

## COGNITIVE NATURE OF SPEECH GENERATION IN THE ADYGHE-RUSSIAN BILINGUAL CONSCIOUSNESS: SOCIOCULTURAL ASPECT

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The relevance of the study is determined by the complexity and significance of cognitive processes of verbal and cogitative activity of bilingual consciousness in the context of the integration of languages. In this regard, the article is aimed at identifying the bilingual speaker's intelligence factor, harmoniously interacting with the factor of the speech-language mechanism. The main methods used to study this problem are contextual, situational, semantic, distributive, comparative analysis; the authors have applied the methods of linguistic deduction and induction, and techniques for highlighting key dominants that allow for comprehensive consideration of Adyghe-Russian bilingual consciousness through the prism of cognitive (mental) acts in the sociocultural space. As presented in the article, the type of verbal and cogitative operations in the sociocultural space of bilingual consciousness can be called an actual naming, in which the linguistic consciousness of the speaker finely solves the problem of finding an adequate word or phrase in the bilingual consciousness lexicon. The methods for bilingual consciousness formation in the sociocultural space have been revealed, the ways of making a cognitive choice of verbal means have been identified, and the possibility of giving a new content to the known words in the process of the act of naming has been substantiated. The materials of the article are of practical value in studying the specifics of modeling the verbal and cogitative activity of bilingual consciousness as the bearer of two contact (Adyghe and Russian) languages; such consciousness becomes permeable to culture and permeated by culture.

**Keywords:** language, speech, speech generation, bilingual consciousness, integration, socio-cultural aspect, cognitive nature.

### INTRODUCTION

The human thought, by its nature, assumes, on the one hand, the material world independent of it, reflected by it, and on the other hand, the verbal means of its expression. The natural language does not have the function of generating thought; being a means of revealing the structure of the native speaker's thought, in fact, it "gives the key" to the reconstruction of consciousness. Actual reality is reflected in the human brain in the process of thinking as accumulated knowledge about this reality, represented in the material forms of language. Language provides a person with a transition to the level of operating with forms of thought that are explicated in the semantics of verbal forms.

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Thus, thinking not only simply exists in the forms of thought, but is realized in definite verbal forms explicating these forms of thought. In the interpretive mode, the system of verbal meanings correlates with the socio- and ethno-cultural competence of the native speakers, the conceptual filling of which is one of the defining features of the people's mentality, since the worldview and world perception of the native speakers are represented precisely in the language, in the system of stereotypes, images, behavioral criteria typical for it which become cognizant of in the context of socio-ethno-cultural traditions. It is known that the recognition of words by the language users who are fluent in it is a highly automated process. Thus, "if the bilingual is fluent in the two languages he or she masters, an externally presented word stimulus will automatically trigger memory units in both language subsystems" (Starreveld *et al.* 2014).

It should be emphasized in this connection that the bilingual consciousness must have an optimal amount of information of a particular language to implement the integration of languages; if information in Russian predominates, then the missing processed information – after a long search – comes from long-term memory in their native language (Adyghe). If in the working memory the information is preserved in the native language in a large volume, then the local opportunity for structuring and analyzing information in Russian is significantly reduced.

Thus, one of the main issues of the cognitive process is the correct calculation of the working memory capacity so that it has an optimal amount of information both in the Adyghe and Russian languages for their integration.

## **MATERIALS AND METHODS OF RESEARCH**

The article deals with the cognitive nature of language integration in the Adyghe-Russian bilingual consciousness. While analyzing theoretical works and factual material, contextual, situational, semantic, distributive, comparative types of analysis were used, as well as of linguistic deduction and induction method and techniques for identifying key dominants.

## **OBJECTIVES AND CONCEPTS**

The purpose of this article is to identify and analyze various aspects of the process of verbal and cogitative activity of the bilingual consciousness, whose production is dependent on the state of the connectedness of separate differentiated languages and their functions at different stages of verbalization. In such consciousness, the motive-generation awakens the thought, and its shaping in the native or other language depends on the language potential of the bilingual, and the knowledge of the axiological background of a particular language being in demand from outside, which is the formative beginning of the mental act of consciousness. Internal speech as a result of perception and transmission of information is the main form of

mediating thought in the inner word, which can be reflected only through a special information-sign system – the language.

As a category of language, the word names the concept, not being identified with it. There are many words with a lexical meaning, which create a semantic plan, forming a verbally semantic field – an external plan. But when creating an external plan, the structure is modified, owing to the interactive activation. The lexical units activated in memory send reinforcement to each unit associated with them, resulting in the activation of many unnecessary words which are normally suppressed by the words searched for.

The concept of this study is in the cognitive nature of speech generation in bilingual consciousness, which tends to recognize and reveal the specificity of natural language as a coding system, the function of the addressee, the organic links of language and national culture, spiritual traditions. For example, J. Krizman, E. Skoe, and N. Kraus conducted a study to determine how socioeconomic status and bilingualism affect cognitive and sensory perceptions of speakers who are fluent in one (English) language and two (English and Spanish) languages. The results showed that “communicative experience in two languages provides enriched linguistic environment ..., which in turn enhances cognitive and linguistic functions ...” (Krizman *et al.* 2016).

The carrier of bilingual consciousness takes on special value due to the equal functioning and integration of the two contact languages (in our case, the Adyghe and Russian languages), since it forms a genuine attitude both to the native culture and to Russian culture with the help of informatively saturated acts of this consciousness, disclosing spiritual, moral-ethical and behavioral norms of the sociocultural community. In this connection, the specificity of modeling the verbal and cogitative activities of Adyghe-Russian bilingual consciousness is of interest for research. It is noteworthy that the process of integrating languages, forming bilingual consciousness, in our case, the Adyghe-Russian one, creates a special value as a carrier of the culture of two languages. “Penetrating” in the cultural environment, the carrier becomes “permeable” to the culture and “permeated with culture”. This “penetration” is realized in the form of mental formations, which are clusters of the cultural environment in human consciousness.

## **RESULTS AND DISCUSSION**

The process of generating utterances in language integration is quite fugitive; therefore, the implementation of language interaction in bilingual consciousness is often difficult to follow thoroughly. Analyzing language evolution is very complicated since no other species of living beings have an equivalent to it (Bolhuis *et al.* 2014). Turning to the arguments of German writer Heinrich von Kleist, A.A. Serebryakov states that “according to Kleist, only the thoughts that occur in a speech act process can be actually realized in speech. The widespread opinion

‘think before speaking’ appears unacceptable to Kleist because it does not lead to ‘compilation’ but to a loss of clarity of thought... At the same time, the act of understanding is inconceivable in isolation from speech production. This is Kleist’s fundamental conclusion drawn from ponderism over ‘gradual compilation of thought when speaking’. By Kleist, understanding or what is called understanding is seamlessly connected with the situation where understanding arises and is realized. Moreover, according to Kleist, this situation is mandatory, and understanding appears as its product” (Serebryakov 2015). It can be assumed from the above that by analogy with a certain natural language functioning in verbal activity, the integration of languages in a certain sociocultural community contributes to the formation of a bilingual consciousness that can ‘half express an idea’ in the native language and ‘the other half’ in Russian.

The research of bilingual consciousness manifestation in a sociocultural space produced in the process of language integration indicates that the native language (Adyghe) objectively interacts with a second language (Russian), they subjectively varying in verbal activity. “... We have the right to consider a language as special knowledge, that is, we have the right to accept a third knowledge, linguistic knowledge, next to the other two – intuitive, contemplative, immediate...” (Baudouin de Courtenay 2014).

Note that speech production is a complex verbal and cogitative process based on a number of jointly functioning zones of the cerebral cortex, each of them ensuring the verbal activity organization in its own way. In the context of verbal activity, verbal forms are considered as a specific means of consolidating the content of mental images in a language, so that a language is called an indirect form of reflecting the reality.

### **Specificity of structuring verbal and cogitative activity of Adyghe-Russian bilingual consciousness in sociocultural space**

Verbal and cogitative process is closely associated with information processing that involves perception and transformation of one type of information into another one. The simplest form of information transformation is recoding. At a more complex level, transformation can affect the information structure, for example, in the case of decomposing general information into specific pieces of information or when information segments are combined into a single piece of information by means of the language semiotic system.

A sign, its immediate meaning focuses the specifics of further meanings, which contributes to the formation of an internal form that is a relation of thought content to the Adyghe-Russian bilingual consciousness. Thus, the verbal and cogitative activity of the Adyghe-Russian bilingual consciousness with its own peculiarities is structured due to the interconnection, mutual influence, and diffusion of the languages in question. This is what language integration in a sociocultural space is

conditioned by. Possible interpretations of the relationship between the native and Russian languages and their understanding find an analogy with the delineation of information stocks in a bilingual consciousness of the socio-cultural space.

Moreover, the information richness (intellectualization) of the Adyghe-Russian bilingual consciousness is endowed with verbal and cogitative activity by various volumes of information due to equal functioning of the two languages, which allows the speaker (the bilingual consciousness) to master word creation more fundamentally, whereby the language expression plane and the content plane of the basic linguistic unit are acting very skillfully. On this premise, a word as a lexical unit of a language can be considered sign-oriented in a variety of conditions, which facilitates revealing the essence of its internal form. The component of the denotative structure of a word, the inner form is the center of an image, that is, in verbal and cogitative activity of a bilingual consciousness, it acts as “one of its features prevailing over all the others... A word from its very birth is for the speaker a means of understanding themselves, apperceive their perceptions. The internal form, in addition to the actual unity of an image, also gives knowledge of this unity; it is not an image of an object, but rather an image of an image, that is, a representation” (Potebnja, 2015).

According to G. Frege, “the nature of speech is a semantic connection of statements, in their combination” (Frege 2015). Developing this position, N.I. Zhinkin regards meaning as a ‘peculiarity of specific vocabulary’, as something ‘that is presentively identical in different lexical compositions’, for a meaning is always presentive (Zhinkin 2009). The uniqueness of meaning consists in the fact that, in case of language integration, the internal form of a word is common to a bilingual consciousness since it represents the unity and ‘coherence’ of presentive relations. The model by N.I. Zhinkin reflects speech switching ‘from one code to another – oral, inner speech, literal code. In the end, the last, fundamental code is formed, that is, text code (denotative)...’ (Zhinkin 2009). It is meaningful information, in the bilingual consciousness through the integration of functioning languages in this case, that makes an idea a reality, supplies the sociocultural space with information, optimizes the intellection and, in the end, becomes ‘the memory of human society’. As noted by V.I. Karasik, “presuppositions are implied bases of communicative practice, this is knowledge about the reality providing a common world outlook among the participants in communication” (Karasik 2013). Consequently, the lexicon of a native speaker who speaks Adyghe and Russian languages in the sociocultural space can represent a body of knowledge about the world forming acts of consciousness in the form of mental spheres where the specifics of the mental consciousness of such a speaker reflect. According to W. von Humboldt, “from the mutually conditioned dependence of thought and word, it is apparent that languages are not only a means of expressing the truth already learnt but, moreover, a means of revealing the previously unknown one. Their

difference does not consist only in the differences between sounds and signs but also in the differences of the worldviews themselves” (Humboldt 2013). Therefore, word in its meaning becomes as it were equivalent to the meaning as a whole since it co-opts the whole variety of semantic units thought comprises. The law of influence of meaning shapes the semantic content of thought in the purest form using the meaning of one word in which the semantic contents of both individual phrases and the whole thought can be created. However, functioning in this way, such words acquire a completely new, immeasurably richer sense. These words get a change in their structure by means of a change in meaning compared to the original one. In a situation of conversing bilinguals, the repertoire of both languages is available to the communicants and can be used at will. Some expressions and words sound better in one language than in another language; fusion allows one to use the most correct/suitable ones, without referring to translation that may belie what one wants to express. However, in some situations, bilinguals know they cannot mix languages (for example, when speaking with monolinguals) and thereat they keep speaking one language (Grosjean 2000). In this case, word as it co-opts the meaning of previous and subsequent words expanding almost indefinitely the scope of its meaning. In internal speech, word is much more loaded with sense than in social speech. It is a concentrated nodule of sense. To translate this meaning into the language of social speech, it would be necessary to expand the meanings embedded in one word into a whole panorama of words (Vygotsky 2011).

The motive for the formation of social speech is thought embedded by an implied sense, and it represents much more in its length and volume than word or even a set of words. In this regard, A.A. Serebryakov writes: “...when thought from a language and through the language meets with itself, it is in the language where it is realized as in something different, in otherness, and the language is a kind of a circuitous route for thought to itself ensuring structuralization and capture of the thought” (Serebryakov 2015). The process of reproducing a thought or going outwards to form social speech is complex since selection of words in the process of their interaction entails a discrepancy between their meanings and the initial ones, which leads to the mediation of a thought first by meanings and then by words. L.S. Vygotsky interpreted the path from thought to word as a process of movement “from the motive that generates a thought to shaping the thought itself, to mediating it in the inner word, then, in the meanings of external words, and finally in words. Yet, a thought is not something ready to be expressed. A thought is an internal mediated process. This is a path from a vague desire to a mediated expression through meanings or rather not to the expression but to the accomplishment of the thought in a word” (Vygotsky 2011). Thus, the interaction of words as the formative principle of thought is realized in the mind in the process of formulating social speech, it travels the way from thought to word, and its meaning mediates the thought.

**The nature of mental acts of consciousness in the process of language integration**

In sociocultural space, the verbalization of mental acts of consciousness in the process of language integration occurs by means of speech production activity, which explains “the transition from a subjective, not yet formed verbally, and understandable only to the subject of sense to a verbalized and intelligible to any listener system of meanings that is formulated in a speech utterance” (Luria 2013). The matter is that the real world of the Adyghe-Russian bilingual consciousness, like any similar consciousness, is diversified and varied. And the key point in forming utterances of this kind of consciousness is the speaker denominating the objects of mental action since a bilingual consciousness cannot provide a separate name for each situation or phenomenon of the world, without exception. The peculiarity of bilingual consciousness denomination is that a speaker, having an information-rich consciousness due to two equally functioning languages, uses the background knowledge in the sociocultural space acquired by the previous experience of the two cultures, which finds an application in the consciousness to new (virtually any) objects of the environment in question. This kind of verbal and cogitative operations in the sociocultural space of bilingual consciousness can be called an actual denomination, in which the linguistic consciousness of a speaker finely solves the problem of finding an appropriate word or phrase in the ‘lexicon of bilingual consciousness’ (Akhidzhakova 2015). In accordance with this, in sociocultural space, a bilingual consciousness makes a cognitive choice of a verbal means to express the active intent among the many different variants available and gives a new content to the known words in the course of denominating process.

Consequently, on the basis of these positions of bilingual consciousness, one can suggest a hypothesis of the mechanism of actual denomination. In the process of forming a mental space, bilingual consciousness uses structural divisions of two types. They are:

- mental component (the psychological content arising as a result of certain operations of inference, representation, etc.);
- the lexicon of a person who has a command of languages.

The mental component contains in the linguistic consciousness of a bilingual speaker current acts of consciousness: figurative, conceptual, verbal ones. What is of particular interest is the manifestation of mental consciousness of a bilingual speaker in verbal and cogitative process (in verbal space) where mental acts are created twofold. Externally, at the logical level recognizable by the subject, they are verbalized, and internally – intuitively – the subject is not aware of and cannot describe in words the mental action process. This explains the interest in the cognitive paradigm of speech production capable of reflecting the intents of an author’s bilingual consciousness. The role of the initiating impulse of an author’s bilingual consciousness is essential at the stage of modeling speech production

that activates an interaction of the mental and linguistic components, which reflects in the internal and social speech in the sociocultural space. For example:

“One day, looking at paintings said to have been brought from Petrograd itself, Aitekov, struck by what he saw, even though he called it libertinage, and in the depth of his heart, a doubt was creeping in, a doubt as he did not have the right to suspect the whole world of libertinage; he is the only one from the aul, clever, and those are all fools; he knows, but they do not; and suddenly he saw his wife on the sill of the room, sitting, holding the baby in her arms, with her legs spread out relaxedly, with her jacket unbuttoned, she was feeding the girl at the breast, with her nape leant against the door jamb, squinting against the bright light; as if she were listening to her mother’s power flowing from her to her little daughter, and she was giving it without stint, and because of giving her face expressed indescribable happiness, which no artist would ever be able to paint! Yet, he did not see this main thing when looking at the paintings, as one needs to have both skill and knowledge, exactly as you guess, although you do not look into, at least by the crust, what kind of stuffing a pie has. And again, returning home, to his family, he told himself that Dzhima had been created and brought into the world to become, after all, perhaps not of great literacy but of great femininity, and that it was him who had guessed she was like that, with such instincts, not someone else but him... And what was particularly amazing and pleasing about her was the confidence that nothing shallow, vulgar, dirty would never stick to her, she was somehow protected from all this” (A. Yevtykh. Mouthful of Spring Water).

As can be seen from the above context, the process of language integration in a bilingual consciousness verbalizes both the mental and sociocultural space, in which the factor of a bilingual speaker’s intelligence and the factor of speech-language mechanism interact seamlessly.

## CONCLUSION

The study of a speaker’s verbal and cogitative activity in the context of the language integration in a bilingual consciousness has made it possible to ascertain the fact of recognizing the complexity and significance of cognitive processes of verbalizing their intentions in course of speech production in the sociocultural space. In other words, it is possible to formulate this metaphorically in the following way: the intellection searches for a word or a verbal concept in terms of meaning and initial intent in Adyghe or Russian, while speech and language provide a range of ready denominations available for selection. Productivity in the sense of creating a new thought, a new vision of the mental space reality is the prerogative of bilingual consciousness intellection, which determines the elements in the space of mental operations that are subject to verbalization. It also carries out a search of a language capability scope and the choice of a verbal product that corresponds to the existing intent (in this case – for the mental consciousness), communication situations,

aesthetic sense, and others. The intellection of such a bilingual consciousness evaluates both the result and the understanding of speech product removing ambiguities in the process of verbalization of both mental and sociocultural space. And the speech-language mechanism of a bilingual speaker also provides a mental scope of language capability by extracting 'mental spheres' from it, reflecting spiritual, moral, and ethical values in their verbal behavior. The means of their manifestations are various verbal actions: showing respect for the elders, amity, ingratiation, condescension; a respectful attitude to a woman, polite and patient listening to the interlocutor, respectful and careful attitude to the nature, responding properly in the process of communication, and much more.

To conclude, the verbal and cogitative process of a bilingual mental consciousness performs a cognitive function, consisting in the creation of a new mental product, cognition of the reality, and, therefore, thought finds the opportunity to be realized in word. It should also be noted that the lexicon of a native speaker (Adyghe and Russian) is enormous, which allows their bilingual consciousness to perform cognitive functions in accordance with the context in particular parts ('mental spheres'), that is, in limited verbal scopes where the main element of the transition process of a bilingual mental consciousness thought into the oral (verbal) form occurs. Thus, the process of speech production in a bilingual consciousness in the context of language integration forms an information-intensive linguistic consciousness and determines a broad spectrum of speech expressiveness in the process of verbalizing a sociocultural space.

### References

- Ahidzhakova, M.P. (2015). Specificity of the manifestation of the mentality of bilingual consciousness in the linguistic cultural space. In Panesh, U.M., Ahidzhakova, M.P. (Eds.) *Cognitive paradigm of mentality in ethno-linguo-cultural space*: Collective monograph. Maikop: Adyghe State University Press, pp. 55-67.
- Baudouin de Courtenay, I.A. (2014). *The Beginnings of Structural Linguistics*. Series: Linguistic legacy of the XX century. Moscow: Krasand.
- Berwick, R.C., Chomsky N. (2015). *Why Only Us? Language and Evolution*. MIT Press.
- Bolhuis, J.J., Tattersall, I., Chomsky, N., Berwick, R.C., 2014. How Could Language Have Evolved? *PLOS Biology [E]*, 12(8), 1-6. <https://doi.org/10.1371/journal.pbio.1001934>
- Frege, G. (2015). *Logic and logical semantics*. Series: Classics of Science. Translated from German. Moscow: Librocom.
- Grosjean, F. (2000). *Myths about bilingualism*. University of Neuchatel, Switzerland. [http://www.francoisgrosjean.ch/myths\\_en.html](http://www.francoisgrosjean.ch/myths_en.html)
- Humboldt, W. von. (2013). *On the Diversity of Human Language Construction and its Influence on the Mental Development of the Human Species. Introduction to universal linguistics*. [Über die verschiedenheit des menschlichen sprachbaues und ihren einfluss auf die geistige entwicklung des menschengeschlechts] Series: The History of Linguophilosophical Thought. Moscow: Librocom.

- Karasik, V.I. (2013). *Language matrix of culture*. Moscow: Gnosis.
- Krizman, J., Skoe, E., Kraus, N. (2016). *Bilingual enhancements have no socioeconomic boundaries*. *Developmental Science*, 19(6):881-891. DOI: 10.1111/desc.12347.
- Luria, A.R. (2013). *The fundamentals of neuropsychology*. Series: Classical study book. Moscow: Academia.
- Potebnja, A.A. (2015). *Word and Sentence. Introduction to the theory*. Series: Linguistic legacy of the XX century. Moscow: Krasand.
- Serebryakov, A.A. (2015). Cognitive aspects of speech generation in German romantic discourse. *Modern Problems of Science and Education*, 1-1.; URL: <http://www.science-education.ru/ru/article/view?id=19726>
- Starreveld, P.A., De Groot, A.M.B., Rossmark, B. M.M Hell Van, J.G. (2014). Parallel language activation during word processing in bilinguals: Evidence from word production in sentence context. *Bilingualism: Language and Cognition*, 17 (2), 258-276. Cambridge University Press.
- Vygotsky, L.S. (2011). *Thinking and Speech*. Series: Philosophy. Moscow: AST, Astrel.
- Zhinkin, N.I. (2009). *Psycholinguistics*. Moscow: Labyrinth.