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Linguistic representation of people with autism spectrum disorder in a contemporary British novel: A case study

Summary

In today's increasingly inclusive society, where acceptance of neurodiversity and variations from conventional social norms has become a fundamental value, the successful integration of individuals with autism spectrum disorder (ASD) into everyday life represents a critical challenge. Over the past decade, significant advancements in medical and psychological research have expanded our understanding of the psychological and physiological manifestations of autism, developed educational approaches for children with ASD, and identified distinctive communication patterns among individuals with autism. Global statistics indicate that approximately 1% of the world's population has some form of autism spectrum disorder, with prevalence rates continuing to rise. Therefore, there is a pressing need for comprehensive, multidisciplinary research in this field.

One of the main aspects of autism spectrum disorder is impaired communication, specifically the absence of fully reciprocal, mutually intelligible dialogue between individuals with ASD and neurotypical counterparts. And while medicine and pedagogy study the behavioral and cognitive traits of autistic people, linguistics can uniquely contribute by analyzing thought processes, linguistic patterns, and perceptual frameworks inherent to ASD cognition. It can also promote understanding by providing practical communication guidelines, based on scientific explanations, in contrast to the ones shown in literature and film. The study's primary objective centers on equipping neurotypical society with scientifically validated insights on how to decode communication dynamics with autistic individuals and establish strategies for meaningful interaction.

To accomplish these objectives, the study employed dual analytical frameworks: (1) interpretive analysis comparing literary representations of autism with empirical scientific data, and (2) contextual analysis to map hierarchical relationships within semantic-cognitive dimensions.

The article uses an interdisciplinary approach to study the communicative characteristics of autistic individuals, drawing on Russian and international research in medicine, education, and linguistics. It reviews theories of effective communication and communication breakdowns, outlining key principles and causes. The practical analysis focuses on how high-functioning autistic individuals are portrayed in literature with the emphasis on conventionalized forms of communication. A case study of a contemporary British novel examines the way literary texts depict autistic communication across linguistic, cognitive, perceptual, behavioral, and physiological levels. It can be argued that fiction could be one of the tools to help neurotypical society learn to communicate with people with ASD.

Keywords: ASD, communication, communicative failures, Grice's maxims, fiction

1. INTRODUCTION

Recently there has been a rise in interest towards people with autism spectrum disorders (ASD) in Russia. Rather than stigmatize or isolate them from the socially active part of society, it aims at integrating them, fully or partially, into social interaction. In this connection we can mention positive changes in Russian society: in the sphere of education there have been introduced new laws on social inclusion for people with mental disorders, government provides help for children with orphan diseases, new specialized treatments for them are being developed and etc. But socialization of neurodivergent people with intellectual disabilities and intact speech plays an important role in the process of inclusion.

Socialization is a two-way process: on the one hand, we can deal with the problem by teaching certain skills to children and adults with mental disorders. In this regard we can rely on existing research in the field of medicine, psychology, social adaptation, special education and speech and language pathology.

On the other hand, we can approach the problem by educating the society about the peculiarities of such people and proper ways of interacting with them. Fiction can play a very important role in this process, for instance, though works whose characters are non-typical representatives of society, children and adults with autism spectrum disorder (ASD). In most European countries, social support in this area began to develop much earlier. And in European modern literature there are a number of works

on this topic, for example, Mark Haddon “The Curious Incident of the Dog in the Night-time” (2003), Marty Leimbach “Daniel Isn’t Talking” (2008), Oliver Sacks “An Anthropologist on Mars” (2009), Arabella Carter-Johnson “Iris Grace” (2016), Judith Newman “To Siri with Love: A Mother, Her Autistic Son, and the Kindness of Machines” (2014).

Obviously, in a work of fiction we are dealing with a conventionalized representation (Zelenyaeva, 2015) of the processes of perception, reasoning and the speech of neurodivergent people, but the purpose of these works is most likely not to imitate their way of thinking, but to demonstrate to society what types of difficulties they may encounter in communication and social interaction.

The purpose of the article is to consider the author’s conventionalized depiction of an autistic person (on the example of the novel by M. Haddon “The Curious Incident of the Dog in the Night-time”), describe their way of thinking, perception features, behavioural reactions and language as presented in the novel in comparison with how those are described in medical discourse. Relying on these observations it will be possible to determine those characteristics which lead to communicative failures and develop recommendations for successful interaction with them by neurotypical members of society.

The objectives of this study are threefold. First, it aims to summarize the prevailing understanding of the communicative characteristics of high-functioning autistic individuals, drawing on medical and educational research from both Russia and abroad. Second, it seeks to examine the principles of effective communication and the causes of communicative breakdowns from a linguistic perspective, enabling an interdisciplinary comparison of the communication process across linguistics, psycholinguistics, psychology, pedagogy, speech and language pathology, and special education. The practical objective is to analyze how the communicative features of autistic individuals are represented in literary texts, with the goal of enhancing neurotypical society’s understanding of autism and identifying strategies to support successful communication.

To achieve these objectives, the study employed the following research methods: analysis of fictional representations of autistic individuals, compared with scientific data; contextual analysis to identify the hierarchical structure of semantic and cognitive aspects; questionnaire surveys to test the validity of the study’s hypothesis.

2. BACKGROUND: MEDICAL AND LINGUISTIC PERSPECTIVES ON ASD

2.1 Medical and diagnostic criteria for ASD

The foundations of medical diagnosis of autism were laid back in 1979, when Lorna Wing and Judith Gould published the results of their research and formulated a triad of impairments in autism: disorders of social interaction, communication and imagination (Wing & Gould, 1979: 11–29).

In Russian psychiatry, guided by ICD-10 (International Classification of Diseases of the 10th revision), with disorders of this type doctors diagnose childhood autism (F.84.0):

A type of general developmental disorder that is determined by the presence of: a) anomalies and developmental delays that manifest in a child under the age of three; b) psychopathological changes in all three areas: equivalent social interactions, communication functions and behaviour that is limited, stereotypical and monotonous. These specific diagnostic features are usually complemented by other non-specific problems, such as phobias, sleep and eating disorders, outbursts of irritation and self-directed aggressiveness (ICD-10).

The American Psychiatric Association also considers “difficulties in communication and interaction” as one of the key symptoms for diagnosing ASD (American Psychiatric Association, 2013).

The third member of the triad – lack of imagination – leads to monotony and stereotypical behavioral reactions, which are a typical sign of autistic behaviour.

2.2 Linguistic and communicative features in ASD

The peculiarities of speech, language and behavior of people with ASD, which are caused by the impairments in the three above-mentioned areas, are considered in some detail in English-language scientific sources, mainly within the framework of experimental and empirical research in the field of psychology and speech and language therapy. Some studies provide a comprehensive description of the communicative difficulties of autistic people associated with the disorders on one or more levels: semantics, pragmatics, phonology, morphology or syntax (Vogindroukas et al., 2022). The researchers note that: “individuals with ASD also present a number of languages untypicalities such as echolalia, pedantic speech, misunderstanding of figurative language and more, due to pragmatic impairment” (Vogindroukas et al., 2022).

The specifics of linguistic disorders of persons with ASD are revealed in the manual published by the Autism Resource Center in Indiana, USA. They note the following features of people with ASD:

In some cases, complex language structures in their speech may be a repetition of fragments of dialogues heard on TV or in communication with other people. Such mild echolalia may be appropriately or inappropriately used in context. For the majority of people with ASD, the depth of meaning for specific words used may be restricted. They may have difficulty with figurative expressions such as idioms, metaphors, similes and irony (see also Vulchanova et al., 2015). Individuals with ASD may not always recognize in a dialogue or text that certain words may have alternative meanings. They tend to respond to suggestions, instructions, or other information quite literally. It is difficult for them to understand humor in TV shows, movies, cartoons or daily communication. Special questions (When? Why? How?) can cause difficulties for them (see also Goodwin et al., 2012). They understand the basic structure of the sentence, but may have difficulty with complex sentences that include subordinate clauses. They often rely primarily on keywords rather than on the grammatical structure of the message, which may be caused by misunderstanding of this structure. They may not catch the connection of one idea with another in a conversation or text, i.e. they may not connect the content of one sentence with another (Vicker, 2009).

Similar results were obtained by scientists who studied linguistic markers of ASD in narratives used to diagnose children with ASD. The study participants were 18 Spanish-Catalan bilingual children and 18 children with identical verbal IQ (control group). The authors of the article concluded that bilingual autistic children (without intellectual disability) exhibit distinct narrative patterns compared to neurotypical peers: fewer complex clauses, more referential errors, and atypical word choice-without morphosyntactic deficits (Schroeder et al., 2023).

Many foreign studies of autism appeared as early as the first half of the 20th century and are relevant up to the present day (Clayton & Fatemi, 2008; Frith & Houston, 2000; Kanner, 1943; Treffert, 2006).

Recent studies in Russia have begun to explore the communicative characteristics of children with ASD, particularly in relation to their learning opportunities during various stages of preschool and school education (Leonova, 2020; Panasenkova, 2022). However, many of these studies focus primarily on the formal linguistic features of autistic speech, which do not fully account for the underlying causes of communication breakdowns addressed in this research. To better understand these

causes and develop effective recommendations, it is essential to integrate the existing data with communication theory.

3. THEORETICAL FRAMEWORK: COMMUNICATION AND GRICE'S MAXIMS

Taratukhina defines **communication** as “a specific act of information exchange, the process of transmitting emotional and intellectual content” (Taratukhina, 2016: 462). Based on this definition, communication involving the transmission of emotional content is likely to encounter difficulties when one of the participants is an autistic person.

In this study, our primary focus is on effective communication – where all participants achieve their intended goals in some way. The concept of successful communication has been examined by many linguists from various perspectives, often depending on the type of discourse under investigation (e.g. Kuranova, 2016; Lenecz, 2016; Van Dijk, 1981). The conditions for successful communication, frequently cited in the literature, were originally formulated by Grice and summarized in his “Cooperative Principle”. He explains that conversations are cooperative efforts where participants share a common purpose or direction, whether clearly defined or evolving during the exchange. At each stage, speakers are expected to make contributions appropriate to the accepted purpose of the interaction. This principle guides how people communicate effectively by assuming that each participant’s utterance is relevant and timely within the context of the conversation (Grice, 1975: 41–58). Next, Grice formulates the maxims of Quantity, Quality, Relation and Manner. However, the scholar notes that these maxims can sometimes be violated without hindering successful communication, and at times, they may even conflict with one another. It is possible that non-compliance with Gricean maxims contributes to communication failures in individuals with ASD. This non-compliance may stem from an initial reluctance to engage in communication. A characteristic feature of autistic individuals, related to their social cognition and profiles, is a reduced need for communication, which can lead to disregard for the Cooperative Principle and its associated maxims.

Developing this idea, it is logical to assume that individuals with ASD do not only disregard this principle themselves, but also do not expect others to follow it. The whole theory of communicative implicatures relies on the assumption that “the talker will in general ... proceed in the manner that these principles prescribe”

(Grice, 1975: 47). That is, in order to correctly interpret an indirect speech act or an ambiguous utterance, the listener must assume that the speaker adheres to the Cooperative Principle and generally observes its maxims. This allows the listener to reject interpretations that contradict the maxims and select the most plausible meaning through logical reasoning or syllogistic inference. However, this complex logical reasoning is often difficult for individuals with ASD. Because they tend to interpret words and expressions literally, they struggle to grasp conversational implicatures. Grice notes that in typical communication, “the speaker thinks (and would expect the hearer to think that the speaker thinks) that it is within the competence of the hearer to work out or grasp intuitively” that the speaker means something beyond the literal expression (Grice, 1975: 50). The challenge arises in interactions with neurodivergent individuals, where the speaker cannot reliably expect this shared understanding.

When examining communication through the lens of communicative failures, we can refer to the definition by Ermakova and Zemskaya (1993), who describe communicative failures as the non-fulfilment or incomplete realization of the speaker’s communicative intention due to various causes. They identify three types of communicative failures based on their origins: those stemming from the structure of the language, those arising from differences between speakers, and those caused by pragmatic factors (Ermakova & Zemskaya, 1993: 30). All three types of failures may occur in communication involving autistic individuals.

Many researchers are engaged in studying the causes of communication failures not only in the field of linguistics but also in psychology and psycholinguistics. Studies focusing on communication failures, grounded in data from individual languages, have been conducted through various perspectives and theoretical frameworks.

An analysis of various classifications of the causes of communication failures reveals that the primary distinction is between linguistic and non-linguistic causes. The latter can be further divided into cultural, physiological, and psychological categories. According to Potemkin (1994), Teplyakova (1998), and Vechkina (2010), cultural causes include differences in national character and mentality, violations of ethical norms, the influence of stereotypes, differing understandings of politeness, variations in space and time perception, misinterpretation of nonverbal communication, differences in values, mismatches between cultural and linguistic norms, divergent communication strategies, and differences in humor perception. Physiological causes encompass auditory, visual, and speech impairments. Psychological causes may involve the formation of an inaccurate image of the communication partner and differences in the social backgrounds of communicants, such as age, gender, profession, place of residence, and level of language competence.

Many researchers have studied the principles of successful communication (Bara, 2010; Furnham & Bochner, 1986; Sperber & Wilson, 1995; Tomasello, 2003; Turner, 1991). Successful dialogue requires clearly defined pragmatic goals, which enable interlocutors to maintain a coherent and consistent conversation. Communication failures often arise when the illocutionary force of an utterance is misunderstood, preventing the pragmatic meaning from being accurately interpreted. It is important to note that, in the examples examined in this study, the success of speech acts largely depends on personal factors, with the social context playing a secondary role.

A communicative failure can also result from misinterpreting the speaker's actions, such as facial expressions, gestures, and other extralinguistic cues. This often becomes evident when the listener asks the speaker to repeat their statement. Additionally, communicative failure is apparent when the recipient responds inappropriately to the speaker's message, indicating a misunderstanding of the illocutionary force and a failure to achieve the communication goal. Thus, communicative mismatches may arise from both external situational factors and internal personal characteristics. Fundamentally, communicative failure is marked by a breakdown in information transfer caused by semantic issues as well as the specific structuring of the dialogue.

There are several non-linguistic causes of communicative failures, many of which can simultaneously fall into two or more categories. These include misinterpretation of nonverbal communication, misunderstanding of indirect speech, and failure to grasp implicatures. Additionally, the psycholinguistic and sociolinguistic characteristics of communicants can contribute to communication breakdowns. When identifying the main types of communicative failures in this category, it is important to establish specific "risk zones" that may arise in intercultural communication. This should be based on a communicative situation model that accounts for its intercultural nature (see Fig. 1).

This type of model situates the communication process within two types of context: socio-cultural and situational. Such a distinction is essential, as each context provides communicants with different types of information through its respective channels. The situational context is defined as the set of elements that constitute a communicative situation, such as time and place, the degree of formality or informality, participants, and other relevant factors.

The socio-cultural context encompasses the norms and rules of behavior specific to the situation and based on the values of the culture in which the communication occurs. Social roles and statuses of the interlocutors are expressed differently depending on the context. From the perspective of the socio-cultural context, two factors are

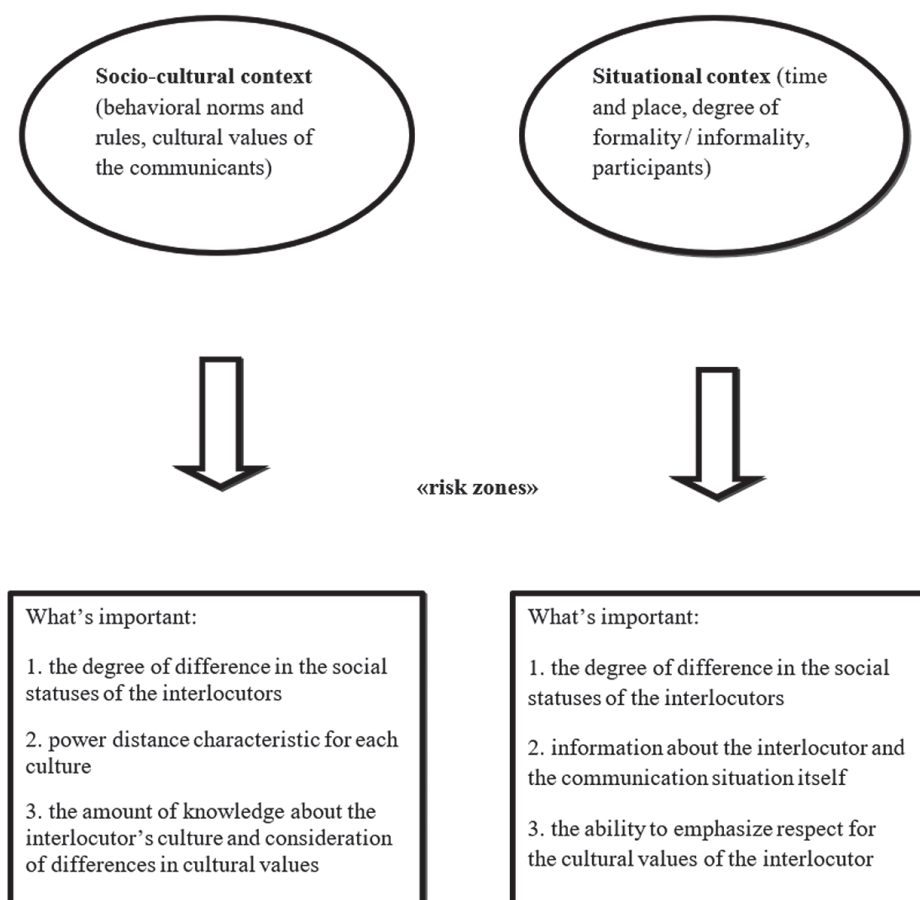


Figure 1. A model of intercultural communicative situation

particularly important: the degree of difference between the social statuses of the interlocutors and the characteristics of power distance within each culture.

From the perspective of the situational context, differences in social status may vary in significance depending on the specific situation. Cultural identity guides participants on how to behave, taking into account the similarities or differences in social roles as well as the norms of politeness inherent to their culture.

Background knowledge and the value systems of the interlocutors are also crucial components of the communication process model. When related to different types of context, the following distinctions emerge: within the socio-cultural context, greater emphasis is placed on understanding the interlocutor's culture and respecting differences in cultural values. In contrast, the situational context requires knowledge

about the interlocutor and the specifics of the communicative situation – such as whether the interaction is formal or informal and the degree of status differences. In addition, the success of communication often depends on the speaker's ability to demonstrate respect for the cultural values of their interlocutor.

Purely linguistic causes of communication failures have been studied by linguists such as Potemkin (1994: 56), Teplyakova (1998: 67), and Vechkina (2010: 40–46). This category of failures includes violations of orthoepic norms (such as incorrect accent or stress), issues related to polysemy and paronymy, the use of nonce-words, borrowings, highly specialized terms, jargon, and professional language, as well as inaccurate understanding of lexical meanings. Additionally, failures may arise from elliptical syntactic constructions, syntactic ambiguity, and referential ambiguity.

4. METHODOLOGY

This study employs an interdisciplinary methodology, drawing on research from linguistics, medicine, psychology, and education to analyze the communicative characteristics of individuals with autism spectrum disorder (ASD). The research design integrates three main methods. First, interpretive analysis is used to compare the literary representation of ASD in Mark Haddon's *The Curious Incident of the Dog in the Night-Time* with empirical findings from medical and linguistic literature. Second, contextual analysis is applied to identify and map the hierarchical structure of semantic and cognitive features as depicted in the novel. Third, a questionnaire survey was conducted via a specialized online forum dedicated to the discussion of autistic children (https://zen.ru/zapiski_oshaleloj_materi). A total of 54 participants completed the survey, with 45 respondents affirmatively answering the question, "Does the main character of the novel resemble a person with ASD?" Respondents were also invited to provide brief comments to elaborate on their answers. For example, one participant noted, "Perhaps the book is especially interesting to me because we have Asperger's in our family, and so much of what is written feels as if it's about us." In their comments, respondents often shared personal stories and highlighted challenges related to ASD diagnosis in Russia. This multi-method approach enables a comprehensive examination of how ASD is portrayed across linguistic, cognitive, perceptual, behavioral, and physiological dimensions, and provides a foundation for developing practical recommendations to enhance communication between neurotypical society and individuals with ASD.

5. ANALYSIS: LINGUISTIC REPRESENTATION OF ASD IN THE NOVEL "THE CURIOUS INCIDENT OF THE DOG IN THE NIGHT-TIME"

This particular book was chosen as the corpus material for this study because compared to other novels featuring autistic persons it provides a comprehensive description of their communicative behaviour. The book received critical acclaim, winning the Boeke Prize in South Africa (modeled after the British Booker Prize) and the Whitbread Book Award. The story is narrated in the first person by Christopher Boone, a fifteen-year-old autistic teenager who attends a mainstream school but studies in a separate classroom with a tutor. Christopher is articulate and intellectually gifted, particularly in mathematics and physics, and is preparing to take the A-level exam, the highest level in mathematics for English secondary schools.

Upon its publication, the novel was widely regarded as providing an accurate insight into the mind of a person with ASD. At the time, it was commonly believed that individuals with certain forms of ASD could possess exceptional talents in scientific or artistic fields. However, in 2009, Mark Haddon admitted on his blog that he was not an expert on autism.

Haddon employed specific artistic techniques and narrative forms to convey the perspective and worldview of a high-functioning autistic person, revealing Christopher's reasoning processes, behavioral peculiarities, and physiological traits. The novel includes internal monologues that illustrate Christopher's unique thought patterns and mindset, as well as dialogues accompanied by his mental commentary, which reveal his distinctive perception of people and reality. Notably, the text incorporates visual elements – such as pictures and diagrams – that symbolize the dominance of visual thinking in autistic individuals. This innovative narrative approach uses images to represent the way Christopher's autistic brain processes information, highlighting the gap between verbal and visual cognition.

This article examines certain features of autistic language as portrayed through first-person narration in fiction. It also explores the types of reactions autistic individuals exhibit during interactions with others – including behavioral responses, interpretations of others' actions and thoughts – and their distinctive way of thinking, such as constructing sequences of mental images.

As part of the study, a survey was conducted among parents of children with ASD in an online forum. Participants were asked to read the novel under analysis and assess how closely their children's behavior resembled that of the main character.

The majority of respondents (90%) reported significant similarities or even complete alignment in various behavioral and communicative aspects.

The novel presents several storylines through shifting perspectives: from the autistic protagonist's point of view, from the perspectives of his loved ones (revealing internal conflicts), and through third-person narration that depicts how others respond to the autistic character – both appropriately, to model positive interactions, and inappropriately, to highlight common misunderstandings.

The analysis of the linguistic portrayal of individuals with ASD and their communicative traits in fiction is conducted through a detailed description of the main character's mental and linguistic peculiarities, as well as the communicative failures that arise from them.

5.1 Speech and language

In the novel, the main character's language is presented in a fictionalized form, both as spoken dialogue with others and as internal monologue. The peculiarities of language in the author's interpretation can be identified at the lexical, syntactic and stylistic levels. A significant portion of the protagonist's utterances – approximately 50% – consists of specialized vocabulary drawn from scientific fields such as mathematics, physics, astronomy, and biology, for example:

And all I could see would be stars. And stars are the places where the molecules that life is made of were constructed billions of years ago. For example, all the iron in your blood which stops you from being anemic was made in a star.

Christopher explains many processes in the human body and natural phenomena using a scientific prose style, often through definitions and formulas. These explanations would be more suitable for scientific publications and textbooks rather than everyday speech, for example:

Mrs. Alexander said, "It's a kind of cake. It has four pink and yellow squares in the middle and it has marzipan icing round the edge." And I said, "Is it a long cake with a square cross section which is divided into equally sized, alternately coloured squares?"

At the syntactic level it can be noted that Christopher's speech often consists of short simple sentences, for example:

It was 7 minutes after midnight. The dog was lying on the grass in the middle of the lawn in front of Mrs. Shears's house. Its eyes were closed.

The speech of individuals with ASD is often characterized by a linear presentation of thoughts, with few or no ellipses or interruptions. In the main character's speech,

only the function words “yes” and “no” are used independently, without further explanation. Parallel syntactic constructions are also common in Christopher’s speech, apparently, they make it easier for him to process events, for example:

Then I detected in the utility room.

Then I detected in the dining room.

Then I detected in the living room, where I found the missing wheel from my Airfix Messerschmitt Bf 109 G-6 model under the sofa.

Then I thought I heard Father coming through the front door and I jumped.

The language of the main character abounds in various syntactic structures. Complex sentences with subordinate clauses demonstrate his well-developed reasoning abilities:

Then I went upstairs, but I didn’t do any detecting in my own room because I reasoned that Father wouldn’t hide something from me in my own room unless he was being very clever and doing what is called a Double Bluff like in a real murder mystery novel, so I decided to look in my own room only if I couldn’t find the book anywhere else.

Additionally, he uses simple constructions with the subjunctive mood to express projections of his future behavior. However, Subjunctive II constructions – typically used to describe unreal or hypothetical situations – are notably absent from his speech, probably because such concepts are difficult for Christopher to grasp (which reflects the third element of the ASD triad).

And if he never gave it back to me I would be able to remember most of what I had written, so I would put it all into the second secret book and if there were bits I wanted to check to make sure I had remembered them correctly I could come into his room when he was out and check.

One notable feature of the main character’s speech is the frequent absence of linking words or conjunctions. Most sentences describing successive actions simply begin with “then”, as illustrated in the examples above. In fact, the word “then” appears 489 times throughout the novel.

Christopher also exhibits peculiarities in his perception of grammatical structures, which affects how he responds – or sometimes fails to respond – to the interlocutor’s questions. He tends to recognize questions that are grammatically well-formed. This pattern is evident in the original English version of the book. In the Russian translation, where interrogative sentences do not rely on a fixed word order, autistic individuals appear to rely more on intonation to identify questions, for example:

He said: "I've talked to your father, and he says you didn't hit a policeman on purpose."

I didn't answer anything because it wasn't a question.

This example illustrates that Christopher disregards the Gricean Cooperative Principle. Although the statement is not technically a question, the speaker implies that Christopher should understand the pragmatic purpose behind the utterance. The speaker expects him to confirm or deny the statement, and perhaps provide an explanation. However, Christopher fails to grasp this intention, resulting in a communication breakdown.

At the stylistic level, Christopher's language is marked by the absence of stylistically nuanced vocabulary. He often describes people, animals, and various objects using specifying epithets, for example:

He had curly black fur, but if you got closer, you could see that the skin was shining through it – pale yellow, like a chicken.

Christopher's language lacks evaluative epithets and metaphors. Even the comparisons he makes are not truly metaphorical; instead, they refer to concrete visual images.

Dreadlocks is when you never wash your hair and it looks like old rope.

He struggles to describe a person's emotional state because there are no clear visual cues that distinguish one emotion from another. As a result, his descriptions focus on listing specific small details, such as color, shape, and size. For example:

She was wearing pyjamas and a housecoat. Her toenails were painted bright pink and she had no shoes on.

The sergeant behind the desk had very hairy hands and he had bitten his nails so much that they had bled.

Christopher sometimes evaluates people based on whether they like dogs: if someone loves dogs, he considers them a good person; if they do not, he assumes they are bad.

5.2 Perceptual features

In the novel, the author constructs a system to depict how a character with ASD perceives the surrounding world. For Christopher, visualization is the primary mode of perception. He easily processes information that can be represented as a clear visual image and requires only logical comprehension, for example:

I know all the countries of the world and their capital cities and every prime number up to 7,057.

However, dynamic visual cues, such as facial expressions and gestures, which are typically linked to recognizing an interlocutor's emotional state, are difficult for Christopher to interpret, for example:

I got Siobhan to draw lots of these faces and then write down next to them exactly what they meant. I kept the piece of paper in my pocket and took it out when I didn't understand what someone was saying. But it was very difficult to decide which of the diagrams was most like the face they were making because people's faces move very quickly.

He is able to recognize only basic emotions like sadness and happiness through emoticon-like images; other emotions or subtle variations remain indistinguishable to him.

At the same time, Christopher's visual perception exhibits unique characteristics. He categorizes colors as either annoying or tolerable, disliking yellow and brown in particular. This preference even influences his eating habits – for instance, he tints brown gravy with red food coloring to avoid looking at colors he finds unpleasant. Furthermore, objects painted in two colors pose perceptual challenges for him and can even lead to avoidance or refusal to interact with such objects, for example:

The box, which was a brown thing inside a red thing, which made my head feel funny so I didn't look.

Christopher's visual perception is influenced by spatial characteristics. He feels calmer and more comfortable in smaller spaces with regular, geometric shapes, for example:

It was nice in the police cell. It was almost a perfect cube, 2 meters long by 2 meters wide by 2 meters high. It contained approximately 8 cubic meters of air. And I like really little spaces, so long as there is no one else in them with me. Sometimes when I want to be on my own I get into the airing cupboard outside the bathroom and slide in beside the boiler and pull the door closed behind me and sit there and think for hours and it makes me feel very calm.

His spatial perception is also linked to what he considers the correct arrangement of objects within a given space, for example:

And sometimes Mrs. Shears stayed overnight at our house and I liked it when she did because she made things tidy and she arranged the jars and pans and tins in order of their height on the shelves in the kitchen and she always made their labels face outward. And she put the knives and forks and spoons in the correct compartments in the cutlery drawer.

Additionally, his perception of time is structured around a specific order of actions, such as a daily routine, for example:

And that is one of the other reasons why I don't like France, because when people are on holiday they don't have a timetable and I had to get Mother and Father to tell me every morning exactly what we were going to do that day to make me feel better.

Because time is not like space. And when you put something down somewhere, like a protractor or a biscuit, you can have a map in your head to tell you where you have left it. But even if you don't have a map, it will still be there because a map is a representation of things that actually exist so you can find the protractor or the biscuit again. And a timetable is a map of time, except that if you don't have a timetable time is not there like the landing and the garden and the route to school. And this means that time is a mystery, and not even a thing... And this is why I like timetables, because they make sure you don't get lost in time.

The main character also analyzes the world around him through olfactory perception, for example:

And Mr. Jeavons smells of soap and wears brown shoes that have approximately 60 tiny circular holes in each of them. ... He smelled of body odor and old biscuits and of popcorn, which is what you smell of if you haven't washed for a very long time, like Jason at school smells because his family is poor. ... he smelled of something I do not know the name of which Father often smells of when he comes home from work.

His auditory perception is closely linked to his visual processing; he transforms sounds into mental images, and even words appear to him as printed text, for example:

Often I can see what someone is saying written out like it is being printed on a computer screen, especially if they are in another room. But this was not on a computer screen. I could see it written really large, like it was on a big advert on the side of a bus.

However, he experiences significant difficulties with language perception. When an interlocutor uses slang, vernacular expressions, metaphors, or other figurative language, Christopher is unable to form corresponding mental images and therefore struggles to understand what is being said, for example:

I do not like proper novels. In proper novels people say things like, "I am veined with iron, with silver and with streaks of common mud. I cannot contract into the firm fist which those clench who do not depend on stimulus." What does this mean? I do not know.

But she smoked cigarettes and she said lots of things I didn't understand, e.g., "I'm going to hit the hay," and "It's brass monkeys out there," and "Let's rustle up some tucker." And I didn't like when she said things like that because I didn't know what she meant.

The boy prefers animals to people, finding them easier to understand and interact with since they do not use language, for example:

I like dogs. You always know what a dog is thinking. It has four moods. Happy, sad, cross and concentrating. Also, dogs are faithful and they do not tell lies because they cannot talk. ... I also said that I cared about dogs because they were faithful and honest, and some dogs were cleverer and more interesting than some people.

Christopher's visual perception of people has another distinctive feature: he pays little attention to faces and shows little interest in the facial expressions of others, most likely because these are dynamic visual images, for example:

And I don't know what some hardness of eye means, and I'm not interested in faces.

In his visual perception of the world around him, Christopher lacks a signifying, generalizing function, which makes it more difficult for him to process and interpret his surroundings, for example:

But if I am standing in a field in the countryside I notice everything. There are 19 cows in the field, 15 of which are black and white and 4 of which are brown and white. There is a village in the distance which has 31 visible houses and a church with a square tower and not a spire... And there were 31 more things in this list of things I noticed but Siobhan said I didn't need to write them all down. And it means that it is very tiring if I am in a new place because I see all these things, and if someone asked me afterward what the cows looked like, I could ask which one, and I could do a drawing of them at home and say that a particular cow had patterns on it like this.

It is also very difficult to accept anything new for Christopher, for example:

I do not like strangers because I do not like people I have never met before. They are hard to understand. It is like being in France, which is where we went on holiday sometimes when Mother was alive, to camp. And I hated it because if you went into a shop or a restaurant or on a beach you couldn't understand what anyone was saying, which was frightening. It takes me a long time to get used to people I do not know. For example, when there is a new member of staff at school I do not talk to them for weeks and weeks. I just watch them until I know that they are safe. Then I ask them questions about themselves, like whether they have pets and what is their favorite color and what do they know about the Apollo space missions and I get them to draw a plan of their house and I ask them what kind of car they drive, so I get to know them. Then I don't mind if I am in the same room as them and don't have to watch them all the time.

Tactile perception in individuals with ASD is often highly sensitive; they generally dislike being touched and are strongly averse to violations of personal boundaries, for example:

I don't like it when people grab me. And I flicked out the saw blade and I held it tightly in the pocket that Toby wasn't in so that I could stab someone if they grabbed hold of me.

I stepped outside. Father was standing in the corridor. He held up his right hand and spread his fingers out in a fan. I held up my left hand and spread my fingers out in a fan and we made our fingers and thumbs touch each other. We do this because sometimes Father wants to give me a hug, but I do not like hugging people so we do this instead, and it means that he loves me.

5.3 Physiological traits

Throughout the narrative, the author also highlights physiological characteristics of the main character. In particular, Christopher experiences disturbed and limited sleep, for example:

...when I am still awake at 3 a.m. or 4 a.m. in the morning and I can walk up and down the street and pretend that I am the only person in the whole world.

He eats very slowly and follows specific rituals – such as requiring food to be served on separate plates, as mixed food makes it impossible for him to eat, for example:

I eat very slowly so my food is nearly always cold.

Autistic individuals may also face challenges with personal hygiene rituals. In the novel, Christopher explains some of the reasons behind these difficulties, for example:

And then I wanted to go for a wee, but I was on a train. And I didn't know how long it would take us to get to London and I felt a panic starting, and I started to tap a rhythm on the glass with my knuckles to help me wait and not think about wanting to go for a wee, and I looked at my watch and I waited for 17 minutes. But when I want to go for a wee I have to go really quickly, which is why I like to be at home or at school and I always go for a wee before I get on the bus, which is why I leaked a bit and wet my trousers.

The author offers his own explanation for why people with ASD rarely make eye contact with their interlocutors, even during conversation:

Usually people look at you when they're talking to you. I know that they're working out what I'm thinking, but I can't tell what they're thinking. It is like being in a room with a one-way mirror in a spy film. But this was nice, having Father speak to me but not look at me.

Another characteristic of individuals with ASD highlighted in the novel is their exceptional memory, which the author interprets as follows:

My memory is like a film. That is why I am really good at remembering things, like the conversations I have written down in this book, and what people were wearing, and what they smelled like, because my memory has a smelltrack which is like a soundtrack.

*And when people ask me to remember something, I can simply press **Rewind** and **Fast Forward** and **Pause**, like on a video recorder, but more like a DVD player because I don't*

have to Rewind through everything in between to get to a memory of something a long time ago. And there are no buttons, either, because it is happening in my head.

5.4 Reactions towards words and actions of others

One of the narrative threads in the novel portrays Christopher's possible verbal interactions with neurotypical members of society – his parents, neighbors aware of his condition, police officers, teachers at the school he attends, and even passersby. The author constructs dialogue models intertwined with Christopher's internal monologue, providing readers with insight into how to communicate effectively with individuals like him. By revealing Christopher's thought processes, the author fosters a deeper understanding of his behavior for the audience.

For example, if an interlocutor asks a question without using interrogative intonation or the syntactic structure of a question – such as in colloquial speech – Christopher may not respond, for instance:

And now if I don't know what someone is saying, I ask them what they mean or I walk away.

Loud noises, shouting, or a rapid succession of questions without pauses for answers can cause fear or confusion in Christopher, often expressed through “groaning” and specific body movements, for example:

I do not like people shouting at me. It makes me scared that they are going to hit me or touch me and I do not know what is going to happen. Instead, she started screaming again. I put my hands over my ears and closed my eyes and rolled forward till I was hunched up with my forehead pressed onto the grass. The grass was wet and cold. It was nice. It was nice.

The policeman said, “I am going to ask you once again...” I rolled back onto the lawn and pressed my forehead to the ground again. And made the noise that Father calls groaning. I make this noise when there is too much information coming into my head from the outside world.

And I didn't like all the people being near me and all the noise because it was too much information in my head and it made it hard to think, like there was shouting in my head. So I put my hands over my ears and I groaned very quietly.

The main character may react aggressively to being touched, especially if it is done roughly, for example:

So I got out my Swiss Army knife and I flicked out the saw blade and I held it tightly in the pocket that Toby wasn't in so that I could stab someone if they grabbed hold of me.

Christopher is also uncomfortable when someone laughs at him. Because he has difficulty distinguishing emotions, he cannot tell whether the laughter is friendly, sarcastic, or mocking, for example:

Then he laughed. I do not like people laughing at me, so I turned and walked away.

To have a successful conversation with an autistic person, the interlocutor's speech should avoid metaphors and other stylistic devices-particularly those that do not evoke clear visual images, for example:

This means that the word metaphor is a metaphor. I think it should be called a lie because a pig is not like a day and people do not have skeletons in their cupboards. And when I try and make a picture of the phrase in my head it just confuses me because imagining an apple in someone's eye doesn't have anything to do with liking someone a lot and it makes you forget what the person was talking about.

The novel provides an example of effective communication with an autistic child through the character of Siobhan, Christopher's teacher, for example:

Siobhan understands. When she tells me not to do something she tells me exactly what it is that I am not allowed to do. And I like this.

5.5 Reasoning patterns

The author's use of internal monologue as the narrative style allows readers to closely follow the protagonist's reasoning process. Christopher, who has developed only basic representational thought, struggles to quickly find appropriate answers when questions are asked too rapidly or when he is confronted with several questions at once. The text provides a vivid depiction of his mental state in such situations:

He was asking too many questions. And he was asking them too quickly. They were stacking up in my head like loaves in the factory where Uncle Terry works. The factory is a bakery and he operates the slicing machines. And sometimes a slicer is not working fast enough but the bread keeps coming and there is a blockage. I sometimes think of my mind as a machine, but not always as a bread-slicing machine. It makes it easier to explain to other people what is going on inside it.

And this is how I recognize someone if I don't know who they are. I see what they are wearing, or if they have a walking stick, or funny hair, or a certain type of glasses, or they have a particular way of moving their arms, and I do a Search through my memories to see if I have met them before.

And this is also how I know how to act in difficult situations when I don't know what to do.

This reliance on basic representational thinking also limits his ability to use imagination and to understand or create humor, for example:

I find it hard to imagine things which did not happen to me. I cannot tell jokes because I do not understand them. If I try to say the joke to myself, making the word mean the three different things at the same time, it is like hearing three different pieces of music at the same time, which is uncomfortable and confusing and not nice like white noise. It is like three people trying to talk to you at the same time about different things.

At times, Christopher's behavior may appear illogical because he forms incorrect logical connections, associating current events with his past experiences, for example:

– *Then he said, "I am arresting you for assaulting a police officer."*

This made me feel a lot calmer because it is what policemen say on television and in films.

In this situation, Christopher misinterprets the illocutionary force of the utterance, which was likely intended to frighten him into cooperating. However, his misunderstanding unexpectedly produces the desired pragmatic effect – the boy calms down and follows the policeman.

The peculiarities of Christopher's reasoning shape his unique understanding of, and attitude toward, concepts such as death, truth, and lies. For him, death is a purely physical phenomenon that does not evoke any emotional response, including fear, as demonstrated in the following example when he discusses his mother's death:

When people die they are sometimes put into coffins, which means that they don't mix with the earth for a very long time until the wood of the coffin rots. But Mother was cremated. This means that she was put into a coffin and burned and ground up and turned into ash and smoke. I do not know what happens to the ash and I couldn't ask at the crematorium because I didn't go to the funeral.

In Christopher's view, metaphors – and even some idiomatic expressions – are considered lies because they do not mean exactly what is said. However, he distinguishes "white lies" as instances where information is simply withheld, for example:

And I said, "I have been out." This is called a white lie. A white lie is not a lie at all. It is where you tell the truth but you do not tell all of the truth. This means that everything you say is a white lie.

It is when you describe something by using a word for something that it isn't. This means that the word metaphor is a metaphor. I think it should be called a lie because a pig is not like a day and people do not have skeletons in their cupboards. And when I try and make a picture of the phrase in my head it just confuses me because imagining an apple in someone's eye doesn't

have anything to do with liking someone a lot and it makes you forget what the person was talking about.

These peculiarities of reasoning are sometimes linked to the boy's physiology. For example, his limited imaginative thinking (the third element of the ASD triad) can trigger psychosomatic reactions in situations that involve dealing with fantasy:

This is another reason why I don't like proper novels, because they are lies about things which didn't happen and they make me feel shaky and scared.

Christopher is prone to individual rituals and stereotypical ideas, for example:

*In the bus on the way to school next morning we passed 4 red cars in a row, which meant that it was a **Good Day** – so I decided not to be sad about Wellington. Mr. Jeavons, the psychologist at the school, once asked me why 4 red cars in a row made it a **Good Day**, and three red cars in a row made it a **Quite Good Day**, and five red cars in a row made it a **Super Good Day**. And why do four yellow cars in a row made it a **Black Day**, which is a day when I don't speak to anyone and sit on my own reading books and don't eat my lunch and Take No Risks. He said that I was clearly a very logical person, so he was surprised that I should think like this because it wasn't very logical.*

He rejects the concept of religion because, like other things he finds difficult to imagine, it involves believing in events that did not happen or cannot be seen:

I think people believe in heaven because they don't like the idea of dying, because they want to carry on living and they don't like the idea that other people will move into their house and put their things into the rubbish.

5.6 Behavioral rituals

In terms of behavior, Christopher is also defined by rituals – for example, he always knows the exact time:

I was also wearing my watch and they wanted me to leave this at the desk as well but I said that I needed to keep my watch on because I needed to know exactly what time it was. And when they tried to take it off me I screamed, so they let me keep it on.

Depending on his emotional state, he selects the most appropriate form of communication, for example: *when I'm sad, I like to be alone.*

In the text of the novel the main character lists his own behavioral challenges, allowing the author to convey that individuals like him are often aware of how they differ from others:

*These are some of my **Behavioral Problems**:*

Not talking to people for a long time

Not eating or drinking anything for a long time

Not liking being touched

Screaming when I am angry or confused

Not liking being in really small places with other people

Smashing things when I am angry or confused

Groaning

Not liking yellow things or brown things and refusing to touch yellow things or brown things

Refusing to use my toothbrush if anyone else has touched it

Not eating food if different sorts of food are touching each other

Not noticing that people are angry with me

Not smiling

Saying things that other people think are rude

Doing stupid things

Hitting other people

Hating France

Driving Mother's car

Table 1. Features of conventionalized ideas about the characteristics of persons with ASD

Type	Form
Speech and Language	<ol style="list-style-type: none"> 1. Presence of special terminological 2. Linear construction of utterance with full sentences 3. A lot of parallelism 4. Lack of stylistically marked vocabulary
Perceptual Features	<ol style="list-style-type: none"> 1. Visualization of objects 2. Failure to recognize dynamic visual images (facial expressions) 3. Symbolic color perception 4. Spatial visual perception 5. The perception of time is determined by the order of actions 6. Perception of the surrounding world through olfactory perception 7. Auditory perception through visual images 8. Absence of a signifying generalizing function 9. Tactile perception is heightened (does not like to be touched)
Physiological Traits	<ol style="list-style-type: none"> 1. Sleep disorder 2. Slow and ritualized process of eating 3. Limited personal hygiene skills 4. Good visual memory
Behavioral Rituals	<ol style="list-style-type: none"> 1. Lack of verbal reaction to incomprehensible information from an interlocutor 2. Frightened by loud speech or many questions asked at once 3. Aggressive response to touch
Reasoning Patterns	<ol style="list-style-type: none"> 1. Literal way of thinking 2. Incorrect associative-logical connections 3. Individual concepts for “death”, “truth”, “lies”, “religion” 4. Individual rituals and stereotypical ideas

6. DISCUSSION

Today, many pressing social issues are studied through a multidisciplinary approach to gain deeper understanding and develop effective solutions. Linguistics, alongside neurobiology, psychology, and pedagogy, examines various medical and communicative aspects of people with ASD, offering a unique perspective on the problem. Within linguistics, the communication of high-functioning autistic individuals – who represent approximately 1% of the global population – can be analyzed in terms of both successful interactions and communication breakdowns.

The portrayal of autistic communication in literary texts can also provide valuable insights. Artistic works employ a range of methods and techniques that make complex issues more accessible to a broad audience – issues that might otherwise seem obscure when presented solely in scientific language. Fiction, especially when narrated in the first person, not only offers an engaging story but also serves an important educational function.

In the analyzed novel, we identified specific techniques used to present the internal experiences of individuals with mental disorders to a broad audience. Primarily, these include first-person narration, internal monologues, and colloquial speech, which effectively illustrate the cause-and-effect relationships between reasoning, perception, and behavior in such individuals. Additionally, we highlighted the graphic elements employed in the text – such as emoticons used in teaching children with ASD, as well as graphic and mathematical schemes and diagrams that help clarify the concrete logical thinking characteristic of these children.

The language and speech peculiarities of people with ASD were studied at the lexical, syntactic, and stylistic levels. A notable grammatical feature is the linear arrangement of utterances using simple sentences. The language of the main character is rich in technical terms and stylistically neutral vocabulary.

The main character's communicative behavior is categorized into groups including peculiarities of perception, reasoning, reactions to interlocutors, and physiological features.

Christopher's perception is primarily based on visualizing all objects of reality, which influences his other sensory experiences. He can even perceive spoken language as printed text. His tendency toward concrete, representational thinking prevents him from understanding figurative expressions. Since visual perception is his dominant and most important sensory channel, tactile sensations often feel redundant or even irritating, while his perception of color is selective – he categorizes colors as either acceptable or unacceptable in his environment. Dynamic visual stimuli, such as

human facial expressions, also go largely undifferentiated by him. For people with ASD, visual perception of the surrounding world is marked by stereotypical spatial and temporal preferences: the surrounding space should be small and geometrically regular, objects must be arranged in an orderly, often rhythmic manner, and time is structured rigidly around daily routines. Physiological peculiarities include short sleep duration and certain atypical hygiene habits, aspects rarely addressed in medical or pedagogical discourse.

The peculiarities of the main character's reasoning reveal a distinctive understanding – and consequently, a unique attitude – toward concepts such as death, truth, and lies, which can contribute to communication difficulties with neurotypical individuals. Autistic people also tend to hold stereotypical ideas about many things, which is reflected in their communicative behavior.

In fiction, these characteristics are presented clearly and accessibly to a wide audience through artistic techniques such as repetition, carefully constructed situations, and internal monologues.

While this study provides valuable insights into the linguistic and communicative representation of persons with ASD through the lens of contemporary literature, several limitations should be acknowledged. The analysis is based primarily on a single literary work, which, despite its authenticity and popularity, may not fully capture the diversity and complexity of autistic experiences. Additionally, the questionnaire survey was conducted within a specific online community, which may introduce selection bias and limit the generalizability of the findings. Nevertheless, the study's interdisciplinary approach highlights the significance of literature as a tool for bridging the gap between clinical research and public understanding. By aligning literary depictions with empirical data and real-life perspectives, the research underscores the potential of fiction to foster empathy, challenge stereotypes, and inform more effective communication strategies with individuals on the autism spectrum.

7. CONCLUSION

This study demonstrates that the linguistic and communicative characteristics of individuals with autism spectrum disorder (ASD) are not only rooted in medical and psychological domains but are also vividly and instructively represented in contemporary literature. Through a comparative analysis of Mark Haddon's "The Curious Incident of the Dog in the Night-Time" and empirical scientific data, the research reveals that literary texts can serve as tools for increasing public awareness and understanding of ASD. The novel's portrayal of the protagonist's perception,

reasoning, language, and behavior closely aligns with clinical descriptions of high-functioning autism, as confirmed by both expert literature and responses from individuals familiar with ASD. The findings highlight the importance of recognizing the unique patterns of communication, cognition, and sensory experience in autistic individuals, as well as the frequent causes of communicative breakdowns with neurotypical society. Ultimately, the study underscores the value of interdisciplinary approaches in fostering social inclusion and bridging the gap between clinical realities and societal perceptions of autism.

Currently, Autism Spectrum Disorder (ASD) is characterized primarily as a social communication disorder, meaning that the main challenge for individuals with ASD is establishing effective communication with others. Therefore, neurotypical interlocutors should take into account the stereotyped (restricted and repetitive) behavioral patterns of autistic individuals, their difficulties with social-emotional interaction, and their unique use and interpretation of nonverbal cues during communication.

Based on the insights gained from both literary analysis and empirical research, the following recommendations are proposed to enhance communication and social integration for individuals with ASD:

1. **Adopt Clear Communication Strategies.** When interacting with people with ASD, use simple grammatical structures, avoid figurative language and metaphors, and articulate speech clearly and calmly.
2. **Recognize and Respect Individual Differences.** Be mindful of the sensory sensitivities, behavioral rituals, and unique cognitive patterns that may influence the communication preferences and responses of autistic individuals.
3. **Provide Opportunities for Feedback.** Allow individuals with ASD to clarify or comment during interactions, as this can help bridge gaps in understanding and reduce communicative failures.

Finally, promoting awareness through literature could be implemented by using literary works featuring autistic characters in educational and public awareness campaigns to foster empathy and understanding among neurotypical individuals.

By implementing these recommendations, neurotypical society can contribute to more effective, respectful, and inclusive communication with individuals on the autism spectrum, thereby promoting greater social integration and well-being for all members of the community.

Future research could consider including a larger and more diverse sample and incorporating multiple literary sources or empirical data to enhance the robustness and applicability of the findings.

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Investigating performance variations in verbal fluency and executive functions in fluent and non-fluent bilingual aphasia

Summary

The existing literature on bilingual aphasia is limited, especially in investigating verbal semantic and letter fluency. The present study, in which fluency impairment variations of fluent and non-fluent bilingual people with aphasia (bPWA) are studied, is part of a larger-scale research. The study aimed to investigate performance variations in executive functions and verbal fluency among fluent and non-fluent bPWA compared to healthy participants. A total of 26 participants were recruited, including 6 fluent and 2 non-fluent bPWA, as well as 18 bilingual healthy participants (HB). The results indicated significant letter fluency and switching impairment in both aphasia groups, with non-fluent bPWA exhibiting more pronounced deficits. The findings contribute to the understanding of verbal fluency impairments in fluent and non-fluent bPWA and highlight the need for tailored therapeutic interventions and further exploration of cognitive and lexical deficits in bilingual aphasia.

Keywords: bilingual aphasia, semantic and letter fluency, executive functions, multiple case study

1. INTRODUCTION

It is now widely recognised that more than half of the global population is bilingual (Ardila & Ramos, 2007; Grosjean & Li, 2013), which has resulted in a marked rise in the incidence of bilingual aphasia (Ansaldi & Saidi, 2014; Gitterman et al., 2012). Bilingual aphasia is a condition in which an individual who is fluent in two or more

languages experiences language deficits in both languages following brain damage (Gitterman et al., 2012) and it can be classified into two types of impairments: parallel and selective (Fabbro, 2001). Parallel impairment occurs when both languages of a bilingual person are affected to a similar extent. Selective impairment, on the other hand, refers to a situation where one language is more affected than the other (Gitterman et al., 2012). In the case of aphasia subtypes, a broadly accepted distinction is made between fluent and non-fluent categories (Chapey, 2008). Fluent aphasia is a condition where the ability to comprehend spoken words is impaired, while the ability to produce connected speech remains relatively unaffected. However, speech is often incoherent and may contain irrelevant words, especially in severe cases (Hedge, 2024). In contrast, non-fluent aphasia is a condition that is characterised by severely impaired language production, while the ability to comprehend spoken words remains relatively intact (Clough & Gordon, 2020; Hedge, 2024).

Verbal fluency tasks are frequently used to investigate the correlation between executive and language function in healthy adults (Hughes & Bryan, 2002; Patra et al., 2019) and clinical populations (Bittner & Crowe, 2007; Carpenter et al., 2020; Faroqi-Shah et al., 2018; Henry et al., 2004; Wauters et al., 2020). Executive functions are a set of top-down mental processes that are essential for tasks that require concentration and attention. These processes are particularly important when going on procedural automatism or relying on instinct or intuition would be insufficient or impossible (Diamond, 2013). The influential model proposed by Miyake and colleagues (2000) consists of three distinct components of executive functions, such as updating, inhibition and shifting. Miyake and colleagues argued that these components represent core processes underlying executive functions and can be measured separately (Friedman & Miyake, 2017; Friedman et al., 2008; Miyake & Friedman, 2012; Miyake et al., 2000). Verbal fluency tests usually include semantic and letter fluency tasks, where participants are requested to produce as many different words as possible within a fixed period of time, usually under one minute (Bose et al., 2022). In terms of the letter fluency task, participants are requested to generate as many distinct words as possible that begin with a given letter (e.g. M) or phoneme (/b/) (Patra et al., 2020). In the semantic verbal fluency task, participants are requested to access the pre-existing connections in their mental lexicon associated with the given category to produce words. However, it is worth noting that in the letter verbal fluency task, participants are required to produce words beginning with a specific letter/phoneme while suppressing the activation of related semantic concepts (Patra et al., 2020). Studies have shown that such activation can have a detrimental effect (Friesen et al., 2014; Luo et al., 2010).

Research examining the relationship between executive functions and verbal fluency tasks has indicated that successful performance in verbal fluency tasks relies on both lexical and executive abilities (Bittner & Crowe, 2007; Patra et al., 2020; Shao et al., 2014). In case of aphasia, numerous studies have found that people diagnosed with aphasia produce a limited number of answers in verbal fluency tasks (Bose et al., 2017; Kiran et al., 2014), likely due to a combination of lexical deficits and executive control difficulties. While lexical deficits have been proposed as the primary cause, recent research also implicates executive control impairments as an underlying factor (Bose et al., 2017, 2022; Faroqi-Shah et al., 2018; Patra et al., 2020). In bilingual aphasia, the number of studies investigating verbal fluency and executive control processes is rather limited (Carpenter et al., 2020; Faroqi-Shah et al., 2018; Kiran et al., 2014; Patra et al., 2020). This is particularly evident in the context of comparing semantic and letter fluency, however, research has demonstrated that a comparison between the two can provide a more comprehensive insight into the role of executive control processes in verbal fluency tasks (Bose et al., 2022; Friesen et al., 2014; Patra et al., 2020). These studies moved beyond the traditional approach of examining verbal fluency tasks in aphasia, as they included further variables beyond only calculating the number of correct answers. For instance, by calculating the fluency difference score (Bose et al., 2022; Friesen et al., 2014; Patra et al., 2019, 2020), searching within a subcategory (Patra et al., 2019), examining switching from a subcategory to another (Troyer et al., 1997), which all demand higher executive control demands to perform successfully. Furthermore, the literature on verbal fluency has identified mean retrieval latency as an important variable (Friesen et al., 2014), it has linked longer mean retrieval latency with fewer correct responses to greater cross-linguistic interference in healthy bilingual population. The fluency difference score (FDS), which represents the difference between performance on the two conditions, has been proposed as a measure of executive abilities in healthy individuals. Specifically, a smaller difference score as a proportion of the semantic fluency score has been associated with superior executive functioning (Friesen et al., 2014). Studies comparing semantic and letter verbal fluency tasks have revealed significant differences in healthy and clinical population between the two. While most studies found that the letter verbal fluency task places a greater demand on executive functions (Bose et al., 2022; Friesen et al., 2014; Patra et al., 2019, 2020; Shao et al., 2014; Thiele et al., 2016) a few found the opposite (Gordon et al., 2018; Whiteside et al., 2016), therefore further research is needed to investigate verbal fluency, especially in the domain of aphasia. In case of semantic fluency task in bilingual aphasic patients, Kiran et al. (2014), found

that bilingual patients with aphasia produced fewer correct number of answers and switching than healthy bilinguals while both groups used similar clustering strategies. Furthermore, Kiran et al. (2014) did not find cross-linguistic differences at the group level in individuals with bilingual aphasia (despite parallel impairment), only in healthy bilingual controls. In case of healthy controls, they demonstrated better performance in their dominant language, aligning with the hypothesis that the non-dominant language imposes greater cognitive demands, resulting in reduced verbal output (Kiran et al., 2014).

In the bilingual aphasia literature significant progress has been made in investigating the role of lexical and executive control in verbal fluency along with independent measures of executive functions (Carpenter et al., 2020; Faroqi-Shah et al., 2018; Patra et al., 2020). Faroqi-Shah et al. (2018) investigated the relationship between cognitive control, word retrieval in aphasia. The study included participants with monolingual (N= 18) and bilingual aphasia (divided into two subgroups, N= 10 in each group) in the chronic phase of recovery as well as matching control groups comprised of neurologically healthy monolingual and bilingual participants of corresponding ages, sex and educational backgrounds. All bilingual participants (Tamil-English) demonstrated a high level of proficiency in bilingualism. The results of the Western Aphasia Battery (WAB) indicated that participants with bilingual aphasia exhibited parallel impairment with regard to their L1 and L2, moreover, both the monolingual and bilingual aphasics exhibited a moderate degree of impairment with different subtypes of fluent and non-fluent aphasia. The study employed the semantic verbal fluency task, object naming and the Stroop task. The results indicated that no correlation between the semantic verbal fluency and the Stroop task was found. However, a strong correlation was observed between object naming and the semantic verbal fluency task. It has been suggested that the absence of a correlation between inhibitory control and semantic fluency may be due to the impaired executive control abilities of people with aphasia for whom word retrieval is no longer possible (Faroqi-Shah et al., 2018).

Carpenter et al. (2020) investigated 13 individuals with bilingual aphasia (Spanish- English) and 22 healthy bilingual controls in verbal semantic fluency task in four conditions: No-Switch in L1, No-Switch in L2, Self-Switch and Forced Switch. The bilingual individuals with aphasia were in the chronic phase of recovery, with eleven having acquired aphasia from stroke, one from traumatic brain injury, and one from a brain tumour. Carpenter et al. (2020) found that bilingual individuals with aphasia were more vulnerable to the impact of the executive functions demand in

verbal fluency tasks in comparison to the healthy control groups. Furthermore, when examining cross-linguistic difference in the letter fluency task, the study indicated that bilinguals with aphasia did not exhibit such difference, unlike healthy bilingual controls. According to Carpenter et al. (2020) this absence of cross-linguistic variation in the aphasia group suggests that heightened executive control demands may impede performance in bilingual individuals with aphasia. Additionally, they found that bilinguals with aphasia experienced greater difficulty in the forced-switched condition, which placed greater demand on the executive control mechanism, while they performed similarly to healthy participants in easier self-switch task (Carpenter et al., 2020).

Patra et al. (2020) investigated the role of executive control processes in verbal semantic and letter fluency as well as independent measures of executive control (Stroop task, Trail Making Test and backward digit span) in eight Bengali-English bilingual individuals with aphasia. All participants were diagnosed with non-fluent aphasia types from severe to mild impairments in both languages as well as were in the chronic phase of recovery. They examined not only the number of correct answers but also the fluency difference score, cluster size, number of switches, within cluster pauses, between cluster-pauses as well as 1st-RT and Sub-RT. The results indicated that bilingual participants with aphasia performed poorly in the verbal fluency measures, where executive control demands were higher (e.g. letter fluency, FDS, number of switches and between cluster-pauses). Furthermore, their findings were reinforced by correlational analysis, which revealed a significant relationship between Stroop ratio and backward digit span as well as verbal fluency variables (e.g. number of correct answers, number of switches and 1st-RT).

1.1 The present study

The aforementioned studies have significantly advanced our understanding of the relationship between executive functions and verbal fluency performance in bilingual individuals with aphasia. However, these studies primarily examined bilingual aphasia at the group level, including participants with only non-fluent aphasia or those exhibiting different fluency patterns with similar impairment levels. While they conducted individual-level analyses, they neglected to focus on performance differences across fluent and non-fluent aphasia types. Understanding the nuances between fluent and non-fluent aphasia subtypes is essential for developing tailored therapeutic interventions and enhancing our comprehension of the cognitive-linguistic interface

in bilingual aphasia. Therefore, the present study aimed to investigate performance variations in executive functions, verbal semantic and letter fluency among fluent and non-fluent bilingual individuals with aphasia, in comparison to healthy bilingual participants.

Verbal fluency performance is typically assessed by the total number of acceptable words generated during the allotted time, as well as the temporal parameters, such as the number of words produced in shorter time segments within the total duration. The aim was to investigate the degree of word retrieval deficits experienced by individuals diagnosed with fluent and non-fluent aphasia. It was anticipated that both bPWA groups would demonstrate lower overall accuracy in semantic and letter fluency tasks relative to the healthy bilingual participants due to the impact of aphasia on word retrieval. Although the degree of this difference was expected to vary between the two aphasia groups. Additionally, both the aphasic and healthy groups were expected to demonstrate poorer performance in the letter fluency task, as it requires greater engagement of executive control processes (Bose et al., 2017, 2022; Carpenter et al., 2020; Patra et al., 2020). Regarding cross-linguistic comparison in the semantic fluency task, it was expected that both aphasia groups would demonstrate similar performance, without significant cross-linguistic differences, in contrast to healthy bilinguals (Kiran et al., 2014; Patra et al., 2020).

The study also examined how the two aphasia groups differed from the healthy bilingual participants in the distribution of responses across the four-time intervals. It was hypothesized that the distribution of correct responses across the four intervals would significantly differ between the two aphasia groups and the healthy bilingual participant, although the degree of this difference was expected to vary between the two aphasia groups. Furthermore, it was investigated whether errors, such as repetitions and responses outside the target category, were more common in the aphasia groups.

Finally, the Trail Making Test was used to examine possible impairments in executive functions. The study hypothesized that both fluent and non-fluent bilingual individuals with aphasia would experience difficulties in the Trail Making Test, particularly in Part B. However, the degree of the difference was expected to vary between the two aphasia groups. Even if the fluent bPWA group exhibited relatively better performance compared to the non-fluent participants, it was anticipated that the fluent bPWA group would still show a greater TMT difference score compared to healthy bilingual individuals, indicating potential deficits in switching abilities.

2. METHODS

2.1 Participants

All participants with bilingual aphasia had suffered a cerebrovascular accident. Clinical criteria for aphasic participants included: (1) signs of aphasia as indicated by their performance during the Western Aphasia Battery (WAB) in both languages (Kertesz, 1982), (2) at least 6 months post-onset of their stroke, (3) premorbid right-handedness. The bilingual aphasia group included 8 participants, with demographic details presented in Table 1. Participants' ages ranged from 44 to 81 years, with a mean age of 63.5 years ($SD = 13.02$). This group included 3 males and 5 females, educational background measured in years from 11 to 20 years ($M = 13.38$ years, $SD = 3.20$). The participants were classified into different educational levels: three participants with secondary education (bPWA1, bPWA3, bPWA7), three with vocational education (bPWA4, bPWA6, bPWA8) and two with higher education (bPWA2, bPWA5). The post-onset days varied from 184 to 8978 days, with a mean of 2641.13 days ($SD = 3835.87$). Six participants were classified as fluent, and two individuals were classified as non-fluent based on the WAB performances and evaluations of (former) speech-language pathologists. Regarding aphasia types, five participants were classified as anomic (bPWA1, bPWA2, bPWA3, bPWA4, bPWA5), one as conduction (bPWA7) and two as global (bPWA6, bPWA8) based on evaluation of the speech-language pathologists who participated in the assessments. The participants' first language (L1) was either Croatian (CRO) or Hungarian (HU), while their second language (L2) (Hungarian, Slovakian, German) was acquired at varying ages (see Table 1 for details). All participants were interviewed about their language background using the Hungarian version of the Bilingual Aphasia Test (Paradis, 1989; adapted to Hungarian by Lábás-Weber, n.d.) questionnaire (language acquisition history, language of instruction, language usage and dominance) in the presence of the author of this study and speech-language pathologists, which showed that all bilinguals used their languages parallelly both before and after the stroke incident. In case of severe cases of aphasia, family members provided the necessary information about the language background. Specifically, participants bPWA1, bPWA2 and bPWA3 were born in Hungary and lived in small towns speaking Croatian in a small community. The language of instruction at school was Hungarian and Croatian language was also taught. They acquired Croatian as their L1 and their L2 was Hungarian at the age of six and three. The home language was Croatian, they used Hungarian at school and workplaces. Participants bPWA5, bPWA6, bPWA7 and bPWA8 were born in Slovakia in small towns still

speaking Hungarian. They first acquired Hungarian and Slovakian at the age of 3 and 6. The language of instructions at school was Hungarian for participants bPWA6 and bPWA8 and Slovakian for bPWA5 and bPWA7. The home language was Hungarian, while they used Hungarian and Slovakian at school and work. Participant bPWA4 was born in Hungary and moved to Germany at the age of 30, the language of instruction was Hungarian. He used Hungarian as home language and German at work on a daily basis. Participants bPWA1, bPWA2, bPWA3, received only speech therapy in Hungarian, while bPWA4, bPWA5, bPWA6, bPWA7 and bPWA8 in both languages. Parallel impairment was observed in all cases of aphasic participants, as determined by the evaluation of the speech-language pathologists and the WAB results. The Aphasia Quotient (AQ) of the WAB is presented in Table 1 for both languages.

Table 1. Aphasic participant details

Participants	Age	Sex	Education in years	Education level	Post on set days	Speech	Lesion site	Aphasia type	Aphasia severity (parallel)	WAB AQ L1	WAB AQ L2	L1	AoA L1	L2	AoA L2
bPWA1	73	female	12	secondary	8580	fluent	left	anomic	mild	92.2	95.7	CRO	from birth	HU	6
bPWA2	72	female	16	higher education	603	fluent	left	anomic	mild	79.9	83.8	CRO	from birth	HU	6
bPWA3	57	male	12	secondary	8978	fluent	left	anomic	mild	78.6	90.6	CRO	from birth	HU	3
bPWA4	60	male	11	vocational	369	fluent	left	anomic	mild	91.2	82	HU	from birth	DE	30
bPWA5	49	female	20	medical school	225	fluent	left	anomic	mild	95	88.4	HU	from birth	SK	3
bPWA6	72	male	11	vocational	201	non-fluent	left	global	severe	14.9	15.5	HU	from birth	SK	6
bPWA7	44	female	14	secondary	1989	fluent	left	conduction	moderate	53	50	HU	from birth	SK	3
bPWA8	81	female	11	vocational	184	non-fluent	left	global	severe	9.2	5	HU	from birth	SK	6
Mean	63.5		13.38		2641.13					64.25	63.88				7.88
SD	13.02		3.20		3835.87					34.84	35.96				9.06
min-max	44-81		11-20		184-8978					9.2-95	5-95.7				3-30

The healthy bilingual group consisted of 18 participants, whose demographic characteristics are presented in Table 2. Participants' ages ranged from 46 to 80 years, with a mean age of 65 years ($SD = 9.80$). The group involved 13 females and 5 males and had educational attainment ranging from 8 to 30 years ($M = 13.17$ years, $SD = 5.51$). Similarly to the bilingual aphasia group, the participants had their first language (L1) as Croatian (CRO) or Hungarian (HU) and had acquired their second language (L2), Hungarian or Croatian or Slovakian (SK) or German (DE), at varying ages. This group served as a reference for the bilingual aphasia group. All participants (bPWA and HB) provided informed consent, and the confidentiality of data was maintained by assigning unique identification number to each participant.

Table 2. Neurologically healthy bilingual participant details

Participants	Age	Sex	Education in years	Education level	L1	AoA L1	L2	AoA L2
HB1	62	female	12	secondary	CRO	from birth	HU	3
HB2	63	female	11	vocational	CRO	from birth	HU	3
HB3	66	female	16	higher education	CRO	from birth	HU	3
HB4	66	female	14	vocational	CRO	from birth	HU	6
HB5	67	female	8	elementary	CRO	from birth	HU	6
HB6	67	female	16	higher education	CRO	from birth	HU	6
HB7	71	female	8	elementary	CRO	from birth	HU	3
HB8	72	male	8	elementary	CRO	from birth	HU	3
HB9	72	male	11	vocational	CRO	from birth	HU	6
HB10	76	female	8	elementary	CRO	from birth	HU	6
HB11	77	female	11	vocational	CRO	from birth	HU	6
HB12	69	male	11	vocational	HU	from birth	DE	30
HB13	50	female	18	higher education	HU	from birth	SK	from birth
HB14	80	female	8	elementary	CRO	from birth	HU	6
HB15	60	female	30	doctorate	HU	from birth	CRO	from birth
HB16	46	female	18	higher education	HU	from birth	CRO	from birth
HB17	47	male	17	higher education	CRO	from birth	HU	3
HB18	59	male	12	secondary	HU	from birth	CRO	23
Mean	65		13.17					6.28
SD	9.80		5.51					7.77
min-max	46-80		8-30					0-30

2.2 Assessment tools

The letter and semantic fluency tasks were administered from the Hungarian version of the Addenbrooke's Cognitive Examination (Dudás et al., 2002). In the semantic fluency task, the participants were required to name as many animals as they could in one minute. In the letter fluency task, the participants had to name as many words as they could with the letter 'M', except names, cities and countries in one minute. Potential impairments in inhibition, working memory and cognitive flexibility were investigated in people with aphasia. The maximum available score in the fluency tasks was 7 in both tasks. In the case of the semantic fluency task, if the participant generated more than 21 words, they received a score of 7. A score of 6 was given for word count between 17 and 21, while a score of 5 was assigned for generating 14 and 16 words. For further details, please refer to Table 3. In the letter fluency task, participants who generated a word count exceeding 17, they received a score of 7. Participants who generated between 14 and 17 words earned a score of 6. For further details of the scoring system of the letter fluency task, please refer to Table 3. The distribution of responses across 15-second intervals was also compared between both aphasic and healthy participants (only in the Hungarian version). Additionally, it was also investigated whether errors such as out-of-category responses and repetitions were more common in the aphasic groups. The semantic fluency task was assessed in both languages (CRO/SK/DE from the WAB test), while letter fluency was assessed in Hungarian.

Table 3. The scoring system of the letter and semantic fluency tests

Letter fluency	Semantic fluency	Score
> 17	> 21	7
14-17	17-21	6
11-13	14-16	5
8-10	11-13	4
6-7	9-10	3
4-5	7-8	2
1-3	1-6	1
0	0	0

The Trail Making Test (TMT) is a widely used clinical task for the evaluation of cognitive flexibility impairment in participants with aphasia. The test assesses the capacity to shift between sets, requiring the participant to connect an alternating series of numbers and letters. Failure to shift attentional set results in a pattern of perseveration, whereby the individual continues to select based on the previously successful or overlearned set. Performance in the TMT is sensitive to the frontal lobe, particularly to the lateral frontal lobe (Egner, 2017). It consists of two parts. In part A, the participants had to draw a line (on paper using pen/pencil) connecting consecutive numbers (from 1 to 25), while in part B, they had to join numbers and letters together in an alternating progressive sequence (McMorris, 2016). In both parts, response times were recorded in seconds, along with the number of errors made in each part. In the case of non-fluent forms of aphasia, the examiner stopped the assessment if the participant was unable to progress, particularly in Part B. In such cases, only the number of errors was documented. Although participants unable to complete Part B are often marked as taking 301 seconds in Trail Making Test interpretations, the present study included participants in the fluent aphasia group who successfully performed the task in over 301 seconds. Consequently, for non-fluent participants, the number of mistakes was analysed instead of assigning the 301-second mark. Additionally, for individuals with fluent bilingual aphasia, it was possible to calculate the Trail Making Test difference and ratio scores. The TMT difference (TMTB-TMTA) score has been proposed as the optimal measure of task switching ability (Sánchez-Cubillo et al., 2009), while the TMT ratio (TMT B/TMT A) is suggested to mitigate the influence of perceptual speed to some extent (Lamberty et al., 1994; Salthouse, 2011). TMT was used to measure visual attention, working memory and cognitive flexibility. While the TMT is frequently employed as a non-linguistic assessment, it is important to recognize that its reliance on letter sequencing necessities linguistic competence. Consequently, when interpreting TMT results, the potential influence of aphasia on linguistic abilities should be considered.

2.3 Procedures

Participants with bilingual aphasia were recruited from a variety of sources. The recruitment was conducted via three principal channels: (a) institutional, (b) private speech and language therapists, (c) individual. Aphasia subtypes in both languages were assessed by highly experienced speech-language pathologists.

- a) Institutional recruitment: Some participants were recruited from rehabilitation centres and hospitals, who were approached in collaboration with rehabilitation departments where speech therapists identified suitable candidates based on

predefined inclusion criteria. The individuals bPWA2, was recruited from the Sopron Erzsébet Teaching Hospital and Rehabilitation Institute in Hungary (Soproni Erzsébet Oktató Kórház és Rehabilitációs Intézet). The hospital provided a speech therapist as well as a bilingual psychologist for the Croatian tests, in addition to a quiet and private room for the assessments. The speech therapist conducted the Hungarian test, while the Croatian test was carried out by the bilingual psychologist. Both the Hungarian and Croatian assessments were conducted in the presence of the author of this study. The hospital director of the Rehabilitation Institute in Sopron gave written permission (reference number: 543-2/2023) for the author of this study to enter the Institution and make use of the speech therapy room to conduct assessments. Participant bPWA5 was recruited from Penta Hospitals, (Nemocnica Dunajská Streda) in Slovakia. The director of the hospital gave written authorisation to the author of this study to enter the Institution and make use of the speech therapy room to conduct assessments. The hospital provided a speech therapist and a suitable room for the assessments. Since the speech therapist was bilingual (L1 Hungarian, L2 Slovakian), all the tests were conducted in the presence of the speech therapist and the author of this study.

- b) Private speech therapists: Additional participants were recruited through a Hungarian-Slovakian private speech therapist (bPWA6, bPWA7, bPWA8). The speech-language pathologist helped in the process of identifying individuals who were actively seeking therapy and met the eligibility requirements of the study. Written informed consent was obtained from both the therapists and participants prior to collecting data. The speech-language pathologist conducted both the Hungarian and Slovakian assessments in the presence of the author of this study.
- c) Individual recruitment: Participant bPWA1 and bPWA3 were recruited on an individual basis, who had completed a course of formal speech therapy and was no longer receiving regular treatment. The individuals were approached directly, through support groups for people with aphasia with the help of a highly experienced speech-therapist who was willing to help the assessments voluntarily. Data for these individuals was collected in their homes to ensure a comfortable and familiar environment, thereby facilitating a more effective assessment. The assessments were conducted in the presence of, a speech-language pathologist, a Croatian Hungarian interpreter and the author of this study. All participants provided written informed consent.

The assessments were performed in several sessions and every participant was tested individually. All procedures were conducted in accordance with ethical guidelines, ensuring that the participants were fully informed of the study's purpose and their right to withdraw their participation at any time. The WAB tests were administered in both languages and were administered on two different occasions. All sessions were recorded with digital voice recorder.

2.4 Data analysis

In the present study for statistical analysis, the Kolmogorov-Smirnov (KS) test, a non-parametric and distribution-free test that imposes no assumptions regarding the underlying data distribution, was used. Specifically, the two-sample KS test with a one-sided alternative hypothesis for stochastic dominance was employed. Unlike the Mann-Whitney U test, which primarily evaluates differences in central tendencies between two populations, the KS test considers the entire distribution of data (Dodge, 2008). In the case of discrete data, the KS test tends to be conservative, as noted in previous studies (Noether, 1963; Slakter, 1965; Walsh, 1963). The study employed the SciPy library's implementation (Virtanen et al., 2020), specifically with the `kstest` function. The KS test was used to investigate performance differences in verbal fluency and the TMT between fluent bPWA and HB, as well as between non-fluent bPWA and HB groups.

For the analysis of paired samples, the Wilcoxon signed-rank (WSR) test, a non-parametric method to assess the significance of differences in paired data was employed, which was also performed using a one-sided alternative hypothesis to evaluate stochastic dominance. The calculations were implemented using the `wilcoxon` function from the SciPy Library (Virtanen et al., 2020). This implementation uses permutation tests for samples with ties. In the present study, the Wilcoxon signed-rank test was employed to analyse performance differences between semantic and letter fluency tasks across all groups, as well as to compare differences in semantic fluency task performance between the languages within each group.

3. RESULTS

The findings presented in this study are based on the test results of the fluent and non-fluent bilingual aphasics compared with the bilingual participants' performance in the reference group. The individual scores as well as the mean and standard derivations (SD) for the verbal fluency tests and the Trail Making Test along with the result of the statistical

analysis are presented in Appendix A-D. The findings regarding the group differences in verbal fluency are presented first, followed by the detailed results of the Trail Making Test, which was used to examine potential impairments in switching ability.

3.1 Group differences in verbal letter and semantic fluency

In the Hungarian versions of the verbal fluency tasks, differences between fluent bPWA and healthy bilingual participants were found in terms of the scores of total number of correct answers in the letter fluency task (refer to Figure 1) (fluent bPWA: $M = 2.5$, $SD = 1.22$; HB: $M = 5$, $SD = 1.50$), while the semantic fluency task did not reveal any group differences in the total number of correct answers (fluent bPWA: $M = 4$, $SD = 2.53$; HB: $M = 6.39$, $SD = 0.98$).

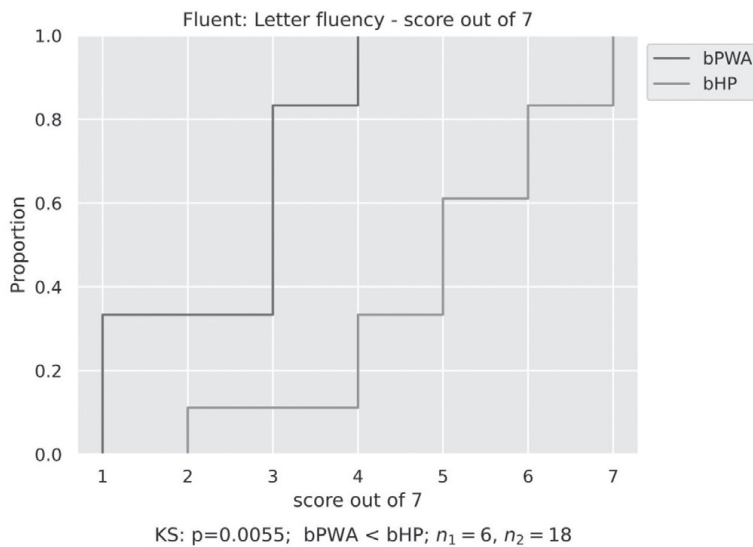


Figure 1. Comparison of the fluency scores in the Hungarian version of the letter fluency task between fluent bilingual aphasics and healthy bilingual participants

Further analysis of answer distribution in the semantic fluency task, across four 15 second intervals, indicated that while overall performance was similar, the distribution of answers during varied between fluent bPWA and HB in the first and second intervals, but not in the subsequent intervals. In the letter fluency task, fluent bPWA demonstrated significantly lower performance compared to HB across all time intervals. The non-fluent participants performed both fluency tasks poorly and the comparison between non-fluent bPWA and HB revealed significant differences in

both fluency tasks, as well as in all the four intervals for both semantic and letter fluency tasks. The analysis of repetitions and out-of-category responses did not reveal any significant differences in any group comparison for the semantic and letter fluency tasks, suggesting that while both aphasia groups struggled with overall fluency, their patterns of repetition and category errors were not statistically different from those of healthy bilinguals.

Furthermore, the comparison between semantic and letter fluency tasks within both bPWA groups and the HB group revealed no significant differences within the fluent and non-fluent aphasia groups. However, the HB group exhibited a significant difference, with better performance in the semantic fluency task compared to the letter fluency task (see Figure 2).

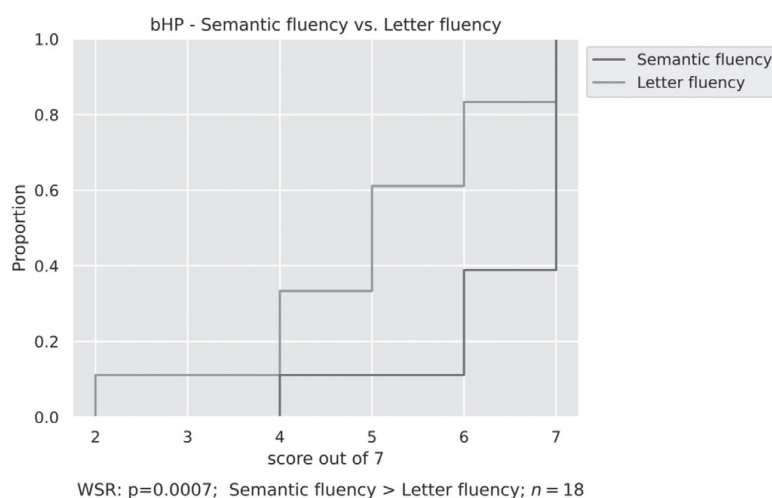


Figure 2. Comparison of semantic and letter fluency tasks in the healthy bilingual reference group

Finally, in the Croatian, Slovakian and German versions of the semantic fluency test, no significant cross linguistic differences were observed in either the fluent or the non-fluent bPWA groups. However, the HB group showed significantly better performance in the Hungarian version of the semantic fluency task.

3.2 Group differences in the Trail Making Test

The analysis revealed statistically significant difference in RT between fluent bPWA and HB in both TMT-A and TMT-B demonstrating that fluent bPWA needed significantly longer time to complete the task than HB (refer to Figures 3–4). Regarding

the non-fluent participants, the study only analysed the RT in TMT-A due to the fact the non-fluent bPWA were unable to solve part B. As a result, the number of mistakes were also analysed in both parts. The analysis revealed significantly longer RTs in the TMT-A for the non-fluent bPWA group compared to the HB group (refer to Figure 5). In terms of error analysis, in Part A, only the non-fluent bPWA group performed significantly worse compared to the HB group, while the fluent bPWA group did not show significant differences, suggesting that despite their significantly slower performance, their accuracy remained intact. In contrast, in Part B, both the fluent and non-fluent bPWAs made significantly more errors than the HB group. The TMT ratio and difference were calculated for the fluent bPWA, as the necessary RT data was missing for the non-fluent bPWA group. The TMT ratio scores showed no statistically significant difference between fluent bPWA and healthy controls (fluent bPWA: $M = 2.73$, $SD = 1.11$; HB: $M = 2.63$, $SD = 1.02$), suggesting that both groups experienced the expected pattern of longer times on TMT-B compared to TMT-A. In contrast, the TMT difference scores revealed a significant difference, with fluent bPWA exhibiting notably higher scores than the reference group (fluent bPWA: $M = 149.17$, $SD = 83.92$; HB: $M = 74.50$, $SD = 66.34$) suggesting impairment in switching abilities.

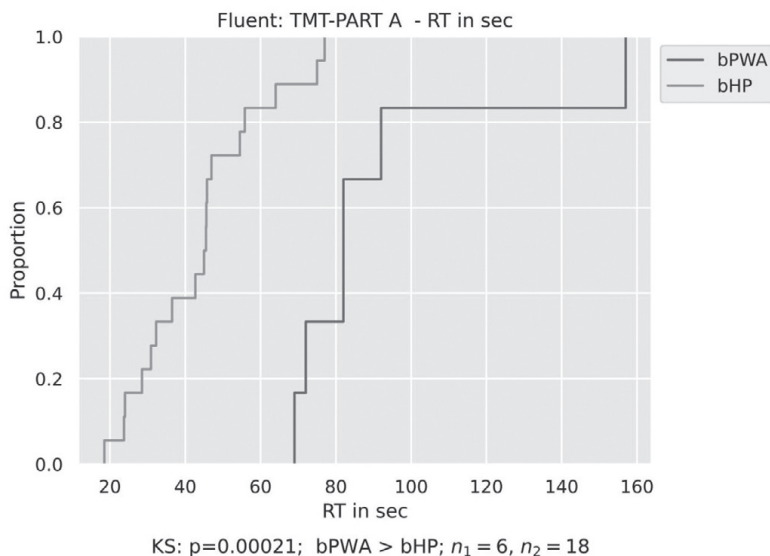


Figure 3. Comparison of RT in the TMT-A between fluent bilingual aphasics and healthy bilingual participants

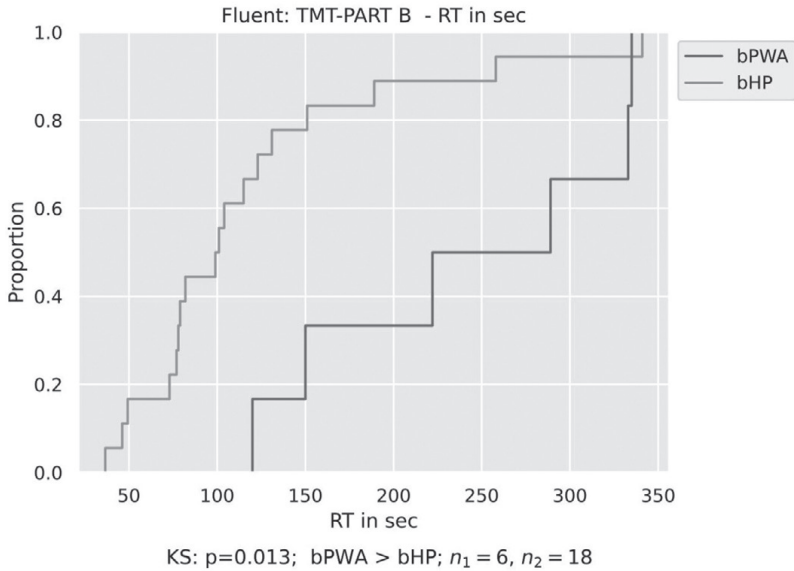


Figure 4. Comparison of RT in TMT-B between fluent bilingual aphasics and healthy bilinguals

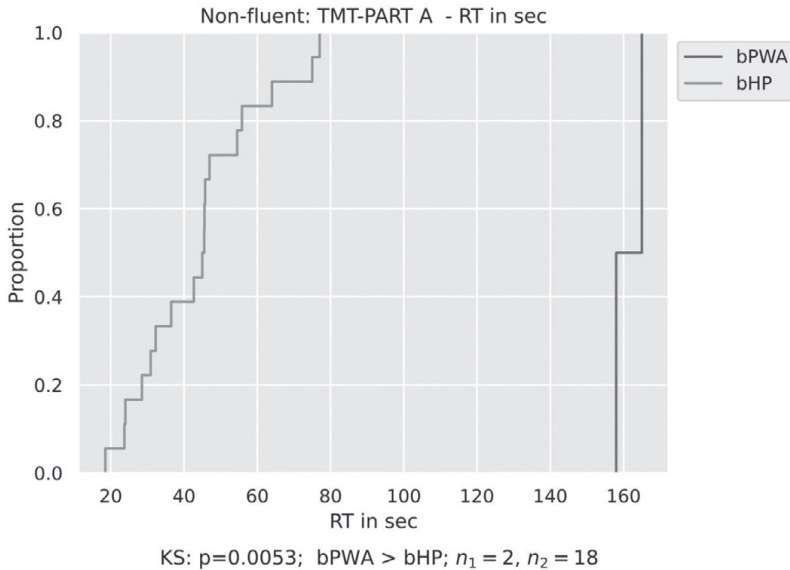


Figure 5. Comparison of RT in TMT-A between non-fluent bilingual aphasics and healthy bilinguals

4. DISCUSSION

The present study sought to elucidate the performance variations in executive functions, verbal semantic fluency, and letter fluency among bilingual people with aphasia (bPWA), specifically comparing fluent and non-fluent aphasia groups with healthy bilingual participant. The results indicate significant performance deficits in both aphasia groups compared to healthy controls, particularly in tasks requiring greater executive control, such as letter fluency.

The findings from the semantic and letter verbal fluency tasks elucidate significant differences in verbal fluency capabilities between the participants with fluent and non-fluent bilingual aphasia and healthy bilingual participants. The structured assessment over four 15-second intervals provided a nuanced understanding of how fluency performance fluctuates over time, revealing not only the overall proficiency of each group but also the challenges faced by the aphasia groups in maintaining consistent output. In both fluency tasks, both fluent and non-fluent participants with aphasia generated fewer responses compared to healthy participants which is in concurrence with aphasia literature which has shown that individuals with aphasia tend to have difficulties in lexical retrieval and production (Bose et al., 2017, 2022; Faroqi-Shah et al., 2018; Kiran et al., 2014; Patra et al., 2020). While the semantic fluency task did not reveal significant differences between the fluent bPWA and healthy bilingual participants, although a trend towards lower performance was noted. The non-fluent bPWA group, on the other hand, performed significantly worse across both fluency tasks. This stark contrast highlights the profound impact of non-fluent aphasia on verbal output. The anticipated poorer performance in letter fluency compared to semantic fluency was confirmed, as both bPWA groups and the HB group exhibited lower scores in the letter fluency task, reinforcing the notion that letter fluency tasks demand greater executive control engagement (Bose et al., 2022; Carpenter et al., 2020; Patra et al., 2020). The findings demonstrate that both fluent and non-fluent bPWA exhibited significantly lower performance in letter fluency tasks compared to healthy bilingual participants. This aligns with prior research emphasizing the executive demands of letter fluency, which necessitates not only lexical retrieval but also cognitive flexibility and inhibition (Bose et al., 2017; Carpenter et al., 2020). The anticipated differences in performance between the two aphasia groups were confirmed, with the non-fluent bPWA exhibiting more pronounced deficits in both semantic and letter fluency tasks. The analysis of response distribution across time intervals in the semantic fluency task revealed that the distribution of responses varied

significantly in the initial intervals between fluent participants and the reference group. In the letter fluency task, the fluent aphasia group performed poorly compared to the reference group in all the four intervals. The non-fluent aphasia group demonstrated a consistent inability to produce correct responses across all time intervals, indicating a more pervasive deficit in word retrieval in both fluency tasks. The examination of errors, including repetitions and out-of-category responses, yielded no significant differences between the aphasia groups and healthy bilingual participants. The lack of significant differences in error rates and repetitions between bilingual aphasics and the reference group further highlights that the primary challenge for participants with aphasia lies in the quantity of correct responses rather than the quality, suggesting a more profound disruption in the fluency of language production.

When comparing the performance of bilingual aphasics with the bilingual reference group in the Trail Making Test, the findings underscored the impact of aphasia on cognitive performance. The results indicated that both fluent and non-fluent bPWA groups demonstrated significant impairments in TMT performance compared to healthy bilingual participants, particularly in Part B of the test. The fluent bilingual aphasia group exhibited significantly longer response times in both parts and higher error rate in part B, while similar error rate was observed in part A compared to their neurologically healthy counterparts. In contrast, the non-fluent participants demonstrated significant difficulties in both parts of the TMT in terms of RT and error rate. This outcome is consistent with the literature, which indicates that individuals with aphasia face considerable challenges in cognitive tasks, reflecting the underlying language processing difficulties associated with the condition (Aglioti et al., 1996; Jaillard et al., 2009; Jokinen et al., 2015; Mariën et al., 2017; Penn et al., 2009; Povroznik et al., 2018; Schumacher et al., 2019; Tsiakiri et al., 2024; Turunen, 2017). Even though fluent participants produced correct performance in the TMT-A, they needed significantly longer time to produce the correct performance compared to healthy counterparts. Furthermore, both aphasic and healthy participants experienced the expected pattern of longer times on TMT-B compared to TMT-A. In contrast, the TMT difference scores revealed a significant difference, with fluent bPWA exhibiting notably higher scores than the reference group, suggesting impairment in switching abilities.

5. CONCLUSION

In conclusion, the findings revealed significant performance deficits in both aphasia groups when contrasted with healthy participants, particularly in tasks that necessitate

higher levels of executive control, such as letter fluency. The results from the semantic and letter fluency tasks illustrate marked differences in verbal fluency capabilities between the fluent and non-fluent bilingual aphasia groups and their healthy counterparts. The structured assessment conducted over four 15-second intervals provided a detailed understanding of fluency performance over time, highlighting not only the overall performance of each group but also the specific challenges faced by the aphasia groups in maintaining consistent verbal output. The results of the Trail Making Test showed switching impairments in both aphasia groups. This study offers valuable insights into the impairment of verbal semantic and letter fluency in bilingual individuals with aphasia, both fluent and non-fluent. However, it is crucial to recognize the limitations of the research. For example, the relatively small sample size restricts the ability to generalize the findings and apply them more broadly. Future research should aim to investigate the underlying mechanisms that contribute towards the observed differences in verbal fluency impairments. Furthermore, expanding the sample size and including a broader range of cognitive assessments could provide a more comprehensive understanding of the challenges in verbal fluency and executive functions faced by individuals with bilingual aphasia.

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Appendices

Appendix A. Comparison of the number of correct answers during each 15-second-long period in the Hungarian version of the semantic verbal and letter fluency tasks in bilingual aphasic participants

Semantic verbal fluency							
	0-15 sec	15-30 sec	30-45 sec	45-60 sec	mistakes	repetition	max score
bPWA 1	7	6	3	2	1	0	6
bPWA 2	5	4	4	0	2	0	4
bPWA 3	3	0	0	2	1	3	1
bPWA 4	6	0	0	0	0	5	1
bPWA 5	7	6	6	4	0	0	7
bPWA 6	0	0	0	0	0	0	0
bPWA 7	6	2	3	3	0	1	5
bPWA 8	0	0	0	0	0	0	0

Letter fluency							
	0-15 sec	15-30 sec	30-45 sec	45-60 sec	mistakes	repetition	max score
bPWA 1	4	3	1	1	0	1	4
bPWA 2	2	0	0	1	0	0	1
bPWA 3	0	2	3	1	2	1	3
bPWA 4	3	4	0	0	2	2	3
bPWA 5	1	1	0	0	0	0	1
bPWA 6	0	0	0	0	0	0	0
bPWA 7	3	1	0	2	0	0	3
bPWA 8	0	0	0	0	0	0	0

Appendix B. Comparison of the number of correct answers during each 15-second-long period in the Hungarian version of the semantic verbal and letter fluency tasks in healthy bilingual participants

Semantic fluency							
	0-15 sec	15-30 sec	30-45 sec	45-60 sec	mistakes	repetition	max score
HB 1	8	3	4	2	0	0	6
HB 2	10	8	8	3	0	0	7
HB 3	13	4	7	2	2	0	7
HB 4	16	6	6	6	0	0	7
HB 5	10	4	1	3	1	0	6
HB 6	11	7	9	7	0	0	7
HB 7	10	3	5	1	2	0	6
HB 8	9	5	4	2	0	0	6
HB 9	7	2	0	4	0	2	4
HB 10	9	7	2	5	0	0	7
HB 11	8	2	2	1	0	1	4
HB 12	12	10	7	7	0	1	7
HB 13	14	11	7	10	0	0	7
HB 14	8	3	5	2	0	0	6
HB 15	10	4	4	4	0	0	7
HB 16	7	8	7	5	0	2	7
HB 17	12	5	5	3	0	1	7
HB 18	9	5	5	3	0	1	7
Letter fluency							
	0-15 sec	15-30 sec	30-45 sec	45-60 sec	mistakes	repetition	max score
HB 1	7	3	2	0	0	0	5
HB 2	6	1	1	1	0	1	4
HB 3	5	3	3	0	0	0	5
HB 4	7	3	4	1	0	0	6
HB 5	7	2	2	1	0	1	5
HB 6	2	6	4	1	1	1	5
HB 7	3	0	1	0	3	2	2
HB 8	3	0	1	1	0	0	2
HB 9	8	3	1	2	1	3	6

Letter fluency							
	0-15 sec	15-30 sec	30-45 sec	45-60 sec	mistakes	repetition	max score
HB 10	4	1	1	2	3	0	4
HB 11	3	3	2	1	1	1	4
HB 12	5	2	4	2	0	0	5
HB 13	8	7	4	4	0	1	7
HB 14	3	2	0	3	1	0	4
HB 15	7	5	6	3	0	0	7
HB 16	6	7	5	1	0	1	7
HB 17	5	3	3	5	0	0	6
HB 18	4	4	6	1	0	0	6

Appendix C. Individual scores in the Trail Making Test for aphasic participants

		TMT-A RT in sec	TMT-A number of mistakes	TMT-B Rt in sec	TMT-B number of mistakes	TMT ratio	TMT difference
Fluent bPWA	bPWA1	157	0	335	6	2.13	178
	bPWA2	72	0	289	4	4.01	217
	bPWA3	69	0	150	2	2.17	81
	bPWA4	82	0	222	4	2.71	140
	bPWA5	92	0	120	1	1.30	28
	bPWA7	82	2	333	9	4.06	251
	Mean	92.33	0.33	241.5	4.33	2.73	149.17
	SD	32.72	0.82	92.61	2.88	1.11	83.92
	Range of scores (min-max)	69-157	0-2	120-335	1-9	1.3-4.06	28-251
Non- fluent bPWA	bPWA6	165	23		23		
	bPWA8	158	23		23		
	Mean	161.5	23		23		
	SD	4.95	0	no data	0	no data	
	Range of scores (min-max)	158-165	23		23		
HB mean		44.04	0.06	118.51	0.39	2.63	74.50
HB SD		16.78	0.24	77.12	0.85	1.02	66.34
Range of scores (min-max)		18.52-77	0-1	36.61- 341	0-3	1.28-4.62	8.1-266

Appendix D. Results of the semantic fluency tasks in both languages (significant in bold)

		Semantic fluency (HU) total number of answers	Letter fluency (HU) total number of answers	Semantic fluency (CRO/SK/DE) total number of answers
Fluent	bPWA1	18	9	9
	bPWA2	13	3	6
	bPWA3	5	6	0
	bPWA4	6	7	2
	bPWA5	23	2	23
	bPWA7	14	6	6
	Mean	13.17	5.5	7.67
	SD	6.91	2.59	8.16
Non-fluent	bPWA6	0	0	0
	bPWA8	0	0	0
	Mean	0	0	0
	SD	0	0	0
HB	Mean	24.33	12.61	15.39
	SD	8.34	5.14	3.27

	Semantic versus letter fluency (HU) Total number of correct answers	Semantic fluency (HU) versus (CRO/SK/DE) Total number of correct answers
fluent bPWA (N= 6)	W= 16, $p > .100$	W= 19.5, $p = .062$
non-fluent bPWA (N= 2)	W= 1.5, $p > .100$	W= 1.5, $p > .100$
HB (N= 18)	W= 154, $p = .001$ semantic fluency > letter fluency	W= 168, $p = .001$ HU > CRO/SK/DE

Appendix E. Results of the statistical analysis in verbal fluency tests, as well as in TMT in both aphasia groups compared to the bilingual reference group (significant in bold)

	Fluent bPWA (N= 6) versus HB (N= 18)	Non-fluent bPWA (N= 2) versus HB (N= 18)
Semantic fluency: total number of correct answers (HU)	KS: D= 0.556, p= .051	KS: D= 1.000, p= .005 bPWA < HB
Letter fluency: total number of correct answers (HU)	KS: D= 0.722, p= .005 bPWA < HB	KS: D= 1.000, p= .005 bPWA < HB
Semantic fluency (HU): 0-15 sec	KS: D= 0.889, p < .001 bPWA < HB	KS: D= 1.000, p= .005 bPWA < HB
Semantic fluency (HU): 15-30 sec	KS: D= 0.722, p= .005 bPWA < HB	KS: D= 1.000, p= .005 bPWA < HB
Semantic fluency (HU): 30-45 sec	KS: D= 0.556, p= .051	KS: D= 1.000, p= .005 bPWA < HB
Semantic fluency (HU): 45-60 sec	KS: D= 0.556, p= .051	KS: D= 1.000, p= .005 bPWA < HB
Semantic fluency (HU): repetitions	KS: D= 0.333, p > .100	KS: D= 0.333, p > .100
Semantic fluency (HU): answers out of category	KS: D= 0.333, p > .100	KS: D= 0.167, p > .100
Letter fluency (HU): 0-15 sec	KS: D= 0.611, p= .027 bPWA < HB	KS: D= 1.000, p= .005 bPWA < HB
Letter fluency (HU): 15-30 sec	KS: D= 0.611, p= .027 bPWA < HB	KS: D= 1.000, p= .005 bPWA < HB
Letter fluency (HU): 30-45 sec	KS: D= 0.667, p= .013 bPWA < HB	KS: D= 1.000, p= .005 bPWA < HB
Letter fluency (HU): 45-60 sec	KS: D= 0.722, p= .005 bPWA < HB	KS: D= 1.000, p= .005 bPWA < HB
Letter fluency (HU): repetitions	KS: D= 0.056, p > .100	KS: D= 0.444, p > .100
Letter fluency (HU): answers out of category	KS: D= 0.222, p > .100	KS: D= 0.333, p > .100
TMT-A RT in sec	KS: D= 0.889, p= < .001 bPWA > HB	KS: D= 1.000, p= .005 bPWA > HB
TMT-A number of mistakes	KS: D= 0.167, p= .756	KS: D= 1.000, p= .005 bPWA > HB
TM-B RT in sec	KS: D= 0.667, p= .013 bPWA > HB	no data
TMT-B number of mistakes	KS: D= 0.778, p= .002 bPWA > HB	KS: D= 1.000, p= .005 bPWA > HB

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Ideological metaphor in the speeches of Josip Broz Tito

Summary

In the analysis of political rhetoric, metaphor is often associated with ideology, pragmatic aims and rhetorical persuasion. The choice of metaphors in combination with other linguistic devices in political speeches can be seen as part of a persuasive strategy. There is a range of approaches available when designing research into political metaphor, e.g., Charteris-Black (2018) proposes a critical metaphor analysis as a method for the analysis and interpretation of metaphor as a tool of ideology. This paper explores how systematic analysis of the Josip Broz Tito's New Year's speeches can help us understand how these communist discourse processes are driven by underlying metaphors. Nine speeches from Josip Broz Tito, a Yugoslav communist revolutionary and politician who served in various positions of national leadership from 1943 to 1980, were considered for the analysis. Metaphors were identified, interpreted and explained. The analysis has shown that metaphors are of various source and target domains, the most common domains are current values or danger and risk: truth (*our fight for the truth, voice for the victory of the truth*), unity (*unity is our strongest tool, let's be united*), struggle (*liberation from the occupier*), construction (*let's build socialism, build a new society*) and similar. With these recurrent patterns or conventional metaphors in communicating ideology Tito is creating enemy-images, he is escaping into myth, and he is also creating stereotypes.

Keywords: ideology, communist regime, political discourse, metaphor

1. INTRODUCTION

Critical discourse analysis of historical political speeches and texts can contribute to a better understanding of historical circumstances as well as the consequences they had in the development of a certain society. Metaphor, as an interesting and powerful

rhetorical tool that is often associated with ideology, pragmatic aims and rhetorical persuasion, is the topic of this research. This paper examines epideictic speeches, specifically, Tito's New Year's addresses, to show how communist discourse operates through underlying conceptual metaphors that shape its ideological and rhetorical structure. Presidential New Year's speeches can be understood primarily as epideictic or ceremonial rhetoric, a form of discourse concerned with praise, reflection, and the reaffirmation of communal values rather than with policy advocacy. Rooted in Aristotle's (*Rhetoric*, Book I) tripartite division of oratory into deliberative, forensic, and epideictic, these speeches function as ceremonial occasions through which leaders celebrate national identity and inspire collective optimism. Modern rhetorical scholars have expanded this understanding: Perelman and Olbrechts-Tyteca (1969) describe epideictic discourse as a means of reinforcing shared beliefs and maintaining social cohesion, while Hauser (2002) note that presidential rhetoric often blends genres, using ceremonial language to unify rather than to deliberate. Campbell and Jamieson (2008) similarly argue that presidential ceremonial addresses, including inaugural and holiday speeches, serve primarily epideictic functions by interpreting and reaffirming the values of the nation. This epideictic genre is characterized by amplification as its main rhetorical and argumentative strategy. Consequently, it is reasonable to expect a higher density of metaphorical language than in deliberative discourse. The present study analyses the political language of communism in the New Year's addresses of Yugoslav President Josip Broz Tito. He was a significant historical and political figure of Croatian and Yugoslav history in the second half of the 20th century. Despite his humble origin, he was born in a large and poor peasant family, and he became the most prominent communist revolutionary and politician who served in various positions of national leadership from 1943 until his death in 1980. During World War II, he was the leader of the Yugoslav Partisans, often regarded as the most effective resistance movement in German-occupied Europe. He also served as the president of the Socialist Federal Republic of Yugoslavia from 1953 until his death in 1980. Ideologically, Tito's contributions to communist thought are known as Titoism. Some historians criticize Tito's presidency as authoritarian and view him as a dictator, whereas others characterize him as a benevolent dictator. However, we cannot dispute that he was a popular public figure both at Yugoslavia and abroad. Owing to his charisma, which served as motivation and inspiration for many citizens of that country, Tito led Yugoslavia for a very long time, independently and authoritatively¹.

¹ Information about Tito has been gathered from websites: <https://www.enciklopedija.hr/clanak/broz-josip-tito> (accessed on 15 October 2024) and <https://hbl.lzmk.hr/clanak/broz-josip-tito> (accessed on 15 October 2024).

2. THEORETICAL FRAMEWORK: POLITICAL DISCOURSE AND LANGUAGE, IDEOLOGY AND METAPHOR

Political discourse is focused primarily on persuading people to take specified political actions or to make crucial political decisions (Rozina & Karapetjana, 2009: 113). It can be represented as the site where politicians can expose and enact their ideologies and policies (van Dijk, 2003: 212, 214) and it fulfils many functions in the political process (van Dijk, 2008: 176). We can regard Tito's New Year's addresses as political speeches. In Fairclough's (2013) and van Dijk's (2003) terms, even the ceremonial discourse operates as an instrument of power reproduction, embedding political directives and ideological legitimation within the rhetoric of celebration and unity. Although Tito's New Year's addresses formally belong to the epideictic genre, within the ideological framework of a one-party socialist system they acquire a markedly deliberative function, as they serve the reproduction of ideology and power. They legitimize the existing order through a ceremonial form, whereby the ritual is rhetorically employed as a strategy of political consolidation. In that sense, they serve primarily as political speeches through which ideological messages and policy orientations are communicated to the public. Language has a significant role in political discourse because it is an instrument through which the manipulative intents of politicians become apparent. Language only gains power in the hands of the powerful; it is not powerful 'per se'. A specific language even symbolizes the group of persons in power (Wodak, 1989a: xv). Politicians themselves are very attentive to the importance of language. Through language politicians can view their ideas and ideologies (Rozina & Karapetjana, 2009: 3). Chilton (2004) believes that politics and language are fundamentally connected. Politics requires language because there is no political activity that exists without using language (Chilton, 2004) and because language can be used to steer people's beliefs and thoughts as well as to control the way those people think and believe. The way in which language is perceived depends on the type of language used. When one controls the discourse, one can control how others think (Jones & Peccei, 2004: 39). In addition to any other kind of discourse, political discourse is likely more ideological. In modern societies, as well as throughout in history, power is achieved and maintained through ideologies. Ideologies are closely linked to power because of the nature of the ideological assumptions embedded in particular conventions. Ideologies are closely linked to language because using language is the most common form of social behaviour and is the form of social behaviour in which we rely most on common sense assumptions (Fairclough, 2001: 2). Even within the political discourse

ideology as a term certainly does not have a single fixed meaning. The term has a number of meanings, but it is not infinitely variable in meaning, and the meanings it has tend to cluster together into a small number of main 'families' (Fairclough, 2001: 78). To be exact, Fairclough identifies two such families: one interpreted as any social policy that is in part or in whole derived from social theory in a conscious way, and the other interpreted as ideas that arise from a given set of material interests in the course of the struggle for power. The point to stress is that the variable meanings of ideology are not just randomly generated. It would require a comparison of the meaning system, not just word meanings. Therefore, in the first interpretation (post-war American sense), ideology is closely related to totalitarianism, and totalitarian and ideological are sometimes used as near synonyms. Furthermore, totalitarianism is a superordinate term that subsumes fascism, communism, Marxism, and so forth; the meaning system is structured to make ideology 'a weapon against Marxism'. In the second interpretation (Marxist meaning) system, by contrast, totalitarianism does not figure at all, nor of course do we find communism/Marxism and fascism as co-homonyms of totalitarianism (Fairclough, 2001: 78). Charteris-Black (2018: 257) defined ideology as a coherent set of ideas and beliefs that provides an organized and systematic representation of the world about which the holders of the ideology could agree. A more detailed definition is the basis of the social representation shared by the members of the group. This means that ideology allows people, as group members, to organize the multitude of social beliefs about what is in the case, good or bad, right or wrong, from them to act accordingly (van Dijk, 1989: 8). Furthermore, Wodak (1989b: 140) differentiates ideologies in totalitarian systems where ideologies create and propagate a secondary reality that one must believe and ideologies in democratic systems in which one may believe in. Ideologies are themselves closely related to cognitive and psychological processes and are expressed through language or originate in or are reinforced by it. The textual analysis approach enables us to critically elucidate the structures of ideas within an ideology, which stem from value judgments and attitudes that determine people's actions (Schjerve, 1989: 9, 58), so ideology is a system of ideas based on value judgments and attitudes, which aid certain forces within a society in furthering their interests to stabilize their power. In the analysis of political rhetoric, metaphor is often associated with ideology, pragmatic aims and rhetorical persuasion (Šarić, 2014: 175). Many scholars emphasize that metaphors in political discourse do not merely have stylistic or rhetorical value, but also perform an argumentative and ideological function (Charteris-Black, 2004; Chilton, 2004; Musolff, 2016). According to Charteris-Black (2011: 50–51) metaphors are highly

persuasive precisely because they can activate “both conscious and unconscious resources to influence our rational, moral and emotional response, both directly — through describing and analysing political issues — and indirectly by influencing how we feel about things”. Charteris-Black (2011: 14) also claims that metaphor is a matter of expectations – on the basis of our previous experience of language. It is a relative rather than an absolute phenomenon because the meanings of words change at different rates for different individuals according to their differing experiences of language. The metaphor is central to critical discourse analysis (Charteris-Black, 2004: 28) since it is concerned with forming a coherent view of reality. Hodge and Kress (1993: 15) propose that ideology involves a systematically organized presentation of reality and that metaphor may reveal the underlying intentions of the text producer and therefore serve to identify the nature of particular ideologies. Metaphor can have a different political impact. First, it has the ability to frame the political debate. Second, using a particular metaphor can also reveal an underlying conception of a political reality. Metaphors may thus not only frame the debate, but also orient it towards particular political decisions. Another political impact of metaphors is to achieve certain political goals, such as (re-) producing legitimacy through the frequency of certain metaphorical mappings in political discourse (Perrez & Reuchamps, 2015: 167).

3. AIMS AND HYPOTHESIS

Several goals were established in this research. The first goal was to identify metaphorical linguistic expressions that are chosen in Tito’s speeches. The second goal was to interpret metaphors found in speeches by source domain and try to explain why these metaphors are chosen (with reference to interactions between the orator’s purposes and a specific set of speech circumstances). Moreover, beyond the conceptual level, the goal was an attempt to answer such metaphor use motivated by ideological factors and how metaphors are used systematically to create political myths and discourses of legitimization and delegitimization that give rise to ideologies and world views. Finally, the last goal was to determine the differences in the frequency and types of metaphors used in speeches from different decades. The research seeks to address the following research questions: RQ1: To what extent do Tito’s New Year’s addresses employ metaphorical expressions, and how does the frequency of metaphors compare to that of metonymies?; RQ2: What source domains are most commonly used in the metaphors found in these speeches?; RQ3: In what ways do metaphors in Tito’s

speeches construct arguments that persuade the audience and reinforce ideological claims?; RQ4: How do the frequency, type, and source domains of metaphors vary (or remain consistent) across different decades?

4. METHODOLOGY

The corpora are based on the speeches delivered by the president of Yugoslavia Josip Broz Tito on New Year's days during the four decades of his governance, from 1945 until his death in 1980. This paper aimed to provide an overview of Tito's entire governance through his New Year's speeches. The corpus consists of 35 speeches in total. For the purposes of this research, a subset of 9 speeches was analysed, with three speeches chosen from each decade. The selection of speeches was guided by the aim to capture how Tito's rhetoric responded to the major socio-political changes and challenges that Yugoslavia experienced from the 1940s to the end of the 1970s. By analysing three speeches from each of the three decades, the study aims to identify shifts and continuities in the metaphors used, highlighting how political priorities and ideological narratives evolved over time. Speeches from the 1970s were difficult to find, requiring searches through a large newspaper corpus or an entirely new set of books. New Year's speeches were selected for two reasons: first, because of their length and second, because of the audience to which they were addressed. In an evaluation of public speeches, some authors (e.g., Mio, 1997) found that speeches addressing the general public contained twice as many metaphors as those addressing more limited audiences. Speeches addressing a broad audience need to be more inclusive, or they need to have broader root metaphors and resonate with these root metaphors more to convince the audience of the correctness of the thesis of the speech (Mio, 1997: 128). Tito's speeches were broadcast on the national radio first, and when television started broadcasting in Yugoslavia in 1956, they were also broadcast on national television. Today, the majority of his speeches are available in numerous books about his life and activities. For the purpose of this research, the monograph *Tito: speeches and articles* (1956–1972) was used. Table 1 summarizes the composition of our data. The table shows that the speeches are approximately the same length, except for the two from the 1940s.

Table 1. General information about Tito's speeches

Speech	Year	Characters per speech	Source
1	1946	13,330	Book 2
2	1947	15,180	Book 3
3	1949	9,000	Book 4
4	1953	4,920	Book 8
5	1956	6,000	Book 10
6	1959	5,520	Book 14
7	1962	8,700	Book 17
8	1963	6,640	Book 18
9	1965	6,240	Book 20

Therefore, we used these 9 political speeches as a source of data and then established a set of methods that provide a framework for metaphor analysis. The analysis is based on an approach to CDA originally outlined by Fairclough in 1989 and revised in 1995 (Sabir & Kanwal, 2018: 89). Fairclough's model consists of a three-step process of analysis: identification and description, interpretation and explanation of the data (Fairclough, 2013). In designing research into the political metaphor Charteris-Black (2018) deepens this model and proposes critical metaphor analysis (CMA) as a method for the analysis and interpretation of metaphor as a tool of ideology. Our research is based on this method because CMA aims to identify which metaphors are chosen in persuasive genres such as political speeches (as in this research), party political manifestos or press reports. It also attempts to explain why these metaphors are chosen, with reference to the interaction between the orator's purposes and a specific set of speech circumstances. In addition to general pragmatic motives for the use of metaphor, such as gaining attention and facilitating understanding and framing issues to encourage acceptance of the speaker's point of view in a political context this explanation involves demonstrating how metaphors are used systematically to create political myths and discourses of legitimization and delegitimization that give rise to ideologies and worldviews. Figure 1 provides a brief overview of the four principal stages of the CMA (Charteris-Black, 2018: 218).

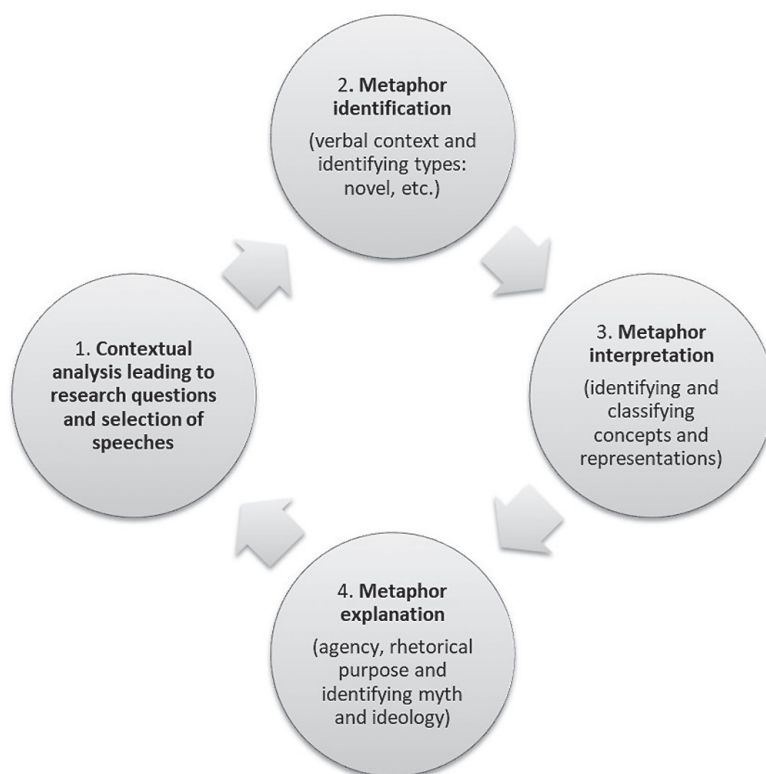


Figure 1. Principle stages of critical metaphor analysis

5. RESULTS AND DISCUSSION

The results and discussion will be presented according to the model of CMA mentioned in the methodology and therefore according to metaphor identification, interpretation and explanation.

5.1 Metaphor identification

Identification of metaphor entails deciding through analysis of words and phrases what to count as a metaphor in the contrast of speech. Because metaphors arise from transferred meanings, whatever sense a word or phrase originally had, a metaphor is formed when this word or phrase is used in a new context with a different sense (Charteris-Black, 2018: 220; Škarić, 2000: 119).

Data for metaphor analysis were collected via a discursive approach, in a related text. In this paper we examined metaphors in a collection of political speeches from a

particular genre – New Year’s addresses. Metaphors in political rhetoric typically occur in phrases or collocations, rather than as separate words, and for that reason we prefer to single out the metaphorical phrase. Potentially metaphorical expressions are separated.

Table 2. Metaphorical expressions in Tito’s speeches corpus

Speech / Year	Characters per speech	Metaphorical expressions per speech
1/1946	13,380	92
2/1947	15,180	86
3/1949	9,000	64
4/1953	4,920	40
5/1956	6,000	28
6/1959	5,520	21
7/1962	8,700	28
8/1963	6,640	34
9/1965	6,240	19
TOTAL	75,580	412

As shown in Table 2, there are a total of 412 potential metaphorical expressions. The frequency of metaphorical expressions is greater in older speeches, in speeches before 1953. Older speeches are also longer than newer ones. The newer speeches have a very simple structure that actually repeats itself. In fact, this is the case with the political texts of all totalitarian regimes. The political speeches of totalitarian regimes (communism as well) were used in the service of conscious propaganda. Despite somewhat different medial-communicative conditions under which these texts originated, there is almost no noticeable difference with regard to their performance. They show substantially the same text-typological and text-constitutive features as Schjerve (1989) also notes in his analysis of political speeches of Futurism and its relationship to Italian Fascism. However, that could be a whole new topic for another study. At the identification stage, metaphorical phrases can be grouped into different categories. We perform a simple classification, naming these categories metaphor and metonymy, in which metaphor establishes a similarity between two different semantic domains. In addition, metonymy can be interpreted within one semantic field, not as a shift in similarity but by any other experiential connection (relation): spatial, temporal, causal, consequential, or symbolic.

Table 3. Frequency of metaphors and metonymies

Speech	Number of metaphorical expressions	Metaphor	Metonymy
1	92	53	39
2	86	54	32
3	64	36	28
4	40	22	18
5	28	19	9
6	21	14	7
7	28	18	10
8	34	22	12
9	19	8	11
TOTAL	412	246	166

As expected, more metaphors were found in the corpus, because metaphor is the most common trope. Table 3 shows that there are more metaphors in each individual speech and the overall results show that metaphors are approximately 1.5 times more common than metonymies. Of course, some metaphors involve other rhetorical tropes, such as personification, synecdoche, periphrasis, or antonomasia, and while they may serve an ornamental purpose, they can simultaneously function as arguments guiding reasoning and persuasion. Here are some examples of metaphors: *we were on the brink of war disaster* (8²); *this time common sense won* (8); *the victory of socialism is most certain in peaceful competition between nations with different political systems* (8); *they branded some drastic phenomena of a subjective character* (8); *to divert the course of our development from the line determined by our revolution in another direction* (8); *so that our working man can enjoy the fruits of his labour* (9); *voices in the West about the need for disarmament are getting quieter* (9); *the results indicate the path we must take* (7); *that cold war game on the edge of the abyss* (7); *new neuralgic points and dangerous war zones are created* (7); *we enter the year with deep faith in our own strength* (6); *that the ideas of peace and peaceful cooperation will finally prevail* (5); *on its flag are inscribed the bright principles of equal and proper relations between nations* (5); *rays of light appear on the horizon* (4); *rays break through the dark clouds that hover humanity* (4); *Europe groaned in fascist darkness* (3); *our Popular Front represents a huge*

²The number in parentheses refers to the number of Tito's speech (see Table 1).

reservoir of volunteer labour (3). There are also many metonymies. One of the most common metonymies is that of naming a cause for an effect, e.g., *removing poverty as soon as possible* (1) – meaning not poverty as a concept but the consequences of poverty; *railway transport was destroyed by the war* (1) – meaning not by the war but by the consequences of war; *the drought has caused significant damage to our economy* (4) – not the drought itself but the consequences it has on agriculture or health. Metonymy also very often denotes space for an institution or its inhabitants, e.g., *The state provided transportation* (1); *The state serves the people* (8), or abstract for concrete, e.g., *Industry supplies our population* (1); *the Communist Party must preserve its hard-won unity* (2); *the UN played a key role in everything* (6); *Today's government will take care of* (8); *Power is in the hands of working people* (2); *Armies fought battles* (2); *The army is the guardian of our independence* (2). An interesting metonymy is one in which a symbol appears for what it symbolizes, e.g., *To create a roof over your head* (2) – the roof is a symbol of a house; *Every patriot should fight against this evil* (1) – where evil symbolizes the war and the enemy. On the other hand, in the process of identification both metaphors and metonymies can be categorized in another manner. For example, Charteris-Black (2018: 222) offers categorization on the basis of the following psycholinguistic criteria: 1. Novel metaphors (processed by comparison); 2. Entrenched metaphors (processed by categorization), and 3. Conventional metaphors (processing shifts between comparison and categorization, depending on context). In political speeches, the majority of metaphors are conventional or entrenched, and only a few are likely to be novel. Novel metaphors are likely to be identified as such by the majority of informants, many of their first analysis, and conventional metaphors over which there will be variation. Conventional metaphors are those that are readily identifiable as metaphors, and entrenched metaphors – those with the majority of an audience are unlikely to be recognized as metaphors because they are processed entirely by categorization (Charteris-Black, 2018: 226). Therefore, invisible entrenched metaphors can reveal the ideology behind the framing of issues in a certain way. However, novel metaphors can evoke empathetic responses and contribute to powerful, heroic narratives (Charteris-Black, 2018: 224). For the purpose of this paper, Charteris-Black's (2018) categorization has been slightly adjusted; metaphors have been identified and categorized on the basis of psycholinguistic criteria in two categories: novel (meaning novel and conventional) and conventional (meaning entrenched). Table 4 shows some of the examples found in the corpus.

Table 4. Psycholinguistic analysis of metaphor in Tito's speeches

NOVEL	CONVENTIONAL
<i>we were left with a rusty legacy</i> (1)	<i>the constitution is the foundation of our statehood</i> (1)
<i>the wounds inflicted on us by the occupier</i> (1)	<i>the draft of the new act</i> (1)
<i>the country is torn apart by the occupation</i> (1)	<i>make hard choices</i> (1)
<i>the people could devote themselves to the treatment of severe wounds</i> (1)	<i>the state is badly weekend</i> (1)
<i>bring the vermin to justice</i> (1)	<i>we must lay a solid foundation</i> (1)
<i>evil must be eradicated</i> (1)	<i>we are trying our best (with all our forces)</i> (1)
<i>distrust towards today's authorities is being sown</i> (1)	<i>many tasks are ahead of us</i> (1)
<i>they are enriched and built by experience</i> (2)	<i>difficulties that stand in our way</i> (1)
<i>Yugoslavia is the child of common struggle and suffering</i> (2)	<i>needs were not taken into account</i> (2)
<i>a program written in blood of hundreds of thousands of our sons</i> (2)	<i>young nation</i> (2)
<i>difficult and thorny path of our socialist construction</i> (2)	<i>that idea is maturing</i> (3)
<i>Europe groaned in fascist darkness</i> (2)	<i>we are with you in our thoughts</i> (6)
<i>all the storms that blew through our country</i> (3)	<i>play a key role</i> (6)
<i>rays of light appear on the horizon</i> (5)	<i>we want to strengthen ties and cooperation</i> (6)

As we can see, ideologically interesting metaphors are those that have often become conventional collocations through recurrent use: *difficulties that stand in our way* (1); *the constitution is the foundation of our statehood* (1); *the difficult path of our socialist development* (3). Many of them are probably relatively invisible as a metaphor because of the very high frequency of metaphors that represent the nation or the state as a person in political rhetoric, e.g., *the state is severely weakened* (1); *the old Yugoslavia fell apart* (1); *great trials for our party* (3).

5.2 Metaphor interpretation

In this phase, metaphors can be interpreted on the basis of conceptual metaphor theory (Lakoff & Johnson, 1980). This involves identifying source and target domains followed by interpreting systematic correspondences by proposing conceptual metaphors. Lakoff and Johnson (1980: 166) emphasize that metaphor is the main means of understanding reality in which a relatively familiar, experience-based source domain is mapped onto a more abstract, less familiar target domain. The classification of metaphors on the

basis of the literal meaning of words is known as organizing by the source domain, whereas the classification on the basis of metaphors referred to in the context is called organizing by the target domain (Charteris-Black, 2018: 218). In this paper, only the first stage of applying conceptual metaphor theory is shown; that is, identifying semantic fields that include groups of semantically related metaphor vehicles; these are known as source domains. The metaphors with reference to their source domains have been classified, because this early phase of metaphor interpretation delays making more debatable decisions about target domains (to what metaphor refers). This is because source domains are evident at the surface level of the text, whereas targets are present in the understanding of the speaker and the audience. Some of the domains stood out in the analysis and the metaphors were grouped by semantic fields of building, construction, health, disease, family, journey, weather etc.

Table 5. Analysis of metaphor source domains in Tito's speeches

SOURCE DOMAIN	EXAMPLES
Building/construction	<i>on the ruins of Yugoslavia</i> (1); <i>it was built from the blood</i> (1); <i>contribute to the reconstruction of a devastated country</i> (1); <i>we must lay a solid foundation in the new year</i> (1); <i>to work on rebuilding of the country</i> (1)
Health/disease	<i>the people could devote themselves to the treatment of severe wounds</i> (1); <i>the wounds inflicted on us by the occupier</i> (1); <i>you need to know the disease if you want to treat it successfully</i> (1)
Weather	<i>but we know where that wind is coming from</i> (2); <i>all the storms that blew through our country</i> (3); <i>unity could withstand the greatest storm of the history</i> (3)
Family	<i>it was built from the blood and bones of our best sons</i> (1); <i>the best sons and daughters were imbued with heroism</i> (1); <i>our sons died for freedom</i> (1); <i>Yugoslavia is the child of common struggle and suffering</i> (2); <i>a program written in blood of hundreds of thousands of our sons</i> (2); <i>it is necessary to return to the patriarchal way of the economy</i>
Path	<i>difficulties that stand in our way</i> (1); <i>difficult and thorny path of our socialist construction</i> (2); <i>we must go the way we came</i> (2); <i>means overcoming the most difficult part of the road</i> (3)
Animal	<i>traitors committed atrocities</i> (1); <i>bring the vermin to justice</i> (1)
Body	<i>organ of the people's government</i> (1); <i>it was built from the blood and bones of the best sons</i> (1); <i>we would dishonour the blood we gave for victory</i> (3); <i>a program written in blood of hundreds of thousands of our sons</i> (2)
Agriculture	<i>bring the vermin to justice</i> (1); <i>evil must be eradicated</i> (1); <i>sows distrust towards today's authorities</i> (1); <i>the truth will clear its way</i> (3); <i>they smear us</i> (3); <i>we will thwart their plans at the root</i> (3)
Truth/ethics	<i>truth and justice will win</i> (3); <i>love for truth and justice is that strength</i> (3); <i>nations have shown moral strength</i> (3)
Sport	<i>broad national competition</i> (2); <i>develop a working match</i> (2)

We can interpret these examples. For example, the source domain of weather allows us to propose conceptual metaphor *circumstances are weather*, which accounts for the group of weather metaphors, particularly one speech: *but we know where that wind is coming from* (2) – wind means some difficulties, unfavourable circumstances at that particular moment (e.g., danger of the new war); *all the storms that blew through our country* (3); *unity could withstand the greatest storm of history* (3) – a similar interpretation can be given in these examples. Furthermore, *building* metaphors portray the country's past history and achievements as cornerstones, e.g., *The country was built from the blood* (1). *Reconstruction* metaphors, on the other hand, also boil down to ideological differences, which are parallel to the motivation of retrospective *building* metaphors. The crucial difference between *reconstruction* metaphors and the other forward-looking *building* metaphors is the presupposition of the country as a damaged building, which conceptually triggers the metaphorical mappings of *the enemies (fascist, ustasas) are destroyers*. Very similarly, is in the *health* source domain, *all our wounds are made by the occupier*. This type of distribution implies that there was an underlying rhetorical purpose in the use of metaphors from this particular source domain. But, metaphors in Tito's New Year's addresses function not only as rhetorical ornaments but also as integral components of argumentation. Following the view that metaphors frame reasoning and structure ideological meaning (Charteris-Black, 2004; Musolff, 2016), their role in Tito's discourse extends beyond stylistic embellishment. By conceptualizing socialism as a *path* or *journey*, Tito's speeches construct an argument of progress and historical inevitability, positioning the Yugoslav people as active participants in a collective movement toward a predetermined goal. Similarly, the recurring *struggle* metaphor legitimizes perseverance and unity, framing economic or political challenges as necessary stages in a moral and ideological battle. Through such metaphorical reasoning, Tito's rhetoric reinforces the legitimacy of the communist project and naturalizes its ideological assumptions, demonstrating that metaphors in political discourse are not merely expressive, but function as arguments that sustain and reproduce power.

However, once we start to consider purpose – or the rhetorical plan behind the sue of metaphor – we are moving on to the explanation of metaphor (Charteris-Black, 2018: 238).

5.3 Metaphor explanation

The metaphor explanation involves going back to the broader social and political context to determine the purposes that speakers had in using these metaphors. Explanation requires judging whether and how metaphors influence an audience; how

they interact with other features and their persuasive role in forming, consolidating changing opinions, ideas and beliefs (Charteris-Black, 2018: 219). In this way, metaphors also perform an argumentative role, guiding reasoning and implicitly supporting particular claims, in addition to their persuasive and rhetorical effects. They not only evoke emotional responses but also implicitly justify the communist project, contrast the regime with its adversaries, and guide the audience's reasoning about loyalty, duty, and collective effort. Here, we can speak about ideological metaphors, metaphors that legitimize the worldview of social groups, which are jointly constructed by speakers and listeners. Tito's speeches show, as a communist ideology in general, coherent representations of a storytelling and both colourful and typical metaphors for communicating ideology. Tito's metaphors found in the analysed corpus, whether novel or conventional, serve multiple purposes in communicating communist ideology. A central theme of communist propaganda is creating enemy-images. This focus is understandable, given that Tito was president from the moment Yugoslavia entered the war. The enemies are usually identifiable: *fascist invaders and collaborators, occupiers, domestic traitors and imperialist profiteers*. Yet these enemies are often portrayed as invisible or imaginary: *enemies of the people, enemies of our country, hostile elements*, or simply *evil*. They are depicted as *dark, dangerous, and relentless*. These metaphors also have an argumentative role – they portray opponents not merely as individuals but as inherently negative forces, implicitly justifying resistance against them by framing them as morally wrong and a threat to the community. To undermine the political goals of these opponents, propaganda highlights only their negative attributes, often presenting them in contrast with the positive qualities of the communist regime. For instance, *the traitors commit atrocities* (1); *they hinder the progress of our country* (1); *their aim is to obstruct us on the path of our development* (4); *the enemies are trying to create confusion among the peasants* (1); *they seek to divide our national unity* (2). Conversely, Yugoslavs are portrayed as *preserving the legacy of the liberation struggle* (1); *millions of patriots contribute to the reconstruction of their devastated country* (1); *destroyed factories are put back into operation* (2); *cities and villages are rebuilt* (2); *inner unity is maintained* (3); *citizens demonstrate creative enthusiasm in building socialism* (4) etc. We also emphasize the argumentative role of these examples. For instance, the metaphor *path of development* transforms political and economic processes into a metaphorical journey, framing opponents as obstacles to something collectively valuable, and thereby legitimizing the actions taken by the regime against them. Similarly, the metaphors *building socialism* and *rebuilding* connect citizens' efforts to tangible results and progress. These metaphors implicitly

argue that collective action is morally right, beneficial, and that the communist project produces concrete achievements and prosperity. Because the language of communists often excludes rationality, they must resort to myths and irrationalism. Only then could it strengthen its claim that its ideology was true and gain credibility for itself. To emphasize the importance of their war and struggle communism needs heroes, a type of man was created that drew his abilities from his blood and the blood of his sons, e.g., *The country was built from the blood and bones of hundreds of thousands of the best sons of Yugoslavia* (1); *to achieve what hundreds of thousands of the best sons of our country died for* (1); *This program was achieved by the people themselves with streams of their precious blood* (2); *This heroic man reached his “maximum development” in his new, independent, native country: comrades are heroes of labour* (1); *the creative enthusiasm of the workers reached an unprecedented height* (2); *a broad national competition was expressed in all parts of the country* (2); *facts that speak about the work heroism of our people* (3); *millions of working people are the bearers of socialist progress* (9). The metaphors in these examples serve an argumentative function by legitimizing and glorifying the communist project. References to blood, sacrifice, and heroic labour frame the citizens' efforts as morally significant and historically necessary, implying that socialism and national progress are the rightful outcomes of immense personal and collective sacrifice. These metaphors construct a moral and causal argument: because the people have sacrificed so much, their achievements are justified, admirable, and inevitable. They also create a model of the *heroic citizen* whose actions exemplify loyalty, dedication, and creative enthusiasm, thereby persuading the audience to value and participate in the collective socialist effort. In order to communicate the ideology of communism more effectively, one needed not only certain arguments that could be legitimized scientifically but also those that could also be applied discursively in a way that was easily intelligible and that guaranteed the widest possible approval by people who received the speech. One strategy to ensure this objective was to charge language emotionally by creating stereotypes and using slogans. Widely known meaning-references were inserted into new contexts, where they aroused unconscious connotations and emotions. The repeated use of linguistic elements used in specific contexts to appeal concepts that are highly charged emotionally and associated with specific value judgments or prejudices, encourage the creation of stereotypes and make reflection on the communicated content more difficult (Schjerve, 1989: 67). Stereotypical in Tito's speeches are claims or concepts that everything old, everything from the past is bad, dark and rotten, e.g., *sabotage is a remnant of the old order* (1); *problems in administration are a legacy of the old regime* (1). On the other hand,

everything new is good and bright. For example: *we are building the brighter future* (1); *the future is something to look forward to* (1); *just in unity we can go forward to a brighter future* (3); *we also have to preserve the legacy of the war* (4). Emphasizing the sacrifice made in the war was intended to justify all the post-war decisions that often contradict the propagated ideology of unity and equality of all nations. In these examples, metaphors and emotionally charged language also serve an argumentative function by legitimizing the communist ideology and post-war policies. By framing the past as bad, dark, and rotten (e.g., *sabotage is a remnant of the old order*) and the future as bright and desirable (e.g., *we are building the brighter future*), the speeches construct a moral and causal argument: the failures of the old order justify the sacrifices and policies of the present, while collective unity and effort are morally right and necessary. Stereotypes, slogans, and repeated emotionally loaded concepts reinforce these claims, making them intuitively persuasive and limiting critical reflection, thus guiding the audience to accept the ideological message as valid and necessary. Similar to stereotypes, the use of slogans and catchwords that appeal to emotions (e.g., *legacy of the people's revolution, victory over the occupier, national liberation struggle, brotherhood and unity, workers and proletarians*) functions argumentatively by embedding the audience in a shared ideological framework. These expressions implicitly assert that participation in the socialist project is morally justified and historically necessary, reinforcing the identification of Tito's political discourse as communist and socialist. By linking emotionally charged language with ideological concepts, metaphors and slogans guide reasoning, shape value judgments, and limit critical reflection, thereby persuading the audience to accept and internalize the intended political message.

6. CONCLUSION

This analysis of metaphors in a collection of political speeches from Tito's New Year's addresses shows that metaphors are interesting and powerful rhetorical tools in the political discourse associated with ideology. We can conclude that these political speeches were used in the service of conscious communist propaganda. Despite somewhat different communicative conditions under which these texts originated, there is almost no noticeable difference with regard to their performance. They substantially show the same text-typological and text-constitutive features, that is, metaphors. It can be concluded that in the analysed corpus, there are many metaphorical expressions. The frequency of metaphorical expressions is greater in older speeches, in speeches before 1953. As expected, more metaphors (e.g., *we were on the*

brink of war disaster) than metonymies (e.g., *removing the poverty as soon as possible*) were used. Additionally, the majority of metaphors are conventional and novel, and ideologically interesting metaphors are those that have often become conventional collocations through recurrent use: *difficulties that stand in our way*; *the constitution is the foundation of our statehood* etc. The most common source domains that stood out in the analysis are those of building, weather and family. With these recurrent patterns or conventional metaphors in communicating ideology Tito is creating enemy-images, and those enemies are often invisible and imaginary; thus, they are dark and dangerous. He escapes into the myth – Yugoslavia needs its heroes. Therefore, a type of man was created that drew his abilities from *his blood and the blood of his sons*. Tito is also creating stereotypes – everything old is bad, and everything new is good. Emphasizing the sacrifice made in the war was intended to justify all the post-war decisions that often contradict propagated ideology of *unity and equality of all nations*. These metaphors not only have rhetorical impact but also function as arguments that guide reasoning and persuasion. In communist discourse, metaphors structure ideological narratives by framing political reality in ways that legitimize specific policies and actions. For example, the recurring metaphor of the *struggle* constructs a moral argument for perseverance and unity, while the metaphor of *building socialism* implies progress, collective effort, and the teleological inevitability of the communist project. This research can inspire further studies, such as comparing Tito's metaphors with those of other (communist) leaders or examining their long-term impact on Yugoslav society. It is important to understand how metaphors can reveal underlying ideological biases, and how they contribute to shaping, communicating, and reinforcing political relations and structures of power. Metaphors are powerful tools in political discourse, framing complex social and ideological realities in accessible terms while shaping how audiences understand, evaluate, and respond to political ideas and authority.

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Prikaz

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<https://doi.org/10.22210/govor.2025.42.10>**Petra Božanić***petboz@ffst.hr*Filozofski fakultet, Sveučilište u Splitu
HrvatskaDiana Tomić: *Govorništvo za nastavnike*. Zagreb, FF press, 2024.

Dr. sc. Diana Tomić, docentica na Odsjeku za fonetiku Filozofskoga fakulteta u Zagrebu sa znanstvenim interesom za govorničku pedagogiju, 2024. godine objavila je knjigu *Govorništvo za nastavnike*, čiji je izdavač FF press u nakladi Filozofskoga fakulteta Sveučilišta u Zagrebu. Elektronička inačica objavljena je 2025. godine, a obasiže 230 stranica. Obrađujući teme iz metodike govorništva, monografija je sadržajno podijeljena u tri cjeline i devet poglavlja s mogućnošću primjene u nastavi. K tomu, ime knjige izravno korelira s kolegijem u okviru nastavničkoga modula Filozofskoga fakulteta Sveučilišta u Zagrebu. U *Predgovoru* (str. 9–11) autorica ističe da je knjiga namijenjena stručnjacima iz područja obrazovanja, ali i svima zainteresiranim za javni govor istaknuvši da je govorenje, kao dio komunikacijske kompetencije, u nastavnoj praksi često zapostavljeno unatoč prisutnosti u ključnim dokumentima obrazovne politike. Stoga D. Tomić svojim prilogom nastoji skrenuti pozornost na to da je poučavanje govorničkih vještina dio temeljnih nastavnčkih kompetencija s polazištem da je dobar nastavnik ujedno dobar govornik, što naposljetku utječe na uspješnost obrazovnoga procesa čineći ga kvalitetnijim. Usto, sadržajnim oblikovanjem knjige autorica naglašava interdisciplinarni pristup poučavanju govorničkih vještina.

Svako poglavlje započinje ishodima učenja i ključnim riječima koje zamjenjuju glosar i indeks pojmova, a završava popisom literature. Prvom se cjelinom određuje okvir govorništva za nastavnike, a obuhvaća tri poglavlja: *Govor, govorništvo, komunikacija, Strah od javnoga govora i trema pred javni nastup i Slušanje govora*. Poglavlje *Govor, govorništvo, komunikacija* (str. 13–32) započinje razlikovanjem pojmova ‘sposobnost’ i ‘vještina’ pri čemu autorica zaključuje da “u današnje vrijeme, bez osnovnih vještina, među kojima je i govornička vještina, nema uspjeha u daljnjem obrazovanju” (str. 15). S tim u svezi, upućuje na to da ključne riječi suvremenoga obrazovanja trebaju biti STEAM, dakle s uključivanjem društvenih i humanističkih znanosti (*A – arts*)

jer dostignuća prirodnih i tehničkih znanosti teško nalaze mjesto u društvu i životu pojedinca bez humanističkoga razumijevanja svijeta i komunikacije. Nadalje, autorica donosi odnos komunikacijskih vještina iz kojih proizlaze govorničke vještine, čiji su preduvjet govorne vještine, koje su prema tome također dio komunikacijskih vještina. Potom se osvrće na suvremeno govorništvo i govorničke vještine te govorno izražavanje i govorne vještine predstavivši *Okvir vještina govornog izražavanja* Mercera i suradnika, koji je koristan za sve nastavnike jer potiče promišljanje o govornim vještinama, uvođenje govornoga izražavanja u nastavu, praćenje europskih obrazovnih tendencija i prilagodbu komunikacijskim potrebama suvremenoga društva. Osim toga, autorica naznačuje razliku između retorike (teorija, praksa, kritika) i govorništva (proces javnoga govora), a time i retoričke te govorničke pedagogije. U poglavlju *Strah od javnoga govora i trema pred javni nastup* (str. 33–46) Tomić promatra osjećaj nelagode pri javnom nastupu u obzoru komunikacijskih strahova, donosi savjete i smjernice za smanjenje straha od javnoga govora, a posebno je zanimljiv *Upitnik za testiranje straha i treme od javnoga govora*, koji ponovnim ispunjavanjem pomaže praćenju napretka učenika i studenata te može poslužiti kao poticaj za razgovor o osjećaju nelagode pri javnome nastupu. U poglavlju *Slušanje govora* (str. 47–65) autorica opisuje važnost slušanja za govornika i publiku uz isticanje kompetencija razvijenoga slušanja (kompetencije za razumijevanje sadržaja i kompetencije kritičkoga slušanja). Pored toga, Tomić je dala pregled vrsta neslušanja i sastavnica aktivnoga slušanja s vježbama za ostvarivanje kritičkoga, govorničkoga slušanja.

Drugi je dio knjige posvećen pripremi javnoga govora s poglavljima *Priprema javnoga govora*, *Izvedba javnoga govora* i *Neverbalna komunikacija*. Poglavlje *Priprema javnoga govora* (str. 67–114) razrađuje faze pripreme (prikupljanje, raspoređivanje, sastavljanje, zapamćivanje, izvedba), proces pripreme u vidu govorničkoga zadatka (tema / opći cilj / govornička strategija, specifični cilj, središnja misao, profil publike, kontekst) i oblikovanja središnje misli. Tomić se osvrće i na govorničke strategije ili opće ciljeve (informiranje, instruiranje, interpretiranje, uvjeravanje, argumentiranje, uzbuđivanje, transformiranje, zabavljanje i rješavanje problema) te njihov suodnos. Autorica detaljno iznosi pregled strukture govora, primjerice, prema antičkim izvorima, Škarićevoj retoričkoj shemi i Marshovoj općoj strukturi govora. Posebno razmatra pripremu glavnoga dijela govora uz iscrpan popis vrsta organizacije glavnoga dijela i teme za koje je pojedina organizacija prikladna. Tomić, dakako, sagledava pripremu uvodnoga i završnoga dijela govora raščlambom TED govora. Poglavlje završava uvidom u govorničke postupke, koji uključuju postupke obrazlaganja, jezično oblikovanje te spontanu figurativnost. U poglavlju *Izvedba javnoga govora* (str. 115–

145) autorica se bavi praktičnim vidom javnoga govora, točnije govornom izvedbom navevši u uvodu znanstvena istraživanja koja potvrđuju kako kvalitetna govornička izvedba pridonosi uspjehu govora. Obrađuje vrste govorničke izvedbe (improvizaciju, čitanje govora, izvedbu zapamćenoga govora te izgovaranje pripremljenoga govora – ekstemporaciju), sastavnice dobre govorničke izvedbe (razumljivost, govornost, izražajnost) te govorna sredstva (osnovni ton, glasnoća, tempo, intonacija, stanke, boja glasa, način izgovora glasnika, naglasak, ritam) i govorne vještine (četiri razine: respiracijska – govorno disanje, fonacijska – govorno glasanje, artikulacijska – vještina izgovora, komunikacijska – govorna izražajnost) s vježbama za poboljšanje govornih vještina te načinima poučavanja govorne izvedbe. Poglavljem *Neverbalna komunikacija* (str. 147–165) Tomić čitatelje uvodi u znanstveni pristup toj temi izdvojivši klasifikaciju neverbalne komunikacije i njezine karakteristike (struktura, namjera, svijest tijekom ponašanja, vidljivost/prikrivenost, kontrola, odnos javno i privatno) pri čemu posebno naglašava važnost kulture u tumačenju neverbalnih ponašanja ponudivši određene aktivnosti za osvještavanje neverbalnih znakova. Također, obrađuje neverbalnu komunikaciju u govorničkoj izvedbi kao dio opće govorničke pripreme, ali i pripreme za izvedbu određenoga govorničkog zadatka.

Treća, ujedno posljednja cjelina knjige donosi stručno i znanstveno utemeljen sadržaj za unaprjeđenje govorničkih vještina. Autorica u poglavlju *Govori u posebnim prigodama* (str. 167–179) definira te govore kao one koji se odvijaju unutar neke komunikacijske zajednice i “čiji je cilj riječima uveličati trenutak u kojem se održavaju, a čiji sadržaj i izvedbu određuje kontekst” (str. 169). Naglasivši potrebu za dodatnim znanstvenim istraživanjima tih govorničkih oblika, oblikovala je opće upute za pripremu govora u posebnim prigodama, od kojih su najčešći pozdravni govori, najava govornika, govori prilikom dodjele nagrada ili priznanja te zdravice. Poglavlje *Debata u nastavi* (str. 181–201) vrijedno je za obrazovne stručnjake na svim razinama obrazovne vertikale. Tomić prvotno definira pojam ‘debata’ istaknuvši važnost vještine kritičkoga učenja, koje obuhvaćaju kritičko mišljenje, istraživačke vještine, vještinu argumentacije, vještinu rješavanja problema, komunikacijske vještine, sposobnost promjene stavova te samostalno vođeno učenje. Zatim se osvrće na prednosti i nedostatke primjene debate u nastavi razrađivši upute za pripremu dobre debate, a posebno su vrijedan prilog kriteriji za procjenu debate u nastavi. Tomu dodaje formate debate (debata Karla Poppera, natjecateljska debata svjetskih škola, politička debata, Lincoln-Douglasova debata) “kao podlogu za prilagodbu formata nastavne debate u određenoj učionici i za određeni predmet” (str. 192). Posebnu pozornost Tomić posvećuje ulozi sudionika debate i njihovoj pripremi, što opimjeruje poopćenom shemom debate.

S obzirom na to da izbor teme i oblikovanje teze za debatu predstavljaju izazov u fazi pripreme debate, autorica je ponudila primjere tema i teza za debatu u nastavi, a razmotrila je i uporabu tehnologije u debatiranju. U završnome poglavlje, *Vrednovanje javnoga govora* (str. 203–230), autorica komentira i pomno odabire ljestvice procjene i obrasce za vrednovanje javnoga govora nudeći smjernice za njihovo usklađivanje s različitim nastavnim okolnostima.

Knjiga *Govorništvo za nastavnike* Diane Tomić važan je i nadasve vrijedan izvorni znanstveni prinos razvoju metodike govorništva i govorničke pedagogije u hrvatskome akademskom i obrazovnom obzorju. Monografija svojom strukturom i sadržajem jasno odražava interdisciplinarnost preplećući teorijske temelje s vježbama koje je autorica osmislila tijekom dugogodišnjega profesionalnog bavljenja istaknutom problematikom. Izniman doprinos djela očituje se u promišljenoj povezanosti govorničkih vještina s razvojem nastavnčkih kompetencija. Knjiga obuhvaća širok raspon tema nametnuvši se kao priručnik za nastavnike i studente te širu javnost zainteresiranu za javno govorenje i razvoj komunikacijskih kompetencija, a ponajprije kao potka razvoja kulture govorništva, prijeko potrebne odlike svake komunikacijske zajednice. Sveobuhvatnost tradicionalnih i suvremenih teorijskih implikacija uz spoj autoričinih istraživanja i bogata niza praktičnih smjernica potvrđuju značajke knjige kao mosta između znanstvenih spoznaja i njihove primjene u obrazovanju i društvenoj praksi. Time se iznova dokazuje potreba međusobnoga dopunjavanja teorije i prakse. Drugim riječima, teorija gubi vrijednost bez praktične primjene, a praksa bez teorijskoga utemeljenja ostaje površna i neodrživa. Objavljivanjem ove monografije Diana Tomić dodatno afirmira govorništvo kao neizostavan dio suvremene nastave i obrazovnoga procesa otvorivši prostor za daljnja istraživanja i praktične primjene u tom području.

Prikaz

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<https://doi.org/10.22210/govor.2025.42.11>**Ana Vidović Zorić***anvidovi@ffzg.unizg.hr*

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Izveštaj o radu Odjela za fonetiku od lipnja 2021. do veljače 2025.

U razdoblju od 2021. do 2025. predsjedništvo Odjela za fonetiku činile su: dr. sc. Ana Vidović Zorić (Odsjek za fonetiku), Maja Lakuš Ivanček, mag. educ. phon. rehab. (Poliklinika SUVAG), Martina Stilin, prof. fonetike i kroatistike (Dnevni centar za rehabilitaciju Slava Raškaj, Rijeka), Ana Vlah, mag. educ. art. orator. i mag. philol. croat. (Služba za jezik i govor Hrvatske radiotelevizije) i Karla Švaljek (ranije Zvonar), mag. educ. phon. rehab. i mag. educ. philol. franc. (Neuroth). Ana Vidović Zorić vodila je Odjel od lipnja 2021. do lipnja 2024., kada voditeljstvo do kraja mandata preuzima Ana Vlah.

Predavanja održana u sklopu Odjela za fonetiku (2021. – 2025.)

Tijekom četverogodišnjega mandata održano je 19 predavanja u sklopu šest tematskih ciklusa. U nastavku ih navodimo kronološki:

Ciklus *Govorna fluentnost*

- 11. studenoga 2021., doc. dr. sc. Mirjana Matea Kovač i doc. dr. sc. Mirela Müller: *Formalno podučavanje govorne fluentnosti na stranom jeziku – primjer iz prakse* (online)
- 2. prosinca 2021., izv. prof. dr. sc. Ana Leko Krhen: *Mucanje – skriveni poremećaji* (online)
- 18. prosinca 2021., prof. dr. sc. Mária Gósy: *The controversial nature of fluency of spontaneous speech* (online).

Ciklus *Govor u pandemiji COVID-19*

- 10. ožujka 2022., doc. dr. sc. Ines Carović: *Prepoznavanje govora pod maskom u doba korone*
- 31. ožujka 2022., Anđela Nikolić Margan, mag. educ. phon. rehab.: *Izazovi u rehabilitaciji slušanja i govora djece i odraslih s umjetnom pužnicom u doba pandemije COVID-19*
- 5. svibnja 2022., Tena Žganec, mag. educ. art. orator.: *Javni govor u pandemiji COVID-19*
- 25. svibnja 2022., Natalie Teakle, menadžerica za rehabilitaciju kohlearnih implantata: *Engaging Children with Hearing Loss in Telepractice* (online).

Ciklus *Digitalna retorika*

- 27. listopada 2022., Kinga J. Rogowska, doktorandica: *You become responsible for what you have named – defining the genre of a competitive debate*
- 24. studenoga 2022., dr. sc. Jelena Tušek: *Prodajna retorika 2.0 weba: amateri, autoriteti i unboxing*
- 16. veljače 2023., doc. dr. sc. Alma Vančura: *Digitalna retorika kao sredstvo političke komunikacije.*

Ciklus *Forenzična fonetika*

- 30. ožujka 2023., prof. dr. sc. Gordana Varošaneć-Škarić: *Etika struke – forenzični fonetičar*
- 27. travnja 2023., Sunčica Kuzmić, dipl.ing.: *Forenzična analiza govora i audiozapisa*
- 25. svibnja 2023., doc. dr. sc. Iva Bašić: *Disfluentnosti kao pomoćna varijabla pri prepoznavanju govornika u forenzičnoj fonetici.*

Ciklus *Fonetika u nastavi*

- 26. listopada 2023., dr. sc. Maja Colnago: *O podučavanju naglasaka u osnovnoj školi*
- 30. studenoga 2023., dr. sc. Ivančica Banković-Mandić, viša lektorica i Katja Peruško, mag. educ. philol. croat. i mag. phon.: *Fonetika u nastavi hrvatskoga kao inoga jezika – primjer Croaticuma*
- 25. siječnja 2024., Lucija Šupe, mag. educ. philol. croat. i mag. phon.: *Retorika u suvremenoj nastavi hrvatskog jezika u srednjim školama*
- 29. veljače 2024., Marina Milunić, mag. njemačkog jezika i književnosti i fonetike: *Znam der-des-dem-den, ali ne mogu kupiti kruh.*

Ciklus *Klinička fonetika*

- 4. travnja 2024., prof. dr. sc. Marko Liker: *Novi studij kliničke lingvistike i fonetike*
- 25. travnja 2024., izv. prof. dr. sc. Yuliia Babchuk: *New approaches in phonetic research*.

Navedenim izborom tema nastojala su se aktualizirati neka od važnih pitanja fonetske znanosti te potaknuti promišljanje o izazovima koji se postavljaju pred suvremenog fonetičara. Neke tradicionalne fonetske teme, poput fluentnosti, nastojalo se preispitati u kontekstu novih otkrića i perspektiva, ali zadržavši poveznicu fonetike s kliničkom praksom i logopedijom. Također se pokušalo odgovoriti i na jednu od većih zdravstvenih kriza u posljednjih dvadesetak godina, a to je pandemija COVID-a 19, preispitujući govornu percepciju, ali i uspješnost kliničke prakse pri govornoj rehabilitaciji. Fokusiranjem na digitalnu retoriku (prodajna retorika, politička komunikacija i debatni žanrovi na internetu), Odjel je odgovorio aktualnim pitanjima koja se nameću u suvremenim područjima komunikologije i medijske retorike. Naglašen je utjecaj digitalnog okruženja na govor i komunikaciju. Uvođenjem forenzične fonetike kao teme potaknula se rasprava o etičkim dilemama struke, kao i o ulozi govornih disfluentnosti u prepoznavanju govornika. Time se nastojala popuniti praznina u edukaciji i podići svijest o ovoj struci. Posljednjim dvama ciklusima fokus je dodatno premješten s teorijskog razmatranja fonetike na njezinu primijenjenu vrijednost u društvu.

Početkom jeseni 2024. godine Ministarstvo zdravstva Republike Hrvatske objavilo je Nacrt prijedloga Zakona o logopedskoj djelatnosti koji je izazvao snažne reakcije u stručnoj zajednici, osobito među fonetičarima rehabilitatorima, jer je logopedu davao isključivu ulogu u rehabilitaciji komunikacije, govora, jezika i sluha. Unutar Odjela za fonetiku održane su interne rasprave; članovi su analizirali zakonski tekst u suradnji s liječnicima, psiholozima i edukacijskim rehabilitatorima te javno iznijeli svoje stajalište.

Sastanci Predsjedništva Odjela za fonetiku

Predsjedništvo je na sastancima, koji su se zbog prostorne udaljenosti članica većinom održavali u *online* obliku, primarno raspravljalo o temama koje su ključne za razvoj struke, povezivanju akademske zajednice s praksom te pozicioniranju fonetike u društvu. Martina Stilin otvorila je raspravu o rehabilitaciji osoba s oštećenjima sluha na daljinu, što je bio jedan od najvećih izazova za trajanja pandemije COVID-a 19. Karla

Švaljek u raspravama je istaknula probleme fonetičara na tržištu rada, ali i naglasila ulogu novih tehnologija u osoba s oštećenjima sluha. Maja Lakuš Ivanček dotakla se pitanja fonetičara u centrima za rehabilitaciju govora i obrazovnim ustanovama. Ana Vlah fokus je stavila na komunikaciju i retoriku u digitalnom vremenu, te osnaživanje fonetičara za praksu u novim okolnostima, dok je Ana Vidović Zorić otvorila pitanja govornog planiranja, fluentnosti, kao i primjene novih spoznaja u kliničke svrhe. Planirali su se i fonetski skupovi kojima je Hrvatsko filološko društvo suorganizator, a to su *Istraživanja govora* 2022. i 2025. godine te *Dani Ive Škarića* 2023. i 2025. godine.

Godišnje skupštine Odjela za fonetiku

U mandatnom su razdoblju održane četiri godišnje skupštine Odjela za fonetiku, i to 4. srpnja 2022., 27. lipnja 2023. i 4. srpnja 2024., dok je skupština održana 17. ožujka 2025. ujedno bila i izborna. Sve su navedene skupštine održane na Filozofskome fakultetu u Zagrebu, uz mogućnost uključivanja na Izbornu skupštinu i na daljinu (*online*). Na skupštini 2022. godine članovi su izvijestili o radu i financijama te donijeli odluku o poticanju većeg uključivanja studenata u rad Odjela. Studenti predmeta Govorništvo održali su svoje trominutne govore. Glavnina rasprave bila je usmjerena na organizaciju dvaju velikih znanstvenih skupova: *Istraživanja govora* (s fokusom na verbotonalnu metodu i kliničku fonetiku) te *Dani Ive Škarića* (s temama retorike kriznih situacija i liderskog diskursa). Skupština 2023. godine fokusirala se na akademski razvoj i izvještaje. Predstavljen je i najavljen ključni projekt za struku – novi diplomski studij Klinička lingvistika i fonetika (u suradnji Odsjeka za lingvistiku i Odsjeka za fonetiku Filozofskog fakulteta u Zagrebu), s planiranim početkom izvođenja u akademskoj godini 2024./2025. Organizatori su podnijeli izvještaje o uspješnosti održanih skupova *Istraživanja govora* i *Dani Ive Škarića*, a najavljeno je i izdavanje zbornika radova u čast prof. emerite Vesne Mildner. Glavna vijest skupštine 2024. godine bila je upis standarda zanimanja fonetičar/fonetičarka u Hrvatski kvalifikacijski okvir (HKO) u studenom 2023., čime je struka službeno prepoznata u sustavu rada. Potvrđen je početak izvođenja novog diplomskog studija. Također je najavljena promjena vodstva Odjela (Ane Vlah umjesto Ane Vidović Zorić) i organizacija niza fonetskih i retoričkih skupova u 2025. godini, uključujući ponovnu organizaciju *Istraživanja govora* i *Dani Ive Škarića*, te sudjelovanje na međunarodnim događanjima.

Izornoj skupštini u ožujku 2025. prethodila je sjednica Odjela za fonetiku, održana 3. veljače 2025., također na Filozofskom fakultetu u Zagrebu, uz sudjelovanje

na daljinu, na kojoj se razgovaralo o tranzicijskom periodu te postojanju potrebe za prijevremenim izborima. Uz odobrenje Predsjedništva, potvrđeno je da je najbolja praksa da voditelj Odjela i dalje bude netko od članova prethodnog predsjedništva te da su članovi predsjedništva predstavnici fonetičara iz različitih područja i institucija, s uključivanjem sve brojnijih kolega u privatnom sektoru, odnosno vlasnika obrta i tvrtki.

Znanstveni skupovi Odjela održani u mandatnome razdoblju

Odjel za fonetiku HFD-a u mandatnome je razdoblju organizirao ili suorganizirao dva međunarodna znanstvena skupa, a to su jedanaesta *Istraživanja govora* (Zagreb, 8. – 10. prosinca 2022., u suorganizaciji s Odsjekom za fonetiku Filozofskog fakulteta u Zagrebu) te *Dani Ive Škarića* (Postira, 19. – 23. travnja 2023.). *Istraživanja govora* okupila su brojne znanstvenike iz osam europskih zemalja (Mađarske, Velike Britanije, Španjolske, Francuske, Slovenije, BiH, Srbije i Hrvatske). Teme u središtu bile su verbotonalna metoda u rehabilitaciji i korekciji stranoga te materinskoga govora, a odabrana je u čast Petru Guberini, u povodu 70 godina objavljivanja njegove knjige *Zvuk i pokret u jeziku*. Druga istaknuta tema bila je klinička fonetika. Pozvani predavači bili su Lorraine Baqué Millet (Autonomno sveučilište u Barceloni) s temom iz područja govorne rehabilitacije, Alice Lee (Sveučilište u Corku) s temom iz područja govorne percepcije te Robert Trotić (Klinički bolnički centar Sestre milosrdnice), koji je govorio o bilateralnom slušanju s umjetnom pužnicom. U sklopu pretkonferencijskog događaja predavanje je održao Robin Lickley (Sveučilište Queen Margaret, Škotska, Ujedinjeno Kraljevstvo) na temu govornih disfluentnosti. Detaljan prikaz skupa dostupan je u časopisu *Govor*, sv. 40, br. 1, 2023. Na *Danima Ive Škarića* u fokusu su bile teme muške i ženske retorike te retorika krize. Sudionici su bili znanstvenici iz Hrvatske i devet stranih zemalja (Češke, Grčke, Danske, Mađarske, Slovenije, Švedske, SAD-a, Poljske i Portugala). Prezentirana su 32 rada. Pozvana predavačica bila je Cornelia Ilie (Akademija Strömstad, Švedska), koja je govorila o rodnoj retorici i njenim mitovima, a organiziran je i okrugli stol “U potrazi za vremenom Ive Škarića” u čast profesora emeritusa Ive Škarića, na kojemu se raspravljalo o položaju retorike u društvu danas i ostavštini profesora Škarića. Detaljan izvještaj o skupu dostupan je u *Govoru*, sv. 40, br. 2, 2023.

Pored navedenih dvaju skupova, Odjel je, zajedno s Glavnim odborom radionice, bio suorganizator i četvrte Međunarodne retoričke radionice (The International Rhetoric Workshop; IRW) održane u Dubrovniku od 17. do 20. lipnja 2024. Središnje

teme bile su granice i raskrižja, kojim se preispitivala uloga retorike u suvremenom društvu, a radionica se bavila i važnom temom kako retorika oblikuje javno mišljenje o geopolitičkim, etničkim, rasnim i socijalnim pitanjima u kontekstu pravde, održivosti i pomirenja. Na radionici je sudjelovalo 47 sudionika čiji je rad pregledalo devet mentora. Sudionici su dolazili iz Sjeverne Amerike, Europe, Kine, Kazahstana i Libanona. Radionica je uključivala plenarna izlaganja, radne grupe i interaktivne okrugle stolove. Pozvani predavači bili su Dimitris Serafis (Sveučilište u Groningenu), Karma Chávez (Sveučilište u Teksasu) i Lisa Flores (Sveučilište Penn State). Detaljan prikaz radionice dostupan je u *Govoru*, sv. 41, br. 2.

Časopis za fonetiku *Govor*

Časopis za fonetiku *Govor* nastavio je izlaziti dva puta godišnje, održavajući svoju redovitost. U navedenom razdoblju objavljeno je ukupno devet brojeva *Govora*: sv. 38, br. 1 i br. 2 (2021.); sv. 39, br. 1 i br. 2 (2022.); sv. 40, br. 1 i br. 2 (2023.); sv. 41, br. 1 i br. 2 (2024.) te sv. 42, br. 1 (2025.). Od 2024. (sv. 41, br. 1) novi je glavni urednik časopisa postao Marko Liker (Odsjek za fonetiku Filozofskog fakulteta u Zagrebu), zamijenivši na tom mjestu dotadašnju glavnu urednicu Gordanu Varošaneć-Škarić (Odsjek za fonetiku Filozofskog fakulteta u Zagrebu).

Zahvala

Za uspješnu provedbu svih navedenih aktivnosti ključan je bio neumoran rad i sinergija cijeloga Odjela. Stoga ovim putem Predsjedništvo upućuje iskrenu zahvalu svim članovima Odjela za fonetiku i HFD-a na predanosti i entuzijazmu. Također, Predsjedništvo zahvaljuje svim pozvanim predavačima, Uredništvu časopisa *Govor*, organizatorima i suorganizatorima skupova, vodstvu Hrvatskoga filološkog društva i njezinim predsjednicima Aniti Skelin Horvat i Davoru Dukiću te tajnici HFD-a Niki Grgurinović na neizmjerljivoj podršci i spremnosti da pomognu u rješavanju problema. Konačno, Predsjedništvo Odjela izražava priznanje i zahvalnost svim fonetičarima u praksi – u kliničkim ustanovama, medijima, obrazovanju i privatnom sektoru – čiji svakodnevni rad potvrđuje primijenjenu vrijednost fonetske struke. S obzirom na najavljeni plan rada u sljedećem četverogodišnjem mandatu, nema nikakve sumnje da će novoizabrano Predsjedništvo istim žarom promicati fonetiku kao temeljnu znanost, povezujući njezine teorijske spoznaje s praksom, ali i novim idejama te poticajima unaprijediti položaj fonetike u znanosti i društvu.

Corrigendum

Rukopis primljen 17. 10. 2025.

Prihvaćen za tisak 24. 10. 2025.

<https://doi.org/10.22210/govor.2025.42.12>**Nina Nodilo, Marko Liker***nnodilo@ffzg.unizg.hr, mliker@ffzg.unizg.hr*Filozofski fakultet Sveučilišta u Zagrebu
Hrvatska

Corrigendum članka Nodilo, N. i Liker, M. (2024). Pivotiranje jezika u osoba s umjetnom pužnicom. *Govor*, 40(2), 141–168. <https://doi.org/10.22210/govor.2023.40.09>

Analizom članka nakon njegove objave i usporedbom s izvornim podacima uočili smo da su klinički podatci o ispitanicima iz tablice 1 na stranici 149 pogrešno uneseni. Ta pogreška ne utječe na zaključke rada, a ne mijenja ni opću interpretaciju rezultata jer glavni cilj rada nije bio uspoređivati rezultate s pojedinačnim kliničkim podacima, već provjeriti pojavljuju li se pivoti u govoru atipičnih ispitanika. Od četiri postavljene hipoteze, ova se pogreška reflektira samo na jedan dio rasprave o zadnjoj, četvrtoj hipotezi, ali bez promjene glavnog zaključka te rasprave.

Imajući u vidu navedeno, odlučili smo časopisu *Govor* poslati ovaj dopis u kojem opisujemo pogrešku i predlažemo corrigendum. Također smo odlučili poslati cjeloviti ispravljeni članak. Molimo urednike časopisa da u sljedećem broju *Govora* omoguće objavu ovog dopisa s doi poveznicom na ispravljeni članak, a da u mrežnom izdanju broja 40 (2) zamijene prethodno objavljeni rad ispravljenom verzijom rada.

Corrigendum ispravlja sljedeće:

1. Na stranici 149 u tablici jedan mijenjaju se pogrešno uneseni podatci za ispitanike i2–i5.

Ta je tablica prije ispravke izgledala ovako:

Ispitanik / Participant	Dob / Age	Dob implantacije / Age at implantation	Dob početka terapije / Age at therapy	Govorni audiogram neposredno prije snimanja / Speech audiogram prior to recording
i1	24	2	2	Prag čujnosti = 25 dB, prag maksimalne razabirljivosti od 90 % = 45 dB / Speech detection threshold at 25 dB, 90% word-recognition at 45 dB
i2	23	4;7	3;4	Prag čujnosti = 25 dB, prag maksimalne razabirljivosti od 90 % = 55 dB / Speech detection threshold at 25 dB, 90% word-recognition at 55 dB
i3	18	5;3	5;7	Prag čujnosti = 40 dB, prag maksimalne razabirljivosti od 70 % = 65 dB / Speech detection threshold at 40 dB, 70% word-recognition at 65 dB
i4	26	6;9	0;9	Prag čujnosti = 20 dB, prag maksimalne razabirljivosti od 50 % = 35 dB / Speech detection threshold at 20 dB, 50% word-recognition at 35 dB
i5	26	7;4	6;2	Prag čujnosti = 35 dB, prag maksimalne razabirljivosti od 80 % = 55 dB / Speech detection threshold at 35 dB, 80% word-recognition at 55 dB

Nakon ispravke tablica 1 izgleda ovako:

Ispitanik / Participant	Dob / Age	Dob implantacije / Age at implantation	Dob početka terapije / Age at therapy	Govorni audiogram neposredno prije snimanja / Speech audiogram prior to recording
i1	24	2	2	Prag čujnosti = 25 dB, prag maksimalne razabirljivosti od 90 % = 45 dB / Speech detection threshold at 25 dB, 90% word-recognition at 45 dB
i2	18	5;3	5;7	Prag čujnosti = 40 dB, prag maksimalne razabirljivosti od 70 % = 65 dB / Speech detection threshold at 40 dB, 70% word-recognition at 65 dB
i3	26	7;4	6;2	Prag čujnosti = 35 dB, prag maksimalne razabirljivosti od 80 % = 55 dB / Speech detection threshold at 35 dB, 80% word-recognition at 55 dB
i4	18	5;3	5;7	Prag čujnosti = 40 dB, prag maksimalne razabirljivosti od 70 % = 65 dB / Speech detection threshold at 40 dB, 70% word-recognition at 65 dB
i5	23	4;7	3;4	Prag čujnosti = 25 dB, prag maksimalne razabirljivosti od 90 % = 55 dB / Speech detection threshold at 25 dB, 90% word-recognition at 55 dB

2. Na stranici 163 mijenja se treći odlomak da bi se izbacili dijelovi koji se referiraju na poredak ispitanika na slici i njihove kliničke podatke. Taj odlomak prije ispravka izgledao je ovako:

“Pokazalo se da i5, ispitanik kojemu je najkasnije ugrađena umjetna pužnica i koji je najkasnije počeo s terapijom, ima najveću prosječnu snagu pivoa, što je statistički značajno. Veća prosječna snaga pivoa kod ispitanika podrazumijeva i veću varijabilnost snage, tj. nedosljednost u opsegu pokreta. Ovaj rezultat ukazuje na mogućnost da je velika snaga pivoa korelat smanjene artikulacijske spretnosti i glatkoće, odnosno, atipične koartikulacije. Ovakav zaključak u skladu je s pretpostavkom Okalidou i Harris (1999), koji napominju da ispitanici s prelingvalnom gluhoćom imaju ponešto drukčiju organizaciju artikulacijskih gesta jer ne posjeduju dovoljno dobru kontrolu nad dijelovima jezika koji su uključeni u izvođenje različitih gesta pri koprodukciji. Ipak, i1 i i4, ispitanici s vrlo različitom dobi ugradnje umjetne pužnice, imaju gotovo jednaku snagu pivoa, s time da je ona neznatno veća kod i4 kojemu je kasnije ugrađena umjetna pužnica. I4 međutim ima mnogo raniju

dob početka terapije od ostalih ispitanika – 0,9 godina, što je moglo utjecati na rezultate. Trebalo bi direktno ispitati razabirljivost govora ispitanika u budućim istraživanjima.”

Nakon ispravka, taj odlomak izgleda ovako:

“Razlika u snazi pivotiranja među ispitanicima pokazala se statistički značajnom. Veća prosječna snaga pivota kod ispitanika podrazumijeva i veću varijabilnost snage, tj. nedosljednost u opsegu pokreta. Ovaj rezultat ukazuje na mogućnost da je velika snaga pivota korelat smanjene artikulacijske spretnosti i glatkoće, odnosno, atipične koartikulacije. Ovakav zaključak u skladu je s pretpostavkom Okalidou i Harris (1999), koji napominju da ispitanici s prelingvalnom gluhoćom imaju ponešto drukčiju organizaciju artikulacijskih gesta jer ne posjeduju dovoljno dobru kontrolu nad dijelovima jezika koji su uključeni u izvođenje različitih gesta pri koprodukciji. Trebalo bi direktno ispitati razabirljivost govora ispitanika u budućim istraživanjima.”

3. Dodatno se ispravljaju i pojedine rečenice u kojima se usporedio poredak ispitanika na slikama s poretkom ispitanika u tablici 1.

Na stranici 148 izbacuju se dvije rečenice koje se referiraju na poredak ispitanika na slici i njihove kliničke podatke.

Na stranici 156 izbacuje se dio rečenice koji se referira na poredak ispitanika na slici i njihove kliničke podatke.

Na stranici 157 izbacuje se dio rečenice koji se referira na poredak ispitanika na slici i njihove kliničke podatke.

Na stranici 158 izbacuje se rečenica koja se referira na poredak ispitanika na slici i njihove kliničke podatke.

Na stranici 163 izbacuje se dio rečenice koji se referira na poredak ispitanika na slici i njihove kliničke podatke.

Urednicima časopisa zahvaljujemo na trudu i vremenu koje su uložili u analizu našeg dopisa, a čitateljima se ispričavamo na komplikaciji.

Autori rada

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Knjiga

Malmberg, B. (1960). *La Phonétique*. Presses universitaires de France.

Članak u časopisu

Gospodnetić, J. (1982). Načela fonetike i njezin napredak. *Govor*, 4(2), 93–108.

Članak u zborniku radova

Blumstein, S. (1995). On the neurobiology of the sound structure of language: Evidence from aphasia. U K. Elenius i P. Branderud (ur.), *Proceedings of the XIIIth International Congress of Phonetic Sciences*, vol. 2 (str. 180–185). KTH i Sveučilište u Stockholmu.

Članak odnosno poglavlje u knjizi više autora

MacNeilage, P. F. (1999). Acquisition of speech. U W. J. Hardcastle i J. Laver (ur.), *The Handbook of Phonetic Sciences* (str. 301–332). Blackwell Publishers.

Izvor na internetu s navedenim autorom

Boersma, P. i Weenink, D. (2005). *Praat: Doing phonetics by computer* (verzija 6.4.13) [računalni program]. <http://www.praat.org/>

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GUIDELINES FOR AUTHORS

Govor publishes original research articles, scholarly notes, letters to the editor, professional articles, reviews, studies, essays and reports, that are relevant to speech science and communication. The languages of the journal are Croatian and English. The journal is published two times a year, in July and in December.

The authors are not charged by the journal for the cost of receiving, reviewing and publishing papers. The journal is funded by the Ministry of Science, Education and Youth of the Republic of Croatia, by subscription to the print edition and funds from the publisher. Authors will receive one copy of the journal in which their contribution has been published.

Manuscript submission

The manuscripts are submitted via e-mail at govor@ffzg.hr in .docx and .pdf file formats. Submissions are open throughout the year.

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- that the manuscript conforms with Instructions for manuscript preparation
- that the authors are responsible for the grammar and style of the manuscript
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 3. The manuscript itself should start on page two, in the following format: title in the language of the article, summary in the language of the article (600 – 1,200 characters), the maximum of five keywords, body of the article.
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-

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al.' (Tomić et al., 2011). All references cited in the text should be listed alphabetically at the end of the article. Please, observe the following formats.

Book

Malmberg, B. (1960). *La Phonétique*. Presses universitaires de France.

Journal article

Gospodnetić, J. (1982). Načela fonetike i njezin napredak. *Govor*, 4(2), 93–108.

Conference proceedings

Blumstein, S. (1995). On the neurobiology of the sound structure of language: Evidence from aphasia. In K. Elenius, & P. Branderud (Eds.), *Proceedings of the XIIIth International Congress of Phonetic Sciences*, Vol. 2 (pp. 180–185). KTH and Stockholm University.

Book section

MacNeilage, P. F. (1999). Acquisition of speech. In W. J. Hardcastle, & J. Laver (Eds.), *The Handbook of phonetic sciences* (pp. 301–332). Blackwell Publishers.

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