



Semiotic Approach to the New Perspectives on Inner Speech

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Accepted: 12 December 2022 / Published online: 22 February 2023

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Abstract

The article aims at identifying the new perspectives on the study of inaudible internal communication, known as inner speech. This is done by addressing the role of semiotic approach in the contemporary studies of inner speech, emphasising the role of contemporary culture in the formation of human inner communication processes, as well as by critically addressing the recent publications that outline the new directions in inner speech research, more specifically “New Perspectives on Inner Speech” edited by Pablo Fossa (2022). The article develops and expands the framework of the new perspectives on inner speech by focusing on such aspects of inner speech research as the language of inner speech, the role of contemporary digital culture in the formation of inner speech and the advances in the recent research methodologies. The discussions established in the article are based on the recent inner speech studies, as well as the author’s own diverse experience in researching inner speech within his PhD research (Fadeev, 2022) and his experience at the inner speech research group at the Department of Semiotics at the University of Tartu.

Keywords Inner speech · Semiotics · Language · Sign systems · Digital culture · Otherness

“A word relates to consciousness as a living cell relates to a whole organism, as an atom relates to the universe. A word is a microcosm of human consciousness” (Vygotsky 2012: 271).

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Introduction

The process of inaudible internal communication, known as inner speech, has been inspiring researchers in various fields of science such as psychology, neuroscience or semiotics since this phenomenon was first coherently presented in science by Lev Vygotsky in his well-known publication “Thinking and speech” (2012). The recent advances in research methodologies in psychology and semiotics fosters the understanding of the development, functions and phenomenology of inner speech. However, inner speech, being a complex cognitive and semiotic process “with no overt behavioral manifestation” (Alderson-Day & Fernyhough, 2015: 934), still remains a phenomenon that is very difficult to study, especially in what refers to collecting empirical data. Thus, scientific literature still struggles in providing a holistic picture of the processes, phenomenology and the semiotic structure of inner speech, leaving many questions about this mystical internal processes unanswered. The development of new methodologies and new possibilities for interdisciplinary approaches inspires researchers to discover new perspectives in the study of inner speech in particular and inner communication processes in general. One of the examples is the recent publication “New Perspectives on Inner Speech” edited by Pablo Fossa (2022), which represents the recent advances in the study of inner speech and thus establishes discussions on creating the framework for the new perspectives on inner speech research.

The given article aims at critically addressing the aforementioned publication in order to widen the current perspectives on the inner speech research. This is done in the article by emphasising the role of semiotics in studying inner speech, especially in what refers to the role of the sign system, i.e. an internal language, that inner speech operates with, as well as the role of culture in the formation of inner communication processes. The discussions established in the article are based on the recent inner speech studies, as well as on the author’s own diverse experience in researching inner speech within his PhD research project (Fadeev, 2022), his experience from working in the inner speech research group at the Department of Semiotics at the University of Tartu and the ongoing interdisciplinary collaboration between the author and the members of the Cognitive Control in Context (CogTex) lab¹ at the Department of Psychology, KU Leuven.

Inner Speech in Psychology and Semiotics

Contemporary psychology and semiotics understand inner speech as “the subjective experience of language in the absence of overt and audible articulation” (Alderson-Day & Fernyhough, 2015: 931), as “a specific formation, with its own laws and complex relations to the other forms of speech activity” (Vygotsky, 2012: 239) and as “the interplay of language and thought” (Perrone-Bertolotti et al., 2014: 221). Inner speech is considered to have role in various psychological and cognitive processes such as “planning, problem-solving, self-motivating, reading, writing, calculating

¹ <https://ppw.kuleuven.be/cogtex>.

and autobiographical memory [...] in thinking and in consciousness, self-awareness and self-regulation” (Perrone-Bertolotti et al., 2014: 221).

Inner speech was scientifically described by Lev Vygotsky in his famous work “Thinking and speech” (2012) as a process of gradual internalisation of what he called “communicative speech” (Vygotsky, 2012: 37). With the growing socialisation a child brings the social forms of behaviour into their internal psychological processes. Thus, it increases the role of natural language as a sign system that begins to serve a child’s internal psychological functions. As a result, “[t]he development of verbal mediation is envisaged as the process through which children become able to use language and other sign systems to regulate their own behavior” (Alderson-Day & Fernyhough, 2015: 932).

Vygotsky’s study points out that the appearance of inner speech is a process of development, which does not happen momentarily but has a preliminary stage, namely private speech² that already demonstrates the functions of inner speech, but is different from communicative speech in its syntax and absence of a real interlocutor (Vygotsky, 2012: 240–249). Vygotsky described that since inner speech is internalised from social communication it continues to convey many aspects of social communication. Thus, inner speech represents a process of socialisation of one’s cognitive and psychological processes. One of these aspects is of course the internal use of natural language. As a result of internalisation, natural language is modified into the sign system that guides one’s internal processes. However, this internalisation presupposes not a one-way, but a mutual influence, which results in the language of inner speech being significantly different from what we normally consider as language of social communication. Vygotsky described several main characteristics of the language of inner speech, including predicativity (Vygotsky, 2012: 193), agglutination (ibid.: 260), dominance of sense³ (ibid.: 259) and influx of sense (ibid.: 261).

The role of culture, and more specifically, natural language in the formation of inner speech made it an important object of semiotic research. Inner speech represents itself as a unique process of using natural languages, which are sign systems introduced by culture, for guiding internal psychological processes. In other words, inner speech is a process that is simultaneously psychological/biological and cultural/social. While the significant influence of culture on the formation of inner speech is evident, at the moment there is no clear understanding of the proportions of each origin.

The given article addresses the perspectives on inner speech in the light of semiotic studies. The semiotic account of inner speech was established already by Vygotsky, whose scientific heritage represents the “understanding of human high psychic functions on the base of describing the dominant role of the signs” (Ivanov, 2014: 488). Vygotsky was especially interested in the role of a word as “a particularly important type of sign” (ibid.: 496) in the development of one’s psyche. Thus, meaning became one of the main foci of Vygotsky’s studies on inner speech and, as he called

² Vygotsky uses the term “egocentric speech”.

³ Sense [смысл] as “the sum of all the psychological events aroused in our consciousness by the word” (Vygotsky, 2012: 259) is thus opposed to the meaning [значение] of a word described as a socially conventional “dictionary” meaning.

it, the main indivisible unit for the inner speech research, which represents “a union of word and thought” (Vygotsky, 2012: 225). Inner speech in general is a semiotic process, and thus demonstrates the semiotic nature and cultural dimension of human psyche. There is a number of aspects of inner speech that has been a focus of semiotic research in inner speech, including the language (or code) of inner speech (Zhinkin, 1998), it’s role in meaning-making (Fadeev, 2022), communication aspect, dialogic nature, the way inner speech becomes manifested in other forms of speech (role in creativity), etc.

Due to the complexity of inner speech as a semiotic and cognitive process and the difficulties in addressing inner speech within the empirical research (Alderson-Day & Fernyhough, 2015: 934), the contemporary science is still struggling with providing a detailed and holistic picture of inner speech processes, its nature, development, functioning and influence on other psychological and cognitive phenomena. Considering the importance of inner speech studies in understanding the way human behaviour is guided by culture-specific sign systems, the researchers of psychology and semiotics are constantly looking for new perspectives on inner speech.

Towards New Perspectives of Inner Speech Research

In the recent decade we have observed the growing renewal of the interest towards the study of the inner speech processes. One of the most significant reasons for this is evidently the technological evolution in research methods such as neuroimaging, which offered the new perspectives for the study of internal self-talk, especially in what refers to the “possible role of inner speech in the experience of auditory verbal hallucinations” (Alderson-Day & Fernyhough, 2015: 935) or verbal memory (Marvel & Desmond, 2012; Baddeley, 1992; Alderson-Day & Fernyhough, 2015: 933). The development of interdisciplinary approaches allowed researchers to unite the capabilities of psychology and semiotics in analysing inner speech for reaching a more holistic understanding of human’s internal communication processes.

As a result, the overall development of new methodologies, including the new theoretical and empirical approaches in psychology, semiotics and other disciplines to address inner speech, has provided the new possibilities for answering a wide scope of questions that has always been in focus of psychology and semiotic science. These questions for instance include the understanding of how culture, through natural and artistic languages, is able to guide human behaviour, cognitive and psychological processes, as well as to investigate how one uses signs and sign systems for internal processes. With the recent evolution of culture and cultural communication processes it provides even more questions to semiotic science, such as whether the change in the processes of cultural communication, such as digitalisation and transmediality (Ojamaa & Torop, 2015), are also able to shape one’s cognitive processes.

The analysis of the new theoretical and practical perspectives on the inner speech research were addressed in the recent book “New Perspectives on Inner Speech” edited by Pablo Fossa (2022). By referring to and critically analysing the book, the following chapters aim at providing the expansion of the analysis established in the book through semiotic perspective.

New Perspectives on the Language that Speaks in Our Head

The development of inner speech is a process guided by the internalisation of natural language and social communication into internal autocommunicative processes with the use of a specific internal sign system. This sign system, which on the one hand is highly individual and at the same time is a “universal language” (Zhinkin, 1998: 159) that is involved not only as an autocommunicative, but also as an interpretive mechanism, represents one of the most intriguing phenomena in the semiotic research of inner speech, which aims to understand what is that language that “speaks” in our head.

In order to describe the structure and syntax of the language of inner speech, we need to emphasise that the development of inner speech is not a simple transfer of a natural language into an internal level. Already Vygotsky’s findings in “Thinking and speech” (2012) demonstrated the differences of experiencing the use of language when it is gradually internalised together with changing its functions. When previously it was solely socially oriented, in the course of psychological development culturally elaborated languages become a part of internal experience. The more language is internalised the more it changes its initial form of a natural language. In addition, natural language, being a sign system introduced by culture, becomes a part of one’s internal processes. As a result, human cognitive and psychological processes (including thinking, memorising, etc.) become regulated by signs and sign systems that are internalised from the cultural environment. Thus, we can argue that the result of internalisation is always a mutual change of psychological functions and language. While this makes inner speech a phenomenon that is very difficult to study, it demonstrates the close links between cognitive processes and the use of language, as well as the internalisation and individualisation of previously socially and culturally elaborated language(s). It also shows the flexibility of natural language in maintaining diverse cognitive functions.

The growing understanding of the diversity of processes that are dependent on inner speech (Alderson-Day & Fernyhough, 2015: 931) emphasises the role of language, and consequently culture, not only in separate psychological processes, but in cognition in general. This leads us to the classical Vygotsky’s discussion in “Thinking and speech” (2012) on the problem that could have become the next object of his unfinished research, namely “the problem of the relation between word and consciousness” (Vygotsky, 2012: 271). By discussing the relations between the evolution of a word and development of human consciousness, Vygotsky argues that “[t]hought and speech turn out to be the key to the nature of human consciousness” (*ibid.*), pointing out from the very roots of the inner speech research the need to turn the perspective towards “a wider and deeper subject” (*ibid.*).

The experience of internal language is a heterogeneous process. As the study by Vissers et al. demonstrates (2020: 2), different dimensions of human consciousness presuppose a different cognitive control, form (e.g. syntax) and function of inner speech. Since inner speech is related to a variety of cognitive processes, its experience varies depending on the level of consciousness and cognitive control. While on the conscious level the language of inner speech represents what is called in literature *expanded inner speech*, namely “linguistically well-formed, grammatical utterances”

(Visser, 2020: 2), on the unconscious level, inner speech represents “a fluid, spontaneous, and unconscious process, during which an utterance is often reduced to a single grammatical form associated with the current experience” (ibid.), a *condensed* type of inner speech.

Another dimension of inner speech was recently addressed in the study by Pablo Fossa and Cristóbal Pacheco (2022) by synthesising Vygotsky’s understanding of inner speech and Husserl’s phenomenological approach to consciousness (Fossa & Pacheco, 2022: 26–28). In the study Fossa and Pacheco describe inner speech experience within its reflective and pre-reflective dimensions. According to the study, reflective inner speech incorporates all the attributes of a natural language with its analytical, instrumental and representative aspects together with the cultural contexts. Pre-reflective inner speech on the contrary occurs as an immediate passive reaction to specific experiences and represents an “experienced, but uncontrolled inner speech” (Fossa & Pacheco, 2022: 19) that has no further reflection and incorporates a very limited signification. Thus, Fossa and Pacheco define pre-reflective inner speech as “associated with the occurrence not conditioned by the cognitive, responding to an emergency embodied as responses of an experiential nature” (Fossa & Pacheco, 2022: 18). The analysis of pre-reflective inner speech establishes new perspectives for developing semiotic understanding of inner speech and its role in meaning-making. Seeing inner speech within its different dimensions allows us to deconstruct the individual sign using activity and the individual act of semiosis.

“Meaning [...] begins to form before language and speech. It is necessary to see things, to move among them, to listen, to touch – in a word, to accumulate in memory all the sensory information that enters the receptors. Only under these conditions is speech received by the ear, from the very beginning it is processed as a sign system and integrated in the act of semiosis.” (Zhinkin, 1982: 83).

The experience of inner speech doesn’t occur in vacuum, meaning that it is always related to a specific context, either prior, current or expected (Fossa, 2022: 136). Identifying the way different contexts influence the experience of inner speech becomes an important direction in the current inner speech studies. One of the examples of it is the study by Vergara et al., (2022), that “explores the subjective experience of inner speech through empathy for pain paradigm” (Vergara et al., 2022: 115). The empirical study established by the authors shows that the experience of inner speech in empathic situations presupposes 2 meaningful units: utterances⁴, that focus on describing empathetic experience, and what is called *experiential context*, namely “a meaningful bodily and emotional context” (Vergara et al., 2022: 132). The study suggests that inner speech can be “a constitutive aspect of the empathic experience” by “mediating the empathic dispositions and actions a person has towards someone else” (Vergara et al., 2022: 132). The study also suggests that the experiential context of inner speech may influence what can be called a spacial aspect of the internal expe-

⁴ “(a) a concern related with the worries about the possible consequences the accident could generate to the sportswomen/sportsmen, and (b) a concern focused on the unpleasant experience that participants have themselves” (Vergara et al., 2022: 132).

rience of language, namely the experiential location⁵ in different parts of the body depending on “localization of salient bodily sensations that appear simultaneously with inner speaking” (Vergara et al., 2022: 134), which can be the reason “why the localization of the inner speaking is retrospectively misplaced under the unnoticed influence of the remembered bodily sensation” (ibid.).

The recent studies in inner speech focus on expanding our understanding of the relations between the content, form and experience of internal use of language and the external context in which it appears. The reported inner self-talk in various contexts, its context-specific manifestation and differences from external communicative speech, inevitably leads us to the question of the syntax, form and internal manifestation of the language, or better say, sign system, that we use for the needs of internal conversation processes.

In the earlier studies of inner speech, Vygotsky already demonstrated the specificities of the language of inner speech and the fundamental differences of it from the natural language we use for communication, which include predicativity, agglutination, dominance of sense and influx of sense of words and phrases in the language of inner speech (Vygotsky, 2012: 193–261). Though Vygotsky looked at inner speech as a primarily linguistic phenomenon. In other words, a process that relies on the natural language. The later studies proposed evidence of the ability of inner speech to internalise other aspects of social and cultural communication, including the sounds of internalised voices, visual-special characteristics, etc. (Zhinkin, 1998; Emerson, 1983; Vissers et al., 2020: 2–3), that will be discussed in more detail in the following chapter.

The recent advances in the understanding of the experience and manifestations of inner speech in various contexts propose new perspectives towards a more holistic and specific description of the language that speaks in our head. This also emphasises the need to identify to what extent this language is a stable phenomenon (in comparison to natural language) and how much such characteristics as context or cognitive task (which implies different levels of cognitive control) influences the manifestation and form of the language of inner speech. This perspective is especially dependent on the efforts of semiotic science in the inner speech research, considering the role of socio-cultural context in the formation of inner speech.

Digital Culture Provides New Perspectives

A close connection of inner speech with culture establishes new direction for the further research and a deeper understanding of inner speech as a semiotic process. In the context of contemporary digital culture it becomes especially important to understand the way the language of inner speech reflects the changes in contemporary social and cultural communication processes. In digital culture communication becomes less centred around natural languages and is characterised with a high degree of multimodality and transmediality. This represents a considerable challenge

⁵ “For instance, it is not unreasonable to expect that people describing their experience of innerly speaking as located in their chest also have, as part of their overall experience, a salient sensation located in the same place” (Vergara et al., 2022: 134).

for the study of inner speech, more specifically in the understanding of how this cultural shift is reflected in the language of inner speech. In other words, how the change of communication processes in culture and in the patterns of social communication shapes the internal communication processes and whether we are able to apply the notion of multimodality to it.

The foundation of the multimodal understanding of inner speech belongs to the studies of the psychologist and linguist Nikolai Zhinkin (1893–1979), who proposed the hypothesis of the *mixed code of inner speech*. Zhinkin argued that “the content of a [human] thought is greater than the limited possibilities of language⁶” (1998: 159). The results of his empirical study demonstrated that in the situations when the use of natural language for internal processes is hindered “one turns to the use of pictorial (non-verbal) representations of specific objects in the reality replacing words in natural language and thus using, as he [Zhinkin] called it, an object-pictorial code” (Fadeev, 2022: 32). Zhinkin’s study demonstrated that the language of inner speech is not limited to only internalised natural language and has a potential to incorporate other internalised sign systems. Thus, code transitions can be considered an essential component of thinking, reflecting Lotman’s understanding of translation as an “elementary act of thinking” (Lotman, 1990: 143–144).

Since Zhinkin’s hypothesis on the mixed code of inner speech, the processes of cultural communication have undergone a significant evolution and even a revolution. Contemporary culture introduced a wide palette of sign systems that can be potentially internalised as a part of inner speech. Thus, addressing inner speech as a process of internal communication that relies on the individualised sign systems that develops by internalising the codes and sign systems of social and cultural communication with an ability “in integrating multisensory information into internally consistent mental representations” (Vissers et al., 2020: 3), provides us with new perspectives on looking at the language that speaks in our head.

The history of inner speech research demonstrates an even wider influence of socio-cultural environment on the experience of inner communication. Already Vygotsky’s research (2012) emphasised that humans are essentially social from birth and already in the early childhood they acquire the *I-others* relations (Gherlone, 2016: 4). Speech plays a role of a mechanism of bringing social and cultural dimension to one’s psychological functions. While discussing the course of psychological development, Vygotsky describes the main function of speech as “communication, social contact” (Vygotsky, 2012: 36), he argues that “[t]he earliest speech of the child is therefore essentially social” (ibid.). At the level of private speech⁷ “the child transfers social, collaborative forms of behavior to the sphere of inner-personal psychic functions” (Vygotsky, 2012: 37). Thus, one’s psychological functions become mediated by signs and sign systems, which are introduced by culture via social communication and internalisation.

The result of this is that the internalised language reflects many aspects of social communication. One of them is the internalisation of voices (e.g. with words or phrases) that is known as the *polyphony of voices* (Bakhtin, 2013) or multivoiced-

⁶ Zhinkin is referring to natural language.

⁷ In his works Vygotsky uses the notion “egocentric speech”.

ness of inner speech and, as a result, the presence of *the other* in the internal communication. The phenomenon of “the presence of the voices of other people in inner speech” (McCarthy-Jones & Fernyhough, 2011: 1587) was empirically addressed in the development of the VISQ methodology in the work of McCarthy-Jones & Fernyhough (2011; Alderson-Day et al., 2018). In their study Picione & Freda (2022) define that otherness “is not only the expression of an external individual [...], but it is simultaneously an expression of the person’s internal world that introduces a difference (a different voice, a different perspective) thus making dialogue possible” (Picione & Freda, 2022: 44). Picione and Freda argue for “the centrality of the function of otherness” (Picione & Freda, 2022: 57) in the psyche, its development, the construction of identity⁸ and in the constitution of the dialogic process, which should be understood as “the process of transforming the psyche and integrating the perspective of Others within the construction of a shared framework” (ibid.).

The discussion presented in the Picione and Freda’s work (2022) opens up an import direction in the study of the role of otherness in the psyche as a dynamic phenomenon and “a liminal process of sensemaking” (Picione & Freda, 2022: 62), and its role in the formation of dialogic processes. At the same time, we should not disregard the cultural origin of the Other and its further role in the construction of internal dialogue and the internal Other. While being an important aspect of social communication, otherness is also an inherent element of culture and a part of semiosphere (Lotman, 2005), “the living tissue of texts, threads of a teeming network of connections that open up to an infinite depth insofar as they meet the others (the other people’s visions, the other people’s interpretations, the other people’s encodings of the world)” (Gherlone, 2016: 11).

Thus, by addressing culture communication processes it is possible to establish new perspectives on identifying the origins and the formation of otherness in psyche and in inner communication. This is especially important in terms of contemporary digital culture, which has introduced not only the new forms of media, but also the new ways of cultural communication, enhancing the dialogic processes in culture. The situation when the phenomenon of the Other can be represented via a virtual or digital Other (Bockarova, 2014) or even as a collective virtual Other, in case of transmediality of cultural autocommunication, provides researchers with the new directions in the analysis of the internal communication processes.

New Methodologies–New Perspectives

Inner speech has always been a phenomenon that is very difficult to research (Vygotsky, 2012: 240; Alderson-Day & Fernyhough 2015: 934). The recent technological and methodological advances have provided researchers with a number of methodologies, which include both quantitative (e.g. dual-task methods or neuroimaging) and qualitative (e.g. self-report scales and questionnaires) approaches (Alderson-Day & Fernyhough, 2015: 934–935). The growing interest towards inner speech from various disciplines requires a deeper understanding of its functions, phe-

⁸ “identity is a liminal process in continuous transformation in the relationship with otherness” (Picione & Freda, 2022: 62).

nomenology and content. As a result, we are observing an active development of inner speech research methodologies on theoretical and empirical levels. One of the examples is the recent focus in experimental psychology on addressing the scales of inner speech, thus contributing to the new empirical approaches. Among such scales there are VISQ (McCarthy-Jones & Fernyhough, 2011), GISQ (Racy et al., 2019) or the Self-Talk Scale (Brinthaup et al., 2009). Another vivid example is the study by Vergara et al. (2022), in which they propose the use of online diaries as a method of introspective analysis in the context of inner speech. At the same time, the study by Fossa & Pacheco (2022) demonstrates the implementation of a theoretical approach, which addresses the concept of inner speech established by Vygotsky through the prism of Husserl's phenomenological approach. The aforementioned methodologies contribute to the development of the holistic picture of the inner speech processes by providing researchers with analytical tools for investigating the experiential and phenomenological dimensions of internal communication. We should though admit that the holistic picture of such a complex and diverse process as inner speech can only be reached by addressing it through all its manifestations.

An important aspect of inner speech is its semiotic nature, which is emphasised in the given article. This implied not only the specific language the inner speech uses, but also the involvement of inner speech in meaning-making processes (Fadeev, 2022: 29–37). Thus, incorporating semiotic approaches to the study of inner speech is necessary for the understanding of inner speech foremost as a communicative process and as a unique human ability to internalise cultural sign systems and use them for diverse internal purposes, including among others thinking, problem solving, meaning-making and creativity. Thus, the analysis of communication (or rather auto-communication) functions of inner speech is one of the key perspectives of incorporating a semiotic approach to the study of inner speech. Another important direction is a deeper understanding of the language or code of inner speech and the way it integrates various cultural sign systems into what Zhinkin calls “universal language” (1998: 159). This immediately brings us to the question of investigating the relations in which inner speech and its code stand with culture and its texts. In other words, how culture together with the sign systems and texts that it produces influences the evolution of an individual code of inner speech.

In recent years, the disciplines such as psychology, psychiatry and semiotics have achieved considerable advances in the theoretical and empirical methodologies of inner speech research. Considering the complexity of inner speech as a cognitive and semiotic process, the difficulty of approaching it empirically, as well as its multidimensional nature, which implies the connection between culture and human cognition, we can argue that the new perspectives on inner speech should be sought at the interfaces between the aforementioned disciplines (once already offered by Vygotsky 2012) in order to uncover the mysteries behind inner speech as one of the main features of human psyche and autocommunication.

Conclusion

The recent development of research methodologies has made significant progress in the study of inner speech in relation to various psychological and cognitive functions. It also emphasised how diverse this process is and how incomplete our knowledge about our own inner world is. Thus, establishing a framework of new perspectives to the study of inner speech is a necessary step towards a more holistic understanding of the inner speech processes.

The given article makes a specific emphasis on the role of semiotics in developing this framework, as inner speech is an essentially semiotic process. Thus, the language of inner speech, or a special individualised sign system that inner speech operates with, represents one of the most intriguing aspects of internal communication processes. The development of digital culture and the evolution of cultural communication processes provides new directions in the study of the language of inner speech. Another cultural aspect of inner speech, that has been emphasised by the recent studies, is the presence of the Other in internal dialogic processes and in the psyche in general (Picione & Freda, 2022). Our contemporary digital culture makes us reconsider the understanding and the role of the Other in the dialogic processes in social and cultural communication, providing new questions for the understanding of internal dialogic processes.

While the development of inner speech is a process of internalising culturally elaborated sign systems, the recent cultural shift (which also includes a change in cultural autocommunication) challenges the inner speech research with the question of how our contemporary digital culture shapes our internal communication processes. In other words, should the change in the way we communicate with each other and in the way culture communicates its text also presupposes the changes in our inner communication? The recent attempts to investigate the new sides of inner speech is a necessary and inevitable process not only towards a clearer picture of the structure, functions and manifestation of inner speech, but also in reaching a better understanding of the role of language, and consequently of culture, in human psychological and cognitive processes.

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