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Cognitive Literary Research as a Showcase of Multidisciplinary Concept of Science

Abstract

Cognitive literary research began to emerge in the 1980s when cognitive linguists discovered that numerous basic processes of human thinking could be revealed and studied within the field of literature. The study presents a survey of cognitive literary studies, research programmes, disciplines and outputs. The general goal of cognitive literary science is to identify common principles and processes of the literary text, imagination and thinking. This means providing a cognitive explanation with regard to the operation, constituents, methods and purposes of the literary process. It could be said, that every interpretation of non-cognitive literary studies has tended to reveal more correct principles of literature, and even more correct meaning/representation of a work of art (e.g. structuralism). Cognitive literary research/science reassesses these aims. If we add the authorial and perceptive procedural competences (memory, attention, emotions, etc.) to the system of literary notions, we will acquire better methodological instruments for the analysis of: the literary expression and shifts in perception; the examination of literary understanding and its types; resolution of literary agents (author, character, reader); and reasons for the popularity of given literary works and the value/negative value attributed to them. That can help us understand what literariness is, which is to find a solution to the main question of literary research, which has not yet been satisfactorily answered.

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The methods of literary research in the 20th century were influenced by normative Marxism as well as Formalism and Structuralism, Psychoanalysis, Deconstructivism, New Historicism etc. The methods of those theories resulted from the ways they approached the fundamental question of the meaning of literature as well as how they approached text and its analysis. For example, the formalization of literary text (attention paid to structures and their hierarchies, to symbolic nature of cognition) considerably marginalized the semantic attributes of text as well as the productive and receptive, mental and physical vehicles of creativity and the literary process. As if what breaks down the walls between syntax and semiotics was a computing procedure as an amodal universal principle, as an idealized, inherent logic independent of any physical structure of the system as well as of time and space. This approach corresponds to logical principles of science but actually contradicts the nature (diversity) of the arts, the existence of which is conditioned by an individual author (authors) and an individual recipient of each work of art and their contexts. The problem was supposed to be solved by e.g. the phenomenological text interpretation or cultural semiotics.

Cognitive literary research/science, which began to expand in the 1980s, builds its knowledge on the previous literary theories. However, as opposed to Structuralism, i.e. the focus on syntax (relations between signs), cognitive literary studies also draw attention to pragmatics (relations between signs and communication situations, communicating subjects, their strategies and goals) and also observe semantics (relations between signs or linguistic tools and denoted objects — of course, cognitive science pays more attention to the relations between linguistic tools and their images, correlates, concepts, notions, created and existing either in the human mind or in the culture of a community, as started to be clarified in works by Herder, Humboldt, Cassirer, Sapir, Whorf, Potebnja, Lotman etc.).

Cognitive literary science is developing as a showcase of new multidisciplinary concept of science, which raises questions about the role of human perception, thinking, feeling and body (biological vehicles) in artistic creativity, in literary stories and their specific versions.

As a discipline, cognitive science (the group of cognitive sciences) began to form at the end of the 1950s. Cognitive science epitomizes a new concept of science which is not only highly multidisciplinary, but also what we call transdisciplinary, which seeks to penetrate the greatest possible depths of the mind by means of creative connections between various disciplines. [...] It not only focuses on the cognitive processes in the narrow sense, such as

perception, learning or judgment, but also on mental operations in the widest possible sense: rational as well as irrational behaviour, intentionality, memory, creativity, and, last but not least, consciousness (Petrů 2007: 18–19).

Though it examines the mind, cognitive science is not a kind of so-called mentalism, as it builds on the assumption that the image of the human world results from the interaction of outer stimuli, information and our inner physiological-mental processes. The cognitive turn to the embodied mind thesis¹ was caused by dissatisfaction with the answers which were then provided by the limited formal and logical models following Cartesian dualism of body versus mind (Damasio 1994). As a result, the sense of the term “cognitive” changed around the mid-20th century, too:

Originally, it distinguished the rational from the emotional and impulsive aspect of mental life. Now it is used to refer to [...] all information processing activities of the brain, ranging from the analysis of immediate stimuli to the organization of subjective experience. In this later sense, “cognitive” includes such processes and phenomena as perception, feeling, emotion, memory, attention, problem-solving, language, thinking, and imagery, most of which are excluded from the earlier sense, or even opposed to it. (Tsur 2008: 595)

Cognitive science uses the current knowledge to give new answers to long-standing epistemological questions about the origins and nature of consciousness, experience, knowledge and thinking. The scope also includes literature-related questions about literary awareness, its origins, agents, elements, outputs, results and purposes. Cognitive linguists were followed by cognitive literary scientists, who challenged the romantic assumption made by the previous literary research that literary thinking is a creative activity of particularly talented individuals. Nowadays, cognitivists state and prove that literary processes comprise some of the essential functions of the human mind. Therefore, cognitive literary research/science does not settle for what the text alone has to offer, but wishes to take into account the whole of the human mind as well as its material basis. In this sense, interdisciplinary cognitive literary research/science belongs to the cognitive sciences, which, nevertheless, is not a reason for disregarding it as a literary research.

Cognitive literary studies — origins, opinions and objectives

Literature, writing and reading are undoubtedly rich sources for cognitivists’ research. On the other hand, a number of literary researchers also realized a few decades ago that “observing the cultural production of meaning always includes cognitive as well as communicative aspects. [...] Why should systematic-theoretical literary research uncritically maintain the idealistic classification of texts, cognitions and bodies?” (Moserová 2007: 13). If we decide to study a text, a mind and a body in mutual context, we surely have to assume and identify common premises and methodology of cognitive as well as literary research. In the first place, there arises the question of whether we acknowledge that it is in our own interest to grasp the (literary) world in a way that is as complex as possible, even at the expense of the fact that cognitive expertise and literary expertise not being exactly the same. It would also be at the expense of the continuous forming and verifying of the identity and reliability of the terms in use, as well as the theses

¹ Doris Bachmann-Medick deciphers the neuro-biological turn as the actual challenge of reconnecting humanities and natural sciences (Bachmann-Medick 2006: 389–401).

and interpretation outcomes. (It was the cognitive experiments that proved that people are able to tolerate vagueness in communication to a certain extent.) Otherwise, we will continue to be absorbed in our disciplines and insist on the partition and the purity of “our own” outputs.

In particular, traditional literary criticism, which oscillates between forming more and more correct representation/meaning, objective value and structural (generative) principles of literary works of art while criticizing their “flaws”, as well as Impressionistic Criticism² both regard the current cognitive studies as a serious challenge. A similar challenge in the last half-century was presented by post-structuralism, which noticed (anew) that language and speech are not just neutral means of information but also tools of power and manipulation in relations between the participants and the discourses of the communication act. Post-structuralism pays attention to a framework, and to external, especially powerful and institutional tools of constituting a work of art, its value and price. Another approach challenging traditional structuralist studies of literature, which should be mentioned, was deconstructionism.

But in a broad, most comprehensive sense, fundamental assumptions, qualities and manifestations of human perception, thinking and experience were not taken into consideration until cognitive literary research/science did so³. Its origins date back to the 1980s when the first principal results of research were published. The works by George Lakoff and Mark Johnson (1980)⁴, Reuven Tsur (1987), Mark Turner (1987), George Lakoff (1987), Norman Holland (1988) or Robert de Beaugrande (1980) must be mentioned. The basis of cognitive research of literature is not a closed work of art, but a work of art as a manifestation of the creativity of the human mind in general, its elements and processes. The literary (artistic) process makes use of methods and processes more or less identical to those of mental coding, the same cognitive architecture, and the functions of short-term, working and long-term memory as everybody uses in common speech and life. Figurativeness, that is, imagery, is the essential part of our thinking and language in its full range. Therefore, cognitive literary research does not emancipate so called “beautiful” literariness, or literary discourse per se. From its point of view, it is more suitable to speak of literary intention (meaning to examine generative literary processes) and literary interpretation (meaning to examine literary interpretational processes)⁵. Cognitive perspective does not accept the traditional view that an autonomous meta-structure of figurative literary language with transferred meanings emerges from some strange and special transformation of ordinary language with its literal meanings. Therefore, the general task of cognitive literary research/science — its *goal* — is to identify and explain common principles of the artistic text, fiction and thinking. For example, one of such principles is metaphorical transmission as a conceptual pattern, which produces a metaphor as well as a metonymy, irony, allegory, symbol, leitmotif and affects composition as well. Following set purposes, the whole literary process is studied ranging from the author (originator) through the literary text, to a corpus of works and their social,

² Impressionistic Criticism tends to describe the critic's own subjective response to a literary work without research on general principles.

³ The terms cognitive-oriented literary research, cognitive-focused literary research/science and cognitive literary research/science/studies are used as synonyms. In a field of cognitive science it is logical to use the term cognitive literary science.

⁴ Lakoff, Johnson, and Turner, originally linguists, remarkably have influenced also literary research.

⁵ If, for example, a computer program is the source of “a poem”, it is up to the recipient whether he/she regards the text as literary or not.

historical and cultural contexts with a particular focus on the recipient and the nature of human experience and evolution. Inspiring predecessors of cognitive literary researchers include: Ludwig Wittgenstein and analytical philosophers and pragmatists, Russian formalists, Prague structuralists, Lev S. Vygotsky, Yuri M. Lotman and the Moscow-Tartu semiotics school, Alexander R. Luria, Tzvetan Todorov, Northrop Frye, reception aestheticians, and others. The first cognitive literary research textbook dedicated to the study of cognitive poetics was published by the English cognitive stylistics expert Peter Stockwell under the title *Cognitive poetics* in 2002. In addition to other things, in the textbook he deals with certain terminology problems so that cognitive and literary researchers can understand each other, even though it turns out that “new terms make us create new conceptualization”⁶ (Stockwell 2002: 9), that is, ideas about phenomena and processes.

Cognitive levels and disciplines

Cognitive studies of literature is built on several theoretical approaches and levels of the collection of cognitive research, or sciences and their methods (Hogan 2003a: 29–34). The first cognitive discipline is neurobiology. The most closely associated specialized field is connectionism theory, which makes theoretical models of the human brain and its cognitive architecture (structure, contents, processes). Connectionism theory adds a partly mental aspect to neurobiological, physiochemical research and applies it to the human mind as well. The human mind is at the centre of attention of intentionalism. This cognitive specialization tracks experience as such and raises the question of what it is like to be a person, individual and human being. It deals with our feelings, beliefs, desires etc. Radical constructivism, as a more specific cognitivist theory, tends to closely relate to intentionalism. It rejects the knowledge of reality as an ontic category and, instead, reflects on reality as the production and organization of knowledge in a certain defined, self-organized system, where even a so-called outer stimulus (from the beholder's viewpoint) is regarded as a mere stimulus or an element of inner structural reduction, selection or interpretation. In order to achieve reasonable reliability of the reality construction, we have to communicate with others and take their experience into consideration for epistemological reasons.

This means that our own experience is also reflected by us and made an “object” which is to be grasped and understood. Here we find ourselves on the level of experimentalism, which is a term used by George Lakoff and Mark Johnson in their book *Philosophy in the Flesh* (1999). It experimentalizes/deals with common, so-called folk hypotheses, reasons and evidence of our everyday experience, which explain people's behaviour and actions. Contrary to the objectivist view that the body has nothing important to do with human thought or categorization, SGCS (Second Generation Cognitive Science) characterizes meaning in terms of embodiment. Lakoff's *experiential realism* has gained a significant position in this field. Lakoff in *Women, Fire and Dangerous Things* accented the totality of human experience, including anything that plays an important role, such as human physicality, genetically inherited qualities, modes of existence in the world, the organization of society etc. Lakoff then formulated theories of meaning, truth, knowledge, reason, categorization etc. The central issue is that of meaning. Why do expressions and notions of human language have meanings?

⁶ ‘nowe etykiety zmuszają nas do odmiennych konceptualizacji’.

If objectivism defines meaning as being independent of thinking beings, Lakoff's experientialism characterizes it through *embodiment* (Lakoff 1987: 14). Pre-conceptual structures are *immediately meaningful* because they are directly and repeatedly experienced through our physicality, through modes of existence of our bodies in a certain environment. The conceptual structure arises from pre-conceptual physical experience and is interconnected with it. Abstract conceptual structures are indirectly meaningful. They are understood thanks to their systematic relationship to the structures, which are directly meaningful⁷.

According to Lakoff, such understanding of meaning makes it possible to characterize: 1. understanding in terms of meaningfulness; 2. truth in term of understanding; 3. entailment in terms of truth; 4. knowledge in terms of truth and understanding; and finally, 5. objectivity in terms of understanding how we understand (Lakoff 1987: 268). In principle, non-cognitive literary science (except for some results of structuralism and receptive/reader-response studies) operates on the first four levels, which are of an interpretative nature, because it cannot understand the specific way we understand and grasp a text, and is not able to interpret what happens inside a human being during the creative and receptive stage of the literary process. It asks the questions *what* and *how*, but it misses the point of *why* literary texts, as well as their interpretations, are the way they are (in relation to human cognition). Interpretations of literature can make an impression that they are accurate reflections of a work of art, but as long as they do not clarify and explain what specifically causes their alleged objectivity, they cannot claim to understand the text in question. For example, an interpretation of a poem mostly making use of prototypical notions of existential meaning may be appreciated as truthful if the recipient understands and describes/transcribes the text of the poem using the attributes of the introduced prototypical notions and situations. That means, in this case, that the correctness and/or truthfulness of the interpretation is conditioned by specific criteria related to the definable processes and structures of human thinking. However, this means that any other interpretation of the given work of art constructed with a different intention, from a different position and through different, perhaps more complex, processes and structures of another recipient's mind may as well claim to be accepted and assessed as well. It is the explanation of the particular receptive processes and their sources and reasons that can demonstrate an emergent meaning and the contribution of the alternative interpretation as opposed to the former (this is the so-to-speak translatory, that is, one that transcribes literature / translated language / into interpretative style / translating language /, so that the literary theory interpretation becomes in a sense synonymous with the meaning of the work of art). All that a decent literary scientific translation of lite-

⁷ In 1980, Lakoff and Johnson in the book *Metaphors We Live By* suggested that metaphors are not merely linguistic ornaments, but an expression of the structure of thought. In the field of cognitive linguistics, metaphor has been defined as an analogy. A metaphor consists of the projection of one schema (the source domain of the metaphor) onto another schema (the target domain of the metaphor). What is projected is the cognitive topology of the source domain, that is, the slots in the source domain as well as their relation with each other (Lakoff and Johnson 1980; Lakoff 1987: 288, 387). For example, a metaphor of a conduit for communication. It transports knowledge about transmission of subjects in receptacles for knowledge on communication as a transmission of thought in words. In this case, abstract conceptual structure arises via the metaphorical *projection* from the domain of the physical to that of the abstract (Lakoff 1987: 268). Lakoff distinguishes also the second type of projection, that is, from basic-level categories to subordinate and superordinate ones (Lakoff 1987: 262). Basic-level categories are the first categories formed during perception of the environment, the first learned by children and those most used in language (e.g. dog, water, anger). The projection from a basic-level category to a superordinate one, e.g. "anger" to "emotion", is also a kind of abstract conceptualization.

rature requires is the interpreter's rich encyclopedic knowledge. However, in relation to the human world, it is more important to recognize art and analyze the conceptual forms, which then make it possible to interpret and explain unknown phenomena too.

Stating and recording the ambiguity of the literary text is easy but it is also necessary to study the reasons and mechanisms of its various and inconsistent interpretations. Neurophysiological research has discovered that cerebral processes include *a principal facility*, which is that interconnections between outer stimuli and information are not completely identical. Furthermore, they need not happen at all or may contain various shifts and contradictions; that is, they are asymmetric and unstable. Therefore, the matching conceptual structure, that is, meaning, is unstable as well. The resulting gaps and furrows are bridged by either conventional or innovative means, with the innovative ones being practically inexhaustible. The creativity of filling up divisions and differences between various levels of perception (e.g. changes in preferences, classifications etc.) disrupts the impenetrability of the hermeneutic circle. Its showcase is literature, which takes the cognitive role, such as manifestation and type of binding, conflicting and non-identical representations. Undoubtedly, an equal importance as of a consciously targeted (say structuralist, historiographic, post-structuralist etc.) interpretation of a work of art is attributed to the answer to the question of what happens in the process of reading and what the physical process background of the final reading/interpretation of the text is like.

The focus of *non-cognitive* literary studies and traditional criticism on finding meanings, autonomous text principles and value categorization of literary works of art can then be opened up and reassessed by research aimed at understanding processes, which create the literariness of a text (Miall 2006). Here, intuition undoubtedly becomes involved. Not only that of the artist but also that of a literary researcher (reader). Intuition is partly a descent into the pre-categorical, non-articulated, instinctive level of information. The information in question may be transmitted further by the human capability of abstract thinking, which functions on the basis of conceptualization. As is already known from Lakoff, metaphorical projection from the structures of physical domain are connected to those of abstract domain and a role is also played by the ability to formulate complex notions and general categories while using image schemas as structural elements. The categories are not objective and absolute but they are features of the human mind, which effects categorisation. While perceiving and interpreting a text, not only is structure crucial, however dynamic, but the connecting cognitive processes and abilities of the communicating mind are as well. That's because it is these which give the text structure its "probability", instability, flexibility, non-linearity, openness, vagueness, selectiveness, fragmentariness, variability, anomalies, and so on. As early as with Yuri Tynyanov and Roman Jakobson, our attention was drawn to the fact that disclosing the immanent causalities of how a literature system is organized does not explain their timing or the choice of one developmental line over others; extra-literary factors operate here. From that point of view, extra-literary factors, among others, also include the author⁸, as well as the recipient of the literary work of art. Therefore, they can never be effectively excluded from the text-forming process (just as, for example, post-structuralism has tried to exclude the author in its own way). This means that, apart from literary-scientific formalization and interpretation (representation or "translation") of a piece of writing, the study of competences in a broadly defined literary process proves to be crucial. In addition to competence

⁸ The originator does not only mean the author(s), it may refer to any source of the text, e.g. computer, see note 5.

as a system of literary knowledge, facts and skills, procedural competences, such as memory, attention, emotions and so on are also important, as well as the processes of creativity and originality. Cognition-based literary theory rejects principal boundaries and differences between cognition as a rational mental activity and emotions as irrational reactions of an author or a reader. It claims that emotions are also cognitive manifestations, although compared to the more specialized rational thinking they organize impressions in a less precise way. At the same time, it points out that, although people may have the same knowledge, they use it differently. The cognitive perspective clarifies how a number of processes are used by an author or reader, including: selection, segmentation and structuredness. That is, whether an author's encoding of literary material and his/her composing of the work of art does or does not match the reader's decoding and his/her conscious as well as unconscious rules (abilities). It also demonstrates that there is no quality difference between common and genius creativity or between literary and non-literary languages. The difference only lies in the intensity, degree or scope. If we extend the system of literary knowledge (cognitive literary research/science does not refuse approaches and results of non-cognitive literary research *a priori*) by procedural competences, we get a more flexible approach and methodological apparatus. With this apparatus and approach, we can then analyze literary discourses, their organization and perception shifts, examine literary understanding and its types, explore literary actors (author, character or reader), and analyze the reasons for popularity of certain works of art and the values attributed to them etc.

At the present time, cognitive literary research/science consists of several relatively distinct disciplines: cognitive rhetoric, cognitive poetics, cognitive narratology, cognitive receptive aesthetics, cognitive literary history and evolutionary literary theory (Lozinskaya 2007: 8). The unifying figure of *cognitive rhetoric* is Mark Turner, who was one of the first researchers to insert the cognitive perspective into literary theory. Turner, originally a linguist, parted ways with Chomsky's syntactic linguistics in order to connect human conceptual and linguistic activities with the sensomotoric basis (embodiment) (Turner 1987). Cognitive rhetoric deals with rhetoric figures and includes fundamental works by G. Lakoff and M. Johnson as theoreticians of the conceptual metaphor (Lakoff, Johnson 1980). According to Lakoff and Johnson, the perception and processing of literature depend on our own complex mental processes and conceptualizations, which establish relations between encyclopedic and linguistic information. Moreover, the majority of our conceptual system is thoroughly metaphorical. For instance, many scientific models are metaphorical. In addition, some types of experience can only be expressed through metaphor, i.e. a certain "thing" is understood and experienced by means of terms referring to "things" of a different kind (e.g. experiencing time by means of space schemas; expressing emotions by means of other phenomena etc.). This means that conceptual, cognitive understanding of a metaphor is based on common human thinking, and thus, the way autonomous literary science knows and practices the metaphor (as an original example of linguistic ingenuity of a specific imaginative/pictorial nature) is further conditioned by other criteria. The literariness of the metaphor is handled from the cognitive point of view by e.g. Gerard Steen. The idea is to bring the metaphor (or rhetoric studies) into the environment of the processes of the human mind and body because it represents a mental pattern, the essential method of categorization and conceptualization, as well as grasp of reality. Conceptual integration theory, as formulated by Mark Turner and Gilles Fauconnier, is also an important part of cognitive rhetoric.

The leading figure of *cognitive poetics* is Reuven Tsur. His literary research builds on neurobiology, Russian formalism and Prague structuralism. Apart from the expressive and structural aspects of human thinking, he deals with the affective aspects and their manifestation in the literary process (*Toward a Theory of Cognitive Poetics*). The area of cognitive poetics also includes Peter Stockwell's (2002), as well as Patrick Hogan's research on narrative universals, emotion prototypes and prototypical stories in various cultures. These authors do not hesitate to continue in research and knowledge building as regards the previous stages of literary studies development in the belief that both of the scientific approaches — "interpretation and explanation — are important, and neither can be eliminated" (Hogan 2003a: 208). Hogan gives an example:

Sometimes the treatment of lower-level structures in terms of higher-level structures (e.g. the identification of a particular sort of stimulation of the amygdala as fear) is referred to as 'interpretation'. Conversely, the treatment of higher-level structures in terms of lower-level structures (e.g. the identification of fear as a particular sort of stimulation of the amygdala) is referred to as 'explanation'. (Hogan 2003a: 208)

A satisfactory definition of literariness on the basis of all possible interpretations and their comments has not yet been provided and can hardly be expected, given the logic of Hogan's example. So it is obvious why cognitive literary science set itself a task to systematically provide explanations on interpretations in order to get to a generally acceptable definition of literariness and literature (as a cognitive activity).

Cognitive narratology was developed especially under the influence of works by Marie-Laure Ryan, Monika Fludernik, Mark Turner, David Herman and Manfred Jahn. It developed the terms such as framework, scenario, script (of a story) and is concerned with mental representations and cognitive processes, which help us understand narrative texts (Catherine Emmott). Cognitive narratology does not omit formal-logical conceptions of so-called possible worlds or text worlds. In addition to these, the cognitive conception of mental spaces and mapping by Gilles Fauconnier was developed. Another well-known cognitive narratologist is Uri Margolin.

Cognitive receptive aesthetics deals with mental processes present while reading literature and its respected representatives are Elaine Scarry and Ellen Esrock, as well as Reuven Tsur and David Miall, who focus on the issue of specific perception of text literariness.

Cognitive literary historicism studies the work and poetics of authors through the projection of biological processes in the human brain (Ellen Spolsky). This part of cognitive literary science, unlike the majority of cognitive arts scholarship, does not distance itself from post-structuralism, deconstructionism and new historicism. Instead, it seeks to correct the remnants of their formalism through research on the material basis of consciousness. There is overlap between this area and some of R. Tsur's and N. Holland's research.

Evolutionary literary theory studies literature from the viewpoint of man's adaptation mechanisms in the evolution process. It asks the question of why humankind has produced a kind of activity like literature (Paul Hernadi). If we take into consideration the textbook classification of literary science into theory, history and criticism, the present overview does not contain literary criticism, and traditional literary history only appears to be marginal here. Since cognitivists do not restrict themselves to interpreting the meanings of literary works of art and their "quality", it is possible to draw some conclusions and instructions for literary criticism

only secondarily. For example, this is the case when doing theoretical research on genres (Hogan 2003b). Literary history interests cognitivists especially in a comparative context (Spolsky 1993). In terms of their specific tasks, individual fields of cognitive literary science may become more anchored in the sphere of the human mind, or in the environment of cerebral and other physical processes. At the same time, there is nothing to stop them from tapping into other cognitive sciences/disciplines and theories such as neurobiology, as well as disciplines that study the natural world.

Essential conceptions, procedures and approaches

Conceptual integration, also known as conceptual blending (Mark Turner, Gilles Fauconnier) is among the most influential and best developed conceptions within all of cognitive science⁹, and has also been adopted in cognitive literary studies. It can be used in the domain of linguistic expression through poetic imagery system and narratological notions, and even in relation to readers' judgments and explanation of the artistic world's ontology. When applied to metaphors, conceptual integration theory tries to explain how a new meaning is formed during metaphor projection, which cannot be attributed to the immediate transmission of the source "thing", or its structures to the target "thing". This is the reason why, instead of the source and target conceptual areas, cognitive literary research, according to conceptual integration theory, also works with the term mental spaces (i.e. partial, temporary and unique information sets, being formed in the actual process of thinking and speech). The latter serve as construction material for other mental spaces, called integrate or blend with a new, more complex emergent meaning. Conceptual integration makes it possible to identify meanings and form new categories. Our primary, as well as complex sensory adoption of the phenomena in the surrounding world depend on this cognitive mechanism too.

What is also generally well received and used is the concept of the idealized cognitive model and the related idea of the prototypical member in the category (Lakoff 1987: 68–76). The prototype is the best or the most typical example of a particular class of objects or phenomena and results from our changeable reception of the surrounding world. It is a standard case, while its averageness stems from meaningfulness. For instance, the conceptual metaphor is a prototypical example of analogical thinking. The prototype conception proves useful in studying languages and literary motifs, as well as in cognitive theory of genre and art movements. Prototype conception is to a great extent related to the category of a literary work per se, assessing the literary value of a work of art, etc. Another significant cognitive conception is schema (scenario, framework, script) (Johnson 1987), which even relates to, for example, the theory of modeling the world of a work of art (Paul Werth). In general, cognitive literary research also studies dichotomies, such as text/context; language/speech, or other cognitive tools; semantics/pragmatics; and literal/figurative meaning etc.

Since man does not perceive and experience the world as an objective reality but experiences its structured, constructed version, when reproducing reality (events and facts) as well as a text we connect, modify or omit information. We sometimes do so consciously for several reasons, including, for instance, ideological ones, but also we do so as a consequence of the amount of knowledge stored in our personal memory. "All of man's cognitive events

⁹ Fauconnier and Turner explain conceptual blending theory in terms of "mental spaces". Mental space theory has been used to explain numerous and diverse phenomena of language and thought/mind.

are fundamentally conditioned by memory functions” (Schwarzová 2009: 65). Semantic, lexical records, which represent the basis of a literary text analysis are stored in the long-term memory inside the memory apparatus as so-called lexical inputs, which are theoretically represented and studied as feature sets (feature model theory), as networked knots (network model theory), or in the holistic format (prototype theory). The unit of mental organization, which is supposed to store knowledge, is a notion. Notions are stored in the long-term memory in complex connections or schemas — so-called frameworks, scenarios or scenes. For example, the schema/scenario “to eat” includes the eater, eating, food, canteen etc. Owing to the schemas, we can add information, which means we also understand an incomplete statement to a certain extent. This can be the case of any non-realistic literary text. As soon as the first word has been identified, the universal, for example syntactic, processing of the information begins. Apart from the upward processes, downward strategies are used at all levels of information processing: “sounds are easier to recognize in a lexical and syntactic context, words are easier to identify in the context of a sentence, sentence analysis is easier in pragmatically appropriate contexts and sentences are easier to interpret within the framework of well-known subject matter” (Schwarzová 2009: 123). That means the outcome of *processing and interpretation* of a text is a mental representation, the content of which is richer than the initial linguistic information. The final mental representation is influenced by a number of things, including: 1) the input data, knowledge and procedures of the long-term memory (from the literary point of view, the prototypical narrations and prototypical emotions are important); 2) the operations of the working memory (e.g. repetition of a perception loop or its visual-spatial outline, metaphor procedures and conceptual integration, i.e. blending are also significant); and the situational and contextual factors of the reception time (these are related to the systematization of selected and segmented perceptions into more complex goals and purposes).

There is a need to interconnect literary studies with studies of language and speech, because language is a manifestation of our human conceptual apparatus, as well as the means and material of literary production. This connection is made, for example, by Reuven Tsur. He has worked his way from studying acoustic sensations in human speech and encoding them on the phonological level to clarifying cognitive procedures, which create aesthetic effects. Within the literary process one is not exposed to changes or even the real dangers of the surrounding world, and one is therefore focused on the designating rather than the designated. Thus, the actual act of processing the information is deautomated and the effects of this deautomatization “appear” to the conscious mind. It is this thesis, identical to those made by Russian formalists, that Tsur’s experiments build on. He seeks to discover how poetic language is formed during the overall processing of information through its encoding, which even modifies it through “organized violence”, and he seeks the purposes of literature within our human thinking and in relation to the mechanisms of adapting to environmental changes. Following the example of Reuven Tsur, a cognitive scientist should be familiar with literary theory and cognitive science as well as linguistics and (receptive) aesthetics. Even the knowledge of psychology is welcome, especially amongst literary cognitivists, who deal with the issues of mind-reading (thinking through reading) in relation to human emotions and empathy. Empathy is perceivable as an automatic reflexive process in the brain (mirror neuron theory), whereas in mind theory identifying other people’s thoughts, emotions and intentions based on appearance is considered to be a social adaptation skill. Owing to em-

pathy, the reader can identify him/herself with imaginary characters of a literary work of art, and can use the bodily characteristics to fathom the emotional states of the heroes etc. (Lisa Zunshine).

The literary process is a suitable opportunity to study all the issues related to human thoughts or emotions across various cultures because there are so called literary universals, which have formed independently of each other in various literary traditions. They are, for example, systems of conventional images/figures, assonance, alliteration, circle *sujets*, romantic tragic-comic prototypical stories and narrations with synchronic *fabula* and *sujet*, which outnumber atypical asynchronic narrations, etc. Patrick Hogan deals with literary universals. He is not interested in differences (among national literatures, periods of time, movements, schools, genres etc.), he uses the cognitivist method to assess very common phenomena, which are also studied and classified by the theory of myth and ritual (Northrop Frye). Hogan's contribution is the interpretation of universal prototypical stories/schemas (romantic, heroic, transcendental, sacrifice story) in terms of human prototypical emotions, such as being in love, fear, anger, delight or the desire to eat.

Hogan's outputs belong among many others, which overcome the claim that cognitive literary science is actually just a cognitive science, which deals with literature in order to prove its cognitive models, and which brings nothing new to literary science itself. First of all, cognitive literary science is not founded on speculation, but gives empirical answers to the question of literariness, and literature. This requires new ways of disputing, which can be found in Reuven Tsur, perhaps the most uncompromising critic of the theories formulated by his colleagues Stockwell, Lakoff and others. The concept of the human literary mind (Mark Turner) is a context, where the "specificity of literary works of art does not disappear, on the contrary, getting to know it helps us study more general thinking processes just as a major modification of any phenomenon enables a fuller disclosure of its structure"¹⁰ (Lozinskaya 2007: 28). In the Central European region, we can rely on Central European formalist and structuralist traditions and their cognitive and interdisciplinary overlap. It may not be necessary to note that formalism featured an irreversible cognitive setting in the 1960s when it was required to provide explanations of structural patterns that connect a work of art with human thinking and reality. Here, Yuri Lotman's work in particular deserves credit.

According to Peter Stockwell, cognitive literary researchers have two ways of approaching a literary text at their disposal: 1. When reading, a typical reader forms the primary, rough interpretation without making any considerable efforts to analyse the work of art. Cognitive literary research/science should discern and explain how the text was understood in this case. It does not make any initial prognoses or influence the interpretation. So the initial reading appears to be "non-principial", "infinite" and open. 2. The other approach, on the contrary, builds on certain verified cognitive rules established beforehand, which would be left unnoticed and pushed back into the "unconsciousness" by an amateur reader. Cognitive literary research is productive here, as it precedes interpretations to some extent and is involved in them. It may be stated that, in the latter case, cognitive literary research/science functions as the organizing and defining factor.

¹⁰ „специфика литературных произведений никуда не исчезает, наоборот, ее изучение помогает исследованию более общих мыслительных процессов, поскольку более яркие виды каково-либо явления позволяют полнее выявить его структуру”.

Critical conclusion

Examination of literature as an expression of human thinking and knowledge is not new, as critics of cognitively oriented literary research/science happily point out. The practice of taking literature as thought can already be found, for example, in the work of Alexander A. Potebnya, and was characteristic of Moscow-Tartu semiotics. Literary cognitivists, however, find the origins of their discipline farther back in the past, even as far back as antiquity.

For this reason, the main argument used to support the claim that cognitive literary research/science is a new way to conduct research on literature derives from the following: on the basis of unprecedented expansion in cognitive research on humans and their activities, which began approximately in the middle of the 20th century, literary studies can move from descriptions of literature, its structure, means, reception and development to a broad-spectrum explanation of the literary process as a whole. This sort of switch to a cognitive explanation of the literary process could never have emerged within the bounds of “autonomous” literary research because there the means and methodological apparatus are simply not available to it. The necessary methods and arguments for it, however, are found in various fields of cognitive science.

This study presents the main approaches and levels of cognitive research on literature. The diversity and heterogeneity of this research generates doubts as to whether cognitive literary research/science stands alone as a science. This is because it lacks a unified program, terminology and even a consistent name, since we speak of cognitive literary research/science, cognitively oriented literary studies, cognitive research on literature etc. The reader of this brief introduction to cognitive literary research/science can formulate his or her own opinion of the research's/science's legitimacy and importance. We can, however, underline the fact that cognitive literary research/science is a relatively young field, but a fast-developing scientific discipline, which is, thanks to its own internal and external critics, dynamically developing a theoretical basis.

Cognitive literary research does not seek to be an exclusive science for the “enlightened”, but a research, which illustrates the importance and function of literature in the real world. Cognitive literary research/science sees literature and the literary process as a subsystem of human cognition. Studying the literary process through the representation of the language system is equal to studying the human mind. Cognitive literary research as a science tries to group the recorded and analysed elements, structures and procedures and the studied processes of producing and perceiving a literary text, as well as literary life, in a functional and holistic way. Its holistic (general cognitive) approach is also supported by the fact that it is transdisciplinary, which means that in order to form its own hypotheses and theories it needs and makes use of the knowledge of other scientific disciplines.

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Streszczenie

Kognitywistyczne badania literackie zaczęły rozwijać się w latach 80. XX wieku, kiedy dostrzeżono, że liczne procesy ludzkiego myślenia objawiają się w literaturze i w oparciu o nią mogą być studiowane. Niniejszy artykuł stanowi przegląd kognitywistycznych badań nad literaturą, wybranych metodologii oraz ich wpływu na studia literaturoznawcze. Nadrzędnym celem kognitywistyki literackiej jest wskazanie repertuaru wspólnych zasad i procesów właściwych literackim tekstom, wyobraźni i kognicji. Oznacza to wypracowanie modelu wyjaśnienia ludzkiego poznania w oparciu o operacje, części składowe, metody i cele procesu literackiego. Jeśli wziąć pod uwagę wymiar percepcji (pamięć, uwaga, emocje etc.) i odnieść go do systemu pojęć literackich, efektem są lepsze instrumenty metodyczne służące analizie tekstu — m.in. w zakresie: literackich środków ekspresji i focalizacji; badania literackich konstrukcji rozumienia i ich rodzajów; ustalenia narracyjnych instancji literackich (autor, bohater, czytelnik); przyczyn popularności danego dzieła literackiego oraz wartości (zarówno pozytywnych, jak i negatywnych) mu przypisanych. Kognitywistyka pomaga nam więc zrozumieć, czym jest literackość, tym samym naprowadza na rozwiązanie głównej kwestii badań literackich, która nie doczekała się dotąd zadowalającej odpowiedzi.

kognitywistyczne badania literackie, kognitywistyka i jej dyscypliny, umysł, interpretacja
metafora pojęciowa/konceptualna, prototyp