'язані з плануванням періоду після виходу на пенсію, українську версію комп'ютерної програми LIWC (Tausczik & Pennebaker, 2010), щоб розкрити психологічні категорії та дослідити аспекти концептуалізації виходу на пенсію. Було зібрано дані від 117 працівників, які перебували у передпенсійному періоді. Вибірка була збалансована за віком та професією з метою покращення її репрезентативності від загальної сукупності: 22 (18,8 %) співробітника університетів, викладачів коледжів, 18 (15,4 %) медсестер дитячих садків, 8(6,6 %) представників медичного персоналу, 18 (15,4 %) держслужбовців, 28 (23,9 %) працівників приватного сектору, 23 (19,7 %) юристів. Остаточна зважена вибірка включає 65,8 % жінок, середній вік 54,52 (SD = 6,21). Результати показують, що 8,5 % респондентів мають низький рівень, 61,5 % – середній рівень та 30 % – високий рівень готовності. Цікавим видається те, що найвищий відсоток категорій афекту (*affect*) та позитивних емоцій (*positive emotions*) простежено в групі із середнім рівнем готовності, а найбільший відсоток категорій каузальності (*cause*), фокусу на теперішньому (*present*) та родини (*family*) здобула група з високим рівнем готовності підготовленості. Загалом, одержані результати дають змогу припустити, що високий рівень готовності до виходу на пенсію пов'язаний з активною когнітивною переоцінкою проблеми виходу на пенсію як один із періодів розвитку сім'ї.

Ключові слова: *готовність до виходу на пенсію, інтерв'ю щодо пенсійних планів, концептуалізація, психологічне значення.*

1. Introduction

There is a growing body of literature that recognizes the importance of retirement preparedness since retirees have a number of psychological issues, notably loss of identity aligned with professional life (Osborne, 2012). Osborne (2012) argues that the main negative effects of preretirement period includes difficulties in decision making, decreased self-esteem and self-confidence, loss of meaning in identity, and death-anxiety. In contrast to loss of identity in retirees, there is much less information about constructing meaning of retirement by individuals with different levels of retirement preparedness. This indicates a need to

understand the various meanings of retirement that exist among individuals in preretirement period. This study provides an important opportunity to advance the understanding of the main negative psychological issues aligned with retirement, and suggests psychological support for individuals in preretirement period.

The present article takes a first step to explore constructing meaning of retirement in individuals with different levels of retirement preparedness and examines the main difficulties in preretirement period, expressed verbally in retirement planning interviews.

Following Wang and Sci (2014), we conceptualize retirement as an individual's exit from the workforce, which accompanies decreased psychological commitment to and behavioral withdrawal from work (p. 211). The scholars suggest four main approaches to conceptualizing retirement from psychological perspective, particularly retirement as a decision-making, retirement as an adjusting process, retirement as a career development stage, and empirical operationalization of retirement.

Retirement as a decision making relates to informed decision making based on a deep knowledge about own resources, peculiarities of the current work and non-working environment, particularly family and community-social settings. From decision making approach pension program should be planned early before old age, serving as a financial and social support for retirees. Planning retirement when individual is young and efficient at the workplace is very important for avoiding psychological comorbidities when time for retirement comes (Park, 2017). Pension program is developing as a result of retirement decision-making and accompanied by declining work activities and strengthening involvement in social and family life (Wang & Schultz, 2010). Evidence consistently suggests that current life goal is a robust predictor of having a pension program and retirement decision making, which relate to retirement readiness (Atuti, 2020).

Adjustment approach views retirement as retirement transition and postretirement adaptation. Psychological peculiarities of transition to retirement relate to different stages, in particular retirement approaches, initial euphoria, some stress, dealing with adjustments to a new lifestyle, then settling down (Victor, 1994). All these stages are characterized by specific difficulties in retirees. Findings of other research indicate that perceived happiness in financial situation, being married, being female, having master or doctorate degree strongly predict retirement preparedness in retirement transition and postretirement adaptation (De los Santos, Labrague, & Milla, 2019).

Retirement as a career development is considered at the individual, job, and organizational levels. The retirement at the individual learning is viewed as physical, and cognitive aging, on the one hand, and enriching experience and expertise, on the other hand. At the job level, retirement is examined as correspondence to technologies requirements. At the organizational level, retirement is assessed through the organizational climate, particularly age bias and discrimination.

Empirical operationalization of retirement captures different dimensions of this period. Recent research points out that paid work hours, nature of the employment, and amount of pension/social security in post-retirement period should be considered as the main characteristics of heterogeneity of this period (Wang, Olson, & Shultz, 2012).

Together, these studies indicate that there is no well-established approach to conceptualization of retirement process. Considering retirement from decision making, adjustment, career developmental and empirical approaches, preparedness for retirement and retirement planning are of crucial importance. As Wang and Schultz (2010) argue, an interdisciplinary research could summarize all different studies on psychological issues of retirement and conceptualize retirement for the perspective of its psychological consequences.

2. Methods

The psycholinguistics study as an interdisciplinary approach in our paper was chosen because it leads to deeper insight into constructing meaning of retirement in individuals with different levels of preparedness. Central to the entire discipline of psycholinguistics is the concept of meaning which leads to understanding the sense of retirement for individuals. Vygotsky (2014) points out that meaning is the act of cognitive generalization and communication, therefore, the meaning of retirement could indicate not only sense of retirement in individuals but their attitudes towards it, verbally expressed in their retirement planned interviews. The study applies questionnaire *Psychological Preparedness for Retirement* (Zasiiekina & Mahdysiuk, 2018). We approached 201 workers who were at preretirement period. The sample was weighted by age and occupation in order to improve its representative of the total population 22 (11 %) – university staff, teachers at colleges, 18 (9 %), nurses in kindergartens, 8 (4 %), healthcare staff, 18 (9 %), government officials, 28 (14 %), workers from private sector, 23 (11 %). The final weighted sample includes 66 % females, average age 54.52, (SD=6.21)

Forty questions were asked, beginning with the statement: “How often are you concerned about each of the following things regarding your preparedness to retirement?”. For example, the fact that there are some physiological and mental changes aligned with aging. The participants had to think about their concerns related to forthcoming retirement, and were assessed with 40 items anchored from 0 to 3, where 0 = never, 1 = rarely, 2 = often, and 3 = every time. The high scores are associated with level of preparedness. Inter-item reliability (α Cronbach) was high (0.840). The study applies percentiles to identify the central tendency, and dispersion of a distribution, and differentiates three levels of retirement preparedness: low (0–46), medium (47–93), high (94–120), the *maximum* score in a composite scale=120.

The main objective of the study was to carry out semi-structured interviews with individuals in preretirement period, who had different levels of preparedness to retirement. We focused primarily on concerns broadly related to planning postretirement period. This category includes plans for certain activity, emotions

and feeling towards this life period, drives for self-development and social interactions. Many individuals in our study reported their professional experience and achievements.

The study applies semi-structured interviews to provide psycholinguistic approach to explore constructing meaning of retirement in individuals with different levels of retirement preparedness. We audio-recorded and transcribed interviews. Transcriptions were analysed by the research team using the Linguistic Inquiry and Word Count (LIWC) (Tausczik & Pennebaker, 2010) in Ukrainian version (Zasiekin et al., 2018). The LIWC analyzes the words and administer them according with the pre-defined categories of positive and negative emotions, motivation, thinking styles and social relationships. The present study examines the psychological meaningful categories as verbal expression of individual preparedness to retirement.

3. Results and Discussion

Figure 1 illustrates the distribution of participants considering low, medium and high levels of preparedness for retirement. It is apparent from this figure that very few participants (8.5 %) demonstrate a low level of preparedness for retirement, the greater part of participants (61.5 %) have medium level, and almost a third of participants (30 %) have a high level. It is apparent from this figure that very few individuals have no concerns about postretirement life and its possible goals. Almost one third of individuals often think about forthcoming period and plan their activity considering life changes.

Figure 1.

Distribution of individuals with different levels of preparedness for retirement

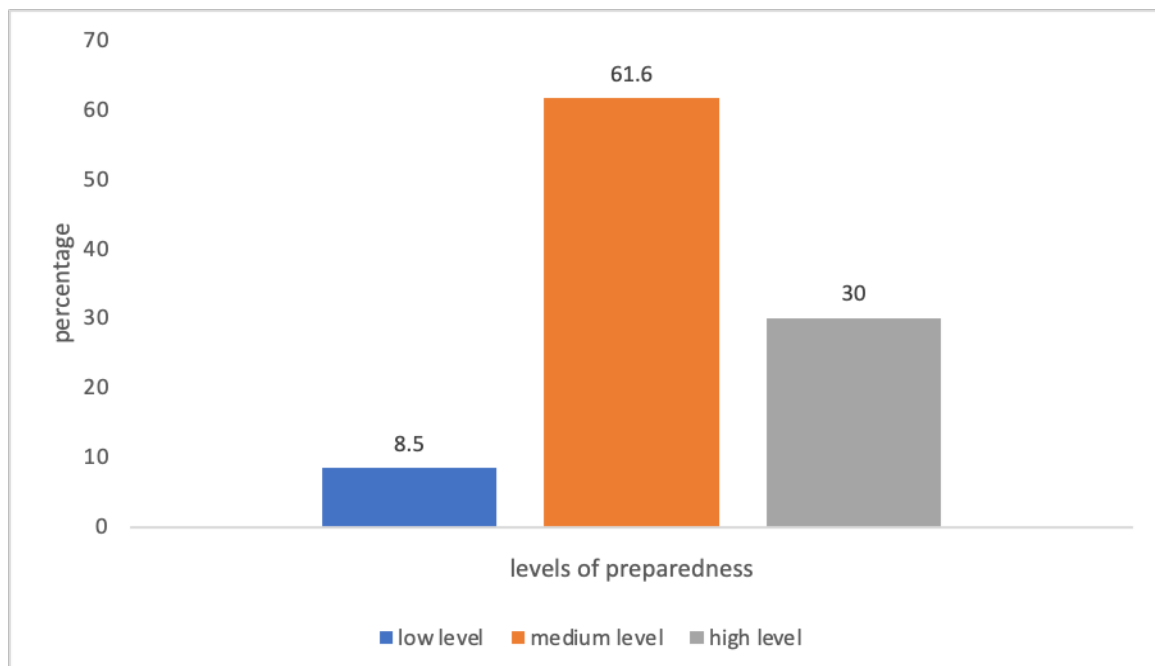


Table 1.

Categories in retirement planned interviews in individuals with different levels of retirement preparedness

Categories	FG 1, M (SD)	FG 2, M (SD)	FG 3, M (SD)
I	4.40 (1.35)	6.69 (3.29)	4.48 (2.11)
Positive emotions	0.89 (0.18)	1.01 (0.77)	0.06 (0.05)
Affect	1.01 (0.31)	1.75 (1.05)	1.07 (0.99)
Cause	2.14 (1.11)	1.93 (0.7)	2.18 (1.23)
Social	2.62 (0.92)	3.42 (1.01)	2.60 (2.09)
Family	0.51 (0.40)	0.62 (0.31)	0.65 (0.61)
Friends	0.34 (0.11)	0.36 (0.14)	0.09 (0.07)
Power	1.08 (0.77)	0.51 (0.32)	0.93 (0.13)
Focus present	1.54 (1.12)	1.66 (1.14)	2.93 (1.21)
Focus past	1.01 (0.07)	1.52 (1.23)	1.27 (1.09)
Focus future	0.36 (0.12)	0.27 (0.11)	0.35 (0.23)

Note: FG 1 – focus group of individuals with a low level of retirement preparedness, FG 2 – focus group of individuals with a medium level of retirement preparedness, FG 3 – focus group of individuals with a high level of retirement preparedness

I and Verbal Tense Categories

Evidence consistently suggests that individuals with physical and emotional pain focusing on themselves more frequently use first-person singular pronouns (Zasiékin et al., 2018). However, other research pointed out that individual self-reference is associated with positive view of themselves as active subjects (Zasiékina & Mahdysiuk, 2018). In addition, these findings suggest that more self-references were more present in positive narratives compared with negative narratives. The most obvious finding to emerge from analysis in the current study is that self-reference was more present in FG 2. The interviews in FG 2 highlight the participants' intentions to harmonize relationship between professional and personal life, taking much efforts in this direction. One unanticipated finding was that interviews in FG 3 indicate less self-reference compared with FG 2. A possible explanation for this might be that individuals with a high level of preparedness for retirement demonstrate their key intentions only in their personal life, notably family relationships, hobby, friends, omitting their current interests in professional life. On the contrary, individuals from FG1 talked mostly about their career, focusing exclusively on professional goals and activities. In addition, individuals from FG 3 have the most reference to the present moment, which is associated, according to our previous findings (Zasiékina & Mahdysiuk, 2018), with well-being, while individuals with FG 1 demonstrate the least references to the present, focusing mostly on their past life episodes, aligned with professional growth. In addition, findings of recent research showed that individuals used more present and future tense verbs in the positive narratives compared with more past tense verbs in negative narratives (Tausczik & Pennebaker, 2010).

(FG 1) I remember coming to Vorokomle in 1975. The first day on September 15 to work. And immediately went to work. Training began on September 1. It was difficult at first, because the students were not familiar, the area was unfamiliar, but I eventually got used to it. I came to work in the 2nd grade, and then in 2 years to work. Then there were 4 classes, in 2 years I had 1 class. And so every year, and so I had worked for 40 years, finishing 4th grade, and then from 1st grade started again.

(FG 2) I really love my job. In 1989 I graduated from the Lutsk Pedagogical Institute and began my professional career in the neighboring village of Vyderta. After some time I went to work in my native school and had worked as a teacher for some time. I had worked as a senior teacher for educational work for 9 years and resigned due to illness. I love my job very much. I love children very much, I gladly go to school. I feel that students really need me, I share my knowledge with them, we travel to the world of beautiful literature, we get acquainted with different works, we learn to live, to think. But I can't say that work has the biggest place in my life. I am finishing my professional activity now, then of course there are plans, there are hobbies. I really like reading fiction, so I will have plenty of time to do my favorite thing. I want to immerse myself in the world of beauty, to read those works that I have not read yet, due to lack of time. And, of course, I will be proud of my students!

(FG 3) Now I am thinking about it. Although I'm used to working. Work is not the main thing in life, it is an opportunity to earn money for life. There are things that are more important. There will be more time to read literature. I want to travel a lot. I don't have a dacha, I don't like it. I have many friends, we communicate especially closely with classmates. We often meet. When someone finds a wonderful poem, we immediately gather and listen. And it doesn't matter how many children or grandchildren you have.

Positive Emotions and Affects Categories

As can be seen from the table above is that categories of positive emotions and affect were more present in FG 2 compared with FG1 and FG3. The interviews in FG 2 highlight the participants' positive attitudes to professional and personal life, including emotional states of happiness, joys and satisfaction with their personal and professional achievements. One unexpected finding was that interviews in FG 1 indicate more references to positive emotions compared with FG 3. A possible explanation for this might be that individuals with a low level of preparedness for retirement demonstrate their highly positive attitude and deep involvement into professional life, which is, on one hand, provide basis for their professional well-being, however, on the other hand, caused a low preparedness for retirement. As Tausczik and Pennebaker (2010) argue the degree to which people express emotion, how they express emotion, and the valence of that emotion can tell us how people are experiencing the world, in our study professional and personal life (p. 32)

(FG 1) Well, I can't say I'm sorry about anything. Most of all I have school and love for children. I love them and I live by it. Now working as a deputy, I can say that I miss those children with whom I worked before, because I had to devote more time to such managerial work, managerial position. I felt more comfortable in class. For me, it's a lifetime.

(FG 2) I love work. I want to change the world for the better, to raise good, smart citizens of our state. I especially like to see the interested eyes of my students. At the moment I am a class teacher, so I love it when my students come to my house and ask for advice. But great joy and happiness to be at home, to enjoy the summer, family and friends.

(FG 3) What worries me most now is the question of people who have no relatives or children and are very lonely. I could help because I can listen, and that's very important for older people. Perhaps such organizations or clubs, if they were created at monasteries or churches, I could work there and benefit. In this case, I would definitely be useful to people. It seems to me that this idea and activity is very necessary and interesting.

Cause, Social Relationship, Friends and Power Categories

Tausczik and Pennebaker (2010) differentiate two subgroups of causal words, notably because, effect, hence, and insight words, particularly think, know, consider, which express cognitive processes of reappraisal. Moreover, a frequent use of causal words is marker of enhancing health, well-being and quality of life. The most obvious finding to emerge from analysis in the current study is that causal words were more present in FG 3 compared with FG 1 and FG 2. The interviews in FG 3 highlight the participants' reappraisal of sense of their life, the role of career as only a part of their life. We assume that reappraisal of professional career in personal life and revealing other senses in life might improve physical and mental being of individuals with a high level of preparedness for retirement. The interviews in FG 3 highlight the participants' attachment to their family, while interviews in FG 2 highlight the participants' close interaction with friends and other social settings. A possible explanation for this might be that individuals with a high level of preparedness for retirement demonstrate a deep involvement into family relationship as a preliminary stage for forthcoming retirement. Participants with a low level of preparedness for retirement are at the stage of reappraisal their career in their life, preserving active relationship with friends, colleagues and other people in different social setting. The low reference to category *family* in FG 1 has been compensated the highest frequency of category *power*. A possible explanation for this might be that individuals with a low level of preparedness for retirement demonstrate a great involvement in career and professional growth.

(FG 1) As a principal, I can say that the microclimate in our team is very good. Everyone empathizes with each other, helps each other. Even if a

district seminar is being prepared, it is not one person involved, but the whole team. Cooperation, always in our team, is a creative cooperation. As a leader, I do not care about the age of the teachers of our team. I insist that all seniors share their experience with the younger ones, and the younger teachers go and ask for advice from their senior colleagues. And we have a very close cooperation with the education department of the city and Oblast, which always supports the school administration.

(FG 2) Work... I love work. But it does not play a vital role in my life, no. My family is always in the forefront, although judging by the opinions of my colleagues, I am a very good teacher, I give good lessons. For example, every day I diligently prepare for those lessons, colleagues and children love me very much. And my friends have always meant a lot to me in my life.

(FG 3) I'm happy with everything. The only thing I regret is that I paid little attention to my family, my daughter's upbringing. Family is the most important thing for me now. I will dedicate myself completely to my family.

4. Conclusion

The purpose of the current study was to determine constructing meaning of retirement in individuals with different levels of retirement preparedness and examines the main difficulties in preretirement period, expressed verbally in retirement planning interviews. This study has shown that individuals with different levels of retirement preparedness have different meaning of retirement. Individuals with a low level of preparedness for retirement construct meaning mostly in categories of *profession, carrier, social interaction* and *power* in professional settings. Individuals with a medium level of preparedness for retirement construct meaning in terms of both personal and professional life, close interaction with colleges, family and friends. Therefore, they use categories of *social interaction, present moment, and first person pronoun* marking themselves as a source of high activity. Individuals with a high level of preparedness for retirement focus predominantly on family and family relationship. Therefore, they have a high reference to category of *family*. Interestingly, the highest percentage of categories of *affect* and *positive emotions* were observed in the group with a medium level of preparedness, whereas the highest indices of categories *cause, focus on present, and family* were captured in the group with a high level of preparedness. Taken together, these results suggest that the high level of retirement preparedness is associated with active cognitive reappraisal of retirement as a period of family activities. One of the more significant findings to emerge from this study is that the main difficulty of the individuals with a low level of preparedness for retirement is a low adjustment to postretirement period and drawing attention exclusively on the career and professional growth. This study has provided a deeper insight into significance of preparedness for retirement, which could be a planned supporting policy for workers in preretirement period. More broadly, research is needed to

determine association of preparedness for retirement and retirees' well-being. The findings of this study have a number of important implications for future practice, providing foundations for psychological support for individuals with a low level of preparedness for retirement.

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FONT AND COLOUR ATTRIBUTES AS MANIPULATED IN MASS MEDIA TEXTS: PSYCHOLINGUISTIC IMPLICATIONS

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Abstract. In this paper an analysis is presented of font and colour as non-verbal and paralingual components which have the capacity to influence and manipulate recipients of a message. On the basis of an extensive body of illustrative material, it has been established that by the use of colour variation, a single text fragment may be interpreted in several different ways, and may also be perceived differently by men and by women. It is demonstrated that colour and font characteristics are not exclusively graphic shells whose function is merely to record an oral statement in writing. They are semantically significant and multifunctional. It has been determined that font and colour are form-creating elements, which make possible the graphic reproduction of objects in everyday use, objects relating to reality and actuality. Variation in font and colour enable us to hypothesize that the mass media communication space is now characterized by a type of linguistic play utilizing these traits so as to render possible the projection of multiple-reading promotional texts. They also permit an economy in terms of space because of the fact that font techniques can perform formative and content functions simultaneously. Based on an experiment involving 60 participants, 30 of whom were male and 30 female, it was found that the information encoded in colour and font graphics shells is not difficult to perceive and to decipher. However, the survey found that women are more likely to perceive that information, although the difference in perception is not striking. When asked whether a sample of illustrative material stirred an appetite by using stylized fonts consisting of foods to convey a food-related message, 74 % of men and 37 % of women in both samples answered in the positive, which in our study confirms the claim that food advertising promotes appetite arousal. The study also showed that most women who read the information perceive it holistically—their attention is not attracted solely by verbal and nonverbal components. On the other hand, only half of the men surveyed saw it as a whole, and almost a third of them initially noticed the verbal components first. Most participants in the experiment claimed that it took them from 5 to 10 seconds to realize that a single message could be read in several different ways. The participants who took part confirm that a single text string can be interpreted in multiple ways due to the font and colour attributes that are utilized in forming them.

Keywords: *font, colour, multimodal, verbal, non-verbal, play.*

Макарук Лариса. Маніпулятивні ознаки шрифту та кольору в масмедійних текстах та їхні психолінгвістичні характеристики.

Анотація. У роботі проаналізовано шрифт і колір як невербальні та паралінгвальні компоненти, які здатні здійснювати вплив на реципієнта та маніпулювати ним. На основі об'ємного корпусу ілюстративного матеріалу встановлено, що завдяки залученню кольору один і той само текстовий фрагмент може мати кілька варіантів прочитання і по-різному

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сприймається особами чоловічої та жіночої статей. Доведено, що колір та шрифт не є виключно графічними оболонками, покликання яких – зафіксувати усне висловлювання на письмі. Вони семантично значущі та поліфункційні. Виявлено, що шрифт та колір є формотворчими елементами, завдяки яким графічно відтворюють предмети повсякденного вжитку, об'єкти дійсності, реалії. Варіювання шрифтом та кольором дає підстави стверджувати, що для масмедійного комунікативного простору характерною є лінгвальна гра, яка завдяки шрифту та кольору реалізується у поліваріантному прочитанні рекламного блоку, економії місця, завдяки тому, що шрифт може виконувати формотворчу та змістотворчу функції одночасно. На основі проведеного експерименту, в якому брало участь 60 учасників, 30 з яких особи чоловічої статі і 30 жіночої, встановлено, що закодована у кольорових та шрифтових графічних оболонках інформація не є складною для сприйняття і дешифрування змісту. Однак, опитування виявило, що швидше сприймають таку інформацію жінки, хоча різниця у сприйнятті не є разючою. 74 % учасників чоловічої та 37 % жіночої статей на питання щодо того, чи вибірка ілюстративного матеріалу, яка репрезентує їжу засобами їжі пробуджує апетит, відповіли «так». Це підтверджує припущення, що реклама продуктів харчування сприяє пробудженню апетиту. Дослідження також засвідчило, що більшість жінок, читаючи інформацію, сприймають її цілісно, тобто їхню увагу не привертають вербальні та невербальні складники поодиночки. Натомість лише половина опитаних чоловіків бачать її як одне ціле, й майже третині спершу впадають у око вербальні складники. Більшість учасників експерименту стверджують, що їм достатньо від 5 до 10 секунд, аби зрозуміти, що одне повідомлення можна прочитати кількома способами. Опитувані також підтвердили, що один і той же само фрагмент можна читати по-різному завдяки шрифту та кольору, з яких він створений.

Ключові слова: шрифт, колір, мультимодальний, вербальний, невербальний, гра.

1. Introduction

In the modern English-language mass media communicative space, font and colour play a role which is a great deal more important than was the case even a few years ago. Whereas font characteristics used to be a relatively neutral element mainly reflecting relatively superficial esthetic preferences, they now represent an actual resource which can exercise various functions including semantic loading. Since new patterns of font usage open up these semantic and even polysemantic possibilities, the whole process of reading and interpreting texts may be altered.

Modern mass media multimodal advertisements consist of enclaves which combine verbal and non-verbal elements. In many cases verbal ones do not possess as great a manipulative potential as non-verbal and paraverbal components. The most conspicuous of these include the insertion of images, and the manipulation of text (involving colour, and special effects such as variations in font size and weight, and text position) which are essential components of advertisements in both paper and digital periodicals. The usage of verbal and non-verbal elements confirms the fact that now we deal with multimodal texts.

There has been a rapid increase in the number of studies devoted to multimodality in recent decades: among the most prominent scholars who deal with multimodality from varying perspectives are such scholars as Bateman (Bateman, 2014; Bateman 2017), Bergstrom (Bergstrom, 2008), Cleirigh (Cleirigh, 2009), Jewitt (Jewitt, 2014), O'Halloran (O'Halloran, 2014), Hiippala (Hiippala, 2017),

Kress (Kress, 1996), van Leeuwen (van Leeuwen, 1996), Lester (Lester, 2006), Makaruk (Makaruk, 2018), Mealing (Mealing, 2008), Nørgaard (Nørgaard, 2018), Unsworth (Unsworth, 2009), Wildfeuer (Wildfeuer, 2017). They are involved in various areas of research in terms of styles and genres, as well as in terms of the aspects considered and the research methods applied.

2. Methods

The methodological basis of the study of multimodal constructions involves the following methods: the inductive, deductive, descriptive, distributive, system-functional, and socio-semiotic methods. The comparative method, the method of visual syntax and the semantic-stylistic method are also used in the work. The technique that was selected made it possible to conduct a comprehensive study of multimodal constructions which constituted a symbiotic fusion of verbal, nonverbal and paraverbal resources. It should be noted to begin with that the method of continuous sampling was used, which made it possible to identify the verbal, nonverbal and paraverbal components to be analyzed. Using induction and deduction, it was possible to identify the semantic and structural features of nonverbal and paraverbal units, their functional load, functioning at the syntactic level. Distributive analysis enabled us to investigate the environment of multimodal graphemes, lexemes and syntactic constructions and to formulate possible methods for combining verbal and nonverbal units. It was found that most of them are interchangeable and can perform a variety of different roles and functions. The socio-semiotic approach involves primarily the processes associated with the expression of meaning in general, and the formulation of meaningful communicative output by individuals in particular; it also focuses on the relationship between modes and their compatibility, and the social needs for which they serve, taking into account the individual producing the sign and the context in which these meanings are realized. The comparative method made it possible to implement comparative steps to identify common and different parameters within the constructs identified in the media. Given the basis of the comparative method and the method of visual syntax, the essence of which is to study multimodal constructs, which are dominated by illustrative components, it became possible to distinguish their components, semantics and most common types based on the proposed criteria. We conducted a survey involving sixty native speakers of English, who filled in an online survey.

In this experiment, which was designed to shed light on the perceiving of multimodal information presented using verbal, paraverbal and non-verbal means, sixty native speakers of English between 20 and 40 years of age, thirty male and thirty female, filled in a survey which contained pictures to be analyzed, with no time limit imposed.

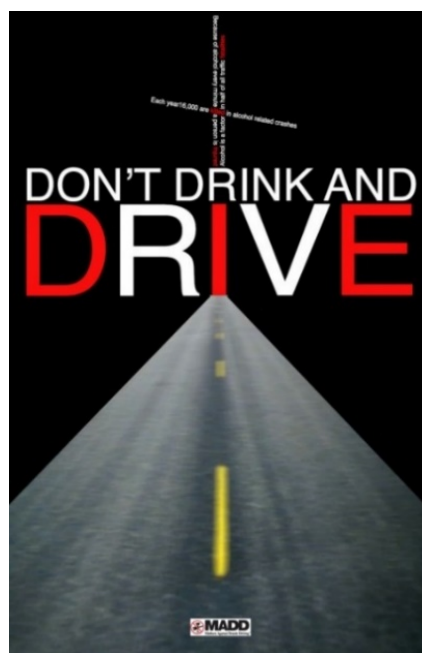
2.1. Procedure

As we have already mentioned, in the modern English-language

communicative space a special role is played by font and colour. This makes possible a dual interpretation of a text, creating a ‘play’ effect with lingual implications, in linguistic terms. The stylistic basis can take the form of both font and colour, as well as additional elements of a verbal or non-verbal nature. Certain manipulations can be made with the fonts themselves, changing the original purpose of the components, imbuing them with new values that, according to their producers, are most relevant to convey the desired meaning. Figure 1 demonstrates colour variation in the background of a single word, which makes it possible to read either “DON’T DRINK AND DRIVE” or “DON’T DRINK AND DIE”. It is obvious that the watchword of the advertisement is that drunken driving causes deaths. In addition, those fatal consequences are implied by the cross-shaped font, suggestive of the cross that is traditionally placed on the tombs of Orthodox Christians. In this way the point is underscored that drunken driving can lead to fatal consequences. As we can see, font features are capable of contributing to the effectiveness of factual elements. In the media communicative space, font and colour as separate modes are often closely interconnected and able to present the content of the message, giving it either positive or negative connotations. We see several colours in this picture, including the dominant black (associated with death) and red (suggestive of blood). This choice of colours is intentional, conveying meaning and coinciding with common-related mental associations.

Figure 1.

Warning against drunk driving
(Pinterest, 2018)

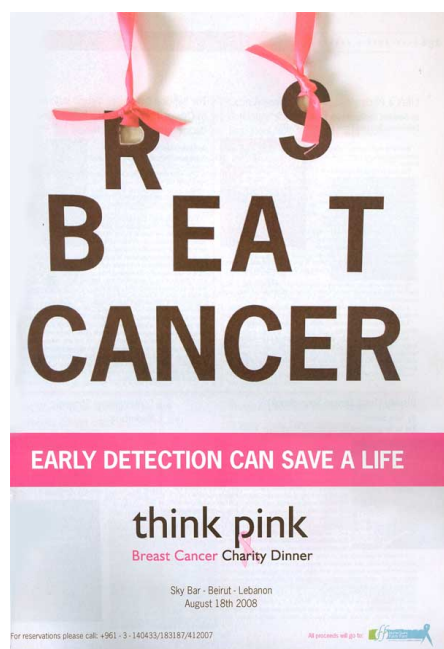


A dual interpretation is also possible in Figure 2, which presents a strong message relating to a potentially fatal disease which can often be successfully treated if the diagnosis is timely: “BREAST CANCER” and “BEAT CANCER”.

The creators of this advertisement are seeking to persuade people to consider what happens to those who are sick and not to forget about the charity that can help those who are ill. Unlike the previous picture, the latter represents the use of additional elements of a non-verbal nature like such as pink ribbons, which are a symbol of breast cancer. In this case, once again, the choice of the colour is not a mere coincidence, but is evidently chosen to represent a generally-accepted concept and to convey meaning through this colour association.

Figure 2.

Early detection of breast cancer (a)
(Blog Anubis, 2017)



The dual-reading strategy is also a feature of the sentence in Figure 3, which points to the possibility of this illness being conquered if it is diagnosed soon enough. The choice of the eraser is an interesting tactic, because it combines the concept of removing the threat posed by the disease, with the transformation of the message when two key letters are removed. Overcoming the disease would be much easier if examinations and diagnoses were carried out sooner. The use of the eraser is the key to conveying the stylistic meaning. We understand that it is easier to erase a few barely-visible letters (shown by the shadow and the eraser remnants) than to eradicate the disease, which often has fatal consequences. In the example above, we are able to follow the dual-option reading. The explicitly promotional message is presented in dark blue text, but upon more careful observation, the two additional letters 'R' and 'S' become identifiable, indicating the specific nature of the disease that is involved. This 'play' with multimodal effects illustrates the potential effectiveness of these manipulations in increasing the persuasiveness of the text which is presented.

Figure 3.
Early detection of breast cancer (b)
(Senor Snacks, 2017)



The ominous warning hidden in the billboard message shown in Figure 4 relates to the same potentially fatal disease as the previous two. However, the targeted usage of text colour use makes it possible to read two different sentences: the first one is evidently, “I HAD A CHESTY COUGH THAT WOULDN’T GO AWAY. I GOT CHECKED AFTER THREE WEEKS”. The strategy that was chosen by the message’s creator was to partially conceal the grim diagnosis conveyed through the alternate reading, leading up to the open warning and recommendation. The implication is clearly that some specific symptoms enable doctors diagnose the disease: “I HAD CANCER”. In this example that has been analyzed, colour is an attribute that actually is suggestive of well-being. It is left to the reader to perceive the two sentences which are separate but sequential.

Figure 4.
Prompt checking for lung cancer
(Ireland's, 2018)



A special dual reading is introduced in Figure 5. This is where the colour play is no longer against the backdrop of lexemes – individual letters – but of entire

phrases, the combination of which also forms a complete sentence. We observe the simultaneous manipulation of the lines. Drivers are warned not to take the risk of texting on their phones while driving, since during even a five-second distraction a car will travel a distance equal to the length of the football field. The two small hearts suggest that romantic feelings sometimes motivate the dangerous texting. The key message to be conveyed is accentuated by the use of the brighter (orange) contrasting colour for the imperative-mood statement that accompanies the internationally-known stop sign, which in this case has implications beyond what an ordinary stop sign would have: “Drivers off the road while texting”.

Figure 5.

Warning not to text while driving
(Pinterest, 2018)



Figure 6 is of interest with respect to the technique used by the writer who crafted the message, which appeared on a cover of the well-known American *The New York Times Magazine* immediately after the 2016 election. It was evidently intended to convey some ideas connected with the lead article inside the magazine, dealing with the implications of Donald Trump’s victory, entitled “Reflections from Trump’s America”. This title appears in such a tiny typeface that at first glance it seems to just be a decorative feature on either side of the word “IS”. The entire large caption was the title of Woody Guthrie’s famous song, but the highlighting of the letters forming the words “his” and “our” pointed to the question in many people’s minds: is this land his land, or our land? For many shocked observers, their own identity and that of their country was a matter of conjecture. The multimodal technique of using contrasting text colour as an accentuation strategy involved a switching of the semantics of one lexeme to another. It is our conclusion that this font-related technique could be classed as a distinctive kind of ‘play’, and involves custom-made font patterns that are not available in ordinary software applications. The purpose of this play is to bring the reader as close as possible to objective reality, to show what the advertised product really is, or what the advertised service can offer.

Figure 6.
New York Times Magazine cover
(Pinterest, 2018)



In Figure 7, alphabetical characters are presented in such a way that by virtue of the character positioning and the texture suggestive of specific foods, a non-verbal message combines with the actual letters to form a complex message relating to cheese products. This technique was evidently intended to produce an effect that would appeal to the reader on levels other than the merely visual. In Figure 8 the words “Eat me” are displayed in a font which is composed of physical components suggestive of dishes that are on offer in the dining establishment. This type of presentation is intended to influence readers on a conscious and a subconscious level, with the purpose of attracting them to visit the restaurant themselves.

Figure 5.
Food imagery composing a font (a)
(Pinterest, 2017)



Figure 8.
Food imagery composing a font
 (River View Observer, 2016)



Here we observe the presence of various grapheme objects, the totality of which forms a multimodal sentence. This picture is also related to the play, in particular its varieties – font-like to objects and processes of objective reality with double duplication of semantics.

The last two figures (9 and 10) in this paper present the possibilities of font as a form-creating element. Alphabetical characters are forced into the shape of a bottle and wine glass, in one case, and into the shape of a dessert cup in the other, in a manner which gives a literal representation of these objects while conveying a relevant verbal message at the same time.

Figure 9.
Font manipulation to suggest the form of a pertinent object (a)
 (Pinoy Listing, 2018)

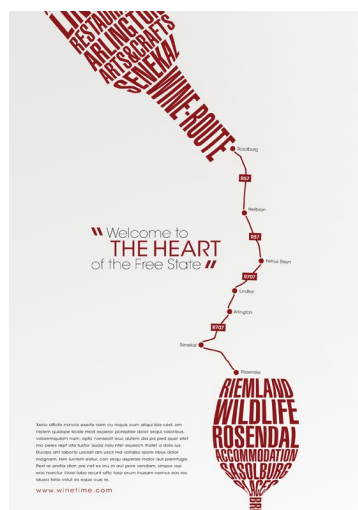


Figure 10.

Font manipulation to suggest the form of a pertinent object (b)
(Ads for Rhetorical Analysis, 2017)



In the first case, the words in the ‘deformed’ text string tell something about the background of the wine that is being advertised; in the second case, a similar tactic is used to present information about the preparation of the dessert. This illustrates the fact that a ‘manipulated font’ can be used to create everyday objects. In a sense, this technique alters the semantic content of the message and embodies a duplication of the content.

3. Results and Discussion

In order to better understand how people perceive information presented to them through verbal, paraverbal and non-verbal means, we conducted an experiment. For the purpose of studying the process of perceiving, memorizing and recalling images, the survey included five questions shown in the table below, along with the responses which were received (see Table 1).

Table 1.

Survey questions and results derived from the respondents' replies to those questions

Q1 When you see a picture of a multimodal nature (including both verbal and non-verbal (paraverbal) features), is it the verbal aspect which you initially perceive, or the non-verbal aspect? Or do you perceive them together as a single entity?	
Females	Males
13 % verbal	33 % verbal
17 % non-verbal	16 % non-verbal
70 % a single entity	51 % a single entity
Q2 How much time did you require to grasp the fact that texts such as those	

presented in Figures 1 – 6 can be read in two different ways?

- 5 seconds? ● 10 seconds? ● more than 10 seconds?

Females	Males
5 seconds – 63 %	5 seconds – 50 %
10 seconds – 32 %	10 seconds – 41 %
more than 10 seconds – 5 %	more than 10 seconds – 9 %

Q3 Did you have any difficulty reading the information presented in figures 1–5?

- Yes ● No

Females	Males
No – 98 %	No – 92 %
Yes – 2 % (Figure 9, because of the small font)	Yes – 8 % (Figures 1 and 6, because of the font being difficult to decipher)

Q4 Do you feel a desire to eat something when you see pictures showing various foods, or texts composed in fonts which actually consist of food imagery?

- Yes ● No

Females	Males
Yes – 37 %	Yes – 74 %
No – 63 %	No – 26 %

Q5 When you looked at pictures 9 and 10, how long did it take you to notice the textual content formed by the objects that were presented?

- 10 seconds? ● 15 seconds? ● more than 15 seconds?

Females	Males
10 seconds – 83 %	10 seconds – 72 %
15 seconds – 17 %	15 seconds – 20 %
more than 15 seconds – 0 %	more than 15 seconds – 8 %

When the responses were analysed, it was demonstrated that 70 % of the females who participated in the experiment perceived the information as a single unit, while only 51 % of males did so. 33 % of the males noticed the verbal portion first whereas only 13 % of the females were able to distinguish the verbal information from the whole unit first. With respect to the non-verbal units, the proportions were almost the same. The speed of comprehension by females exceeded that of males by a margin of 10 %. On the basis of the responses that were obtained, both males and females were able to comprehend the messages involving font and colour within ten seconds or less, indicating clearly that comprehension was not difficult either for either group. It also demonstrated that advertisements containing food imagery stimulated appetite in twice as many men as women (74 %, as opposed to 37 %). The last question was designed to determine whether the readers had any difficulty deciphering the information produced using font and colour in the form of physical objects. The results were almost the same (with a differential of approximately 10 %) for both sexes, although males were slightly less successful; on the whole, the results demonstrated that no significant difficulty was experienced by either group.

4. Conclusions

In this paper an attempt has been made to show the potential of font and colour in terms of textual presentation, and to demonstrate that they do not perform a merely technical role; on the contrary, they have the capacity to convey meaning and to have semantic significance. The examples which have been presented make it possible to assert that manipulations of colour and font in tandem can perform complementary functions. The context and the distribution which of the two is the dominant attribute in any particular instance. The examples given show that when font and colour are used together in this manner, a single sentence can be read in two or more ways, thus making the sentence polysemantic. This being the case, new strategies are needed for reading texts in which these font-related and colour-related techniques are employed. It can be context-related and context-dependent. The examples also show the possibility of the texts embodying an element of emotional colouring, and having an effect which might be termed ‘font and colour play’.

As described in the previous section, an experiment was conducted to gain insights into the comprehension of messages by a selected group of individuals, and the results made it possible to conclude that grasping the meaning of the material presented which involved a mixture of verbal, paraverbal and non-verbal means did not present significant difficulty for either the male or the female participants in the survey, although some slight differences between the two sexes was tabulated. On the whole, females required somewhat more time to comprehend the message than males. A significant number of females perceived all the different means (verbal, paraverbal and non-verbal) as a single entity. However, on the whole it was manifested that members of both sexes were basically able to grasp and retain the content of what they read.

A primary reason for conducting this survey was to provide balance for our study as a whole, in the sense that we devoted extensive attention to the techniques utilized by the creators of multimodal texts in which tactics of font and colour manipulation were utilized, but a study of those aspects, and the various refinements of multimodal techniques which they displayed, would have been incomplete without a corresponding inquiry into the actual response that was evoked in a sample group of recipients exposed to material of the type which is the focus of our attention.

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VERBAL MARKERS OF THE CONCEPT OF PEACE: PSYCHOLINGUISTIC AND LEXICAL ANALYSES

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Abstract. The paper is an attempt to uncover the associative semantics of the concept of ‘Peace’ as reflected in the Ukrainian national linguistic world image. The goal of the article is to carry out a psycholinguistic analysis of the concept’s verbal markers and to compare its associative and lexical meanings at the current stage of the Ukrainian language development. Free word association test involved 148 first- and second-year students of Lesya Ukrainka Volyn National University (Ukraine), Faculty of Philology and Journalism, Ukrainian native speakers aged 18–20. It has been proved that responses related to common lexical meanings of the word-stimulus ‘Peace’ recorded in modern explanatory dictionaries are predominant. 105 words-responses have become the object of the analysis – 329 word-tokens in total, out of which 44 words have been used two times or more (from 2 to 59 times – 268 word-tokens in total), 61 words have been used one time only. The received responses have been differentiated according to semantic and grammatical criteria. Traditional responses which coincide with the common lexical meaning, as well as new original responses which reflect the respondents’ individual experience and are non-typical (not recorded in the dictionaries), were received. The semantic principle of the concept of ‘Peace’ words-markers’ systematization was used as the basis of forming 11 lexical semantic groups. Among the most numerous are the names related to the state of environment, people’s inner world, their physical, emotional and mental state, moral

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and aesthetic properties (47.1 %); names that verbalize relations between people, nations, states (31.9 %). The groups of semantically distant responses are mainly represented by the names of concrete names, less frequently – by the names of abstract concepts and integral syntactic structures, which have no relation to any of the lexical meanings recorded in lexicographic sources. Their semantic ties can be traced at the unconscious level which reflects the psycholinguistic meaning of this word. The conducted word association test enabled defining the extension of the concept's psycholinguistic meaning and thus to record new fragments of the Ukrainian linguistic world image caused by historical, political, and national mental processes.

Keywords: *concept of Peace, free word association test, psycholinguistic analysis, lexical analysis.*

Мельник Ірина, Голоюх Лариса, Каліщук Діана, Левчук Ірина. Вербальні репрезентанти концепту Мир: психолінгвістичний та лексичний аналіз.

Анотація. У статті поглиблено дослідження асоціативної семантики концепту МИР у контексті української національно-мовної картини світу. Мета статті – здійснити психолінгвістичний аналіз вербальних репрезентантів концепту МИР та зіставити його асоціативне та лексичне значення на сучасному етапі розвитку української мови шляхом вільного асоціативного експерименту, до якого залучено 148 респондентів – студентів 1 та 2 курсів факультету філології та журналістики Волинського національного університету імені Лесі Українки, носіїв української мови, віком 18–20 років. Доведено, що істотно переважають асоціації, співвідносні з загальномовними лексичними значеннями слова-стимулу МИР, зафіксованими в сучасних тлумачних словниках. Об'єктом аналізу стали 105 слів-реакцій – 329 слововживань, із-поміж них 44 слова зафіксовані двічі і більше (від 2 до 59 разів – усього 268 слововживань), 61 слово – лише один раз. Одержані реакції диференційовано за семантичним та граматичним критерієм. Зафіксовано традиційні реакції респондентів, що збігаються з загальномовним значенням, та нові, оригінальні реакції, які відбивають індивідуальний досвід респондентів і є нетиповими (не зафіксованими в словниках). Семантичний принцип систематизації слів-маркерів концепту МИР покладено в основу формування 11 лексико-семантичних груп, найчисельнішими з яких є назви, пов'язані зі станом навколишнього середовища, внутрішнім світом людини, її фізичним, емоційно-психічним станом, морально-етичними якостями (47, 1 %); назви, що вербалізують відносини між особами, народами, державами (31,9 %). Виділено також групи семантично віддалених асоціацій переважно репрезентованих назвами конкретних, зрідка – абстрактних понять і цілісними синтаксичними конструкціями, які не співвідносні з жодним його лексичним значенням, зафіксованим у лексикографічних працях. Їхній змістовий зв'язок простежено на підсвідомому рівні, що віддзеркалює психолінгвістичне значення цього слова. Проведений експеримент дав змогу виявити розширення психолінгвістичного значення концепту МИР, а отже, зафіксувати нові фрагменти української мовної картини світу, зумовлені історичними, політичними, національними процесами.

Ключові слова: *концепт мир, вільний асоціативний експеримент, психолінгвістичний аналіз, лексичний аналіз.*

1. Introduction

In modern linguistics, the research based on the word association tests has become rather popular. Reflecting the world in the mind of native speakers, experimental studies provide rather valuable information for the analysis of certain mental fragments. They also help reveal verbal markers of the concepts, establish semantic fields, that reflect a certain area of the person's inner world and reveal

peculiarities of perception and comprehension of lexical units and in total they serve as the material to build a linguistic image of the world.

Building associations is a complicated psychological and physiological process, which presupposes connection between particular neurological and mental activities, thoughts, ideas, feelings. Certain images that are fixed in the native speakers' subconscious are the result of the powerful mechanism of associative connections to a particular word that is articulated, heard or read. Perception of the world and individual style of a person are manifested through person's associations and through the prism of one's individual associative image of the world, that has been formed during one's period of maturing in a certain social, cultural, mental, and linguistic environment.

The idea of studying lexical semantics using associative approach was introduced by Leontyev (1969). The researcher mainly focused on principal unity of psychological nature of semantic and associative characteristics of words (Leontyev, 1969). According to Martinek, using theoretical apparatus of cognitive linguistics to interpret the results of word association tests provides a new perspective for the classification of associative responses. The main task of a researcher is not in creating an artificial classification of the received responses, but in reconstructing the respective conceptual structures in the speaker's mind (Martinek, 2011).

In scientific works of recent years, due to association tests, vectors of associations as indicators of changes in the native speakers' mind have been characterized (Alimushkina, 2015); types of verbal connections in associative fields have been defined (Terekhova, 2014; Martynovych, 1989; Horoshko, 2001), certain concepts that belong to different semantic spheres have been analysed (Nedashkivska, 2011; Denysevych, 2011), comparative research has been carried out: results of various word association tests conducted at different times have been compared to define the structure and dynamics of concepts (Zayets, 2010), etc.

In recent years, scholarly works that scrutinize the ontology of war and peace in the context of Christianity and Islam (Semchynski, 2007), from the point of view of linguistic information space of the present, have aroused interest (Building, 2015; Paraknonski & Yavorska, 2019), philosophical evaluative paradigm of linguistic means of defining the concepts of War and Peace in modern media has been analysed (Kots, 2019), the concept of Peace has been characterized from the point of view of cognitive linguistics (Khudolii, 2014), associative fields of the word-stimulus "Peace" in East Slavic languages have been analysed (Terekhova, 2014).

In modern world the ontology of war and peace belongs to the timeless problems of struggle of opposites in human life. In human mind war is always associated with aggression, destruction, disaster, death, whereas peace is associated with calm, construction, life. Semantics of these opposing concepts is reflected in modern explanatory dictionaries (see War: "1. Organised armed struggle between

states, nations or armed groups within a country. 2. Fig. A state of hostility between anybody; argument, quarrel with somebody, struggle”) (SUM-11, I: 669) and Peace: “1. No disagreement, hostility, argument; consent (in 4th mean.). 2. No armed struggle between two or more nations, states; opposite *war*. 3. Compromise between the fighting sides to cease fire; peace treaty. 4. Calm, silence” (SUM-11, IV: 712); War “1. Organised armed struggle between states, social layers, etc. 2. Fig. A state of hostility between anybody; argument, quarrel with somebody, struggle” (VTSSUM: 186) and Peace “1. No disagreement, hostility, argument; consent (in 4th mean.). 2. No armed struggle between two or more nations, states; opposite *war*. 3. Compromise between the fighting sides to cease fire; peace treaty. 4. Calm, silence” (VTSSUM: 667); War 1. Organised armed struggle between states, nations or armed groups within a country. 2. Fig. A state of hostility between anybody; argument, quarrel with somebody, struggle (SUM-20, III: 469) and Peace 1. No disagreement, hostility, argument; consent (in 4th mean.). 2. No armed struggle between two or more nations, states; opposite *war*. 3. Compromise between the fighting sides to cease fire; peace treaty. 4. Calm, silence (in mean. 1–3)” (SUM-20, IX: 1621). As we see, the meanings of the lexical units under analysis in reputable explanatory dictionaries of the Ukrainian language mainly coincide. It is worth mentioning that these concepts acquire new semantic shades, get new connotations and evaluative paradigms at the present historic moment.

Today’s war in Ukraine differs greatly from previous traditional world wars. If the main purpose of wars and military operations in the past was to achieve the military goal using physical activities (destruction, occupation, etc.), physical military operations and their results affected cognitive sphere, i.e. the sphere of understanding and comprehension of reality. Nowadays it is vice versa – the war as physical violence aims at affecting human conscience, their behavior (Building, 2015). Today’s war in Ukraine is mainly a powerful information war, “the war in minds and for minds. It is the war for cognitive and communication control, for power over human mind, their emotions, thinking, and consequently, for their behavior. It is the struggle for dominance of certain ideas about the world and events in social and individual environment and simultaneous destruction of opposite, “hostile” opinions and thoughts” (Parakhonsky, 2019, p. 21), “it is quasi-aggressive tool of peaceful life, not only of armed conflict between states. And sustainable development of information space produces new opportunities for using these tools. The Internet enabled it to reach new peaks” (Pocheptsov, 2015, p. 3).

Despite the considerable amount of scientific works of philosophical and historical nature on the ontology of war and peace, the variety of approaches to study these linguistic units from the point of view of cognitive linguistics, sociolinguistics, communicative pragmatic linguistics, etc., the issue of dominant and peripheral ideas of these concepts in native speakers’ minds has not been researched enough. This fact contributes to the topicality and prospects of our research. In the context of tough competitive struggle in modern politics, business,

economy and social life the concept of Peace acquires some new sense and requires integral systemic description from the perspective of word association test.

The purpose of our research is to carry out integral psycholinguistic analysis of the concept of Peace verbal markers and to compare its associative and lexical meanings at the present stage of the Ukrainian language development. The stated purpose presupposes solution of the following tasks: 1) on the basis of the responses received in word association test to single out and characterize lexical semantic groups which model the lexical semantic field of the word-stimulus *peace*; 2) to define dominant ideas of the respondents and unconscious components of the concept of Peace semantic space to the maximum extent possible; 3) to analyse the received responses according to grammar criterion; 4) to compare the results of psycholinguistic and lexicographic descriptions of the word meaning.

We support the opinion of some scholars to differentiate these two types of meanings in terms of terminology – the ones recorded in explanatory dictionaries, and the ones represented in native speakers' minds (Popova & Sternin, 2007, p. 66).

According to Popova and Sternin, the systemic lexicographic meaning has been formed in two ways – logically and descriptively. The logical method is connected to the attempts of lexicographers to minimize the features of a certain word meaning. The descriptive method relies on the limited volume of a dictionary entry. Lexical meanings recorded in dictionaries usually form the nucleus of a word meaning. Those semantic features that are not recorded in dictionary entries but are regularly represented in the contexts of a word usage make it possible to state that there are some additional shades in a word meaning, peripheral, potential ones, and confirm the existence of psychologically real (or psycholinguistic) meaning of the word (Popova & Sternin, 2007, p. 67).

The psychological meaning of the word is a structured unity of all semantic components virtually connected to a certain sound representation in native speakers' minds. This is the volume of semantic components that is activated in native speakers' minds by a word taken in isolation, in a unity of all its semantic properties – more or less bright, nuclear and peripheral ones (Popova & Sternin, 2007, p. 68).

A psychologically real word meaning may be theoretically defined and characterized in its basic properties due to comprehensive analysis of all recorded contexts of the word usage. In addition, it may also be effectively defined in an experimental way – though the prism of psycholinguistic experiment.

2. Methods and Procedure

Representatives of different linguistic schools (Sternin & Rudakova, 2001; Cremers & Chemla, 2016; Rakosi, 2017) are actively working on elaboration and improvement of psycholinguistic analysis methodology. Semantic space construction using word association test by college students has been studied in the

works (El-Dakhs, Goldfarb, Halpern, Kostruba, Kotys, Letiucha, Oleksandr Petrov, Vadym Zavadsky). The free WAT is one of the most efficient ways to describe concepts. It enables to define the biggest amount of concept features typical for the current state of native speakers' mind (Kriuchkova, 2005; Kurhanova, 2019; Vivas, Manoilloff, García, Lizarralde, & Vivas, 2019).

Free word association test presupposes that respondents are given a list of words-stimuli to get quick association responses. According to the requirement of the test the associative reply-response should follow at once, without taking time to think, because if there is choice, there is no association process in the sense traditionally accepted in psychology (Frumkina, 2003). It is important to emphasize that free word association test does not restrict the choice of responses by any criterion and presupposes no limits of verbal reactions. Thus, in most cases respondents give not one, but two or even more responses to the word-stimulus. According to Martinek, "second, third, etc. responses, which are usually not recorded in associative dictionaries, also comprise important information which may be used, in particular, to explicate corresponding conceptual structures in speakers' mind" (Martinek, 2007, p. 14).

To carry out psycholinguistic diagnostics of the concept of Peace verbal markers we have conducted free word association test which has been performed in writing. 148 respondents have been engaged in the experiment (first and second-year students of Faculty of Philology and Journalism, Lesya Ukrainka Volyn National University – native speakers of Ukrainian), aged 18–20. To analyse associations there has been elaborated an express questionnaire. The questions have been connected to the word-stimulus Peace and its association field – words related to the word-stimulus. No refusals have been recorded. In this article we only focus on direct responses received to the word-stimulus Peace. Results of other types of reactions, such as phonetic, derivational, phraseological will be analysed in our further research.

At the same time, in order to achieve objective results, we have combined psycholinguistic and lexicographic data for verbal representation of the concept. To fulfill this we have also utilized the following methods: *observation* of linguistic data, *descriptive method* with its techniques of systemic comprehensive study of associative and lexical meanings of the concept of Peace; *psycholinguistic analysis* – to define emotional responses of a person to the given word-stimulus; *contextual analysis* – to study extralinguistic factors, from the perspective of which verbal markers of the concept of Peace have been characterized; *component analysis* – to differentiate the received words-reactions into semantic groups, etc.

3.Results and Discussion

Taking into account the traditional conditions under which word association test has been carried out, where only the first answer is taken into consideration, the number of the responses received to the word-stimulus coincides with the number

of respondents (148). As 105 words- responses have been received– 329 word-tokens – responses to the word-stimulus *peace*, we have decided to present them in full. It enabled us to reproduce the system of associations, created by the analysed word-stimulus: *calm (peace) / спокій 59*, *peace of mind / спокій (на, в) душі 5*, *peace of mind / душевний спокій 3*, *peace in the country / спокій в країні 2*, *peace in the state / спокій в державі 2*, *harmony / злагода 27*, *friendship / дружба 18*, *happiness / щастя 16*, *silence / тиша 8*, *love / любов 8*, *consent / згода 8*, *kindness / добро 7*, *agreement / порозуміння 7*, *harmony / лад 6*, *rapproach / взаєморозуміння 6*, *dove / голуб 6*, *no war / відсутність війни 5*, *safety / безпека 5*, *joy / радість 5*, *sun / сонце 5*, *light / світло 5*, *life / життя 5*, *blessing / благодать 3*, *harmony / гармонія 3*, *smile / посмішка 3*, *welfare / благополуччя 3*, *tears of joy / сльози радості 3*, *tears / сльози 2*, *freedom / свобода 2*, *support / підтримка 2*, *friendliness / дружелюбність 2*, *balance / рівновага 2*, *cosiness / затишок 2*, *solidity / міцність 2*, *strength / сила 2*, *commonwealth / співдружність 2*, *laughter / сміх 2*, *angel / ангел 2*, *holiday / свято 2*, *God / Бог 2*, *bird / птах 2*, *family / родина 2*, *happy family / щаслива родина*, *all family / вся родина*, *child / дитина 2*, *smiling child / усміхнена дитина*, *happy child / щаслива дитина*, *mom / мама*, *happy mom / щаслива мама*, *grandmother / бабуся*, *sky / небо 2*, *clear sky / чисте небо*, *cloudless sky / безхмарне небо*, *bright sky / світле небо*, *stability / стабільність*, *humanity / людяність*, *justice / правосуддя*, *decency / порядність*, *liberty / воля*, *independence / незалежність*, *prosperity / добробут*, *confidence / впевненість*, *warmth / тепло*, *compromise / компроміс*, *reconciliation / примирення*, *comfort / комфорт*, *mutual respect / взаємоповага*, *truce / перемир'я*, *tranquility / умиротворення*, *peacefulness / миролюбство*, *soul / душа*, *consolation / втіха*, *eternity / вічність*, *defender / захисник*, *cat / кіт*, *in a friendly way / дружно*, *joyfully / радісно*, *peacefully / спокійно*, *trust / довіра*, *field / поле*, *demonstration / демонстрація*, *Independence Day / День незалежності*, *Minsk Agreements / Мінські угоди*, *yellow and blue flag / жовто-блакитний прапор*, *willow / верба*, *guilder rose / калина*, *bread / хліб*, *salt / сіль*, *chewing gum / жувачка*, *super! / супер!*, *wahey! / клас!*, *cool! / сила!*, *Ukraine / Україна*, *Lord / Господь*, *Mother of God / Божя Мати*, *The Son of God / Син Божий*, *Holy Spirit / Святий Дух*, *grace of the Lord / благодать Господня*, *playground / дитячий майданчик*, *flowers are in bloom / квіти цвітуть*, *greens abound / зелень буває*, *birds are singing / птахи співають*, *doves are flying / голуби літають*, *cheerful people are walking around the city / веселі люди гуляють по місту*, *child is running along the path / дитина біжить стежкою*. Out of the abovementioned responses, 44 have been used two times or more (from 2 to 59 times –268 word-tokens in total), 61 have been used only one time.

The analysis of the responses received has enabled us to define the most frequent ones, out of which the lexeme-association *calm (peace) / спокій 59* is dominant. Sometimes its semantics is concretized using nouns or adjectives, such

as *peace of mind* / *спокій (на, в) душі* **5**, *peace of mind* / *душевний спокій* **3**, *peace in the country* / *спокій в країні* **2**, *peace in the state* / *спокій в державі* **2**. Besides, for 8 respondents *peace* is associated with *silence* / *тиша*, for 3 of them – with *blessing* / *благодать*, for 1 – with *tranquility* / *умиротворення*, which are semantically close to the word *calm (peace)* / *спокій*. It is worth mentioning that such associations to the word-stimulus *peace* coincide with one of its lexical meanings, recorded in dictionaries (see *peace* / *мир* in 4th meaning – its “calm (peace), silence”(SUM-11, IV: 712; VTSSUM : 667; SUM-20, IX: 1621).

The following responses are quite frequent: *harmony* / *злагода* **27**, *friendship* / *дружба* **18**, *love* / *любов* **8**, *consent* / *згода* **8**, *agreement* / *порозуміння* **7**, *harmony* / *лад* **6**, *rapport* / *взаєморозуміння* **6**, which directly or indirectly correlate with the first lexical meaning of the word-stimulus (see *peace* “1. No disagreement, hostility, argument; consent (in 4th mean.) ” (SUM-11, IV: 712; VTSSUM: 667; SUM-20, IX: 1621). The unique responses *mutual respect*, *trust*, *support*, *friendliness* are semantically close to these words.

The second lexical meaning of the word-stimulus *peace*, namely “2. No armed struggle between two or more nations, states; opposite *war*” (SUM-11, IV: 712; VTSSUM: 667; SUM-20, IX: 1621) is directly or indirectly related to the following responses of the respondents: *no war* / *відсутність війни* **5**, *safety* / *безпека* **5**, *life* / *життя* **5**, *commonwealth* / *співдружність* **2**, *stability*, *welfare* / *стабільність*, *благополуччя* **3**, *prosperity* / *добробут*, *confidence* / *впевненість*, *decency* / *порядність*, *independence* / *незалежність*, *liberty* / *воля*. The third lexical meaning of the word-stimulus *peace*, namely “3. Compromise between the fighting sides to cease fire; peace treaty” (SUM-11, IV: 712; VTSSUM: 667; SUM-20, IX: 1621) can be traced in the following non-repetitive responses: *truce* / *перемир'я*, *reconciliation* / *примирення*, *compromise* / *компроміс*, *Minsk Agreements* / *Мінські угоди*. Other responses of the respondents are not related to the lexical meanings recorded in dictionaries: *happiness* / *щастя* **16**, *kindness* / *добро* **7**, *harmony* / *гармонія* **3**, *coziness* / *затишок* **2**, *joy* / *радість* **5**, *consolation* / *втіха*, *holiday* / *свято* **2**, *light* / *світло* **5**, *warmth* / *тепло*, *sun* / *сонце* **5**, *smile* / *посмішка* **3**, *laughter* / *сміх* **2**, *tears* / *сльози* **2**, *joyfully* / *радісно*, *in a friendly way* / *дружно*, *peacefully* / *спокійно*. It is worth mentioning that those are emotional evaluative lexemes with positive connotation.

Responses that belong to a specific type of the word-sentence are sporadic. In Ukrainian linguistics units of this type have been classified as “non-segmented exclamations-sentences” (Vykhovanets, 2004, p. 374), which indirectly correlate with utterances. They do not define extralinguistic situations, but only render emotions and feelings of the speaker that are related to such situations, or express their subjective positive or negative assessment: *super!* / *супер!*, *wahey!* / *клас!*, *cool!* / *сила!*

Semantically distant associations correlate with the names of concrete concepts: *sky* / *небо* **2**, *angel* / *ангел* **2**, *mom* / *мама*, *God* / *Бог* **2**, *bird* / *птаха* **2**,

*family / родина 2, child / дитина 2, defender / захисник, cat / кіт, field / поле, demonstration / демонстрація, Independence Day / День незалежності, blue and yellow flag / жовто-блакитний прапор, granny / бабуся, Lord / Господь, Mother of God / Божя Мати, The Son of the God / Син Божий, Holy Spirit / Святий Дух, Ukraine / Україна, willow / верба, guelder rose / калина, bread / хліб, salt / сіль, chewing gum / жувачка; abstract concepts: eternity / вічність, soul / душа, humanity / людяність, justice / правосуддя, solidity / міцність, strength / сила; syntactic structures: clear sky / чисте небо, cloudless sky / безхмарне небо, bright sky / світле небо, smiling child / усміхнена дитина, happy child / щаслива дитина, happy mom / щаслива мама, happy family / щаслива родина, all family / вся родина, playground / дитячий майданчик, flowers are in bloom / квіти цвітуть, greens abound / зелень буває, birds are singing / птахи співають, doves are flying / голуби літають, cheerful people are walking around the city / веселі люди гуляють по місту, child is running along the path / дитина біжить стежкою. These associations do not correlate with any of the lexical meanings of the word-stimulus, recorded in the dictionaries. We believe that their sense connection with the word-stimulus *peace* can be traced at the unconscious level, which reflects psycholinguistic meaning of this word. The association *chewing gum / жувачка*, which seems to be absurd as it has no relation to the word-stimulus, needs to be clarified. When used in the appropriate context: *peace, friendship, chewing gum (a Ukrainian idiomatic expression) / мир, дружба, жувачка* – it acquires additional semantic shades. It should be mentioned that in such association line it is used in colloquial speech.*

Thus, outlining respondents' dominant ideas and defining unconscious components of the concept of Peace semantic space, we mainly focused on the frequency of responses to the respective word-stimulus and correlation of its associative and lexicographic meanings.

The results of free word association test to some extent correlate with the responses to the word-stimulus *peace*, recorded in Words Associations Network, such as *disarmament, tranquility, treaty, prosperity, quiet, accord, reconciliation, negotiation, ceasefire, , truce, peacekeeping, justice, armistice, goodwill, mediation, serenity, overture, envoy, righteousness, loving, breach, harmony, strife, discord, bloodshed, endowment, stability, diplomacy, hostility, happiness, agreement, conflict, reparation, neutrality, allies, mediator, aggression, pledge, unity, war, everlasting, perpetual, peaceful, loving, humanitarian, negotiate, war, disturb, reaffirm, restore, ratify* (Words Associations Network).

The abovementioned confirms the opinion of Popova & Sternin (2008) that the psycholinguistic meaning of a word is wider and more extensive than its lexicographic one which “is generally included in psychologically real meaning” (Popova & Sternin, 2007, p. 68), though its components may occupy different places in the psycholinguistic meaning based on their intensity.

The analysis of the responses received in this word association test has been carried out according to the grammar criterion which presupposes their division into pragmatic and syntagmatic. 21 associations belong to syntagmatic ones: *peace of mind / спокій (на, в) душі 5, peace of mind / душевний спокій 3, peace in the country / спокій в країні 2, peace in the state / спокій в державі 2, no war / відсутність війни 5, tears of joy / сльози радості 3, clear sky / чисте небо, cloudless sky / безхмарне небо, bright sky / світле небо, happy family / щаслива родина, all family / вся родина, happy mom / щаслива мама, smiling child / усміхнена дитина, happy child / щаслива дитина, playground / дитячий майданчик, flowers are in bloom / квіти цвітуть, greens abound / зелень буяє, birds are singing / птахи співають, doves are flying / голуби літають, cheerful people are walking around the city / веселі люди гуляють по місту, child is running along the path / дитина біжить стежкою. Six syntagmatic responses occurred more than once (from two to five times – 20 word-tokens in total), 15 responses have been given only one time. Syntagmatic associations constitute 10.64 % of the total number of all responses analysed. We believe they prove figurative worldview of the respondents, reflected in the individual picture of the world.*

All other associations that we received on the analysed word-stimulus belong to paradigmatic ones: *calm (peace) / спокій 59, harmony / злагода 27, friendship / дружба 18, happiness / щастя 16, silence / тиша 8, love / любов 8, consent / згода 8, kindness / добро 7, agreement / порозуміння 7, harmony / лад 6, rapport / взаєморозуміння 6, dove / голуб 6, safety / безпека 5, joy / радість 5, sun / сонце 5, light / світло 5, life / життя 5, harmony / гармонія 3, smile / посмішка 3, godsend / благодать 3, welfare / благополуччя 3, tears / сльози 2, sky / небо 2, freedom / свобода 2, support / підтримка 2, friendliness / дружлюбність 2, balance / рівновага 2, coziness / затишок 2, solidity / міцність 2, strength / сила 2, commonwealth / співдружність 2, laughter / сміх 2, angel / ангел 2, mom / мама, holiday / свято 2, God / Бог 2, bird / птах 2, family / родина 2, child / дитина 2, stability / стабільність, humanity / людяність, justice / правосуддя, decency / порядність, liberty / воля, independence / незалежність, prosperity / добробут, confidence / впевненість, warmth / тепло, compromise / компроміс, reconciliation / примирення, comfort / комфорт, mutual respect / взаємоповага, truce / перемир'я, tranquility / умиротворення, peacefulness / миролюбство, soul / душа, consolation / втіха, eternity / вічність, defender / захисник, cat / кіт, in a friendly way / дружно, joyfully / радісно, peacefully / спокійно, trust / довіра, field / поле, demonstration / демонстрація, granny / бабуся, willow / верба, guelder rose / калина, Ukraine / Україна, Lord / Господь, Mother of God / Божя Мати, The Son of God / Син Божий, Holy Spirit / Святий Дух, Minsk Agreements / Мінські угоди, Independence Day / День незалежності, yellow and blue flag / жовто-блакитний прапор, grace of the Lord / благодать Господня, bread / хліб, salt /*

сіль, chewing gum / жувачка, super! / супер!, wahey! / клас!, cool! / сила! We have singled out 84 words-associations of this type (a significant part of them have been used more than once: from 2 to 59 times, 294 word-tokens altogether), which constitute 89.36 % of the total of all responses analysed. They are all nouns, with a few exceptions, i.e. they belong to the same part of speech as the word-stimulus. Predominance of paradigmatic grammatical associations represents students' analytical and integrated thinking.

The associations on the word-stimulus *peace* make up 11 lexical semantic groups to denote: 1) the state of environment, people's inner world, their physical, emotional and mental state: *calm (peace) / спокій 59, cosiness / затишок 2, silence / тиша 8, godsend / благодать 3, balance / рівновага 2, light / світло 5, warmth / тепло, peace of mind / спокій (на, в) душі 5, peace of mind / душевний спокій 3, happiness / щастя 16, love / любов 8, kindness / добро 7, harmony / гармонія 3, joy / радість 5, consolation / втіха, smile / посмішка 3, laughter / сміх 2, tears / сльози 2; tears of joy / сльози радості 3, tranquility / умиротворення, confidence / впевненість, life / життя 5, solidity / міцність 2, strength / сила 2, humanity / людяність, decency / порядність, joyfully / радісно, peacefully / спокійно, in a friendly way / дружно; 2) relations between people, nations, states, etc.: *harmony / злагода 27, consent / згода 8, friendship / дружба 18, peace in the country / спокій в країні 2, peace in the state / спокій в державі 2, no war / відсутність війни 5, safety / безпека 5, agreement / порозуміння 7, harmony / лад 6, rapport / взаєморозуміння 6, support / підтримка 2, friendliness / дружелюбність 2, commonwealth / співдружність 2, stability / стабільність, independence / незалежність, prosperity / добробут, compromise / компроміс, reconciliation / примирення, comfort / комфорт, mutual respect / взаємоповага, truce / перемир'я, peacefulness / миролюбство, trust / довіра, welfare / благополуччя 3; 3) family relations and people based on the functions they perform: *defender / захисник, family / родина 2, happy family / щаслива родина, all family / вся родина, child / дитина 2, smiling child / усміхнена дитина, happy child / щаслива дитина, mom / мама, happy mom / щаслива мама, granny / бабуся; 4) confessional nominations: Lord / Господь, angel / ангел 2, grace of the Lord / благодать Господня, God / Бог 2, soul / душа, eternity / вічність, Mother of God / Божя Мати, the Son of God / Син Божий, Holy Spirit / Святий Дух; 5) flora and fauna: *bird / птах 2, dove / голуб 6, cat / кіт; willow / верба, guelder rose / калина; 6) space concepts: Ukraine / Україна, playground / дитячий майданчик, field / поле; 7) cosmological concepts: sun / сонце 5; sky / небо 2, clear sky / чисте небо, cloudless sky / безхмарне небо, bright sky / світле небо; 8) social political and state concepts: *liberty / воля, freedom / свобода 2, justice / правосуддя, holiday / свято 2, demonstration / демонстрація, Independence Day / День Незалежності, yellow and blue flag / жовто-блакитний прапор, Minsk Agreements / Мінські угоди; 9) household nominations: *bread / хліб, salt / сіль, chewing gum / жувачка; 10) statements: *Flowers are in bloom / Квіти*******

цвітуть, Greens abound / Зелень буяє, Birds are singing / Птахи співають, Doves are flying / Голуби літають, Merry people are walking around the city / Веселі люди гуляють по місту, Child is running along the path / Дитина біжить стежкою; 11) speaker's feelings and emotions that correlate with non-segmented exclamations-sentences: Super! / Супер!, Wahey! / Клас!, Cool! / Сила!

Thus, the detailed analysis of the received associations made it possible to single out 11 lexical semantic groups, out of which the most numerous responses are connected with the state of environment, people's inner world, their physical, emotional and mental state, moral and ethic properties (155 word-tokens – 47.1 %). A significant part of the respondents associates *peace* with “calm (peace)”. In this association line we have also defined non-typical responses: *confidence / впевненість, life / життя, joyfully / радісно, in a friendly way / дружно, peacefully / спокійно*, etc., related to students' personal experience.

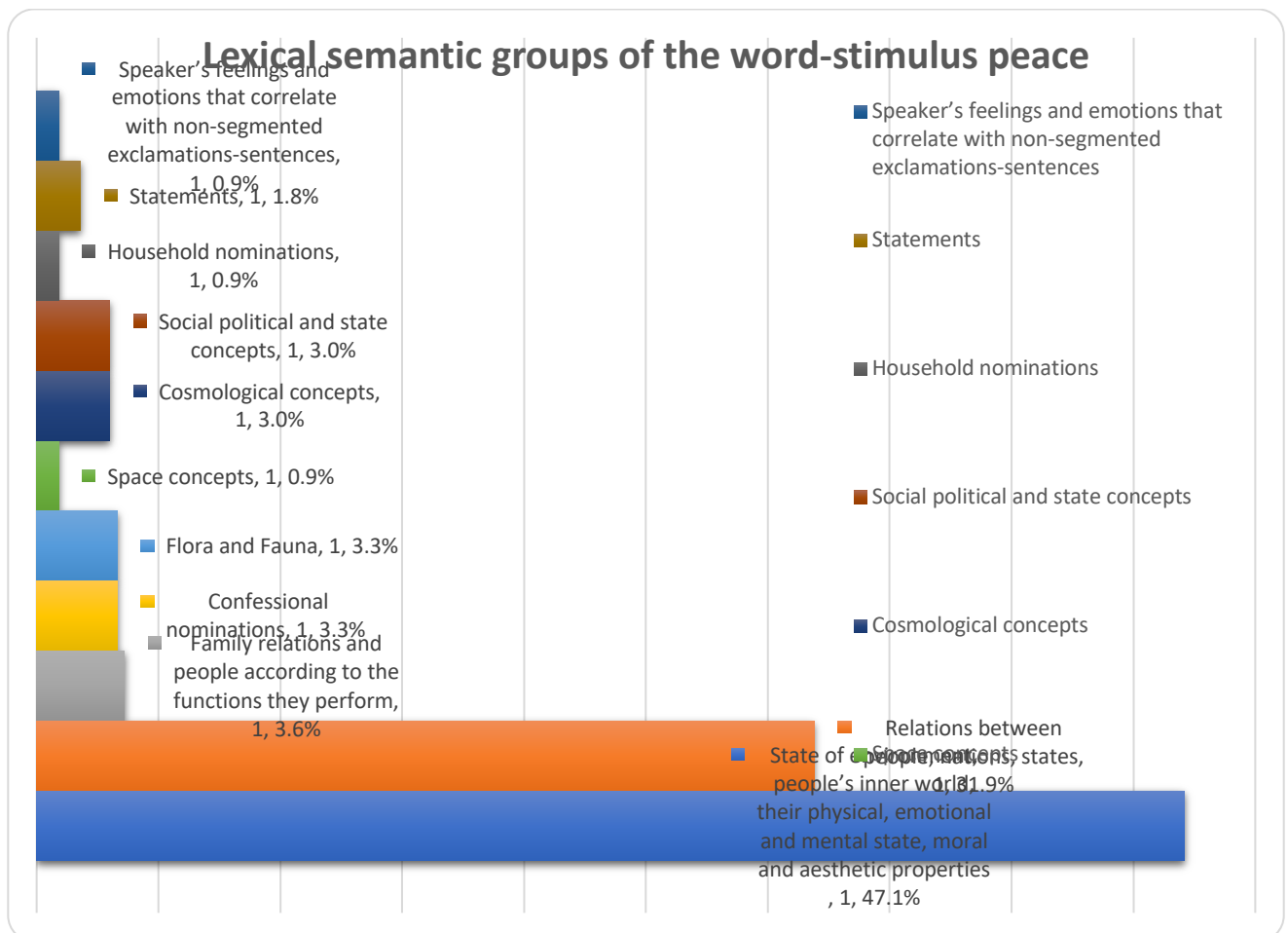
The next largest group of associations directly connected to relations between people, nations, states (105 word-tokens – 31.9 %). Repetitive responses are *harmony / злагода, consent / згода, friendship / дружба, agreement / порозуміння, harmony / лад, rapport / взаєморозуміння*, etc., non-repetitive ones are as follows: *mutual respect / взаємоповага, independence / незалежність, stability / стабільність, welfare / благополуччя, reconciliation / примирення, truce / перемир'я*, etc.

Non-typical responses are the ones that comprise lexemes to denote family relations and people based on the functions they perform: *family / родина, child / дитина, mom / мама, granny / бабуся, smiling child / усміхнена дитина*, etc. (12 word-tokens – 3.6 %); confessional nominations: *Lord / Господь, grace of the Lord / благодать Господня, God / Бог, the Son of God / Син Божий*, etc. (11 word-tokens – 3.3 %); nominations of flora and fauna: *dove / голуб, cat / кіт; willow / верба, guelder rose / калина*, etc. (11 word-tokens – 3.3 %); space concepts: *Ukraine / Україна, playground / дитячий майданчик, field / поле* (3 word-tokens – 0.9 %); cosmological concepts: *sun / сонце, sky / небо, clear sky / чисте небо, cloudless sky / безхмарне небо*, etc. (10 word-tokens – 3.0 %); sociopolitical and state concepts: *demonstration / демонстрація, Independence Day / День Незалежності, yellow and black flag / жовто-блакитний прапор, Minsk Agreements / Мінські угоди*, etc. (10 word-tokens – 3.0 %); household nominations: *bread / хліб, salt / сіль*, etc. (3 word-tokens – 0.9 %); statements: *Flowers are in bloom / Квіти цвітуть, Merry people are walking around the city / Веселі люди гуляють по місту, Child is running along the path / Дитина біжить стежкою*, etc. (6 word-tokens – 1.8 %); speaker's feelings and emotions that correlate with non-segmented exclamations-sentences: *Super! / Супер!, Wahey! / Клас!, Cool / Сила!* (3 word-tokens – 0.9 %) (see Table 1, Figure 1).

Table 1.
Lexical Semantic Groups of the Word-Stimulus Peace

Name of the group	%
State of environment, people’s inner world, their physical, emotional and mental state, moral and aesthetic properties	47.1
Relations between people, nations, states	31.9
Family relations and people based on the functions they perform	3.6
Confessional nominations	3.3
Flora and Fauna	3.3
Space concepts	0.9
Cosmological concepts	3
Sociopolitical and state concepts	3
Household nominations	0.9
Statements	1.8
Speaker’s feelings and emotions that correlate with non-segmented exclamations-sentences	0.9

Figure 1.
Lexical semantic groups of the word-stimulus peace



These associations reflect peculiarities of respondents' worldview, individual figurative worldview.

4. Conclusions

Psycholinguistic analysis of the concept of Peace verbal markers made it possible to define typical and non-typical respondents' ideas of the word-stimulus *peace* from the perspective of free word association test. The first responses belong to the dominant ones. They correlate with the lexical meaning of the word-stimulus recorded in modern dictionaries and reflect direct connection between the word-stimulus and associations. The latter ones are non-typical, unconscious elements of the concept of Peace semantic space, that outline personal worldview of the respondents, and they have no relation to the lexical meanings recorded in dictionaries. Their sense connection is possible only at the unconscious level and concerns the psycholinguistic meaning of this word. In the analysed associations paradigmatic responses (89.36 %) prevail over syntagmatic ones (10.64 %). On the basis of the received responses lexical associative field of the word-stimulus *peace* has been modeled and characterized. It includes 11 lexical semantic groups. The most numerous responses are connected to the state of environment, people's inner world, their physical, emotional and mental state, moral and ethic properties (47.1 %). The next largest group reflects relations between people, nations, states (31.9 %). Few respondents associate the word-stimulus *peace* with nominations to denote family relations and people based on the functions they perform (3.6 %); confessional nominations (3.3 %); nominations of flora and fauna (3.3 %); space concepts (0.9 %); cosmological concepts (3.0 %); social political and state nominations (3.0 %); household nominations (0.9 %); statements (1.8 %); speaker's feelings and emotions (0.9 %). These associations reflect personal experience and peculiarities of respondents' worldview. We see the prospects of this research in the in-depth analysis of associative fields of the words connected to the word-stimulus *peace* through the prism of psychological and linguistic factors.

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ADAPTATION, ASSOCIATION, AND ANALOGY: TRIPLE A OF THE TRANSLATOR'S DECISION-MAKING

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Abstract. The article is dedicated to the analysis of concurrent verbalizations (also known as Think-Aloud Protocols, or TAPs) of semi-professional subjects of the introspective experiment based on the initial fragment of Steven Brust's fantasy novel *The Desecrator*. The research was conducted on the basis of activity-oriented approach within which translation is treated as an integrated cognitive process that unites perceptive, interpretative and productive operations. The participants of the experiment were students for Master's Degree in Translation at the School of Foreign Languages of V. N. Karazin Kharkiv National University, Ukraine. The choice was determined by the fact that the subjects of this type have a high level of a foreign language competence as well as sufficient theoretical background in translation, while, at the same time, they lack practical experience which requires from them considerable psycho-cognitive and creative effort for decision-making in ambiguous situations. The aim of the research is to determine the role of adaptation, association and analogy in resolving problem situations in translation. Adaptation, association and analogy were highlighted as both psychological mechanisms and cognitive procedures of the translator's decision-making. The psychological function of adaptation lies in bringing the translator to the state of adaptivity by applying available knowledge to new situations; its cognitive function lies in adjusting new or alien to the target audience concepts in accordance with the translator's individual worldview. Psycho-cognitive function of association is twofold: firstly, the translator is expected to decipher and reproduce associations underlying the author's decisions; secondly, the translator's own decisions are often of associative nature. Analogical reasonings substantiate the translator's choices through similarity-based heuristics, like those of representativeness and compatibility. The research allowed to expose some varieties of psycho-cognitive mistakes and to express the assumption that the translator's erroneous decisions are ensued by the malfunctioning of the above mechanisms, i.e. by incorrect adaptations, associations, analogies.

Keywords: *adaptation, analogy, association, psycho-cognitive mechanisms and procedures, translation methodology, translator's decision-making.*

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Олександр Ребрій, Владислава Демецька. Адаптація, асоціація та аналогія: три важливих механізми прийняття рішень в перекладі.

Анотація. Статтю присвячено аналізу паралельних вербалізацій (також Протоколи Міркуй Уголос або ПМУ), отриманих від напівпрофесійних інформантів в перебігу перекладу початкового уривку фентезійного роману Стівена Браста “The Desecrator”. Дослідження здійснено із застосуванням діяльнісно-орієнтованого підходу, з перспективи якого переклад розглядають як інтегрований когнітивний процес, що об’єднує перцептивні, інтерпретаційні та продукційні операції. Учасниками експерименту були студенти Харківського національного університету імені В.Н.Каразіна (Україна). Такий вибір зумовлено тим фактом, що ці суб’єкти мають і високий рівень компетентності в іноземній мові, і достатні теоретичні знання в перекладі, хоча й мають недостатній рівень практичного досвіду, який вимагає від них значних психо-когнітивних та творчих зусиль для прийняття рішень у ситуаціях неоднозначності. Метою дослідження є визначення ролі адаптації, асоціації та аналогії у вирішенні проблемних ситуацій в перекладі. Адаптацію, асоціацію та аналогію було висвітлено як психологічні механізми та когнітивні процедури прийняття перекладацьких рішень. Психологічна функція адаптації полягає у приведенні перекладача до стану адаптивності за рахунок використання наявних знань щодо нових ситуацій; її когнітивна функція полягає у пристосування нових або непритаманних цільовій аудиторії концептів у відповідності до індивідуальної картини світу перекладача. Психокогнітивна функція асоціації є подвійною: по-перше, очікується, що перекладач здатен розшифрувати та відтворити асоціації, що перебувають в основі рішень автора; по-друге, його власні рішення часто мають асоціативну природу. Міркування на основі аналогії визначають перекладацький вибір за допомогою евристик подібності, таких як евристика репрезентативності та евристика сумісності. Дослідження дало змогу виявити психокогнітивні типи помилок, спричинених порушенням дії зазначених механізмів.

Ключові слова: адаптація, аналогія, асоціація, методологія перекладу, перекладацькі рішення, психокогнітивні механізми і процедури.

1. Introduction.

Translator’s decision-making remains largely underinvestigated in its many aspects (among pioneers in this field Jiri Levý (Levý, 2000) and Katharina Reiss (Reiss, 2000) should be mentioned), in particular, our ideas of cognitive procedures and psychological mechanisms underlying this process are still vague and based more on assumptions than on firm evidence. However, hundreds of scientists all over the world have been making an attempt after attempt to take the lid off the black box of the translator’s mind: “Though valuable research exists in this area, it remains highly fragmented; and certain aspects appear to have been off-limits to direct empirical research” (Jones, 2006, p. 59).

Since translation has long been acknowledged as “an integrated cognitive process that combines mental operations of perception, interpretation, comprehension and production” (Zasiekina & Zasiekin, 2002, p. 101), the above efforts go hand in hand with a challenge of a much greater scale – to determine and investigate the ties between human mind, language and speech production which is precisely the area of responsibility for psycholinguistics. Thus, *the aim* of our research is to describe how general psychological mechanisms and, simultaneously, cognitive procedures of adaptation, association and analogy that regulate various manifestations of human behavior and thinking reveal themselves through the use of language in translation as a variety of speech and form of communication. Consequently, these mechanisms/procedures can be defined as *the object* of our research, while its *subject* is twofold: firstly, it is linguistic forms of externalizing adaptation, association and analogy in translation; secondly, it is various indications of the role and function of adaptation, association and analogy in translation as retrieved from concurrent verbalizations of the translators’ decision-making.

2. Methodology

The research is based on the strong belief that experimental method borrowed by translation studies from psychology and known as Think-Aloud Protocols (TAPs) can provide some indirect but rather insightful information as to the psycholinguistic substantiation of decision-making in translation. To this end, we designed and held an introspective TAP-type experiment in which 6 subjects gave concurrent verbalizations of their thoughts and considerations that came to their minds during the translation of a fiction text, namely, initial fragment (circa 2800 printed characters) from Steven Brust's fantasy novel "The Desecrator". The analysis of the subjects' reports together with their translations allowed to trace down how adaptation, association and analogy are manifested in problem situation to which we refer those concurrences of circumstances that do not have an unambiguous solution. Some erroneous decisions of the experiment's subjects turned out useful for exposing psycho-cognitive types of mistakes that beginner translators are prone to.

Though TAPs have been in active use in translation studies since the 1980s, their validity as to obtaining reliable cognitive/psycholinguistic data is still under question for fear of possible reactivity and incompleteness (Rojo, 2015). In response to these claims, Karl Anders Ericsson and Herbert Alexander Simon explained in their information processing model that "according to this verbal report procedure the new incoming information is *maintained* in attention until the corresponding verbalization of it is completed. The crucial aspect of this procedure is that the sequence of states, i.e. the information contained in attention and STM [Short-Term Memory – *O.R. V.D.*], remains the same with the verbal report procedure as it would be without the reporting procedure" (Ericsson, Simon, 1987, p. 32). The only observable difference between verbalized and non-verbalized task-completing is that "participants would take somewhat longer to complete the tasks while thinking aloud – presumably because of the additional time required for completing the overt vocalization of the verbal expression of the thoughts" (Ericsson, 2003, p. 10). Translation-wise, this difference seems irrelevant.

3. Results and Discussion

The 1st psychological mechanism of the translator's decision-making that falls in the focus of our attention is *adaptation*. In regard to translation, adaptation is usually treated as a strategy aimed at "directing information towards the culture of the consumer and making adjustments according to the general tastes of consumers of that culture" (Milton, 2009, p. 51–52). As a translation technique / method / procedure, adaptation is defined as "the extreme limit of translation", that is "used in those cases where the type of situation being referred to by the SL message is unknown in the TL culture. In such cases translators have to create a new situation that can be considered as being equivalent. Adaptation can, therefore, be described as a special kind of equivalence, a situational equivalence" (Vinay, Darbelnet,

1995, p. 39). What is more important, “in the context of comprehending the translator’s adaptation, determining the boundaries of its application, the role of the translator’s individual ‘psycholinguistic presence’ in a target text acquires supreme importance” (Demetska, 2019, p. 76).

Our view of adaptation is drastically different as it is aimed at exposing its role in translation as a psychological mechanism that leads an individual to the state of adaptivity as a result of conducting a successful and productive activity. In psychology, such an activity is known under the term ‘adaptive behavior’ understood as “those skills learned throughout development and performed in response to the expectations placed on us from our community and society at large” (Tasse, 2013). Thus, adaptation is “the process of restructuring problem situations by finding a new structural integrity” (Nalchadzan, 2009, p. 82). The level of creative input in adaptation processes varies: it can be lower for typical problem situations (those requiring standard solutions or those the translator is accustomed to) or higher for atypical problem situations that fall under umbrella term ‘translation difficulties’. In the latter case, adaptation is characterized as ‘innovative’ or ‘creative’ because it refers to those human activities that result in the creation of new values and introduce innovations into particular areas of culture. This understanding of adaptation correlates with peculiar to modern translation studies views of translation as a (relatively) independent creative activity.

Let us consider the following example: *It was early in the morning of the third day of the month of the Phoenix in the 230th year of the Reign of Her Glorious Majesty Zerika the Fourth that you sent me to meet the desecrator* (Brust, The Desecrator).

Quite naturally, the subjects faced considerable difficulties with both interpreting and reproducing such fictitious names as *(the month of the) Phoenix* and *(Her Glorious Majesty) Zerika the Fourth*. As a result, they aspired to adapt the names from an alternative world to those from the real one, since “one cognitive and practical way humans explore the new is by flavoring it with the old, the familiar” (Schulkin, 2009, p. 56). As Jay Schulkin points out, “naming objects – marking them and keeping track of them over time – is a fundamental feature of linguistic expression and a form of cognitive adaptation” (ibid.).

See, for instance, Protocol # 2: “*Month of the Phoenix* так і лишимо ‘місяця фенікса’. В наших історичних реаліях, хоча така птиця, яка володіла здібностями класичного фенікса, у західній міфології мала інше дещо ім’я ‘Жарптиця’, але зараз усі знають, хто такий ‘фенікс’ і, мабуть, це не викличе ніяких перешкод розумінню”.

Protocol # 3: “Місяць Фенікс, ні Фенікс, місто в США, штат Арізона, значить автор на щось натякає, але мені поки незрозуміло. <...> Значить, ми з’ясували, що “Зеріка” – це єврейський мудрець, а ‘четвертий’? Тепер у реченні вже все з’ясовано, знайомо, окрім місяця: чому саме його так назвали.

Ну, я вважаю, що можна залишити і 'фенікс'. Чомусь Вікіпедія видає 'Зеріка' як чоловіка, чому тут це жінка – також питання. Це мене збило з пантелику. Так... дивно, чому 'Зеріка' жіночого роду, ну нехай. <...> Так, але мені не дуже подобається”.

Protocol # 5: “Спозаранку третього дня місяця Фенікса’, я думаю, так і залишимо ‘місяця Фенікса’, хоча, можливо, потрібно робити інтерпретацію, що таке Фенікс, але я думаю, на сьогоднішній час уже немає в цьому потреби і навіть дитина знає, що значить Фенікс. Багато літератури про це все – і фільми, і все, що хочеш. <...> так... і далі ми маємо власну назву *HER GLORIOUS MAJESTY ZERIKA*, тобто має бути ім'я або королеви, або можливо якоїсь принцеси, тобто давайте це перекладемо – ‘її величності’. А як щодо перекладу назви? Чи правильно це взагалі буде українською мовою? ‘Зеріка’ чи ‘Зеріка’? (зміна наголосу), але мені чомусь здається, що на переклад цього імені наголос потрібно ставити на перший склад, так як асоціації лише з *zero* – ‘нуль’. Тобто – ‘Зеріка’. ‘Її величності Зеріки Четвертої’”.

First of all, one can see how the subjects are willing to adapt available (from both internal and external sources) knowledge (about what ‘a Phoenix’ is or who ‘Zerika’ is) to the new situation but fail to do it due to the lack of information about the relevance of this knowledge for the new cultural context of both alternative reality and target culture. As a result, they feel some frustration which is clearly pronounced in Protocol # 3: “*It baffled me*” and “*I don't like it very much*”. Thus, the elements under consideration can be defined as ‘frustrators’ that stir the feeling of dissatisfaction even when the decision is made.

Adaptation in translation concerns not only the translator's behavior but also his/her mental structures that are being formed in the process of perceiving and interpreting different types of source signs. When we speak about translation into a native language, it would be natural to adjust new or alien to the target audience concepts in accordance with the translator's individual worldview as a representative of a certain culture and bearer of a corresponding mentality. At the same time, information that is to be translated into a new language and transfused into a new culture is, drawing on Andre Lefevere's metaphor, ‘refracted’, or, drawing on Mona Baker's metaphor, ‘reframed’ in the translator's mind in accordance with their ideas as to the specifics of a target audience's collective worldview. It also means that in a conceptual sense the strategy of domestication following which the translators are striving to adapt the mental image of a source text (or any of its components) in their minds to cognitive structures already present there (concepts, frames, scenes, etc.) helps them get over potential cognitive dissonance and thus can be regarded as a psychologically comfortable one. In this respect, let us consider the following example: “*It was around mid-morning when I found the cave, hidden by a profusion of calia*” (Brust, *The Desecrator*).

Our attraction here is drawn to such designation of time as ‘mid-morning’ which seems quite natural for the collective worldview of English-speaking individuals judging by such similarly-coined lexemes as ‘midnight’, ‘midday’,

‘mid-afternoon’, ‘midweek’, ‘midyear’, etc. For Ukrainian speakers, on the contrary, such segmentation of time periods is less obvious, since there are only two Ukrainian designations of this kind we could think of – ‘полуніч’ for ‘midnight’ and ‘полудень’ for ‘midday’. As a result, the subjects articulate their discomfort caused by the necessity to find the adequate form of reproducing this alien idea. See, for instance, protocol # 1: “*Mid-morning* – ‘всередині ранку’. ‘Рано вранці’, ‘пізно вранці’, ‘всередині ранку’ немає. Хай буде ‘вранці’”.

Protocol # 3: “*Mid-morning* – я розумію, що це середина ранку (це десь 10, 9 годин), наприклад, мені не зрозуміло, якщо чесно... можна взагалі нічого не писати, тому що це неважливо <...>. Можна написати ‘був ВЖЕ ранок’, тобто не ‘ще’ чи ‘тільки’, а вже середина, що нам і потрібно – ‘був вже ранок’”.

Protocol # 6: “Так, что такое *mid-morning* можно себе представить, но не совсем понятно, как это выразить, потому что ‘середина утра’ тоже не звучит. Можно сказать просто ‘наступного ранку’”.

The subjects opted for the same strategy of coping with the problem – they simply skipped the information that didn’t fit into the familiar frame of time segmentation and stopped at the ‘the next morning’ variant, which can be regarded as cognitive adaptation.

Association is our 2nd psycho-cognitive mechanism (in case of association the line between cognition and behavior is often blurred) of translation. If “associations are defined as complex representations that comprise unqualified relations between elementary representations” (Moors, 2014, p. 25), the associative mechanism can be characterized “as the activation of an association in memory” (ibid.). But more importantly, activated associations may have significant effect on performing all kinds of tasks, in our case – selecting the strategy and/or method of translation. According to Alexandra Zalevskaya, “the principle of associating as establishing connections of different types acts as one of the leading characteristics of human speech functioning which gives grounds to speak about the universality of the association mechanism” (Залевская, 1999, с. 51).

The role of association in the translator’s decision-making is twofold. Firstly, the translator is expected to detect (‘to catch’) the associations embedded into the original by the author, or, in other words, to try to understand what associations underlay the author’s decisions. At first glance, this task seems to be of a purely metempsychotic nature, although a closer look at it allows to make an exception for associations (more or less) clearly verbalized in the text or those referred to by the author in all kinds of paratexts. Secondly, the translator’s decisions may stem from their own associations. Obviously, TAPs provide us with the second type of association-related information that serves as a powerful insight into the translator’s decision-making.

On the other hand, author-related and translator-related associations are interwoven, since trying to get to the former ones the translator may inspire the latter ones which may or may not lead to a correct decision. As a rule, the translator’s excessive passion for their own associations results in the introduction into the translated text of information never intended by the author. As an example,

we can once again refer to the above case of the name 'Zerika', falsely associated with English 'zero'. Luckily, in this case the subjects' assumptions did not yield any wrong translations. Unfortunately, this was not the case with the following example: "*My next ride was on a wagon drawn by a pair of oxen. This was from a merchant, a Jhegaala*" (Brust, *The Desecrator*).

The problem was caused by the quasi-realia 'Jhegaala' whose reference was quite opaque due to the lack of the contextual explanatory markers as well as to the method of word-formation itself. Most probably, the nonce word was coined to denote a character's nationality/ethnicity or belonging to a social/professional group. In Protocol # 5 we can see how the subject is trying to ascribe a meaning to the word proceeding from its phonetic resemblance to another word that is present in his/her mental lexicon: "Назва, яку я не знаю, перша асоціація – 'Джигало'. Якщо купець.....джигало – на русском 'бабник', купець може бути бабником, отже буде 'Жигало'. <...>. Дали таке йому ім'я, що можливо і вирішило його долю.....Я зупиняюсь на варіанті – 'Жигало'".

The most interesting fact is that the word 'жиголо' (from French 'gigolo') that stirred the wrongful association in the translator's mind is misspelled in the Protocol and we can only guess if it's a genuine mistake or a subconscious desire to bring Brust's coinage closer to its imaginary Ukrainian prototype. To this, we can only add that the direct allusion to gigolo was not included into the final version of the translation, though the subject added the reference to the fact that 'Jhegaala' was the character's nickname which may be the consequence of the abovementioned considerations verbalized in the protocol: "*Наступну свою подорож я провів за допомогою запряжених волів. Від купця, на прізвисько Жигало, який був досить балакучим*".

This mistake is very interesting as it illustrates a rather typical course of action within which the translator freely adds to translation some (mis)information that was allegedly implied by the author. This type of behavior may be characterized with the help of a theatrical term 'gagging' in its negative meaning 'trying to do something that doesn't flow naturally from the scene' and is often instigated by false associations.

It looks like concurrent verbalizing is well suited for researching psychological and cognitive aspects of the translator's mistakes. Another type of association-based mistake is observed in cases when a particular linguistic element (mostly, a word) is associated with a particular referent so tightly that only one particular variant of translation is taken into account. Let us consider the following situation from the original: "*My sword was light on my back, but the cross guard kept smacking the back of my head when I climbed down off rocks. I tried to adjust it, but couldn't find a position that worked*" (Brust, *The Desecrator*).

The element in question in this context is 'guard' mistakenly interpreted as 'a person who keeps a protecting, supervising, or restraining watch or control over people' while in fact here it is part of a compound 'cross guard' meaning 'a bar of metal at right angles to the blade, placed between the blade and the hilt'.

See, for instance, Protocol # 4: “Якщо *guards* можна перекласти, як ‘конвоїри’, проте ми не знаємо, чи це справді конвоїри, можливо, потім ми змінимо цей момент. Якщо *cross guard*, можливо, *guards* було два, тому можна перекласти, як ‘по обидва боки від нього’. Гм, *couldn't adjust*, але до чого, до того, *guards kept smacking at his back*? Можливо, слід перекласти, не як ‘пристосуватись’, а як ‘звикнутись’, що звучало б краще. Якщо перекласти ‘я не міг знайти якийсь спосіб’, або ‘дійсний спосіб’, то в тексті буде ‘мало життя’, тобто, це не пасуватиме українській мові”.

The TAP demonstrates how initial association-based mistake is combined with other types of mistakes which eventually culminate in substituting a real source-text situation with a fictitious (farfetched) one. Cognition-wise, this case can be characterized as reframing. The mechanism of reframing can be presented as a sequence of mistakes: mistake 1 is caused by falsely associating ‘guard’ with a protecting/supervising person; mistake 2 is caused by falsely associating ‘cross’ with ‘two intersecting lines’ (as a result, the number of guards doubled); mistake 3 is caused by the assumption that two guards should be placed on both sides of the person they accompany, which is a clear case of adaptive ‘gagging’; mistake 4 is caused by both false association (guards are associated with rude treatment of their detainees) and adaptation (guards are the ones who smack the hero on the back of his head).

In the end, the translator’s imagination drew a picture in which two guards accompanied the hero on both sides smacking him periodically on the back of his head: “Я не відчував важкості свого меча за спиною, проте охоронці по обидва боки від мене час від часу ляскали мене ззаду, поки я спускався з гори. Я намагався звикнутись з цим, проте мені це так і не вдалось”. The fact that these ‘guards’ never surfaced in the text again didn’t seem to bother the subject much.

The experiment proves that TAP can be a very fruitful technique for investigating mistakes in translation not from their linguistic or stylistic but from psycho-cognitive perspective, especially when the subjects lack experience and are prone to erroneous judgments. Such mistakes can be presented as a malfunction of a system, a sort of a glitch in the translator’s thinking. What causes such glitches? Potential causes are manifold but our attention is drawn to those instances when faulty translations proceed from erroneous perception/interpretation of a source text elements. Presumably, such perceptions/interpretations are based on the same mechanisms that are responsible for correct ones. In other words, all the translator’s decisions are driven by universal psycho-cognitive mechanisms which in case of errors get ‘derailed’. Thus, we can speak about correct or incorrect adaptations, associations, etc.

One can also presume that the translator’s decision-making is under a strong pressure from those mental formations – models, prototypes, stereotypes – that have been interwoven into an intricate associative verbal network in his/her mind concerning both genre/text/idiolect and specifics of its/their reproduction in the target language and culture. As a result, the translator’s striving to adjust his/her

decision-making in accordance with these mental formations reveals associative nature of this creative process. See, for instance, Protocol # 2: “На жаль, у мене немає можливості отримати інформацію, щодо асоціацій від цих назв у носія мови, мабуть, деякі з них розраховані на те, що якісь історичні чи лінгвістичні реалії носіїв мови дають якусь додаткову інформацію, коли вони їх бачать, але я вважаю, що це теж такий стилістичний прийом автора, тому що у багатьох творах такого жанру – отже, це є казка, якість фентезі чи якийсь магічний твір, тобто, ми бачимо, що цей текст, безперечно, є вигаданим, і для творів такого жанру досить часто характерні такі власні назви, які бувають дуже заплутаними, епічними, тому що це якимось передає атмосферу цього магічного вигаданого світу, і якби вони були досить повсякденні, це було б, мабуть, нецікаве читачу і не відповідало тому впливу, який автор має на меті здійснити на свого читача”.

Association as a mechanism that activates in memory a representation of a certain object as a reaction to another object is tied by a causal type of relation to analogy as a mechanism that “involves the transfer of relational information from a domain that already exists in memory (usually referred to as the source or base domain) to the domain to be explained (referred to as the target domain)” (Vosniadou, Ortony, 1989, p. 6). Analogical reasoning that leads to the translator's decision-making can take form of different similarity-based heuristics, among which the heuristic of representativeness is the most common one. As its name implies, this method of action proceeds from the idea of representativeness, that is “an assessment of the degree of correspondence between a sample and a population, an instance and a category, an act and an actor or, more generally, between an outcome and a model” (Tversky, Kahneman, 2002, p. 22). In most instances, representativeness can be likened to similarity which, in its turn, can be surface (i.e. ‘perceptual’) and deep (‘underlying’ or ‘cognitive’). See, for instance Protocol # 3 where association leads to similarity-based, representativeness-type analogical reasoning: “*Indicate* я так розумію це ‘вияснить’, ‘подумать’... ‘тебе не приходило в голову, що я поспішав’... немає сенсу, тут написано, що не було ніякого поспіху... ‘тому я залишився в Адрілан...ці’ (ну як ‘Шрі-Ланка/ці’) ‘насолодитися цивілізацією’”.

In this case, surface verbal association basing on vocal similarity ‘Адріланка’ – ‘Шрі-Ланка’ is followed by an analogical reasoning: if ‘у Шрі-Ланці’, then ‘в Адріаланці’.

Protocol # 4: “‘Йолата’ – цікаво, можна і ‘Ялата’ і ‘Йолата’/‘Йалата’, але ‘Ялата’ схоже на Ялту, немає нічого незвичайного; ‘Йолата’ більш фентезійно і незвично звучить”. Here again, first comes surface verbal association basing on vocal similarity ‘Ялата’ – ‘Ялта’, and then analogical reasoning: if ‘Ялта’ is a real toponym, similar to it ‘Ялата’ is not suitable for a fantasy work.

Heuristic of compatibility is another similarity-based method of action in the course of which the translator identifies compatible possibilities proceeding from prior experience. Orlando Espino and Ruth M. J. Byrne suggest that people tend to make decisions “based on an immediate heuristic”; they “make their judgment by

envisaging initial possibilities, rather than fully thinking through all the possibilities” (Espino, Byrne, 2013, p. 127). In case of translation, this suggestion is illustrated by the number of alternatives translators get through before opting for the final one. Some of them are content with just a few while others browse through dozens of dictionaries in search of a perfect solution. See, for instance, Protocol # 1: “‘Лише вранці’. Як же це, *push, push bushes aside, push aside*. Показати-то можна. *push aside* – ‘отстранять’. Найтяжче описувати звичайні дії. ‘Відгорнув’, ‘відділив’, ‘відкинув’, ‘відсунув’, ‘відштовхнув’, ‘відгорнув’. ‘Відділив’, ‘від...’ ‘Відсунути’, ‘відкряти’. ‘Відмежувати’, ‘відвести’. Кусти – ‘розгорнути’, ‘розчехнути’. Що ж мені зробити з ними?”

4. Conclusion

The analysis of information contained in TAPs of 6 semi-professional translators, subjects of the introspective experiment, together with translated texts themselves allowed to elicit some indirect but nevertheless illuminating information as to the role of adaptation, association and analogy in the translator’s decision-making. Adaptation, association and analogy are portrayed as both cognitive procedures and psychological mechanisms whose combined action provides for successful resolution of problem situations in translation. On the psychological level, adaptation is seen as a mechanism that leads the translator to the state of adaptivity by applying available knowledge to new situations. On the cognitive level, adaptation implies adjusting new or alien to the target audience concepts in accordance with the translator’s individual worldview as a representative of a certain culture. Association, whose cognitive and psychological aspects are tightly interwoven, has a double function in the translator’s decision-making. On the one hand, the translator is expected to uncover and then reproduce the author’s associations in the source text; on the other hand, the translator’s decisions are often made under the influence of their own associations. Finally, association is causatively related to analogy – psycho-cognitive mechanism of transferring information from one object (sign) to another. Analogical reasonings channel the translator’s decision-making through similarity-based heuristics, like representativeness and compatibility ones.

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**THE STRUCTURE OF BASIC LEVEL CATEGORIES IN
THE UKRAINIANS' CONSCIOUSNESS ACCORDING TO THE RESULTS
OF PSYCHOLINGUISTIC EXPERIMENTS: *PARKAN* AND *MUR*¹**

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Abstract. The aim of this research is to identify experimentally the structure (primarily the central zone) of two basic level categories in the Ukrainian speakers minds: *PARKAN* and *MUR*. To reach this goal 2 psycholinguistic experiments were designed and conducted. Within the first experiment the respondents were asked to determine whether the object on the picture belongs to the category *PARKAN*. Within the second one they were asked to determine whether the object on the picture belongs to the category *MUR*. For each experiment 75 images of the objects with similar functions and perceptual features were selected. The respondents had to choose integers 1-2-3 under the image, where 3 means that the object enters into the category, and 1 means that the object doesn't enter into the category. In the options of responses there was the possibility of partial and complete discrepancy between the word that names the category and the image. The total number of completed Google forms is 846, the total number of the received responses – 12690. The second experiment also took into account the estimates of the respondents from the control group which included 18 historians, architects and restorers. The scaling method was used to process the results: each object received an average score which determined its place in the structure of the category. The central zone of both categories includes objects with a score of 2.75 and higher. By analyzing the perceptual and functional features of the objects of the central zone we have formed a verbal description

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¹ Due to the fact that the Ukrainian word *myp* cannot be accurately translated into English *wall*, we use in this article a transliteration of the Ukrainian *myp* — *MUR*. More precisely, the Ukrainian *myp* corresponds to the German *Mauer*.

of the prototypes of the categories PARKAN and MUR. During the processing of experimental data there were found the differences in the principles of formation of the central zones of categories. This is related to the role of these objects in the modern anthropogenic landscape. The assignment of a certain artifact to the category PARKAN is influenced by two factors: perceptual features and function that a person derives from external features. When categorizing an object as a typical MUR not only perceptual features and function are important, but also information that goes beyond current knowledge about the world, namely knowledge about the status and functions of reality in the past.

Keywords: *psycholinguistic experiment, categorization, basic level, central zone, prototype.*

Жуйкова Маргарита, Лавринович Лілія, Свідзинська Ольга. Структура категорій базового рівня у свідомості українців за результатами психолінгвістичних експериментів: Паркан та Мур.

Анотація. Мета дослідження — експериментальне виявлення структури (передусім центральної зони) двох категорій базового рівня у свідомості носіїв української мови: ПАРКАН та МУР. Для цього було розроблено і проведено два психолінгвістичні експерименти: в першому респондентам пропонувалось визначити приналежність об'єкта на фото до категорії ПАРКАН, в другому — до категорії МУР. Для кожного експерименту було вибрано по 75 зображень об'єктів з подібними функціями та перцептивними ознаками. Респонденти мали вибрати під зображенням цілі числа 1-2-3; оцінка 3 маркує входження об'єкта до категорії, оцінка 1 — невходження до неї. У варіантах відповідей була запрограмована можливість часткової та повної невідповідності між словом, яке називає категорію, та зображенням. Загальна кількість заповнених гугл-форм становить 846, загальна кількість отриманих відповідей — 12690. В другому експерименті враховувались також оцінки контрольної групи респондентів, куди увійшло 18 істориків, архітекторів, реставраторів. Для опрацювання результатів використано метод шкалування: кожен об'єкт отримав середню оцінку, на основі якої визначалось його місце у структурі категорії. До центральної зони обох категорій увійшли об'єкти з оцінкою 2,75 та вище. Шляхом аналізу перцептивних та функціональних ознак об'єктів центральної зони ми сформували вербальний опис прототипів категорій ПАРКАН та МУР. При опрацюванні експериментальних даних було виявлено відмінності у принципах формування центральних зон категорій, що пов'язані з роллю цих об'єктів у сучасному антропогенному ландшафті. На віднесення певного артефакту до категорії ПАРКАН впливають два чинники: перцептивні ознаки та призначення, яке людина виводить із зовнішніх ознак завдяки своїм фоновим знанням. При категоризації об'єкта як типового МУРА виявляються важливими не лише перцептивні ознаки і функція, а й така інформація, що виходить за межі поточних знань про світ, а саме знання про статус і функції реалії у минулому. Вважається, що інформація про культурно-історичну роль реалії посідає важливе місце у структурі відповідного концепту, однак наше дослідження показало, що такі знання можуть впливати на вміст та будову не лише концептів, а й категорій свідомості.

Ключові слова: *психолінгвістичний експеримент, категоризація, базовий рівень, центральна зона, прототип.*

1. Introduction

Categorization is the selection of discrete categories from the continuum of perceptual information, its verbal design, as well as the procedure for acquiring new objects to the singular explicit category, underlies the processes of cognition and is an important means of human orientation in the world.

Rosch first described the cognitive role of categories of consciousness. The paper (Rosch and Mervis, 1975) emphasizes the special role of basic level categories in cognition of the world, and also contrasts these categories with superordinate and subordinate categories. The defining role of basic level categories, as suggested by E. Rosch and C. Mervis, is related to their informativeness, optimal for human consciousness. The fact is that the categories at the superordinate level are too broad, covering too many objects, so the names of such categories (eg, FRUIT, VEHICLE,

TOOL, ANIMAL) cannot provide speakers with the information they need to understand the situation or certain operations with realias.

On the other hand, subordinate categories are very narrow, cover much fewer objects, and the set of distinguishing features of each object grows; therefore, the amount of information associated with the corresponding word, the name of the subordinate category, is excessive for the average speaker (for example, the basic category BOAT includes subordinate categories DUGOUT BOAT, BARKAS, WELBOT, BAIDARKA, YAL, CANOE). Excessive amount of information, as noted by E. Rosch, is contrary to the principle of cognitive economy. Instead, basic level categories provide optimization of the amount of information in communication: "That basic objects are categories at the level of abstraction that maximizes cue validity and maximizes category resemblance is another way of asserting that basic objects are the categories that best mirror the correlational structure of the environment" (Rosch, 1978, p. 31).

Active experimental researches, which began in the 1970s by psychologists, were aimed at identifying the properties of categories of different levels in the minds of people. Thus, in profound experiments which were done by American psychologists Murphy and Smith, it was shown that the time it takes for people to classify certain objects is less than that required to recognize subordinate and superordinate level objects. (Murphy & Smith, 1982). For the purity of the experiment, the researchers modeled images of 14 tools representing the categories of all three levels, and also applied short fictional names to them.

A detailed review of theoretical and experimental research, basic principles, various hypotheses, their critique of basic level categories, as well as subordinate and superordinate categories, is found in the work of Hajibayova (Hajibayova, 2013). This review covers a significant part of the scientific works of philosophers, psychologists and linguists (References contains 71 references, which include almost all major research in this area). According to Hajibayova, at the present stage there is a need to study the categories of the basic level at the interdisciplinary level, which will, in particular, optimally organize information search systems focused on user needs. "Cross-disciplinary studies of basic-level categories may not only help to better understand individuals categorization patterns, but also contribute to the development of systems that would provide more 'organic' juxtaposition of controlled or 'artificial' and user-generated vocabularies. As a result, it may improve representation, organization, 'findability' and effective use of the knowledge" (Hajibayova, 2013, p. 685).

Natural cognitive categories, as shown by numerous experiments, are organized on the principle of "center – periphery"; in the center of the category of the basic level is one or more prototype objects, which, according to native speakers, can better than others represent the whole category (Rosch, 1975). The pioneering work in linguistic research, where not only images but also lexical items were used to identify the content of basic level categories, is the work of the American linguist Labov (Labov, 1983). By interviewing respondents, he found out the conditions under which native speakers use lexical items from the group "dishes" such as cup, glass, mug, bowl, pitcher, vase. Labov showed the respondents schematic images of different types of

utensils, which had certain common features, and asked to name these objects. By the method of mathematical calculations, Labov built a probabilistic model that allows to predict which English word can be applied to a particular subject with certain parameters. From the point of view of cognitology, W. Labov's experiments are aimed at substantiating the indeterminate limits of natural categories, the presence of borderline zones between them, as well as the identification of prototypes of categories CUP, MUG, BOWL, VASE, GLASS and others. It was W. Labov who had the idea to ask the respondents the question: "Would you call this object the word X?", Which implies the answer "yes" or "no".

It should be noted that in Ukrainian psycholinguistics and cognitology there are no studies aimed at studying the basic level categories. Modern experimental studies in these areas mostly deal with such area of mental lexicon organization as associative connections between individual concepts (see the works of Ukrainian scientists Martinek, Karpenko, Horoshko, Nedashkivska, Denysevych); much less often in the sphere of interests of Ukrainian researchers is the structure of categories of superordinate level, look at Khadzhioglova's work on the organization of the category MUSICAL INSTRUMENTS in different linguistic cultures. Our study of two categories of the basic level fills the gap that exists in cognitive studies aimed at analyzing the mental space of Ukrainian speakers.

The relevance of the proposed work is determined by the importance of experimental examination of various categories of consciousness, in particular those that affect the spatial orientation and daily activities of people.

2.Methods

2.1. Procedure. The first experiment is the PARKAN category

The purpose of our article is, first, to describe the methodology and procedure of two psycholinguistic experiments, as well as to discuss their results. Secondly, we present for scientific discussion our conclusions about the features of the prototype objects of the basic level categories PARKAN and MUR in the minds of Ukrainian speakers. The following methods were used to achieve the goal such as a survey of respondents, during which they responded not to verbal but to visual stimuli, as well as a similar survey of respondents in the control group; method of scaling the results of the survey using two methods (calculating the arithmetic mean; determining the ratio of answers "yes" / "no").

The first psycholinguistic experiment (hereinafter PE-1) was organized as follows. In the process of preparation, 75 different photographs (authors of all photos are Zhuykova and Svidzynska) were selected, which depict various functional objects typical of modern urban and suburban space.

These included actually fences and other means to limit the territory or object (*guard rails, curbs, stretched chains, wires or tapes, stone fences around the fountains, metal fences around the graves, railings on the stairs, balustrades on the terraces*). All photos were divided between 5 versions and placed in Google forms. Each option includes different photos so that there are both central and peripheral objects that fall into the category of PARKAN as well as objects that limit something, but mostly are not understood as fences.

The survey was conducted in May 2020. Before the experiment began, potential participants received the following information: “Each photo has an object that separates or encloses part of the space. You need to think about the answer to the question and choose one of the answers based on your own ideas about the objects you know”. Respondents were required to indicate their age and name in the form (without a last name, which ensured the anonymity of the survey) and give the image their rating by selecting it from the drop-down scale (1-2-3). Questions and answers to it are formulated in PE-1 as follows: “To what extent does the image in the photo correspond to your ideas about the fence? 1 – No, it's not a fence, 2 – Not quite like that, but maybe, 3 – Yes, it's a fence”. Thus, respondents were asked to establish a correspondence between the image and the name of the category expressed in words; it is important that the respondents had to respond not to the semantics of a given word, but to its scope of reference, which was modeled in the photo. In the answer options under the photo, the possibility of partial and complete discrepancy between the word and the image was programmed.

To see the details of the content of all versions of Google forms PE-1: <https://cutt.ly/ZsSALTQ>; <https://cutt.ly/QsSSqVz>; <https://cutt.ly/wsSGOqN>; <https://cutt.ly/8s1RV3c>; <https://cutt.ly/WsSHtI7>.

The participants of the experiment were native speakers of the Ukrainian language of both sexes, mostly residents of Volyn and Lviv regions, the average age of respondents is 26.3 years. The total number of completed forms is 460; the total number of received answers is 6900. The exact data on the answers to each of the 75 images is under the link: <https://cutt.ly/hsJ87hM> (p. PE-1). One photo has an average of 92 answers, which allows us to consider the results representative.

2.2. The second experiment is the MUR category

The second experiment (hereinafter PE-2) was built similarly to the first and reproduced its form and content. Google forms also included 75 photos (the authors of all photos, except for one archive were M. Zhujkova and O. Svidzynska), which we divided between the five versions of the questionnaire on the same principle as in PE-1. The proposed images show various objects created by man from stone or its analogues; their appearance and purpose are different (you can find the restrictive, defensive, decorative, reinforcing functions). The question to be answered by the respondents was formulated similarly to the question PE-1: “To what extent does the image in the photo correspond to your ideas about the wall? 1 – No, it's not a wall, 2 – Not quite like that, but maybe, 3 – Yes, it's a wall”.

To see the details of the content of all versions of Google forms PE-2: <https://cutt.ly/tsSHZch>; <https://cutt.ly/DsSHYal>; <https://cutt.ly/QsSH9Sx>; <https://cutt.ly/CsSJrWn>; <https://cutt.ly/2sSJdAU>.

The experiment was conducted in July 2020. We changed the target group of respondents: adults of both sexes took part in the survey, mostly with higher education, some of them are scientists. All respondents are native speakers of the Ukrainian language; the average age is 41.7 years. A control group of eighteen historians, architects and restorers was formed among the persons who filled out the forms. As the professional opinion of experts is of special interest to us, we analyzed

their answers separately; expert assessments are included in the overall calculation of results.

The geography of PE-2 participants was expanded, i.e., the forms were sent to residents of Volyn and L'viv regions, Rivne, Kyiv, Kamianets-Podilskyi, Ivano-Frankivsk, Uzhhorod, and a small number to residents of central and eastern parts of Ukraine. 386 completed forms were received; the total number of answers is 5790. All indicators for answers to each of the 75 images in PE-2 are under the link: <https://cutt.ly/hsJ87hM> (p. PE-2). The average number of answers per photo is 77.2.

Elaboration of PE-1 and PE-2 results and their discussion

The results were processed in two ways: first, a general descending scale was constructed, which gives the average score for each photo; secondly, for each image the number of answers "yes" and "no" in percent was taken into account. Estimates of images in PE-1 are in the range from 1.06 (photo 73) to 2.91 (photos 3 and 59); statistical error in evaluating the results we did not take into account. The average scores are entered in the general table (<https://cutt.ly/PsSP3QH>, p. 1–2).

The scaling of the results for the structure of the PARKAN category showed that the decline in grades occurs smoothly, without jumps and gaps (the average step between adjacent positions is 0.03 points). Because of this, we had to conditionally separate the central zone, in which we included objects with scores of 2.75 and higher. Table 1 presents estimates of eleven objects of the central zone, as well as their brief description:

Table 1

Objects of the central zone of the PARKAN category

Photo number	Average rating on a scale of 1–3	Percentage of answers “yes” / “no”	Brief characteristic of the object
59	2.91	93.3 / 2.2	A wooden fence which is made of individual vertical columns that fit snugly together; limits the territory of the playground
3	2.91	91.7 / 1.0	Wooden construction fence (temporary) which is assembled from individual boards
51	2.84	87.6 / 3.4	Modern city fence on a stone foundation, the top is made of wrought iron details; encloses a private house
64	2.80	81.9 / 2.1	Fence of individual metal elements, placed vertically, without a foundation; fences off the parking lot
15	2.79	83.3 / 4.2	Mesh fence on a stone foundation, mesh is built into the pillars; fences off a private estate in the city
5	2.77	81.3 / 4.2	Fence in the form of a metal mesh on a concrete foundation, encloses a private house in the city

7	2.77	79.2 / 2.1	Fence in the form of low sections of metal mesh around a private house in the village
28	2.77	86.0 / 4.3	A low fence of individual wooden fences around a small front garden
70	2.77	81.9 / 5.3	Mesh fence, in which the mesh frame is attached to metal poles; fences off the kindergarten
43	2.76	81.5 / 5.6	Modern city fence on a stone foundation, the top of which is made of flat steel pin placed vertically
72	2.76	77.7 / 2.1	Sectional metal fence around the office area, low, discontinuous

The results of PE-2 were similarly processed. Estimates of PE-2 objects range from 1.09 (photo 43) to 2.99 (photo 62); statistical error in evaluating the results we did not take into account. The scale of general assessments obtained in PE-2 has only one quantitative gap: between adjacent positions 23 (2.75 points) and 19 (2.59 points) there is a difference of 0.16 points, which allows us to distinguish the central zone of the MUR category and include nine photos. Estimates located on the overall scale then decline very smoothly, as in PE-1, which does not give grounds to reliably distinguish areas of near and far periphery. Information on the objects of the central zone, including their attribution, is given in Table 2.

Table 2

Objects of the central zone of the MUR category

Photo number	Average rating on a scale of 1–3	Percentage of answers “yes” / “no”	Short attribution of the object
62	2.99	98.7 / 1.3	Authentic city wall in Przemyśl, a restored fragment on the Basztowa Street. Approximate construction time is XVI – first half of the XVII century. Another fragment of the same wall is in the photo 22
66	2.92	94.9 / 2.5	Authentic wall around the territory of the former Bernardine monastery in L’viv. Approximate construction time is the beginning of XVII century, view from the Mytna Square
2	2.89	92.8 / 3.6	The walls of the fortress in Kamianets-Podilskyi, modern look after reconstruction
11	2.88	90.4 / 2.4	Former defensive, now retaining wall in the Old Town of Kamianets-Podilskyi on the terraces between Ruska and Hospitalna

			Streets. Approximate time of construction: the first third of the XVIII century
35	2.88	90.5 / 2.7	Archive photo of the remains of the Eastern defensive wall of Chufut-Kale (Crimea). Approximate time of construction is the end of the XIV – the middle of the XV century
53	2.85	89.3 / 4.0	An authentic wall around the former Franciscans-Observantists monastery in L'viv. Approximate time of construction is the middle of the XVII century, view from the Zamkova Street
31	2,82	86.5 / 4.1	Authentic wall in the eastern part of the Old Town of Kamianets-Podilskyi on Dominikanska Street from Pyatnytska Street
22	2,81	88.0 / 6.7	City wall in Przemyśl, view from Basztowa Street. Approximate time of construction is XVI - first half of the XVII century. Another fragment of the same wall is in the photo 62
23	2,75	78.7 / 4.0	Authentic wall around the territory of the Basilian Monastery in Buchach, Ternopil region. Approximate time of construction is the middle of the XVIII century

The results for the central zone of the MUR category show that the respondents identify with the walls primarily ancient fortifications that performed a defensive function. This function determines, first, the material from which the walls are built: it is either natural stones or fired bricks; individual elements of the walls are combined with a reinforcing solution. Secondly, the defensive function determines the size (height, length and thickness) of the walls.

It should be noted that the lower marks were given to those old walls, which, unlike the objects of the central zone, do not see the masonry of stone or brick, because they are now plastered and whitewashed. Thus, photos 20 and 50 show high walls that separated the territory of the former Benedictine monastery in L'viv (photo from the Memorial Heroyiv Nebesnoyi Sotni near Krivonos Street) (Melnyk, 2010, p. 16). These objects received a score of 2.16 (wall with an open fragment of masonry) and 2.41 (masonry completely covered with plaster). Another example: the territory of the church of St. Lazar in L'viv has an authentic, well-preserved wall of the XVII century, which stretches along the Kopernyka Street. The wall is covered with plaster now, but its stone foundations can be seen below. We used two photos of this wall (71 and 37) from the same angle and got rather low scores of 2.35 and 2.27. Photo 51 shows the Cathedral of St. Yura in L'viv and the wall in front of it, which is now plastered and whitewashed. This object, despite its considerable height, received a score of 2.24.

Respondents did not interpret the objects of the new construction, in particular deaf fences in the form of solid stone masonry above human height (for example, photos 28, 48, 49, 57, 59, 70, 72); their estimates range from 1.57 to 1.88. However, the modern stylization of the fence "à la the wall", presented in photo 46, has an unexpectedly high score of 2.12, which is not surprising, because a close score (2.16) was given to the image of the authentic walls of the Benedictine monastery.

Let's turn to the estimates given by the participants of the experiment, selected in the control group. In total, they filled out 67 Google forms, a total of 1,005 responses; each photo has about 13.4 ratings. The full scale of assessments made by experts can be viewed here: <https://cutt.ly/PsSP3QH>, p. 3–4. We present comparative results for the central zone in Table 3.

Table 3

Comparative assessments of the objects of the central zone of the MUR category in the general survey and in the group of experts

Photo number	All respondents	Experts
62	2.99	3
66	2.92	3
2	2.89	3
11	2.88	2.92
35	2.88	2.86
53	2.85	2.69
22	2.81	2.86
31	2.82	2.79
23	2.75	2.57
19	2.59	2.71

The central area of the MUR category, presented in the minds of experts, is generally not very different from the one built on the basis of general estimates, but contains two objects less. Specialists dropped objects 23 and 53 from the central zone. In addition, in the control group, photo 19 is closer to the center of the category than in the overall assessment. This photo shows the wall around the Franciscans-Observantists monastery; the same wall is presented in the photo 53. Expert estimates for this wall are almost the same: 2.69 and 2.71, and the overall estimates have a significant gap of 0.26 (one image falls in the central area, and the other does not). Thus, in total, the experiment identified eight different objects of the central zone of the MUR category.

The problem of selecting the attributes that are inherent in the prototypes of the categories PARKAN and MUR

After processing all the results of PE-1, we gave access to them to students of philology at Lesya Ukrainka Volyn National University, who also participated in the survey, and asked to describe in general the objects of the central zone. The

purpose of the task for students was to verbalize the features of the prototype fences with reliance on the own experience of the participant of the experiment, and on the generalized survey data. Here are some answers:

“Prototype fence is a high wooden or metal, solid or non-continuous object that separates one part of the territory from another”; “the prototype fence has a height that is close to human height; 3–4 cm thick; made of wood or metal mesh and welded panel; performs the main function of fencing a person’s place of residence”; “prototype fence is up to about 2 meters; the material must be dense, ie the fence must be a structure that creates the impression of “impassability”; the fence must be strong”; “height is about 1 meter; prototype fence is high, securely encloses the territory”, “fence is a rectangular structure without too large holes and other elements that violate its integrity (e.g., wicket), with a height of 1 to 2.5 meters, located on the ground and which separates a certain part of the territory from another; in good enough condition to perform this function”; “the height of the fences should not be lower than approximately 40 cm; the fence must be made of solid materials; the fence must separate one territory from another”; “the prototype fence must be made of metal materials, have a rectangular shape and a height of 1.2 m to 2 m, enclose or fence off of a certain area or a certain object. It must be intact and form a clear line”.

It is noticeable that the signs of fences of the central zone allocated by students are defined by properties of concrete referents and represent considerable variety both external signs, and purpose of fences. In general, we can assume that the problem of invariant characteristics has not been solved; the signs given by students are sometimes contradictory. Thus, defining the main function of fences as «fencing off a person's place of residence», the student does not pay attention to the survey data, in which of the 11 fences of the central zone only five enclose housing, and the remaining six restrict non-residential facilities: playground, construction area, kindergarten, parking lot, front garden, etc. A similar situation is observed with the requirements for the material, size, and density of the prototype fence.

The reason for these difficulties lies primarily in the cognitive complexity of distinguishing features that are part of a holistic gestalt, which is stored in the memory of speakers and serves as a sample in the categorization of real objects of human experience. Discussing the results of Labov’s experiment and describing the prototype of the CUP category, Taylor notes: “Thus, the prototypical cup (in Western societies) has a handle, it is made of porcelain, it comes with a saucer; it has a certain overall shape and a typical size; cups are used for drinking hot tea or coffee, and you usually buy them in sets of six” (Taylor, 1995, p. 42). The researcher further remarks: “None of these attributes is essential for membership in the category” (Taylor, 1995, p. 42). Discussing with Labov, Wierzbicka in her work in 1985 offered her approach to the description of categories of household items. In her opinion, it is important to distinguish those features of the category that are not constant and may vary from those that are necessary (non-negative). Necessary attributes for the CUP category Wierzbicka considers, first, the function, i.e., the cup is made to drink hot drinks from it; secondly, the size tied to the

method of use, i.e., the size of the cup should be such that a person can easily lift it to his mouth, holding it with one hand. Other features, such as the presence of an ear and a saucer, are variable and are not necessary, although, as the author emphasizes, the “ideal” cup must have an ear (handle) and a saucer (Wierzbicka, 1985, p. 59).

A similar situation, in our opinion, occurs when identifying signs of prototype fences: you should look for the set of integral characteristics of the category, which are best manifested in the prototype objects. By generalizing the perceptual features of the objects of the central zone, we form the following description of the prototype PARKAN:

height is determined by human height; the length is sufficient to limit a certain area and is determined by its size; the fence has no gaps (except for a specially built-in gate); the left and right edges are not open: they are either locked to each other or connected to another structure or obstacle; the level of the surface on which the fence passes is approximately the same on both sides: first, this level does not have a sharp difference in height, and secondly, there is soil on both sides of the fence.

The last characteristic is not obvious, but it allows you to exclude from the category of PARKAN those objects that may have all the above features and do not receive the name of the *fence*: fences on bridges, balustrades on the edge of the terrace, guard rails on the road leading to mountain slope, etc. See photo 18 (guard rails) with a score of 1.30, photo 65 (fence on the tram bridge) with a score of 1.60, photo 47 (railings on the stairs) with a score of 1.19. It is important that the fence is located perpendicular to the ground (otherwise, its stability decreases). Such features of the fence as integrity, material, shape, thickness are variable; they depend on the available opportunities, aesthetic guidelines, specific purpose, traditions, and time of construction etc.

It should be noted that in the categorization of a particular phenomenon of reality, including artifacts, a person primarily perceives perceptual features. Speakers associate the functions or purpose of an artifact with its external features or deduce them by implication. Obviously, the main function of the fence is to create an obstacle to the movement of man (animal), the secondary is to highlight the boundaries of a certain area, demarcation of its parts (marking the boundaries of property, danger zone).

Weakening of prototype features in the PARKAN category is observed in transitions from those realities that serve as real obstacles to movement, to peripheral objects of the category that perform a symbolic function, i.e., symbolically mark the prohibition of passage or vehicular passage or mark someone's property (look at the photo 62 – *муh (tyn)* in the garden). In general, as we expected, those objects that received a score below 2.00 in PE-1, go beyond the category of PARKAN, although they perform the function of restricting movement.

The prototype of the MUR category has a different set of external features:

it is a large vertical object (this dimension is much larger than a person's height); its material is stone and / or brick; the length of the wall is sufficient to demarcate a large area, and a person can not always cover the entire length of the view from one point; the left and right edges of the wall are not open; the masonry

has a third essential dimension. i.e., width; the masonry has no gaps, except for structures specially designed for passage or vehicular passage (wickets, gates).

Dimensions and material are dictated by the main historical purpose of the walls such as to serve as a means of defense during hostilities, to protect property and people inside, from the aggressive actions of those who seek to seize them. According to PE-2 data, the central zone of the MUR category includes those objects that have lost their defensive function long time ago, but were built just for it. The prototype objects of the MUR category included the former defensive wall about 10 m high in Kamianets-Podilskyi, which has already lost its function in the XIX century and is now considered a supporter (Serbina, 2012, pp. 139–140); it is the appearance of reality that allowed respondents to correlate it with the walls.

When the assessment decreases on the general scale, a gradual loss of prototype features of the walls can be observed. As we have already mentioned, those walls that are plastered and whitewashed on the outside received a lower grade. The lower height of the wall than a certain imaginary standard also resulted in a lower estimate. For example, photo 29 shows the stone wall of the Turkish bridge in Kamianets-Podilskyi, the height of the wall is approximately equal to a person's height; this photo has an overall rating of 2.33 (experts gave a slightly higher rating of 2.36). The distance from the prototype is experimentally recorded in those objects that performed a defensive function in the past, but are already severely damaged and not reproduced in its original form. In our materials, these are, in particular, the remains of city fortifications in the center of L'viv about 1 meter high (photo №60), which were discovered during excavations in the late 1970s (Bilushchak, 2012, p. 72). The score of this object on the general scale is 1.72, and in the sample of specialists the score is significantly higher: 2.08. It is noticeable that the rank of the object is reduced by those signs that indicate the absence of a basic defensive function; for example, photo 6 shows an authentic, relatively low wall from Kamianets-Podilskyi: on the general scale it has a score of 2.24 (the control group gives a higher score is 2.38), and the lack of unanimity in the reactions of respondents is clearly visible: 47, 0 % answered "yes", 22.9 % is "no", the remaining 30.1 % is "not quite similar, but it can be". Photo №40 shows an object with decorative elements (a brick wall around the church of St. Clement in L'viv, built in the XX century); this facility has an overall score of 2.26 and a specialist score of only 2.07. Photo №1 shows a high (up to 4 meters) wall near the existing prison in Lutsk, with barbed wire stretched over its upper part. This wall received a total score of 2.34 from the respondents (control group is 2.46). Thus, the fewer external features of a historic defensive object a wall has, the farther from the center its place in the structure of the category.

4. Conclusions

The results of experiments show that in the minds of Ukrainian speakers there are two adjacent categories of the basic level PARKAN and MUR, which have a typical structure for natural categories and are part of a common category of superordinate level (FENCE). In both categories, respondents distinguish well

between the central and peripheral zones; respondents can also correctly assess those objects that go beyond both of these categories. When evaluating images, the participants of the experiments first pay attention to the appearance of reality, while adequately taking into account its purpose. Objects that fill the central zone of the MUR and PANK categories have different historical depths: the prototype wall is an ancient element of the cultural anthropogenic landscape, created several centuries ago (and its former defensive function in modern conditions does not matter), and the prototype fence is subject of relatively recent construction with a clear restrictive function. The center of the MUR category is formed almost identically both in the general calculation of answers and in the answers of specialists. This means that Ukrainian speakers with a fairly high level of background knowledge now have a close idea of the 'ideal' object called *a wall*. By analyzing the external features of the objects of the central zone of both categories, we were able to identify the characteristics inherent in the prototype fences and walls.

Thus, our experiments showed that the assignment of a particular artifact to a natural category is influenced by the following factors: **external features** (they are perceived perceptually, sensory organs), **functional purpose** (it is derived from external features due to background knowledge of the world), and in some cases, **a cultural-historical role** based not on current knowledge of realities but on information about the status and functions of reality in the past. This is special knowledge that forms the cultural identity of the nation and ensures the longevity of national and cultural traditions. There is a widespread view among linguists that this kind of information is contained in conceptual structures, but our experimental study has shown that it can also affect the content and structure of mental categories.

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BOOK REVIEW

INVALUABLE CONTRIBUTION TO THE TREASURY OF TRANSLATION SCIENCE

Енциклопедія перекладознавства / пер. з англ., за ред. О.А. Кальниченка та Л. М. Черноватого. Том 1. Вінниця : Нова книга, 2020. 552 с.

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This year, 2020, has been marked by an outstanding event, long awaited by scholarly, linguistic and literary community: Volume 1 of *Translation Encyclopedia* edited by Oleksandr Kalnychenko and Leonid Chernovaty was published in Ukrainian by Nova Knyha Publishers, Vinnytsia, Ukraine. The book has seen light thanks to the leadership of the *Ukrainian Translator Trainers' Union (UTTU)* headed by Dr. Leonid Chernovaty, as well as talents and efforts of a highly qualified team of translators and translation professors from major universities of Ukraine. It comprises a translation of *The Handbook of Translation Studies* (edited by Yves Gambier, Luc van Doorslaer, John Benjamins Publishing Company, 2010).

By the depth of insights into problems, the variety of addressed topics, clarity and persuasiveness of argumentation, openness to innovation, as well as historical and geographical frameworks the reviewed book is definite to find its place among the major humanitarian publications, considerably broadening the horizons of Ukrainian scholars, students, and thinkers.

The collection presents a wide range of articles summarizing the newest concepts and trends of Translation Studies, such as adaptation, self-translation, censorship, community and conference interpreting, technical translation, terminology and translation, multilingualism and translation, etc. Through the authors' perspectives, the reader may follow the dynamics of changes in the content of translation science and its various approaches (descriptive, applied, interpretive, cognitive, functional) and its major concepts (such as translation quality, relevance, norms, units, strategies and tactics).

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Of great interest to the audience will be the scope of interdisciplinary fields, such as history of translation, translation didactics, ethics of translation, as well as articles unveiling the links of translation studies with semantics, semiotics, philosophy, hermeneutics, journalism, gender factors, ethics, sociology, ethnography and art. The Encyclopedia also embraces such fields of literary translation as postcolonial literature, censorship, children's literature, translating plays, humor and comics; it outlines the problems of industry-specific (political, technical, commercial, scientific, religious, legal translation, media interpreting) and even sign language translation. Much attention is devoted to practical applications of the latest translation research, as well as new technologies in translation, research and teaching translation methodologies, as well as the role of translation in foreign language teaching.

The concepts and ideas in the book are presented by the outstanding translation theorists, many of whom are the authors and conceivers of new theories of translation and their major research fields: Fabio Alves & Amparo Hurtado Albir, Jorge Díaz Cintas, Riitta Jääskeläinen, Marianne Lederer, Jeremy Munday, Christiane Nord, Franz Pöchhacker, Christina Schäffner and others. A valuable feature of the ideas covered in the Encyclopedia is their openness to plurality of scholarly opinions, continuous dialogue over the major problems of translation theory and practice, which involves the reader into discussion and inspires the further search for solutions.

The translation of the original theoretical insights into Ukrainian by seasoned scholars, professional translators and translation teachers will, first and foremost, open them to a broader audience, making their content more accessible and perceivable to the readers. But what is more important, it develops the conceptual network of translatology, enriching the Ukrainian terminology, and expanding the borders of the Ukrainian language scientific style. Besides being an invaluable source of theoretical knowledge, the book is also an exemplary application of theory into practice, a guide to the state-of-art choice of translation strategies, tactics and decisions, a model scientific translation to be emulated by practicing and aspiring translators.

The 1st volume of “Translation Encyclopedia”, edited by Oleksandr Kalnychenko and Leonid Chernovaty will definitely find equally high acclaim of professors and students, theorists and practitioners, seasoned and aspiring scholars of translation and relevant fields. *Welcoming the new pioneering publication, we strongly believe that it will initiate a tradition of publishing translated scholarly works in Ukraine, and look forward to the appearance of new volumes.*

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CALENDAR

PSYCHOLINGUISTIC RESEARCH EVENTS

16th International Online Conference

Psycholinguistics in the Modern World

Host institution: Hryhoriy Skovoroda University in Pereiaslav

Deadline for submitting abstracts: October 1, 2021

Location: Pereiaslav, Ukraine

Start Date: 28–29th October, 2021

Contact: Nataliya Kharchenko

E-mail: psycholing.conf@gmail.com

URL: <https://psycholing-conference.com>

12th International Online Congress of International Society of Applied Psycholinguistics - ISAPL - New Perspectives in Psycholinguistic Research: Language, Culture, Technologies

Host institution: The University of Aveiro

Deadline for registration: April 15, 2021

Location: Aveiro, Portugal

Start Date: 3-5th June, 2021

Contact: Leonor Scliar-Cabral

E-mail: 12isapl.congress.org@gmail.com

URL: <https://isapl2020.org>

XV International Symposium of Psycholinguistics

Host institution: Universities Nebrija and Complutense de Madrid

Deadline for submitting abstracts: February 15, 2021

Location: Madrid, Spain

Start Date: 22 June, 2021

Contact: Alice Foucart

E-mail: is.psycholinguistics@gmail.com

URL: <https://www.herbsttreffen-patholinguistik.de/>

Experimental Arabic Linguistics Conference 2021

Host institution: American University of Sharjah, UAE

Deadline for submitting papers: January 31, 2021

Location: Sharjah, UAE

Start Date: 4–6th April, 2021

Contact: Ji Young Shim

E-mail: exal2021@aus.edu

URL: <https://linguistlist.org/easyabs/EXAL2021>

Disfluency in Spontaneous Speech

Host institution: Université Paris 8 Vincennes -

Deadline for submitting abstracts: March 15, 2021

Location: Saint-Denis, France

Start Date: 26–27th August, 2021

Contact: Ivana Didirková

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URL: <http://diss2021.fr>

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