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FARMASI LILLA

STORYTELLING AND THE PERCEPTIONS OF THE EMBODIED MIND: SPACE AND MOVEMENT IN NARRATIVES

Supervisors:
Dr. Kiss Attila
Dr. Kovács Ágnes Zsófia

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Introduction

Matei Chiaia attempts to survey the genre of "introduction books", which has been undeniably popular in the past few decades in narratology. He closes his article with a somewhat scary, yet optimistic and inspiring metaphor for the contemporary field of narratology and the work that is done in it, namely, a maze, to which introductions "open various more or less comfortable entrances […] and give more or less helpful instructions on how to find one or several possible exits" (Chiaia 2012, 29). But, insisting that this only makes the labyrinth more attractive and exciting, Chiaia assumes that "no single book can tell what way leads best through the labyrinth. One has to come in to find out" (Chiaia 2012, 29). One thing that I will attempt to argue for in this dissertation is that this metaphor is true not only on the level of metanarratology, as Chiaia claims, but on the level of everyday narrative comprehension as well. Except, in narrative understanding one does not have to choose one way and leave the rest unexplored because one goes along all the pathways simultaneously. My aim is to explore some of these pathways.

Cognitive poetics chiefly investigates the production of meaning, keeping in mind the hypothesis that literary works are necessarily influenced by the architecture of human consciousness. Regarding this problem, two approaches form the backbone of the method I apply in my analyses, second-generation cognitive narratology and neuro-narratology. The former foregrounds different aspects of human embodiment while the latter focuses on brain processes. The aim of this dissertation is to explore a potential component of this issue, and since I imagine the reading process as extremely complex and only partially conscious, the dissertation is necessarily interdisciplinary and theoretical. I see a similarity between what happened in the field, which was to become the humanities before the 20th century and what is happening in it today. Disciplines were not strictly distinguished, one could theorize language through psychology,[1] and today's interdisciplinary projects show a similar agenda and attitude. I will start the first chapter by examining processes in the interval since these are quite intriguing and necessary to understand the current situation of literary theory. By processes I mean important epistemological changes in the 20th century, which were chiefly entailed by revolutionary discoveries in physics and had fundamental effects on theories through numerous disciplinary boundaries. In the course of describing my method I will keep returning to the issues of the position and the relationship of the humanities and natural

[1] Linguistics and psychology were also quite different from what they are today. Alexandr Potebnja's work, "Language and Thought," published in 1862 is a good example for that and for the fact that these disciplines could easily be treated as one.

sciences because both are necessary when one attempts to theorize narratives, and as it has been proposed repeatedly, the boundaries between them are probably much more artificial than it has been often considered throughout much of the 20th century.

Considering my research, the most important changes occurred in the way human consciousness was imagined, especially in the cognitive sciences. I am concerned with narratives that involve the representations of mental illnesses and other peculiar mental states. The fact that, as the title suggests, I am interested in the workings of the human body hardly seems odd to anyone who is a bit familiar with the mind-body problem.[2] While the notion of consciousness is still very much debated to say the least, the theories of embodied cognition have become quite substantial. These theories offer an answer to the mind-body problem, which is largely the problem of the ontology of a "thinking thing" as Lawrence Shapiro puts it (Shapiro 2011, 1).

The understanding of language on the level of single expressions or sentences generates intriguing debates within the mind-body problem, but considering narratives one finds oneself facing probably even more complex questions. For instance, in the case of narratives, one cannot distinguish elements like those of language such as morphemes or phonemes. The definitions of narrative have been largely constructed around the concept of an 'event,' which in and of itself is a problematic concept. Narratives also often show resemblance to processes and elements of cognition other than language, not to mention that storytelling is not exclusively tied to language, it exists through numerous mediums. The idea that narratives and the human body are deeply intertwined is nothing new. On the other hand, what one means by "narratives," "human body," and the exact nature of the relationship between the two are topics of lively debates.

After discussing the history of modern narratology, which led to the establishment of cognitive narratology (and a plethora of other narratologies) in the first chapter, I will specify my understanding of human cognition and consciousness, which is primarily influenced by second-generation cognitive science. This approach imagines all forms of cognition as inherently embodied, often placing special emphasis on sense perceptions, which "link" human consciousness through the body to the environment of the body. The narratology which has incorporated these theories is referred to as second generation cognitive narratology, and it strives to investigate the roles of embodiment in narratives with the

[2] See more about the mind-body problem in *The Embodied Mind: Cognitive Science and Human Experience* by Francisco Varela et al. (Varela et al. 1993, 28), or in Siri Hustvedt's *The Shaking Woman or A History of My Nerves* (2011).

hypothesis that narratives are basic structures of human cognition. The emerging study of neuro-narratology can be understood as this approach taken one step further in the direction of neuroscience, especially neurobiology. My research attempts to contribute to these endeavours by examining the roles of nonvisual spatial perception and spatial experience in the workings of narratives, especially narrative understanding. In my understanding, it would be more fruitful to consider the theories of the field of neuropsychology to investigate the mind-body problem, instead of neurobiology. I will reconsider the workings of narratological concepts through the theories and findings of the neuropsychology of spatial perception and experience.

I have mentioned above that I imagine narrative comprehension as a very complex process. Claiming that I will focus on human embodiment in this process does not make my research statement much simpler since numerous different dissertations could have been written about such a statement. A dissertation with a contextualist, for instance feminist or corporeal narratological approach, or a psychoanalytic approach could have easily followed such a research statement, although all of these research areas have a longer history, and they are therefore much more developed than that of neuro-narratology. Importantly, I did not decide not to discuss these approaches in much detail[3] because I believe that my approach better describes and explains the complete process of narrative comprehension. In the complexity of making sense of a narrative there are important roles for social, cultural, historical, and gendered aspects, in fact, in many cases they play the main roles in it. But the model of narrative comprehension should be imagined as Richard Walsh explains it in his study, "Beyond Fictional Worlds: Narrative and Spatial Cognition" (Walsh 2017), namely that it feeds from numerous more or less intertwined cognitive processes, which all have their individual way of meaning construction. Sommer acknowledges the fact that narrative theories could never explain everything that needs to be explained in connection with narratives (Sommer 2017, 603), on the other hand, he maintains that other fields could also profit from narrative theories, moreover, in some cases they might depend on them (Sommer 2017, 603).I believe aspects of the narrative's and the reader's social context are among these as much as neuropsychological ones. In this dissertation I will focus on the latter.

Psychoanalytic approaches are somewhat different as they are often understood as an alternative to cognitive science. Freudian and especially Lacanian psychoanalysis tend to

[3] Although I will revisit them in the subsections "Narratology and embodiment" and "Space, conceptualization and language," which probably shows their relevance.

formulate models of the psyche from highly symbolic, complex processes it produces. In this respect, psychoanalysis is seemingly in opposition with the way embodied cognition attempts to model the workings of consciousness: formulating it from the simplest actions, focusing on lower forms of intelligence such as movement in space as the basis of higher, more abstract forms. On the other hand, newer theories of psychoanalysis such as the approaches of Daniel Stern's theories of development, Kaja Silverman's (and Freud's) bodily ego, or Wilma Bucci's attempts to reconcile cognitive science with Freudian psychoanalysis are much less opposed to cognitive science, even when it comes to the issue of conceptualization or the production of meaning. I will revisit this issue when discussing conceptualization and embodiment.

Yanna Popova, an important representative of second-generation cognitive narratology states that "[m]eaningfulness is both a condition and a product of narrative understanding" (Popova 2014, 30). As Marisa Bortolussi and Peter Dixon explain in *Psychonarratology*, "an abundance of evidence on the nature of inferences drawn during reading suggests that inferences are drawn in the service of what is termed a 'search for meaning'" (Bortolussi and Dixon 2003, 13). One constructs symbolic meaning through an extremely complex process of comprehension that it built as a result of the workings of several mental processes.

I am interested in the 'meaning' that is the condition of narrative understanding. Popova explains that "meaning in any human endeavour is only constructed by and through experience" (Popova 2014, 4), and experience is, as I will attempt to show in the second chapter, which discusses cognition, more complex than we thought previously. Another important idea, inspired by phenomenology, that I will adopt is that "it is the human mind that organizes into discrete entities a world which is otherwise continuous and fluid. Discreteness is thus assumed to be a property of our categorization skills" (Popova 2014, 20). The nature and especially the problems of such organizational acts may tell us about the human mind, potentially even through storytelling. Narrative comprehension and the construction of meaning of narratives are probably impossible to model altogether today as cultural, individual, and neurological phenomena all take part in it. But even on the level of a narrative discourse it can be difficult to estimate what are the elements from which meaning is constructed.[4]

[4] For instance, as Popova explains, in a narrative "[e]ven events that do not happen are also events that shape the overall configuration of the plot because the choices made causally affect the further events that do take place" (Popova 2014, 29).

In my literary analyses I will look for aspects of human embodiment that potentially influence the production of meaning. My hypothesis is that in narration information can be organized according to structures of embodiment, for instance the fundamental experience of living in a body that navigates in space, and the mode of organization, which, in the case of narratives becomes traceable in narrative discourse and potentially contribute to the production of meaning on a presymbolic level.

The method that I am about to elaborate on in the first two chapters was inspired by the corpus I work with in the second half of the dissertation, where I will analyse pieces of prose fiction which, in various ways, tackle the mind-body problem, focus on cognition and consciousness representation, especially when cognition becomes deautomatized or otherwise problematic. The corpus of the dissertation consists of five novels and short stories, which, in Siri Hustvedt's words outline "a focused zone of ambiguity" (*Louisiana Channel* 2018) containing human embodiment and consciousness, therefore addressing important research questions in the humanities and in natural sciences as well.

The difficulties in the dialogue between the two fields of science is best illustrated by the term "the two cultures" that C. P. Snow English novelist and physical chemist introduced in his 1959 Rede Lecture. In his lecture Snow elaborates on the problems deriving from the isolation of researchers of the natural sciences and the humanities as well as the problems of the fragmented social and educational domains of Britain. Snow does not talk about the work of the researchers in the two fields; however, he states that the two cultures do not even have a chance to (Snow 2012, 16). However, this is what happens in the case of some interdisciplinary research. The relationship of the two fields, which is occasionally (although stereotypically) antagonistic (Snow 2012, 4) often heavily influences and complicates such scientific work.

Vladimir Nabokov, when he was asked to tell his opinion about the supposed opposition of the 'two cultures' of science and the humanities, answered that

> [o]ne of those 'Two Cultures' is really nothing but utilitarian technology; the other is B-grade novels, ideological fiction, popular art. Who cares if there exists a gap between such 'physics' and such 'humanities'? (Nabokov 2011, 67)

While this particular opinion might be a bit stronger than what is advisable in this area, I agree with the idea between the lines, which is that ideally there is no strict opposition between the two cultures. In another interview Nabokov seems to overwrite stereotypical views when mentions the two fields he has contributed to again, as he highlights "the

precision of poetry and the excitement of pure science" as their chief traits (Nabokov 2011, 9).

Siri Hustvedt, who lives an "interesting double life" (*Louisiana Channel* 2018) as a writer of fiction and of scholarly papers on the mind-body problem, claims to see more and more conversation between science and arts, which she welcomes and finds necessary. On the other hand, she also explains that our culture seems to view science in masculine terms, being more serious and reliable, and the arts and the humanities in feminine terms, as being "fluffy" and "imaginary" (*Louisiana Channel* 2018). This view apparently results in a problematic and unfair state where science is valued more at the expense of the humanities (*Louisiana Channel* 2018). Elena Gomel also calls attention to the fact that it is impossible to clearly differentiate between these types of knowledge: "There are no two cultures of science and the humanities, there is only one culture in which mathematical formulae and narrative templates feed on each other" (Gomel 2014, 9). It is probably impossible to have an accurate model of any part of the human cognition without adopting the view Gomel refers to. The literary works that I will examine were finally selected because they seem to be equally interesting both for the various branches in the natural sciences and literary theory in the humanities.

I did not have a category of literary works in mind when I started to plan my dissertation, but I had a strong interest in specific themes and narratological concepts. The literary works that I will examine form a rather homogeneous group organized chiefly by these interests of mine, which have turned out to entail quite a specific type of literary narrative that lends itself to an analysis with the method I will outline in the first two chapters. In the following section I will give a brief introduction to these narratives.

First, I have been interested in sense perceptions and the ways they might contribute to structuring human consciousness, and the roles these structures potentially play in literary works. This interest quickly led me to cognitive theories with regards to methods, and, as to the object of examination, to stories of problematic mental states narrated in the first person or with internal focalization. Among the first such stories that I discovered were Don DeLillo's *The Body Artist*, which is a story of a mourning woman, who suffers from the psychological trauma of losing her husband. This short novel helped me further narrow the scope of my interest, since I needed to select among sense perceptions as well. An overwhelmingly large percentage of literary works and analyses focus on visual perception. Regarding the importance of visual culture in our lives, it is hardly surprising, nevertheless

the theme seemed too overtheorized[5]. This reason, and the story of *The Body Artist*, the protagonist and focalizor character of which often focuses her attention on senses other than vision, guided (but did not completely limit) my attention towards nonvisual perception, especially proprioception, the sensing of one's own body(parts), and the sense of motion and balance. I am especially interested in the ways these, and their representations contribute to the construction of a *storyworld*. The problem with these phenomena of the human body is the same as the problem of writing a screenplay as Stephen Fry describes it through another aspect of embodiment:

> the book is the spine of a musical. Like a spine *it is only noticed when it goes wrong and like a spine, the book supports the entire frame and transmits the signals, messages and impulses that allow the body to feel, move, and express itself.* (Fry 2010, 266, my emphasis)

Proprioception among our senses in our everyday life is also somewhat like the human spine. The whole cannot function without it, but it is hard to notice since, as Fry puts it, one only realizes that it is there when something is wrong with it. Of course, this view is no news in scientific research. As in psycholinguistics, researchers often attempt to understand unconscious linguistic processes through investigating the deficits of speech production, it seems reasonable to investigate narrations by narrators who live with neurological problems[6]. These narratives are concerned with the lives of characters who live with mental or neurological illnesses, therefore providing narrative representations of problematic workings of the psyche and the nervous system, the representations of deficits of narrative cognition or narrative intelligence.

[5] This tendency is also observable in philosophy and cognitive science as well, where researchers also tend to focus too much on vision perception and much less on other modes of perception (Chemero 2009, 154). When it comes to literature, the importance and popularity of visual arts within it is often thought of as a contemporary trend, although there are much earlier literary works of art that concern themselves with visuality, such as Edith Wharton's writings (Kovács 2012).

[6] Examining what is symbolic in their narration, i.e. what does *not* require a neurological approach could be the topic of another dissertation. On the other hand, it would be very difficult to develop such an approach, since different mental conditions entail the problems of different functions and skills. For instance, in the analysis of Lethem's *Motherless Brooklyn*, I do not devote special attention to the expression and representation of emotions (which are among the most popular research topics in cognitive poetics) since the narrator of the novel in this respect does not seem to differ at all from mentally healthy people.

The neuronovel

For neuro-narratology ideal objects of research might be the memoirs of authors who have experienced illnesses, or examples of the *neuronovel*, which has become a distinct genre in Anglo-Saxon literature. Marco Roth estimates that literary works that can be labelled as *neuronovels* started to appear in the 1990s, which is also referred to as The Decade of the Brain[7]. He explains that this genre replaces the psychological novel and other genres that focus on the representations of consciousness and replaces the concept of consciousness with that of the brain.

In Roth's view the appearance of neuronovels follows the tendency that is observable in the scientific world as well as in culture, due to which empirical methods of the natural sciences have become more and more dominant. In literary theory, this tendency has started to spread in the 1980s, with the "exhaustion" of the linguistic turn and as psychoanalytic schools gradually became discredited[8] (Roth 2009). This tendency in and of itself does not lead to more reliable methods and findings since, as Roth also points it out, it results in reductionism, where the functioning of the mind or the consciousness is explained solely with the functioning of the brain (Roth 2009). This methodological mistake in Noë's explanation is akin to that of attempting to explain how a car works through only examining its engine[9] (Noë 2004, 211-212).

However, I find the genre of the *neuronovel*[10] especially important because, in spite of the strong scientific influence it appears to find the balance between natural sciences and the humanities and art. These works are inspired by medical descriptions of mental states but, since they are fictive stories, their main strategies of representation remain introspection and observation of others, which incidentally are also the methods of the "discredited" psychoanalytical approaches (Roth 2009). It might seem that – as Marie-Laure Ryan puts it –, theoretical and artistic works that build on the combination of cognitive or neurosciences

[7] In the US in this period great efforts were made to support brain research and to raise public awareness of the achievements of such research.

[8] Although it is also wise to treat findings of empirical tests sceptically, the reason for this discrediting is that, unlike the research methods that are currently accepted in natural sciences, for the findings of psychoanalysis it is usually impossible to find proof. While some of Freud's theories, such as that of Oedipus complex do stand an empirical testing, when it comes to many of his famous works, such as *The Interpretation of Dreams* (1899), and theories which build on it, such as Lacan's understanding of the signifying process, a method of empirical testing is nearly unimaginable.

[9] In the case of a car we all know that its workings are heavily influenced by the rest of its "body", as well as its environment: a car will not function without wheels, or under water, neither when it is turned upside down, etc. In the case of the human mind (or brain), due to a long history of different conceptualizations of the phenomenon, this kind of logic seems much less obvious.

[10] Choosing to deal only with novels seems to be a somewhat arbitrary decision. There are pieces of poetry and drama, which concentrate on mental problems, and might be fruitful to examine with similar methods.

and humanities are "uncomfortably sandwiched" between speculation and interpretation and experimental, empirical approaches (Schneider 2017, 485). However, the use and importance of these endeavours is exactly the fact that they work with more than one field. As clinical psychologists have admitted, the most effective way to express the subjective experience of mental states and illnesses is through art[11] (Hamm et al. 2014).

Although it is important to note that the examination of literary works with the help of scientific methods and theories raises numerous problems. Jay Hamm et al. analyze Denis Johnson's short story collection, *Jesus' Son.* The narrator of the stories is a young man, who is a drug addict, but besides that, the reader knows hardly anything about him. Hamm et al. read the work as a fictive psychosis narrative, and they examine the subjective side of three symptoms of Schizophrenia[12], despite the fact that neither Johnson, the creator of the text, nor his protagonist is a person with schizophrenia. Hamm et al. do not claim to have diagnosed the narrator, but the symptoms are definitely detectable and the psychologists are permissive[13]. Ronald Schleifer, who investigates the relationship of Tourette's syndrome and poetic language, is also permissive as he analyses Jonathan Lethem's[14] novel, *Motherless Brooklyn* instead of the speech of real patients with Tourette's syndrome (Schleifer 2001), risking the possibility of investigating the relationship of poetic language and poetic language. In the case of works such as *Motherless Brooklyn*, one can never be completely sure of how authentic the representation of a condition is in the work, how authentic the representation of the speech of these people is, let alone the representation of their consciousness altogether

As Ron Padgett puts it, when arguing for the importance of the creative talent of artists "[i]t is one thing to have a nightmare, it is another to write like Kafka" (Padgett 1997, 54). Art in general and literature in particular indeed needs to be given the credit that it can grasp and authentically represent a mental condition. Alva Noë explains that "the task of phenomenology, and of experiential art, ought to be not so much to depict or represent or

[11] Hamm and Lysaker are researchers. There is no evidence that the majority of practicing psychologists follow this idea. On the other hand, it is not an entirely new approach either: besides case studies and dreams, Freud liked to analyse literary works and other works of art because he regarded them as excellent expressions of those complexities and heterogeneities of the human psyche and its working that are otherwise very difficult to observe or study.

[12] Fragmented consciousness, perceiving of one's interpersonal environment as unstable and constantly changing, and loss of agency.

[13] The lack of a diagnosis is possibly not a methodological problem since currently no specific symptoms of Schizophrenia have been discovered, which means that its symptoms can manifest in numerous "combinations", they might also change over time in the case of the same patient, and all of them can be found in other mental illnesses as well (American Psychiatric Association 2013, 87).

[14] He is also a mentally healthy person.

describe experience, but rather to catch experience in the act of making the world available" (Noë 2004, 176), for which the experiments with the representation of deautomatized perceptions, which is often observable in the narratives I analyse, are completely suitable. In this dissertation I will not debate the authenticity of representations such as the one in Lethem's novel. In the case of Lethem, it is partly because of the credit that this work already has in its reception, and because as I analyse it, it indeed seems to correlate with the descriptions of Tourette's syndrome in neuropsychology. However, in any such analysis the authenticity of the analysed representation needs to be considered[15].

In this dissertation, some of the works that I will investigate belong to a type of the *neuronovel*, in which the author puts a neurologically or cognitively 'atypical' person in the position of the protagonist. In these novels, as I will attempt to show in the analysis of *Motherless Brooklyn*, the consciousness of this character becomes the focus for the work. Through this strategy a character type, which traditionally has been used as a minor character becomes the protagonist, the focus of the story (Roth 2009). Roth provides a great illustration for the peculiarity of this strategy by considering what William Faulkner's *The Sound and the Fury* would be like if it was narrated solely by Benjy (Roth 2009). Some other works that I will examine portray cognitively 'normal' characters put into circumstances which make normal perception impossible, be it a psychological trauma, or abnormal spatial conditions.

Probably it is obvious even from this short description that neither neuro-narratology, nor the neuronovel is concerned with radically new problems or is proposing new questions. In this respect, the neuronovel should not be regarded as a new genre, but the descendant of, possibly a subgenre of the psychological novel, and neuro-narratology is a new branch of cognitive narratology. Both can count as new and relevant because they approach the old problems and questions with methods and theories which have been quite unusual in the humanities. Many of the most important terms of narratology are deeply intertwined with the concepts of perception, yet their definitions were created before cognitive theories or neurology started to theorize human perception. The integration of their findings is essential since the considerations of more cognitive and neurological research on perception may shed

[15] While in this thesis I will not discuss it in detail, the problem of measuring the authenticity of such a work is very important. It would definitely need further consideration, but it is certain that scientific investigations of different mental states always be consulted. An additional issue regarding the authenticity of representations of mental states and/or illnesses is concerned with the first half of Padgett's statement: "it is one thing to have a nightmare". It is by no means certain that someone suffering from a mental illness, therefore having a genuine subjective experience of the given condition, will be able to find the appropriate language for describing it.

new light on old problems and questions such as the workings of the human psyche, the role of narratives in the production of meaning and in the processes of human consciousness by shifting the focus to the workings of the brain and the construction or interpretation of *storyworlds*.

About whether such a method and such a genre have a bright future, as Schneider points it out, it would be early to make judgments. On the other hand, the genre of the *neuronovel* probably has a longer history than Roth assumes. According to him, the first example of the genre is Ian McEwan's *Enduring Love* (1997), a novel concerned with a character who suffers from de Clerambault's syndrome. Roth outlines the neuronovel as a genre that is strongly interested in the functioning of the brain, and this is the characteristic of the genre with which he makes the distinction between neuronovel and earlier works that concern themselves with mental or psychological processes and problems. Although if one accepts the model of human consciousness that second generation (embodied) cognitive theories offer, i.e. imagining it as a something emerging from the brain-body-environment system, the number of literary works that provide useful representations of human cognitive and neurological problems grow: it is not necessary for such a novel to be concerned with the brain, and in fact, even the novels which Roth refers to often seem to focus on consciousness instead of the brain[16]. The embodied, embedded view of consciousness seems to provide a better common theoretical frame in which these works fit that also allows for the inclusion of more stories. Don DeLillo's short story "The Ivory Acrobat" (1988), in the focus of which we find the descriptions of the perception of space and bodily experiences of a woman who suffers from pathological fear (of earthquakes) could also belong here. In some of their chapters or plot lines one can claim that some of Vladimir Nabokov's works also belong to this category. At least in part his novels, which focus of perception and memory, such as *The Defense* (originally published in 1930), *Invitation to a Beheading* (1935–1936), *Despair* (1934), *Look at the Harlequins!* (1974) could definitely be good examples of neuronovels. If one accepts that the neuronovel is not necessarily a new genre, classics such as Gilman's "The Yellow Wallpaper" may be considered as part of this (larger) category of novels and short stories.

Illness narratives and neuronovels, through their problematic characters, sometimes show qualities that can be best described as narrative deficits, at some places turning into

[16] For instance, the narrator of *Motherless Brooklyn* compulsively keeps giving descriptions of the way his imagination, memory, and attention (fail to) function. These are classic cognitive psychological phenomena and at no point do we learn anything about the brain functions behind these phenomena.

dysfunctional narratives in the traditional sense. If one accepts that these works can be read as consciousness representations[17], their problematic nature, contrasted with the symptoms of the respective mental problem or illness might show new sides of such narratological terms as focalization, or the functions of narrative patterns or structures. Examining these problems and concepts we might learn more about the way narratives function, the way we comprehend narratives, as well as the role of the human body in cognitive processes.

Turning to the above described corpus in the second part of this dissertation, I will investigate different aspects and roles of spatial perceptions in the narratives I have chosen, concerning basic narratological terms and categories. Spatial experience plays an extremely important role in the organization of our conceptual systems, for instance, in narrative intelligence. Although these phenomena usually remain unreflected or only unconsciously comprehended, in my view they contribute to the process of the production of meaning. They often operate beneath the conscious level of cognition, yet they potentially work as the raw material of narrative meaning. In the second part of my dissertation I attempt to examine the ways this operation of spatial experience may be possible. The stories that I will analyse are Vladimir Nabokov's *The Original of Laura* (2009); *Invitation to a Beheading* (1935-6) in a comparative reading with Edgar Allan Poe's "The Pit and the Pendulum;" Don DeLillo's *The Body Artist* (2001) and "The Ivory Acrobat" (1988); and Jonathan Lethem's *Motherless Brooklyn* (1999).

The second part of the dissertation starts with the examination of Nabokov's *The Original of Laura*, which is a peculiar unfinished novel, revolving around questions of materiality, intermediality, and human embodiment. When the author died, the protonovel was at such a stage of being constructed where it is not clear what it was going to focus on. As for embodiment, it employs numerous approaches from the sexualized body, through problems of sickness, to questions of neurology. Its analysis is placed at the end of the second chapter about theory, which contains to some extent the theoretical background of all of these approaches. This part of the dissertation therefore serves as an example for numerous approaches to the human body.

Invitation to a Beheading is one of Nabokov's earlier novels. After presenting the way Nabokov was interested in sense perceptions and the way he used them in his works, I will concentrate on the ways the narrative engages the reader through the representations of sense perceptions. In the second half of the chapter I compare Nabokov's novel with Poe's short

[17] Especially when they operate with first person narration or internal focalization.

story, “The Pit and the Pendulum.” The two stories are remarkably similar to each other. The protagonist in both of them is a person who has been sentenced to death and is waiting for the execution. The embodied experience of the extreme anxiety, fear, and panic that such a character must suffer has distinct structures in perceptions, which, especially in Nabokov’s story, organize and influence the narration, and defamiliarize the story, which in turn reads like an absurdist work.

The 4th chapter is concerned with Don DeLillo’s prose, which seems to foreground human embodiment and the use and limitations of language simultaneously. The first analysis in the chapter is that of *The Body Artist*, a short novel about a performance artist who suffers from a psychological trauma, which fractures her perception of the world, especially the way she perceives time and space. With the help of image schema theory, I will attempt to explore the way the protagonist’s ambiguous, multiplied, and deautomatized perceptions affect the text and the discourse of the short novel, and therefore the reading process and experience of the reader. My hypothesis is that narrative, not unlike simpler levels of language use such as single expressions or paragraphs may be grounded in a preconceptual dimension, structured chiefly by spatial experience.

In the second half of the fifth chapter I analyse DeLillo’s short story, **“**The Ivory Acrobat,” in which, unlike in *The Body Artist,* there is an extremely unstable but clearly defined and gradually shrinking narrative space. It is constructed through the spatial experience of a music teacher, who is unusually frightened of the aftershocks of an earthquake, hence she continuously listens and feels, monitoring her environment to see if an aftershock is approaching. The focus on sense perceptions seems to contribute considerably to the quality in DeLillo’s prose, which critics refer to as “slowness.” The structure of the narrative, which, according to my hypothesis, reflects that of the embodied experience of panic, is partly responsible for the creation of the slow narrative, where events seem to be replaced with (embodied) experiences.

The seventh chapter contains the analysis of Jonathan Lethem’s postclassical detective story, *Motherless Brooklyn.* The story is narrated by a man with Tourette’s syndrome, and probably attention and obsessive-compulsive disorders. The logic of storytelling is highly influenced by the alienated perceptions and the “dancing” attention of the narrator. In Tourette’s syndrome problems of motor and language functions are manifested simultaneously. These, embodiment and language are both strongly connected to the way I imagine the working of narrative intelligence; therefore, I suppose that these problems may affect the organization of the narrative, especially on the level of dialogues and discourse.

Similarly to the way the discourse unfolds in of *The Body Artist*, I presume the discourse of the narrative, instead of a linear movement, can be modelled, instead of a linear movement, with the help of more complex spatial metaphors, which are always dynamic, therefore motion is a key feature in them.

From a neuropsyhological point of view, the narratives I analyse form a spectrum. At one end of this spectrum we can place *The Original of Laura*, in which there are no representations of particular neurological problems; *Invitation to a Beheading* and *The Body Artist*, where neuropsychological problems seem to appear as a response to situations the protagonists find themselves in, would belong in its middle; and *Motherless Brooklyn*, where the protagonist clearly has an inborn neurological disorder, would be positioned towards the end of the spectrum. A potential further step would be the analysis of nonfiction texts created by people with neurological or mental disorders.[18]

PART I. THEORY AND METHODOLOGY

Chapter 1: From Narratology to Narratologies

The purpose of this chapter is to explain my viewpoint necessarily in greater detail since, as far as the disciplines are defined today, simply stating that I am working with contemporary narrative theories and cognitive science could not only mean numerous different approaches but it could easily imply even the opposite approach of what I am about to apply. Narratology has become a highly complex field in the first decades of the twenty-first century, and cognitive science also has a complicated history and present, rich with debates. Therefore, it seems unavoidable to provide a short summary of the past of these disciplines before the explication of the exact interdisciplinary approaches that I hope to make use of in this dissertation.

Ever since the dawn of French structuralism, the fact that narratives, "like life itself", are everywhere around us (Barthes 1975, 237) has been widely acknowledged, and lately the same can be said about narrative theories (Heinen, Sommer 2009, 1). From the perspective of the present thesis Barthes' description of narratives is especially significant

[18] For instance, borderline personality disorder has a specific spatial structure on the level of language use, which may have an effect on the level of narratives created by these people (Pohárnok 2004).

because, even before narrative theories have started spreading across disciplines and integrating the findings of other fields, it had suggested that narratives play an immensely important role in many aspects of human lives.

Today there is no debate about the usefulness of narrative studies in various disciplines, since for decades narrative has been "emancipated [...] from literature and from fiction, and [has been recognized] as a semiotic phenomenon that transcends disciplines and media" (Hyvärinen 2010, 72). This current state, which is incidentally far from monolithic to say the least, is the result of rather exciting movements reaching back to Aristotle, or in a stricter, generally accepted sense, a brief introduction of which must suffice here, to the times of Russian Formalism and possibly to somewhat before that. To properly contextualize my project, I believe it is important to outline the history and the present state of the field, and where it might be heading.

1.1. Histories of narratology

There are several accounts of the history of the roughly hundred-year-old field, which strive to outline its evolution as simply as possible, focusing on the greatest shifts it has gone through. Dan Shen has made a collection of these, describing the field changing from structuralist to poststructuralist; classical to postclassical; structuralist to cultural/historical; formalist to contextualist; "formal investigation to pragmatic gender-oriented and ideological investigations"; or traditional to postmodern (Shen 2005, 141). These all seem to outline more or less the same direction, referring to the same significant change in the field, due to which the original theoretical toolkit of the field was replaced, or at least heavily expanded with a new one.

Apart from these, one may find accounts that tie the major changes to the movements in literary theory to which they belonged. David Herman's is probably the most popular and accepted account. As he explains, Russian Formalism was the "proto" era of narratology; the time of French Structuralism, the 1960s, was the birth and the heyday of classical narratology (the first halves of the accounts that are mentioned above belong here); which was refined until the 1980s; to be taken even further during the following decades in a movement that Herman terms the era of postclassical narratology or narratologi*es* (Herman 2009, 26). Monika Fludernik explains the process metaphorically and understands "Russian Formalism to be the childhood, French Structuralism the youth and postclassical narratology

the mature age of modern narratology" (quoted in Martínez 2012, 135), while yet another account with a geographical logic can claim that narratology "migrates from Russia via France to the USA" (Martínez 2012, 135). Almost all of these attempts of mapping the field would pass as what Mathias Martínez calls "the usual master narrative" (Martínez 2012, 134) of modern narratology.

They are simple and systematic enough and already say a lot about the development of the field. On the other hand, some theorists think they are not sufficient. It is not to say that they are incorrect, but they are definitely incomplete, and therefore, as Martínez claims, misleading (Martínez 2012, 134). He favours a decentered version of the development of narratology to a linear one, and quite rightfully observes that

> Ironically, decades after the advent of 'postclassical' narratology, the discipline so far has conceptualized its own history mostly in a non-contextual manner, namely as a pure transfer of ideas. Such an approach corresponds to the spirit of 'classical' rather than 'postclassical' narratology. (Martínez 2012, 134)

Martínez elaborates on a number of important factors, which make a linear history of narratology impossible, and which, to my mind in fact are generally important and potentially harmful factors in any academic field, such as the language barrier, meaning the marginal position of academic work that is not available in English; the fact that younger generations of scholars may ignore important parts of a field; or the barrier of academic practices, meaning that the success of a piece of academic work obviously depends on which conference it is presented at or which journal publishes it. If we take these factors into account, instead of a linear way the field shows "connecting main roads and intersections but also discontinuous elements like dead-end streets and occasional subway stations. [As a story,] it is driven by many agents and multiple causes" (Martínez 2012, 135).

Matti Hyvärinen is on a similar track as he rethinks what we usually refer to as the 'narrative turn'. This term that seems to imply that at some point narrative theory underwent its one major turn and became influential in other fields, too. Hyvärinen argues for a pluralization of this change, which involved more than one set of different agendas and attitudes (Hyvärinen 2010). Brian McHale observes that "where once we had theories about narrative, we now begin to have stories about theory" (quoted in Nünning 2003, 241). Hence at this point one only has competing narratives of what has been happening in narrative theories lately.

We have more than one story about it also because, even without the important factors mentioned by Martinez, the scope of the field became much broader and it incorporated numerous methods from numerous other fields. The brief story of its "public image" shows that narratology has been "deeply unfashionable at the beginning of [the 20th] century [...], has survived the near-death experience of a predominantly poststructuralist fin-de-siècle and is now fully *en vogue*" (Sommer 2012, 144). While "there arguably never was 'one' Narratology in the first place" (Nünning 2003, 245), the pluralization of the field is even more obvious as

> the development of narratology has followed a course away from the identification and systematization of the 'properties' of narrative texts in the direction of a growing awareness of the complex interplay that exists between both texts and their cultural contexts and between textual features and the interpretive choices and strategies involved in the reading process. (Nünning 2003, 244)

David Herman coined the term 'postclassical narratology', which is the most commonly used term for contemporary narratology in cognitive narratology. Herman outlines three major projects in postclassical narratology, one that aims at reconsidering the existing methodology and other theoretical issues, another that works for the expansion of the corpus of narratives that narratology analyses, and a third one, which is a synthesis of the first two projects and attempts to refine the theory and extend the corpus (Herman 2009, 31). My approach, with a focus on its interdisciplinary methodology, aims at contributing to the first of these projects.

Another interesting change is that, as Marie Laure Ryan observes, the pioneers of narrative theory usually focused on one literary genre, such as the folktale, as Vladimir Propp did, or the novel, which is probably the most popular object of analysis in narratology to this day. Structuralist narratology was concerned with "narratology proper", with a universal scope (Ryan quoted in Hyvärinen 2010, 72). This universal scope became the norm for a long time, but, as Roy Sommer points it out, unnatural narratology, a smaller research project within contemporary postclassical narratology

> shifts the focus from identifying features shared by all practices and artefacts commonly defined as narratives to specific kinds of literature: to antimimetic, postmodern or experimental literary texts. By doing so, it encourages us to reconsider the boundaries between theories of narrative and theories of fiction, genre theory and poetics. (Sommer 2017, 600)

In a sense it follows the practice of protonarratologists, focuses on one genre, or one sort of stories. Sommer goes further and announces that "[r]etro is the new cool" (Sommer 2012, 151), suspecting a return of structuralist narratology, or rather a "neo-classical narratology" (Sommer 2012, 151). The same tendency was reflected on by the organizers of the European Naratology Network's ENN5 Conference (held in September 2017, Prague), the subtitle of which was "Metamorphosing the Structures". The Call for Papers included the following statement:

> recently we have been witnessing critical voices declaring that post-classical narratologies did not throw much new light to the study of narratives and are calling for driving the scholarly attention to the potential of classical narratology (http://www.narratology.net/enn5)

Dan Shen sees the return of some characteristics of traditional narratology in the methods of cognitive narratology:

> one narratological aspect has remained unchanged: the models built up by cognitive narratologists to account for 'the textual features and structures' are usually as formal and decontextualized as classical structural models, thereby constituting, in effect, a preservation and development of formal narrative poetics. (Shen 2005, 143)

While according to Sommer the "structuralist orthodoxy" cannot "bring the postclassical camp back to the fold", after decades of unpopularity, '[n]arratology is back with a vengeance" (Sommer 2012, 154). The next section attempts to explain the aftermath of this assumed change.

1.2. Babelization

In the following paragraphs I will outline my understanding of the contemporary state of narratology, which is largely based on the studies of Ansgar Nünning and Roy Sommer. While Sommer's conception of the contemporary renaissance of narratology above implies the notion of resurrection, Nünning opts for a reference to the Old Testament when he claims that narratologists "have been tremendously fruitful, and multiplied" (Nünning 2003, 247). On a less optimistic note he adds that "[w]hether they have actually replenished the earth may be debatable" (Nünning 2003, 247), and referring to the many diverse projects that are

claimed to be narratological, he finds it "an open question whether all or even most of the new approaches have all that much in common with the systematic study of narrative known as 'narratology,'" (Nünning 2003, 240). The enormous growth in the first decade of the twenty-first century that one could witness concerning the interest in narratives and narrative theory (Sommer 2012, 143) resulted in the expansion of the corpus and the objectives, and in what Sommer interprets as a transitional phase of the field (Sommer 2017 600).

The state of art has become increasingly hard to survey (Sommer 2012 144). The current confusion, to which Sommer and Heinen refer with the euphemism "Babelization" of the field (Sommer, Heinen 2009, 2) is chiefly due to the fact that narratology not only borrows concepts and findings form other fields, which sometimes cannot even be called neighboring, but researchers of various fields such as medicine, law, sociology, history, anthropology, or economics all have their narrative approaches to their problems. In narrative psychology, narrative has been regarded as a successful tool with which we can trace complex psychological processes (László 2008, 9), but, as Sandra Heinen has pointed out, narratological application in the fields of psychology and psychiatry usually means the simple borrowing of concepts from structuralist narratology (Heinen, Sommer 2009, 194).

The findings of postclassical theories of narrative are rarely applied, and as several narratologists lament, genuine interdisciplinarity is hardly ever observable in these endeavours (Heinen and Sommer 2009, 1; Bortolussi and Dixon 2003, 3). It should indeed come as an alarming fact to a narratologist that the definition of 'narrative', which is heavily debated with numerous competing views in literary theory, is one which attracts virtually no attention as a problem in other fields (Hyvärinen 2010, 78). For instance, in psychology narrative is often not understood as a text type, or a cognitive structure but essentially as any larger piece of text to be analysed, as opposed to materials acquired with the help of tests or other experimental methods (Ehmann 2002, 74). Sommer assumes that "[c]ross-disciplinary borrowing encourages metaphorical usage of terminology, with the result that even formerly well-defined terms are now in need of redefinition or explication" (Sommer 2012, 145). Sandra Heinen suspects that the reverse process happens and claims that the "rising tide of narrative research is a direct consequence of an altered conception of narrative, which is no longer considered to be merely a literary genre" (Heinen 2009, 193), but which is a more general conceptualization of narrative as a cognitive structure (Heinen 2009, 193).

The concerns and findings of postclassical narratology are often too theoretical for most of the fields where narrative theory has been applied. Medicine, sociology, psychology, or economics have all developed their own hypotheses and theories about the processes of

production and comprehension of narratives, often in isolation from narratology. As Sommer and Heinen observe,

> we are still far from 'integrating' narrative research in the sense of coordinating core interests, research questions and key findings in a concerted effort to move beyond the current 'Babelization' of narrative studies[19]. (Heinen, Sommer, 2009, 2)

There are not many signs of us getting closer to this goal of integrating either. I will revisit and further illustrate this problem when I discuss the approaches to human embodiment in narrative theories.

The scene does not get much less confusing if one shrinks the scope and chooses to focus only on narrative studies in literary and cultural theory, which is actually still a rather large scope containing numerous semiotic systems and media from literary works through history to stained-glass windows (Barthes 1975, 237) as well as theories such as feminist theory, postcolonialism or psychoanalytic, and cognitive theories among many others. The accounts of the development of narratology collected by Dan Shen that I listed above all belong to these areas of interest, which shows how complex it is. There are "no clearcut boundaries either between the groups or between approaches subsumed under one more or less artificial umbrella" of narrative inquiry (Nünning 2003, 248).

There are many more models of narrative theory imagined than I could summarize here, Ansgar Nünning provides several tables and collections of past and present variants of narrative theory in his study entitled "Narratology or Narratologies? Taking Stock of Recent Developments, Critique and Modest Proposals for Future Usages of the Term" (2003). Concerning postclassical narratologies he distinguishes eight major approaches, all of which have several subcategories. Altogether most mappings acknowledge "contextualist / thematic / ideological", "transmedial", "postmodern" and "cognitive" approaches as the most influential contemporary narratologies, which are only mentioned here as examples of the vastness of the field, since there are great amounts of knowledge collected behind each of them, and a proper introduction to them is far beyond the scope of a work such as this. As it is probably already clear, the methodologies of these branches are often quite different from each other and from those of their structuralist antecedents. One of the most important

[19] Although Heinen and Sommer discuss narrative studies, the problem of the pluralization of theories is observable probably in all academic disciplines, similarly to the difficulties and pitfalls that Martínez mentions (Martínez 2012).

concerns of narratologists is whether an approach is a proper narratological inquiry or "merely [application] of narratological models and categories to specific texts, genres, or periods" (Nünning 2003, 251).

There is a lot of criticism and complaint about postclassical narratology. Some proponents of "old-school," traditional narratology are sceptical to say the least and understand contemporary interdisciplinary projects as mere "contamination that infects 'pure' and 'neutral' description and poetics with the ugly taint of ideology and relativism" (Nünning 2003, 255). While acknowledging that "[n]arratologies' recent bunch of offspring includes a wide range of approaches, many of which at first glance look like curious hybrids" (Nünning 2003, 247), Nünning attempts to conceptualize "'narratology proper' and 'applications of narratology' or 'narratological criticism" as the two poles of a gliding scale without evaluating the approaches themselves (Nünning 2003, 251). Providing an elegant little outline of the many functions of (many forms of) narratives, Roy Sommer takes a stance that disposes of narrow scopes of narrative inquiry. It is worth quoting at length:

> If narrative is really a way of world-making and sense-making, if storytelling really is a universal feature of human communication, if the mind really is accessible through its stories, if narratives really allow us to come to terms with trauma, to memorize things, to develop coherent images of ourselves, to demonize others, to justify injustice or to win elections, narratologists should be out there, not merely analyzing narrative forms, but also investigating the manifold uses of narrative in the real world. (Sommer 2012, 144)

This is a completely legitimate pleading, although it does not do much to help the above mentioned "Babelization". As a reaction to that, "the past decade appears to have been a period not only of proliferation and diversification, but also of classification and codification. This is reflected in the rise of genres such as introductions and handbooks" (Sommer 2012, 145).

The validity of a metanarratology is hardly debated. To clear up some of the terminological confusion, Nünning suggests a systematic use of some terms. He conceptualizes 'narrative studies' as the broadest term, and 'narrative theory', 'narratology', and 'narratological criticism' are to be understood as its subcategories (Nünning 2003, 257). The problem is that researchers of narrative studies often live in complete isolation from each other, due to which state a psychologist or a historian favouring narrative approaches potentially has never heard of metanarratology, let alone reading it and taking its concerns into consideration. The ones who are open for truly interdisciplinary work are usually

narratologists, who had gotten training in literary theory first and started dealing with other disciplines later (Sommer Heinen 2009, 2)

As to what kind of knowledge is produced by narrative studies, there are also different conceptualizations. According to traditional narratology, the object of narratological research is not the "what" but the "how" of storytelling, which means that researchers should pay attention to the structures and workings (how is it represented, with what strategies, etc.) instead of the content of a narrative (i.e. what it is actually about). This approach allows narratologists to theorize about universal themes and problems, such as the narrator, or the plot in general. Postclassical narratologies, especially feminist or postcolonial approaches often focus on the "what" of narratives, and even adding the "why" to its most important questions, hence "contaminating" the previously clear and objective field with ideologies and relativism according to some proponents of classical narratology. Cognitive approaches - to which this thesis wishes to contribute - in this respect seem to return to the examinations of the old "how" of traditional narratology.

In the following part, drawing closer to my present concern, I will elaborate on the changings of the field with a focus on the style, the object and methods, and the idea of knowledge production in narratology, which I find extremely important, and which is usually largely ignored or merely briefly mentioned in the introductory parts of articles and monographs (Sommer 2012).

1.3. Humanities and Science (of Stories): Knowledge Production in Narratology

It is often pointed out that Tzvetan Todorov, who has coined the term 'la narratologie' in 1969, conceptualized it as 'the *science* of stories' (Todorov 1969: 10, my emphasis). The word 'science' legitimizes an attitude of making universal claims about stories, which was characteristic of the work done during the time of classical narratology that I have already mentioned above. While I strongly agree with Sommer's stance in metanarratology briefly summarized as "theorize and let theorize" (Sommer 2017, 606), moreover, I would add, let practice and let test empirically as well, but it is also important to remember that narratology has its own heritage when it comes to the production of knowledge. One of its founding fathers associated it with the word "science", and narratology has always leaned, at least in part, or at least in attitude, towards natural sciences. Todorov assumed that

> [t]he nature of structural analysis will be essentially theoretical and non-descriptive; in other words, the aim of such a study will never be the description of a concrete work. The work will be considered as the manifestation of an

> abstract structure, merely one of its possible realizations an understanding of that structure will be the real goal of structural analysis. (Todorov 1969, 2099)[20]

Putting the content of the (at that time exclusively literary) narrative aside, its analysis indeed appears to have the rigidity and strictness that one usually attributes to science. Moreover, as Sommer emphasizes, "[n]arratologists have often pointed out that the term narrative is linked etymologically not only with storytelling but also with knowledge" (Sommer 2017, 594).

Hayden White explains in *The Content of the Form* "that the word 'narrative' goes back to the ancient Sanskrit 'gna,' a root term that means 'know,' and that it comes down to us through Latin words for both 'knowing' ('gnarus') and 'telling' ('narro')" (Abbott 2002, 11). In H. Porter Abbott's interpretation, it shows that the "etymology catches the two sides of narrative. It is a universal tool for knowing as well as telling, for absorbing knowledge as well as expressing it. [...] But [...] narrative can be used to deliver false information; it can be used to keep us in darkness and even encourage us to do things we should not do" (Abbott 2002, 11). Besides showing the noble as well as the ethically problematic uses of narratives, it is an especially convenient conceptualization for cognitive narratology, too, which claims that narrative and narration as cognitive structures are essentially bound up with processes of collecting, organizing, and storing knowledge about the world.

It is well known that structuralist narratology was highly inspired by the structuralist linguistics of Ferdinand de Saussure. David Herman actually claims that linguistics was the "pilot-science" of narratology (Herman 2009, 24), for instance the concepts of the *fabula* and the *sjuzhet* are modeled after those of the signified and the signifier (Herman 2013, 132). Arguably this was the step that uncoupled the study of narratives from the theories of the novel, and made non-literary narratives available for the study, or, as Herman assumes, scholarly attention was shifted "from a particular genre of literary writing to all discourse (or, in an even wider interpretation, all semiotic activities) that can be interpreted as narratively organized" (Herman 2009, 24). Monika Fludernik argues that the history of modern narratology can be interpreted as the adaptation of new "linguistic paradigms one by one as they arose in the twentieth century" (Fludernik 2005, 48), and among these the newest has been cognitive linguistics.

[20] It is worth mentioning that semiotics (largely inspired by Saussure's semiology) aimed at achieving the same: it was not examining simply meaning but the logic of the production of meaning.

On the other hand, linguistics is not actually able to deal with all semiotic activities, as it is tied to the medium of language. This is a big disadvantage for contemporary narrative theories that are inspired chiefly by linguistics[21]. Zoltán Vecsey (Vecsey 2010) surveys some of these theories and, with the premise that narratives have to be represented through language, ends up with the unavoidable but misguided conclusion that there is no cognition without language. Apparently, his approach can be only supported by cognitivist theories of human cognition, which "[conceive] of representations as akin to words in a language of thought, and of cognition as consisting in operations on language-like structures" (Shapiro 2011, 47). The problem of different approaches to human cognition is to be sorted out in Chapter 2.

Linguistics becomes another kind of inspiration for narratology the way Marie-Laure Ryan sees it. She assumes that "a fully-fledged theory of narrative, like a complete grammar of language, cannot be reduced to syntax and semantics – i.e. the study of discourse and plot or story – but also requires pragmatics (Ryan quoted in Sommer 2012, 144). According to this view, narratives, like language in general but regardless of their medium, cannot be fully understood and properly examined without their context. Importantly, as Gerald Prince asserts, "[u]nlike a sign, a narrative is not recognized but understood" (Prince 2003, 6). This claim supports the cognitive approach, and, within it, excludes the cognitivist one, which is, by nature, unable to explain the processes of understanding: as it is suggested, computers can perform acts like humans without actually understanding their meaning or significance, therefore they are unable to provide faithful models for these acts [22].

1.3.1. Paradigm expansion

Roy Sommer found it suitable to examine the changes of the field with the help of Thomas Kuhn's theory of paradigm shifts, "to reconsider the narratological enterprise from the vantage points of epistemology and the philosophy of science" (Sommer 2017, 593). This reconsideration entails an intriguing comparison of hard science and the humanities, which is a more than relevant concern in the case of cognitive narratology. Narratological knowledge has a "double structure" (Sommer 2017, 596). This is what Sommer calls the

[21] Of course, today this can be regarded as a separate approach among contemporary narratologies.

[22] This idea is famously illustrated in John Searle's 'Chinese Room problem', described in his study 'Minds, brains, and programs' (1980). The thought experiment explains that someone who knows no written or spoken Chinese after enough practice with a trial and error method (which is incidentally the way supervised deep learning works), could 'answer' a Chinese speaker's questions with Chinese characters correctly, and may even convince the Chinese speaker that he or she speaks Chinese, without understanding anything from the conversation.

peculiar nature of the study "characterized by a productive convergence of two distinct kinds or sources of knowledge", namely "intuitive knowledge is acquired individually through aesthetic experience" and "abstract and systematic knowledge is produced collectively by theorizing intuitive knowledge in terms of narrative and narrativity" (Sommer 2017, 596). Intuitive knowledge has been traditionally associated with the arts and the humanities while abstract and systematic knowledge are with hard science[23].

Some assume that there is no dividing line between these two types of knowledge. This is an extremely important idea, the working of which is highly difficult to observe, let alone describe in entirety because it is notoriously interdisciplinary and complex in nature. However, as for methodology today, subjective experience is not regarded and valued equally in the two cultures:

> The philosophy of science acknowledges that intuition may play a key role in scientific discoveries, a stage in scientific research that is traditionally referred to as context of discovery. Scientific intuition has no value of its own, but is only considered as an initial, and somewhat mysterious, stage in the germination of new hypotheses, theories or methods. From a literary perspective, however, the aesthetic experience is valued independently from the knowledge it may help to produce. There is always an element of *l'art pour l'art* in narratological abstractions, since such abstractions are drawn in part from intuitive knowledge (Sommer 2017, 596)

But "narratology has always sought to reconcile intuition and abstraction in a systematic way" (Sommer 2017 598). This enables narratology to be an especially suitable discipline for interdisciplinary research, as it has been evidenced in the exponential growth of narrative studies in the past decades. After such a growth there is probably no debate about the fact that "structuralist narratology is unable to fully explain narrative, and few would insist that it is, in Kuhn's sense, "better than its competitors" (Sommer 2017 601).

But before claiming that we have "witnessed a paradigm shift from structuralism to cultural studies" (Sommer 2017 602) in narratology, it is essential to remember that Kuhn created his much-debated conceptualization of the paradigm with natural sciences, especially Physics, in mind[24]. Narratologists have taken new routes and created theories disregarding fundamental principles of structuralist narratology, but it is important to add

[23] Which, as their comparison of the in my Introduction attempted to demonstrate, is simply not the case.
[24] Kuhn's concept is, among other problems, famously underdefined, yet the lack of its precision allows it to be used outside the natural sciences as well (Sommer 2017, 601).

that postclassical narratology was never meant to be the criticism of classical narratology. David Herman explains that

> Postclassical approaches [...] build on the classical tradition but supplement it with concepts and methods that were unavailable to story analysts such as Barthes, Genette, Greimas, and Todorov during the heyday of structuralism. These ideas stem from fields ranging from gender theory and philosophical ethics, to post- Saussurean linguistics, philosophy of language, and cognitive science, to comparative media studies and critical theory. In short, postclassical narratology, which should not be conflated with poststructuralist theories of narrative, contains classical narratology as one of its "moments" but also includes more recent perspectives on the forms and functions of narrative. (Herman 2009, 26)

Newer and newer narrative theories have not overwritten previous conceptualizations and theories of narrative. In the humanities paradigms usually do not seek to replace one other, it is not rare that ancient theories coexist with the latest ones, even if there are disagreements between them. What Sommer claims about narrative studies is therefore probably valid in most corners of the humanities. "[S]tructuralism and its main 'competitors'[...] are not in fact competing or even incommensurable, but highly compatible paradigms" (Sommer 2017, 603). To illustrate this situation Sommer suggests the terms *paradigm expansion* or *paradigm evolution* (Sommer 2017, 603). "The former emphasizes the process of revision while the latter highlights the opposition to Kuhn's notion of revolutionary paradigm shifts" (Summer 2017, 603) and both depict more faithfully the nature of changes in the humanities than Kuhn's term as

> the 'science of narrative' never intended to establish scientific procedures such as proposing testable hypotheses and making predictions. Narrative theories are not designed to be falsified, nor can they be confirmed [...], but they will continue to refine existing ways of defining and studying narrative across genres and media. (Sommer 2017, 605).

Paradigm expansion or evolution would be more suitable terms for understanding modern narratology altogether as classical and postclassical narratology are not mutually exclusive paradigms. In fact, as I have mentioned, cognitive narratology seems to reach back to its traditional roots especially considering its interest, which is rather the "how" than the "what" or the "why" of storytelling.

I have elaborated on the changes, the evolution, or the expansion of the paradigms of narratology and its present condition to contextualize the position that I aim to take through

this thesis. As already suggested, cognitive narratology, which is a complex approach in itself, in several ways appears to reach back to principles that were characteristic of traditional structuralist narratology. In the following section I will attempt to provide a more detailed outline of cognitive narratology in order to explain this relation and point out the novel aspects of study cognitive narratology has to offer. To explain the relation of narratologies and cognitive narratology further, I need to include an additional aspect by providing an introduction of the cognitive theories that I will build on.

Chapter 2. Cognitive Science, Human Embodiment, Narratology

"[...] nearly everyone working in
cognitive science is working on an
approach that someone else has shown
to be hopeless, usually by an argument
that is more or less purely
philosophical." (Chemero 2009, 3)

In the following part I will briefly explain how cognitive science became relevant in literary theory as a part of the Babelization of the discipline, and how the approach of embodied cognition has been developed. Philosopher Anthony Chemero's words neatly illustrate the nature of cognitive science, which is not only heterogeneous but also extremely fragmented, containing a number of conflicts and contradictions. Hopefully in this section it will become clear why and how researches arrived at this state.

2.1. Human cognition across the disciplines

2.1.1. Phenomenology and physics

Theorists often point out the similarities of reader response criticism and cognitive poetics. The similarities exist because these approaches have been motivated by the same idea from the outset. This idea was a consequence of the appearance of phenomenological philosophy in literary theory, and it was embodied in the pragmatic turn in literary theory. This turn has been assumed to be the manifestation of the larger paradigm shift in the academic world in literary theory (Bortolussi and Dixon 2003, 2). Besides semiotics, reader-response theory was the most influential area of literary theory that shifted the focus from the understanding of meaning to the understanding of the construction of meaning. Cognitive poetics is the latest theoretical endeavour that investigates this issue.

According to phenomenology, we get to know everything in the world through our consciousness, because everything that is known to us is accessed through our senses and constructed through our consciousness. Meaning does not just exist, there is no fixed, objective meaning in a text as the formalists and structuralists assumed, but it is constructed by the reader. As Iser explains in his seminal work, *The Act of Reading* (translated into English in 1978), the literary work is an action, more precisely an act of communication between the text and the reader, where the reader has a creative, active role: that of

actualization and meaning-making. In cognitive narratology, narrative itself is regarded as more of an event than an object (Herman 2013, 154), therefore if one is interested in finding out more about a narrative, it is only reasonable to investigate the consciousness of the reader of that narrative to learn about the way it is built. But, regardless of whether one does research in natural sciences or in the humanities, approaching consciousness is a problematic issue.

In fact, when it comes to research on human cognition, its problem can be understood as part of a larger set of problems: the twentieth century has been an especially transitional era regarding the scientific worldview in general and the theories about the nature of human consciousness in particular. As its fundamental laws were shaken by theories of the electromagnetic field, the theory of relativity, and the quantum mechanics of subatomic particles, radical changes occurred even in physics (Szokolszky 1998, 277). Physics is important here because it has been looked up to as the model for all other sciences, as the "queen of all sciences"[25] (Szokolszky 1998, 276). Concepts of space, time, and matter have changed, and the world has turned into a fabric of interwoven, complicated groups of events, which could not be modelled in the same way anymore (Szokolszky 1998, 278).

2.1.2. Cognitive science and biology

The nature of human consciousness was to be understood as a part of this new world view. The Cartesian idea of the duality of a machine-like and rationally controlled body, and an also mechanically operating, rational, but not material mind (Szokolszky 1998, 276), accompanied by the dualism of the body and the soul in the theology of the Christian tradition, has dominated, and quite widely still dominates our conceptualizations of the human being. As for human behaviour, there were two leading theories in the Western world in the first half of the twentieth century: Freudian psychoanalysis and behaviourist psychology.[26] Besides these, and the thousands of years of religious beliefs and philosophy, today human behaviour and consciousness have one more powerful theory that was founded in the 1950s: cognitive science.

Cognitive science is "the scientific discipline that studies conceptual systems" (Lakoff and Johnson 1999, 21). It is informed and inspired by various disciplines such as philosophy,

[25] Moreover, for instance in neurology, the majority of theories about the functioning of the nervous system build on mechanical models openly inspired by the laws of Physics. In fact, the vocabulary nicely reflects the position Physics holds among all sciences, considering that the rest of the disciplines tend to have theories, while Physics has *laws*.

[26] The goal of which was to replace the earlier, introspectionist tradition (Paco and Gomila 2008, 99).

linguistics, or computer science. George Lakoff and Mark Johnson in their groundbreaking work, *Philosophy in the Flesh. The Embodied Mind and its Challenge to Western Thought*, explain it as a new, "empirically responsible philosophy, consistent with empirical discoveries about the nature of the mind" (Lakoff and Johnson 1999, 24). Cognitive science has strong ties both with the natural sciences and with the humanities, and the tension between these two large fields is especially apparent when cognitive science aspires to understand and model (often subjective) human experience with the help of scientific methods (Varela et al. 1993, 12).

The conceptualization of human cognition and consciousness is a heavily debated issue, the alternatives of which differ sometimes even in their most basic principles. One of the earliest of them, also known as cognitivism or standard cognitive science, follows the Western intellectual tradition, the Cartesian understanding of cognition as the disembodied reason that operates independently of any context[27]. Incidentally, this approach appeared in the 1950s in parallel with and strongly influenced by the appearance of computer science. Its goal was to understand and model cognitive processes that operate between the stimulus and the response, which were hidden from behaviourism in a "black box" of the human mind (Shapiro 2011, 14).

To achieve this, the Cartesian idea of the mind was theoretically completed with the abilities and capacities of Neumann's computer (Szokolszky 1998, 276). Therefore, the human being was regarded more or less as a computer that happens to be made of flesh and blood (Putnam in Szokolszky 1998, 274). Consciousness was assumed to work as a software while the body, the concept of which was reduced to the brain, stood for the hardware (Szokolszky 1998, 274). All of the projects within this approach agree that human cognition is to be imagined as a set of computational mechanisms, which operate through the manipulation of a fixed set of symbolic representations with pre-written, algorithmic rules. This view also assumes that besides the input that any computational process needs, similarly to a computer, human cognition always works independently of its context in every sense. Since cognition takes place in the brain, cognitive science should limit its investigation to this organ exclusively. This is called the "Solipsistic view" in standard cognitive science (Shapiro 2011, 26).

The problem with this view was that in experiments researchers seem to be able to only imitate - and, importantly, not necessarily *model* - human intelligence of a rather high

[27] Major representatives of this approach are Jerry Fodor and Zenon Pylyshyn.

level: abstract processes of cognition such as playing chess or solving mathematical problems.[28] Other processes of the human cognitive system such as perception, or emotions were very visibly impossible to faithfully model with the help of the computation metaphor[29].

If one accepts that emotions or somatosensory processes, and other, less-than-rational and calculable parts of our mental lives cannot be excluded from among the issues of human cognition, a fundamental question re-rises: what is human cognition if not symbol manipulation? It used to be a rhetorical question during the cognitivist reign but became a genuine one as it gradually turned out that symbol manipulation as an explanation cannot account for most of what happens in the human mind (Szokolszky 1998, 275)[30]. The challenges of cognitivism are numerous today, but one of the first influential theories that described cognition as something fundamentally different from the workings of a computer was J. J. Gibson's ecological theory of visual perception. Gibson realized that the simple fact that the perceiver is mobile is an immensely important part of human perception, which actually emerges from the interaction between the perceiver and the world (Shapiro 2011, 35). The mobility of the perceiver is an especially crucial principle which is behind this thesis as well: there is no spatial experience without movement. This understanding is incompatible with the ideas of the algorithmic pre-written rules and the solipsistic view of standard cognitive science. Theories such as the dynamical systems theory or the connectionists' models also contribute to the very heterogeneous post-Cartesian set of research projects[31]. Since the conceptualization of embodiment in human cognition is far from unified, I will now attempt to describe the most important principles of the post-Cartesian theories of cognition without getting extremely side-tracked.

2.1.3. Human cognitive processes embodiment

The most important problem with cognitivism is that, through dealing with high-level cognitive processes and problems exclusively, it radically reduces the complexity of the

[28] And even in these cases the fact that a computer is successful in carrying out these tasks does not mean that it operates by the same rules as human cognition.
[29] I.e. that the human mind works like the computer. This is the core metaphor of cognitivism.
[30] While cognitive theories are not far from natural sciences, similarly to the changes that have occurred in narrative theory, this change of perspective cannot be regarded as a paradigm shift, therefore cognitivism has not been discredited altogether.
[31] See Shapiro's *Embodied Cognition* (2011) and Calvo and Gomila's *Handbook of Cognitive Science: An Embodied Approach* (2008).

functions and processes of human consciousness. For instance, cognitivism reduces the concept of the mind to that of the brain or/and reduces the concept of the body to that of the brain in assuming that the body is important in cognition only so far as it means an access to the sensory input that is necessary for cognition (Gibbs 2005, 5). The alternative approaches, also called post-Cartesian alternatives, believe cognition to be much more dynamic, flexible, and changing, and imagine that the body and its environment have a vital role in making it up. These approaches, as has been mentioned, are far from a unified field of study: they are more of a group of research projects (Shapiro 2011, 2). Another collective name for these paradigms is 4E cognition, consisting of "embodied," "enactive," "embedded," or "extended," cognition[32], which are all more or less viewed as being in agreement regarding the workings of cognition, but all put the emphasis elsewhere in its processes[33]. However, it is important to note that some of these approaches have been developed independently and in isolation from the others, furthermore, each of them is still being formed, therefore "it is difficult to get a grasp on what exactly falls within each domain; moreover, it may even be the case that these paradigms are more hostile to each other than standard cognitive science" (Ryan 2012, 175).

Due to my focus on embodiment and motion my method necessarily favours the embodied and the enactive approaches, although I do not exclude neither postcartesian theory. One principle that the above projects all have in common is that neither perception, nor any other part of cognition are simply processes in the brain (Noë 2004, 2), because human embodiment has much more complex and important role in it. According to dynamical systems theory, "[c]ognition is embodied insofar as it emerges not from an intricately unfolding cognitive program, but from a dynamic dance in which body, perception, and world guide each other's steps" (Shapiro 2011, 61), in other words, the elements of this system consisting of the consciousness, the body, and the world are interdependent and determine each other. Hence, the new basic unit of analysis for cognitive theorists becomes the mind-body-environment system. The analysed literary works in the second part of this thesis can all be understood as illustrations and contemplations of this principle.

[32] The number of the paradigms and the possible neighbouring but different perspectives does not stop at four though, the "ecological" approach is yet another paradigm that fits the name, and "situated" cognition, while it does not start with an "e", is also an approach largely similar to the rest.

[33] In the rest of the dissertation I will use the term embodied cognition for the sake of simplicity, but I use it with the above-mentioned aspects kept in mind.

Alva Noë, a famous representative of the theory of enactive cognition makes the claim that "to perceive like us, you must have a body like ours" (Noë 2004, 25). Consequently, to think like us, you also must have a body like ours. This second sentence follows from the idea that perception, action, and thought cannot operate independently from each other (Noë 2004, 3). If they cannot operate independently, they also should not be studied completely separately.

But at this point, another problematic concept arises: embodiment. By embodiment, the post-Cartesian alternatives of the theory of cognition mean neural events, the processes of the cognitive unconscious,[34] and also subjective, phenomenological experience (Gibbs 2005, 10), while also keeping in mind that the environment of the body is also important to cognitive processes. To understand how abstract and simple, low levels of cognition are connected, one must see that mental states, functions, and processes are "supported by the same processes that are used for physical interactions" (Pecher and Zwaan 2005, 1), therefore all complex and abstract cognitive structures emerge from lower levels of cognition, such as action and perception (Pecher and Zwaan 2005, 1). This approach therefore in a way strives to criticise cognitivism because it did not go far enough in revising behaviourism. Cognitivism is trying to imagine the reason behind the stimulus-response mechanism by trying to model the processes of the "black box" of behaviorism (Shapiro 2011, 14), but in a way follows it and fails to think outside the proverbial box.

Embodied cognition attempts to imagine embodiment and environment as a context of reason to understand the mind as dynamic, natural, contextual; to go beyond the dualism of lifeless matter and non-material reason with a fundamental discontinuity imagined between them (Szokolszky 1998, 276). For instance, in this sense seeing does not mean having a sense perception. Noë claims that "[seeing] is to have visual sensations that are integrated in the right sort of way, with bodily skills"[35] (Noë 2004, 4). As perception and action become essential to more abstract levels of cognition, the human body and the environment become parts of the human cognitive system (Pecher and Zwaan 2005, 2), which seems a radical approach that is in many senses irreconcilable with standard cognitive science.

[34] The cognitive unconscious is the sum of mental processes that are inaccessible to conscious awareness not because their being connected to memories of traumatic events (as psychoanalysis would perhaps argue), but simply because they are too automatic, fast, and, in fact, usually unnecessary to follow consciously, such as the majority of perception, language comprehension, or the functioning of implicit memory (Lakoff and Johnson 1999, 10-11).

[35] Perfectly healthy eyes and optical nerves are not sufficient in and of themselves, not even for a single visual stimulus to enter our consciousness, let alone constructing a complex visual experience that most people constantly have.

George Lakoff and Mark Johnson's 1999 volume entitled *Philosophy in the Flesh* became one of the seminal readings in this area. In it they explain how "every understanding that we can have of the world, ourselves, and others can only be framed in terms of concepts shaped by our bodies (Lakoff and Johnson 1999, 495). According to the theory of embodied cognition, reason, and the overall organization of human cognition and consciousness arise from and are restricted by our everyday, embodied functioning in space (Lakoff and Johnson 1999, 4). Reason is neither transparent, nor always rational, because it is "metaphorical and imaginative, and emotionally engaged" (Lakoff and Johnson n 1999, 4).

The potential method of research to be applied in embodied cognitive science becomes largely problematic though with the realization that "we can't have direct access to most of what is going on in our minds" (Lakoff and Johnson 1999, 22). The lion's share of language comprehension, perception, or motion – among many other processes – happens below our conscious awareness, (Lakoff and Johnson 1999, 9-15). Introspection, the method of phenomenology is useful, although not nearly satisfactory in and of itself if we want to learn more about the way human cognition works (Johnson 2005, 21). As Francisco Varela et al. point it out in *The Embodied Mind: Cognitive Science and Human Experience*, another 'urtext' in the post-Cartesian alternatives of the theories of human cognition (Shapiro 2011, 52.), "[m]ost of Continental philosophical discussions have proceeded without taking into consideration scientific research on cognition", with the exception of Maurice Merleau-Ponty, who carried out the kind of research in his time which would count as (embodied) cognitive science today (Varela et al. 1993. 150), not to mention that he belonged to a generation that had received a sufficiently interdisciplinary education that allowed him to be a philosopher and do scientific experiments with injured war veterans who suffered from major cognitive and neurological deficits due to their injuries.

The aim of contemporary cognitive science therefore is to describe human consciousness in a way that explains how it is grounded in embodiment, including the way the way humans function in their environment (Gibbs 2005c, 3) since the body and its environment are important components of the human cognitive system. Minds or consciousness are not in the brain, and not even in the body only – they are to be understood as interfaces or "webs encompassing brains, bodies, and the world" (Gibbs 2005c, 66). The object of the examinations of embodied cognitive science are manifestations of intelligence, but different from those of standard cognitive science, because lower processes of cognition such as orientation and movement in space (Szokolszky 1998, 287) as well as non-rational phenomena such as emotions become relevant from this perspective. This new approach

entails a complete rethinking of "what it means to be a thinking thing" (Shapiro 2011, 1) through the new changes in the models of cognition. According to this approach, the world, and in it the global mind-body-environment systems are too complicated for us to thoroughly model and understand, yet the basic principles of this complicatedness are possible and necessary to observe and understand (Szokolszky 1998, 290).

The approach that I am about to outline relies heavily on the post-Cartesian alternatives of the theories of cognition. It is important to remember that these alternatives do not offer theories with more answers or more evidence about the exact processes of cognition than those of orthodox cognitive science. The reason for this, as the quote at the beginning of this subchapter indicates, is that there is no sufficient method of convincingly proving any of them. All one can claim is that the basic principles of the post-Cartesian approaches seem to be more appropriate in understanding and modelling human cognition in general.

Since clear (empirical) evidence and undebatable theories are hard to find in cognitive science. I am more side with Lawrence Shapiro's careful approach, which he applies in *Embodied Cognition* (2011). He acknowledges the opposition between standard and embodied cognitive science[36] but devotes his book to rethinking the relevance and the potential of these instead of simply criticising standard cognitive science and discussing it in past tense. The reason why I find this approach particularly useful is that I understand narrative cognition as a complex, continuously plural set of processes, and while I strongly prefer embodied theories, I do not see a reason why some of the processes of human cognition cannot be akin to the processes of computation. In the following section I will present the ways narratology has adopted the theories of cognitive science(s).

2.2. Cognitive Narratology vs Cognitive Narratologies

"Narration implies communication,
communication implies reception, and
reception implies cognition."
(Eder 2003, 282)

Although the path between cognitive science and narratology is probably not as smooth as Jens Eder makes it appear in the above quote, the connection is indeed very strong between

[36] This is his somewhat simplified way of referring to cognitivist and post-Cartesian theories, although in the book he discusses the complexity of these approaches.

them, hence no wonder that cognitive narratology has been an extremely successful part of cognitive poetics. The term 'cognitive narratology' was coined by Manfred Jahn in 1997 (Jahn 1997). Apart from this piece of information, it is rather difficult to summarize the beginnings of cognitive poetics because, as Márta Horváth and Erzsébet Szabó explain, this approach cannot be tied either to the work of one school of literary theory or to one significant text, which could be referred to as the starting point of cognitive poetics (Horváth and Szabó 2013, 139). It appeared as a part of a broader turn toward cognitive theories in the 1990s[37], in literary theory it belongs to cognitive poetics, and the field has become one of the most successful branches of today's narratological endeavours, moreover, it has arguably been overtheorized (Nünning 2003, 256).

Narrative theories, "cross-fertilized" (Herman 2013, xi) with the study of human cognition, usually understand narratives as tools or a strategies of mental processes and the production of meaning. To put it in another way, narrative is a structure that is partly responsible for organizing human consciousness, as it is conceptualized as a "basic human strategy for coming to terms with time, process, and change" (Herman 2010). Moreover, Mark Turner claims that human cognition is intrinsically of a literary character (Turner 1996), and some theorists even view narrative as a distinct human trait, not unlike language (Abbott, 2002, 1). This is the broad understanding of narratives that this thesis tries to build on.

2.2.1. Cognitive narratology

The focus of cognitive narratology is on the processes of narrative understanding, the comprehension of narratives in other words, and the objects of its study are the narrative structures, components, or storytelling strategies that influence narrative understanding. This approach should be viewed as "the investigation of mental processes and representations corresponding to the textual features and structures of narrative" (Bortolussi and Dixon 2003, 24) or of "the way specific discourse patterns trigger narrative experiences" (Herman 2013, 105). Considering the amount of mental processes that fall under the category of cognition[38] this field of study is necessarily enormous and fragmented.

[37] Cognitive theories appeared across various disciplines due to an immensely influential 'cognitive revolution'. In literary theory the terms "cognitive literary theory"; "cognitive poetics"; "cognitive stylistics"; "cognitive rhetorics" are all in use (Hamilton and Schneider 2002, 640), and cognitive narratology is a set of theories within what these terms refer to.

[38] The workings of the memory, emotions, problem solving, learning, perceptions, etc.

Since its career started in the 1990s, cognitive narratology has already developed several approaches, some of which compete with each other[39], while others simply investigate different issues and largely ignore each other. In my understanding, psycho- and affective narratologies are more of subfields of cognitive narratology, just as language comprehension and emotions both belong to human cognition in general. Sommer situates cognitive narratology in a group of new narratologies together with psycho- and affective narratologies (Sommer 2012, 152). Dan Shen, however, simply mentions psychonarratology as a part of cognitive narratology (Shen 2005, 157). Shen's logic is more reasonable in this respect since the approaches of psychonarratology, affective narratology, and neuro-narratology are probably not strong and substantial enough (yet) to be considered as individual research programs, and, on the other hand, they are not different enough to be clearly separated from either each other or from cognitive narratology. Research within cognitive narratology is altogether understood as group of loosely connected research projects than a clearly defined framework for inquiry. In their workings, I conceptualize these approaches not unlike the 4E[40] approaches of cognition, which roughly hold the same system of principles and theories, but each of them puts the emphasis elsewhere in this system.

One of the basic principles of cognitive poetics is that literary texts are fundamentally influenced by the architecture of the human mind and the ways in which it processes information (Szabó 2012, 9). Cognitive literary theories regard the reading and comprehension of fiction as a process rooted in brain functions, therefore it is to be investigated in the context of other skills of the human mind, in connection with them (Horváth 2012, 6). However, as Erzsébet Szabó points it out, cognitive poetics is not primarily an empirical endeavour, either in its object or in the tools of its investigations. It seeks to construct theoretical explanations and models about the processes that are at work in the interaction between the human mind and narrative texts (Szabó 2012, 117, Horváth and Szabó 2013, 142).

The meaning of a narrative, which is the primary concern of cognitive narratology, emerges from these processes (László 1998, 267). The aim of a cognitive narratologist is to find cognitive structures, or ways of organizing knowledge and experience in the human

[39] For instance the cognitivist and the embodied approaches.

[40] As has been mentioned in the part about cognitive processes and human embodiment (2.1.3.), recent, post-cartesian approaches to human cognition are often referred to as "4E cognition". These are the approaches of embodied, embedded, extended, and enactive cognition. These can be viewed as a "package deal," but they are far from a homogeneous set of theories (Ryan 2012, 174).

mind, which play part in the consumption and mental representations of stories (László 1998, 267), which is arguably still "the least understood dimension of narrative" (Bortolussi and Dixon 2003, 3). According to this description of the goals and strategies of cognitive narratology, Dan Shen's criticism, aimed at the "reader-free" and decontextualized traits of the study do not seem quite legitimate, especially in parallel with her observation suggesting that cognitive narratology seems to represent a return to structuralist practices. Cognitive narratology is not concerned with unique readerly experiences, but with potentially universal structures in the interaction between an individual and a story. This is also a view due to which cognitive narratology is often conceptualized as the descendant of reception theories (Eder 2003; Hamilton and Schneider 2002), especially the theory of Iser, who was concerned with the individual reader instead of reader communities.

Jens Eder (2003) discusses the importance and the possible applications of cognitive and reception theories, which is a popular but extremely debated subject in narratology. As Eder puts is, "[a]ttitudes range from outright rejection to partial integration to the radical claim that narratology should actually be treated as part of cognitive science" (Eder 2003, 208).

Iser, who has recognized that the meaning of a literary text is constructed in the mind of the reader at a time when structuralism prevailed, can be claimed to have done what cognitive theorists do today, with the tools and the heritage of hermeneutics and phenomenology available to him in the 1970s. Mark Turner, although he talks about literature in general and not about narratives specifically, asserts that "the capacity to think in stories or narrative imagining, and the projection of one 'story' to another" are fundamental for human cognition (Hamilton and Schneider 2002, 652). Hamilton and Schneider claim that to remain relevant, reception theory must take the cognitive turn (Hamilton and Schneider 2002, 656). Mark Turner's approach is built on this assumption. Since his method relies on cognitive criticism and linguistics, the "study of mind-through-language-and-literature" (Hamilton and Schneider 2002, 650) as Turner's approach is referred to, points more directly towards my concerns.

Nevertheless, Turner's view is shared by cognitive poetics in general. According to this, it is a mistake to separate literature from other modes of cognition (Hamilton and Schneider 2002, 648) since "literature is cognitive and the mind is literary and the boundaries between them are artificial" (Hamilton and Schneider 2002, 653). Furthermore, literature is positively embodied. Hamilton and Schneider summarize the approach stating that

> everyday communication and literary expression spring from the same principles of thought, which in turn derive from very basic interactions of the human body with its environment. Thus, the study of literature is–or ought to be–fundamentally similar to the study of how the human being (defined by Turner as "a mind in a brain in a body") thinks. (Hamilton and Schneider 2002, 647)

Using the same train of thought David Herman claims that stories, not unlike meaning itself, are "more events than things" (Herman 2013, 154) and Peter Stockwell, in his introductory monograph on cognitive poetics points out that "literary texts are artefacts, but 'readings' are natural objects" (Stockwell 2002, 2). The word 'natural' is key to me as it brings about important connotations that can fundamentally change one's view of a literary work[41] as it implies the quality of being a part of the dynamic way humans interact with their environment. To me this word also helps choosing an approach within cognitive narratology, which has become an enormous field with various goals, interests, and methods of research. Monika Fludernik's theory of natural narratology was arguably a catalyzer of a rather substantial school within cognitive narratology. Natural narratology feeds from the theories of reception, and by understanding narrativity "as mediated human experientiality"[42] (Fludernik 2002, 26) it creates a new conceptualization of narrative, and instead of focusing on plot or events states that in her model "there can […] be narratives without plot, but there cannot be any narratives without a human (anthropomorphic) experiencer of some sort at some narrative level" (Fludernik 2002, 13).

However, the term 'experience' opened up a new problem space that entailed the transfer of a great debate from cognitive sciences to cognitive narratology. This debate is between cognitivist approaches, which see cognition chiefly as symbol manipulation, as a set of processes and functions virtually independent from any kind of context; and the post-cartesian alternatives of the theory of cognition or second-generation cognitive theories, which understand the workings of cognition as the result of the interaction between the mind, the body, and its environment.

In this section I will outline the most important problems of interdisciplinary research that a cognitive narratologist is bound to encounter. First of all, genuine interdisciplinary research is "still limited to fields that have been traditionally perceived as complementary"

[41] The literary work, in accordance with its conceptualization in reader response theories, is the reading itself.
[42] *Experientiality* is a term constructed by Fludernik that she defines as "the quasi-mimetic evocation of real-life experience" (Fludernik 1996, 12). The term was later refined most notably in the works of Marco Caracciolo, for instance in his contribution to *the living handbook of narratology* (Caracciolo 2014b).

(Bortolussi and Dixon 2003, 2). For literary theorists, interdisciplinary research still generally means the combination of literary theory with fields which are theoretically close to it, such as anthropology or sociology (ibid). In fact, while "there is intuitive agreement among promoters of interdisciplinary studies that it is in the boundaries between disciplines that new and exciting insights can emerge, contact between the humanities and natural sciences is still avoided" (Bortolussi and Dixon 2003, 25). Interest in natural sciences is becoming more and more popular in the humanities, but it does not mean that these endeavours are widely acknowledged and/or methodologically clear and unproblematic. The greatest problems here seem to be generated by "the mutual biases of one field against the other and the stereotypes that still dominate each discipline's perception of the other" (Bortolussi and Dixon 2003, 25). However, my approach belongs to these endeavours. A new branch within cognitive narratology that combines the investigation of storytelling with the post-Cartesian alternatives of cognitive theories is known as *second-generation cognitive narratology*. My current approach can be situated within this particular part of cognitive narratology. The following section provides a brief history of it and an outline of its most important interests, aims, and methods.

2.2.2. Second Generation Cognitive Narratology

Richard Menary, discussing the narrative self, proposes that "[i]t is not narratives that shape experiences but, rather, experiences that structure narratives" (Menary 2008, 79). This view to my mind, and for natural narratology as well, also holds for literary narratives and requires a revision of the traditional view of narratives. This revision has already begun in second generation cognitive narratology, which builds its views on second generation cognitive science, and understands cognition as a dynamic process going on in the mind-body-environment system and imagines narrative structures according to this principle.

One of the most popular objects of scrutiny nowadays is the role of human embodiment in cognitive processes, such as the use of language. Storytelling and the interpretation of stories can both be viewed as processes of embodied cognition, if one accepts the notion that these forms of cognition can be shaped by certain aspects of the human body (Horváth 2011, 465). The most influential step in this direction in narratology was taken by Monika Fludernik in her monograph, *Towards a Natural Narratology* (1996) where she began to "ground the study of narrative in a sophisticated description of cognitive experience" (Bortolussi and Dixon 2003, 12). On the other hand, many postclassical

narratologists agree that Fludernik's theory, in which the "notion of experientiality subsumes the ways in which narrative taps into a background of cognitive-level schemas and predispositions" (Caracciolo et al. 2017, 436), is generally on the right track to explain the construction and different forms of narratives, yet it is unclear and underdeveloped (Bortolussi and Dixon 2003, 13). The most notable development to her theory was carried out by Caracciolo (2014), who developed it with the help of the theory of enactive cognition.

The idea of including embodied cognitive theory in narratology has inspired a considerable amount of exciting research. Relying on theories of embodied cognition, Wojciehovski and Gallese have set out to outline the concerns and methods of what they termed "embodied narratology", which offers an explanation of a "more direct and less cognitively-mediated access to" fictive worlds (Gallese and Wojciehovsky 2011). Caracciolo, who writes about the reading process through an enactive approach, claims that when we read fiction "we don't just respond to story-level events and existents, we respond to the ways in which they are presented by discourse", which, regarding its structure, can be motivated by embodied experience (Caracciolo 2015, 50), possibly even by various perceptual experiences. As George Lakoff and Mark Johnson have explained in *Metaphors We Live By* (1980), the metaphor is one of the fundamental structures of the way in which we make sense of the world. Narrative is arguably another.

There have been numerous experiments in mapping the significance of embodiment and cognition in literary theory. Michael Kimmel has been examining metaphoric patterns in narratives. He is one of the theorists who claim that metaphors can be extended beyond figurative language, to the level of whole paragraphs or even whole narratives (Kimmel 2009, 171). Conceptual metaphors, and probably other aspects of embodiment (tension, rhythm, etc.) can motivate a narrative's more complex, higher level structures, and they may be responsible for the whole logic of a story (Kimmel 2009, 173) Considering narrative film, Miklós Kiss explains that embodied image schemas have a "formative role in the initiation of *elementary narrative schemas*, as deeply embodied, internally organized formal gestalts." (Kiss 2015, 43) Hilary Dannenberg analyses metaphors such as CONTAINER and PATH as the chief patterns of stories (Dannenberg 2008). Embodied experience of stories can also be explained by a given (focalizer) character's perspective (Caracciolo 2011, 118) or significant narrative structures organized by embodied rhythms, such as the heartbeat in Poe's "Tell Tale Heart" (Caracciolo 2015, 62), which is claimed to cause simulation through a "spill over" effect. As another study claims, "[a]t the boundary lines of language and logic, rhythm and the unspeakable take over: it is *the heart* that is narrating here. The sound of the heartbeat

that tells the heart's story is in a way invisible but still present throughout the text as a sound" (Alber et al. 2010, 127, emphasis in the original).

Although this has not nearly been a full account of the uses of embodiment in literary theory, I hope to have illustrated its pervasiveness. Actually, it is important to point out that all of these approaches rely on embodied cognitive theories. To better illustrate the problem of embodiment in literary theory, in the next section I will provide a brief survey of approaches that investigate it.

2.2.3. Narratology and embodiment

An excellent example for the Babelization and the problem of integration of narrative theories that I have also referred to comes up when one tries to summarize their approaches to human embodiment. Seemingly mutually exclusive theoretical frames are applied, not to mention the confusion of terms, which easily leads to a classic Babel-like language problem. There have been various experiments that were intended to tackle the relationship of human embodiment and narratives. If we are to imagine these experiments as forming a spectrum, at one end of it one will find corporeal, feminist, and postcolonial narratologies, which chiefly focus on social issues of embodiment, such as the social significance and appearance of bodies. At the other end of this spectrum, I believe one would find neuro-narratology, where human embodiment is understood through neurology, neuropsychology, and post-Cartesian cognitive theories. Movement on the first end of the spectrum might mean the mobility of a minority group in a society, for instance the problem of women being 'confined' to private spaces, while at the other end researchers might be interested in the conceptualization of movement in language comprehension, or, considering this dissertation, that of the representations of problematic, deautomatized perception of motion in literary works.

There is a significant and promising attempt at finding a middle ground between the two ends of the spectrum that I have just described. A so-called embodied narratology that I have briefly referred to, "assumes that the body is a complex, multifaceted phenomenon that encompasses biological processes and cognitive-level structures as well as cultural practices" (Caracciolo et al. 2017, 436). Due to this perspective, structuralist and poststructuralist theories of human embodiment, such as those of Mikhail Bakhtin and Michel Foucault become relevant in narratology. In this case I am not referring to Bakhtin's theory of polyphony, which has been significant in narrative theories for a long time, but his

analysis of the Carnival and the Grotesque in *Rabelais and His World* (1965) (Caracciolo et al. 2017, 438). Foucault's oeuvre offers numerous theories for narratology, for instance his typology of space in "Of Other Spaces: Utopias and Heterotopias" (1967).

Caracciolo et al. explain that an "embodied narratology takes these cultural aspects of embodiment into account but considers them always in connection with the ways in which human thinking is anchored in the bioevolutionary make-up of the human body, guided by bodily experience and shaped by our physical engagement with natural and cultural environments" (Caracciolo et al. 2017, 436). By accounting for cognition in the individual as well as for social and cultural issues, embodied narratology "places an emphasis on bodily experience as the meeting place of bodily states and perceptions (both conscious and pre-conscious) *and* the body's cultural reflections and images" (Caracciolo et al. 2017, 437).

What is not quite clear though, is what this approach offers that one does not get when one considers corporeal and cognitive- and neuro-narratologies as well. Embodied narratology so far does not seem to be more than the sum of its parts, which are already existing narrative theories, and in this respect, I would find this particular narratology unnecessary. On the other hand, I find the fact that it acknowledges and attempts to combine theories, which usually ignore each other despite having a very similar object of study immensely important. It is impossible to overemphasize that human embodiment is a complex issue, for the understanding of which an interdisciplinary approach is necessary. Therefore, I find the view embodied narratology has of human embodiment important but I find it redundant as a 'new' approach that yields yet another narratology and possibly complicates the Babelization of the field even further.

The different conceptualizations of space that these approaches hold are probably the best illustrations of the difference between them. Space has been a buzzword in the humanities lately, and, as Elena Gomel points it out, its understanding is largely based on studies in sociology, such as the work of Michel de Certau and Henri Lefebvre, concentrating on spatial practice and the production of social space, "the way in which physical space is parceled into cultural and social sites" (Gomel 2014, 1), or, briefly, "space reduced to place" (Gomel 2014, 1).

In contrast to these, approaches that rely on the theories of neuropsychology and cognitive science are chiefly preoccupied with the individual's perception and experience of space, his or her spatial mapping and spatial cognitive frames. Besides, as Gomel puts it in the light of the metamorphosis of science in the 20th century, "[i]f post-Newtonian physics merged space and time into the single entity of spacetime, narratology should do the same"

(Gomel 2014, 26). Richard Walsh' study on narrative and spatial cognition (2017), and the present thesis' analyses attempt to gain a better understanding of narrative space with such an approach.

2.3. Human Consciousness and Neuropsychology in Literary Theory: Neuro-narratology

In this section I will take the final step in narrowing the scope of my theoretical interests. As mentioned above, cognitive narratology traditionally seeks to understand and build theories of the (processes of) comprehension of narratives. It is one of the most successful of contemporary narratologies, some even suspect that it is an overly theorized area of narratology (Nünning 2003, 256). Despite this, one cannot claim that the basic questions of cognitive narratology – how do we understand a narrative and what are the roles of narrative structures in human cognition – have nearly been exhaustively answered.

Researches that focus on questions like these have lately started to make more and more use of the findings of natural sciences. One of the newest interdisciplinary branches of literary theory, which cannot be regarded as a fully independent theory yet is called neuro-narratology, and it aims at making use of the theories and findings of neurology in the analysis of literary works. Neurology nowadays gains important not only in the humanities but also in the arts[43]. This could be a good example for the cultural phenomenon C. P. Snow claimed was missing due to the complete isolation of the "two cultures". For a humanities scholar, neuroscience is a typical example of natural sciences, one that can be interpreted as an opposite of the arts and the humanities in nature. However, as the famous neurologist, V. S. Ramachandran who incidentally comes from the cultural context of India, where philosophy, art, and hard sciences are traditionally somewhat less isolated from each other - sees neuroscience as another approach that is intimidated by hard sciences. "After decades of floundering in the shadow of the 'hard' sciences" (Ramachandran 2012, x) it has become rather popular, due to which "we have even seen neuroscience becoming self-confident enough to start offering ideas to disciplines that have traditionally been claimed by the humanities" (Ramachandran 2012, ix), such as neuroaesthetics, the study brain activities and mental processes behind aesthetic experience.

[43] Neuroaesthetics, has been an influential field, in fact, Schneider imagines neuro-narratology as a study growing out of it (Schneider 2017).

In psychology, both Freudian psychoanalysis and behaviorist psychology "would be dramatically eclipsed in the 1980s and 1990s, when neuroscience[44] finally managed to advance beyond the Bronze Age" (Ramachandran 2012, xi). Today we have approaches such as neuromarketing, neuropolitics, and neuroachitecture, some of which are merely "neurohype" (Ramachandran 2012, xi), but in literary theory, where cognitive science seems to have paved the way for the application of more natural science, and where more and more focus seems to be placed on the processes of the body on the level of neurons (Ryan in Schneider 2017, 484), neuroscience might indeed prove useful.

This new branch is apparently close to cognitive narratology[45], and actually sometimes it is regarded as a part of it[46]. Ralf Schneider defines this approach as a new part of postclassical narratology, although he states that it cannot be understood as a sub-discipline or a unified method yet (Schneider 2017, 479). Schneider discusses the possible uses and drawbacks of this approach and he cannot be blamed with overestimating its potential. He sees the use of neuro-narratology in the application of the new kind of knowledge in the researches on the already existing questions, which might shed new light on these problems.

The already existing narratological concepts can be rethought from the perspective of neuroscience, but Schneider does not promise that we will be able to explain what the exact role of the nervous system is in the construction and the comprehension of narratives any time soon (Schneider 2017, 479). It would indeed be too high of an expectation, since the most important problem of brain research is that there is no overarching model of the working of the human brain, which could account for even such fundamental processes as the emergence of mental images. Schneider refers to this problem by stating that we do not understand yet the correspondences between the neurobiological and the conscious processes of the brain (Schneider 2017, 482). According to Schneider, the fundamental question is whether the present neurobiological models of the physiology of perception or the recalling of information help answering the questions of narratologists (Schneider 2017, 483), the most important of which is how meaning emerges (Schneider 2017, 485). Hence Schneider refers to the serious methodological problem, namely that "[t]o look at the activation of brain areas in the processing of individual words, for instance, is a laughably

[44] Which appears to be the most popular approach in dealing with the mind today.

[45] Besides cognitive science cognitive poetics and within it, cognitive narratology borrows terms from a number of scientific fields such as neurology, psychology, and research on artificial intelligence.

[46] As Monika Fludernik explained in her lecture at the beginning of ENN's 2017 doctoral seminar [Prague, Prague, September 11. Preconference Doctoral Seminar "Cognitive Narratology Today"].

inadequate route to a better understanding of the complex mental processes triggered by so much as a single sentence in a more complex narrative" (Schneider 2017, 485).

Despite of this he discusses only neurobiology, focusing on processes on the level of cells, which are not sufficient to understand and explain narrative cognition. Describing consciousness with scientific methods exclusively is (currently) impossible[47]. The mind-body-environment system is also difficult to examine as a unit, because it "is too complicated [and] it is beyond our current experimental capabilities (Calvo and Gomila 2008, 101). Schneider also admits that "at this time in the development of brain sciences [...] no stringent method can be derived that would provide narratology with a truly neurological toolkit" (Schneider 2017, 488), and neuro-narratology should be understood as "a general attitude according to which some concepts of literary studies, and particularly those of cognitive narratology, may come under review" (Schneider 2017, 488). As for the future of neuro-narratology, Schneider points out that

> neuro-narratology can have a future if narratology adopts a general attitude of thinking about the human being inspired by concepts from the neurosciences in order to reconsider some of its assumptions, categories and methods; and no, nothing will come of neuro-narratology in the foreseeable future if anyone expects explanations on how exactly neural activity affects the production and reception of narrative. (Schneider 2017, 479)

He adds that the goal of neuro-narratology "can only be to enrich hermeneutics by integrating findings of brain research" (Schneider 2017, 483). This idea is consistent with my assumption that the process of narrative understanding, not unlike the self, must contain neural as well as social and cultural levels, and therefore it takes an extremely interdisciplinary approach to model.

Currently second-generation cognitive theories, such as embodied cognition, offer the theories which lead to the most fruitful research[48]. According to the embodied approach, neurobiological investigations would not be sufficient means of learning about human consciousness even if neurologists were able to measure with perfect precision, and to make the most elaborate conclusions about the construction of meaning, since these investigations

[47] Although there are experiments seeking to do so, such as the one Rober Pepperel describes in his study, "Consciousness as a Physical Process Caused by the Organization of Energy in the Brain" (Pepperel 2018)

[48] See: George Lakoff and Mark Johnson - *Philosophy in the Flesh*, Alva Noë – *Action in Perception*; Irodalomelméletben: Marco Caracciolo - *The Experientiality of Narrative. An Enactivist Approach*, Yanna Popova - *Stories, Meaning, and Experience: Narrativity and Enaction*, Anežka Kuzmičová - *Literary Narrative and Mental Imagery: A View from Embodied Cognition*.

and measurements would be restricted to only one component of the mind-body-environment system. In fact, it has been a common potential mistake to reduce cognitive science to neuroscience when it comes to research on human consciousness (Chemero 2009, 167).

From an embodied cognitive perspective, Schneider seems to be leaning toward a reductionist understanding[49]. The means of a mutual step forward for narrative and neurological studies could potentially be provided by the theories and findings of neuropsychology, since this discipline investigates precisely the relationship between the brain and the mind, hence might have a better chance at contributing to the bridging of the gap between the two. János Kállai et al. have done research on the neuropsychology of the perception of space and have coupled specific mental states, anxiety, phobias, and other mental illnesses with peculiar patterns of the perception of space[50]. Richard Walsh's approach to narrative understanding shows an exciting direction, as he concludes, as a result of investigating narrative understanding, that the process of the production of meaning builds substantially on nonverbal, somatosensory processes (Walsh 2017). He claims that "narrative always functions interdependently with other modes of cognition" (Walsh 2017, 461). As he explains, "narrative discourse may foreground narrative meaning, but […] [in and of itself] [n]arrative sense-making is partial, provisional, and interdependent with other modes of sense-making" (Walsh 2017, 473). These further modes "would appear to be more fundamental and more primitive than language, initially bound up with the emergence of consciousness, and a primary determinant of the parameters of any conceivable system of values" (Walsh 2017, 473). This view of narrative understanding is in line with the model of the narrative self in phenomenological psychiatry, which emerges from and which is influenced by 'lower' levels of the self and consciousness (Parnas 2003, 219; Martin 2014, 2). There exist phenomena in texts and storyworlds which heavily influence the production of meaning, and which are possible to map with the help of the models of neuropsychology, and this thesis is chiefly concerned with the ones that are possible to detect in the chosen corpus.

[49] For instance, in the case of mirror neurons, he only talks about vision, although mirror neurons can fire in the course of other modalities of perception, or, while neuroscience consists of numerous approaches, he discusses only neurobiology. Vecsey goes even further as he mentions that investigations of cognitive narratology might lead us to sub-neuron levels (Vecsey 2010, 263)

[50] The authors also call attention to the metaphors of psychosis that exist in everyday language, with the help of which we often understand problematic mental states through concepts of motion or different organizations and experiences of space e.g. "collapsing" or "falling apart" (Kállai et al. 1998, 170).

According to Schneider the road is paved for neuro-narratology by the broader field of neuroaesthetics, which is concerned with the relationship between aesthetic experience and the functioning of the human brain, chiefly in the case of visual art, especially paintings. Language as a medium makes this kind of investigation more difficult (Schneider 2017, 484) as the comprehension of a narrative is considerably more complex and slower than that of a painting[51]. Schneider explains that the task of a narrative theory, which wishes to integrate neurosciences is to create such models of the way we understand narratives that take unconscious[52] processes into consideration, such as the functioning of memory.

To take steps towards a truly interdisciplinary understanding of narrative cognition, it is indispensable to take into account the way neuropsychology explains the formation of episodic memories. One of the most significant finding of psychology about memory, namely that it does not work like a storage space in the brain has reached various disciplines, including narratology (Schneider 2017, 489). The most important part of this finding is that "[a] memory does not exist in its own separate storage location—its residue in the brain is distributed over many synaptic connections, whose values have also been shaped by many other experiences" (McClelland 2011, 139). While it may not seem crucial at first, the formation of episodic memories is in fact deeply entwined with narratives as cognitive structures as well as with sensory-perceptual experiences. According to Martin A. Conway, episodic memories consist of so-called episodic elements, which he regards as "the fundamental units of the cognitive system as a whole" (2009, 2311). The episodic elements are "non-verbal and sensory-perceptual in nature", and they are to be understood as the basis of all conceptual knowledge, since the autobiographical knowledge base, which is also built on these elements, is always, at least partially, active in the brain[53] (Conway and Loveday 2015, 575).

This might help us rethink the roles and workings of narratives in human cognition. Importantly, these findings concur with the theory of narratologist Richard Walsh, who claims that "narrative always functions interdependently with other modes of cognition" (2017, 461). As he explains, "narrative discourse may foreground narrative meaning, but […] [in and of itself] [n]arrative sense-making is partial, provisional, and interdependent

[51] If by comprehension, we mean the construction of a (even the first) take on the whole work. A complete comprehension would be impossible probably for any work of art.

[52] Here, again, by unconscious I mean the cognitive unconscious.

[53] Another great misconception about the human brain is that in everyday life most people only use a small percentage of its capacity. In reality, in healthy humans all parts of the brain are active at all times, even during sleep (Schneider 2017, 481). It is an entirely different issue that only a small amount of these processes are accessible to us consciously.

with other modes of sense-making" (Walsh, 2017 473). These further modes "would appear to be more fundamental and more primitive than language, initially bound up with the emergence of consciousness, and a primary determinant of the parameters of any conceivable system of values" (Walsh, 2017 473). This view of narrative understanding is in line with the phenomenological model of the narrative self, which emerges from and is influenced by 'lower' levels of the self and consciousness. A very similar model was described by narratologists as well:

> there is a hypothetical neural process: the 'slow process', which runs in the background of human cognitive life, while the faster-moving sensori-motor one, responsible for the short-duration process that Michotte observes runs in the foreground (Popova 2014, 35)

An important question that Schneider does not make a claim about is: which narratives serve best the investigations of neuro-narratology? Although narratology was originally intended to come up with universal truths about narratives and storytelling, I believe that as an object of study for literary theory that is inspired by neurosciences, not all narratives are equally suitable. Jens Eder makes an important claim about modern narratology, which is probably useful to consider:

> narratology should be concerned with more than just the elements and structures which constitute the necessary and sufficient conditions of a narrative (or the conditions of possibility of a narrative), or which all narratives, and only all narratives, have in common. (Eder 2003, 280)

Bearing in mind this point made by Eder and having outlined the confined section of narratology to which this dissertation belongs and its most important principles about human cognition, I now move on to provide definitions for the most important narratological concepts that I will discuss in the literary analyses.

2.3.1. Basic terms defined from the perspective of Neuronarratology

Marie-Laure Ryan suggests that everywhere in the academia and also largely outside of it in the past few decades "few words have enjoyed so much use and suffered so much abuse as narrative and its partial synonym, story" (Ryan 2007, 22). The meaning of many concepts within narratology have also multiplied. This part of the dissertation is meant to define the

most important terms in my approach and method, based on and inspired by the fields and theories that I have described so far.

2.3.1.1. Narrative

The first is the highly problematic concept of narrative, the definition of which has had a long evolution and numerous versions throughout the history of modern narratology[54]. Yanna Popova is an important figure of contemporary, second generation cognitive narratology. Here I will adopt her understanding of narratives, which is rather general, and in line with those of cognitive narratology (in a broader sense), narrative psychology, and reader response criticism (Popova 2014, 3). According to it, narrative is to be imagined not as a text type or a literary work with given characteristics, but as a cognitive phenomenon in a much more general sense, and it "is approached [...] less as a structure or a system, divorced from the processes of its production and reception, and more as a cognitive process with specific manifestations in experience" (Popova 2014, 3).

My approach agrees considerably with Popova's and Marco Caracciolo's, who are the representatives of the enactive approach to cognition and narratives, which leads them to chiefly theorize the act of interaction between narratives and their recipients as opposed to the traditional, representationalist tendencies of narratology (Caracciolo 2014a, 9). I do not disagree with their approaches, but I focus on aspects of narratives, which are still closer to the text, and therefore to the concept of representation than to readerly actions, while acknowledging that readerly interaction is required for these aspects to exist. As for the nature of this kind of representation though, I, again, agree with Popova, who claims that "the key aspect of understanding narrative is to stop treating it as an abstract structure, as a representation in the manner of classical narratology, and seeing it, instead, as a pattern of experiential and intersubjective sense-making" (Popova 2014, 6). And again, for me a better understanding of this pattern precedes the attempt to understand the sense-making it is involved in, chiefly because of the concerns that rise due to the complexity of this process, and our lack of experimental means to investigate it thoroughly.

Another important aspect is that although I am currently concerned with literary narratives, as for the general conceptualization of narrative intelligence and narrativity, due

[54] Importantly, today it is often used in a metaphoric way in many disciplines. But, within narratology there also have been numerous definitions. See the most important ones collected by Marie-Laure Ryan in her study that is aimed at surveying previous definitions and constructing an up-to-date one (Ryan 2007, 23-24). Another recent cautious attempt at defining 'narrative' is made by Gerald Prince (2003, 5-6).

to having a foundation in post-Cartesian cognitive theories, still in line with Popova, I do not see these phenomena as tied exclusively to language[55]. In Popova's words, "[n]arrative, grounded as it is, by my definition, in perception and cognition, cannot be studied as a mere linguistic artifact" (Popova 2014, 8). I agree with this claim as long as it refers to a cognitivist understanding of language. Although it seems to disregard the extent to which language is also believed to be grounded in lived embodied experience as cognitive linguists have pointed it out.[56]

One of the most important problems of the definition as well as the investigation of stories is that there are no easily definable units of narratives "comparable to the words or phonemes of language" (Ryan 2007, 24). Mary-Laure Ryan explains that "[e]liminating syntax from the definition of narrative means that narrative discourse cannot be described as a specific configuration of purely formal elements" (Ryan 2007, 24). "'Narrative semantics,'" she continues, "is not a fixed relation between so-called 'narrative signs' and their meanings, but the description of a certain type of cognitive construct (Ryan 2007, 25). Herman has created a definition with a similar logic, claiming that "stories form *Gestalten*, psychological wholes, textual sequences whose coherence is supported by interpreters' inferences about participants engaged in activities over time, with a view to accomplishing particular goals" (Herman 2002, 268-9).

2.3.1.2. Storyworld

Narrative space and (the construction of) the narrative world are also important in my literary analyses. In line with what the previous paragraph showed, as Elena Gomel puts it, "the basic concept of narratology is not story but 'narrative world'" (Gomel 2014, 28). In this regard, I rely on David Herman's popular theory of the *storyworld*, which is the most well-known conceptualization of narratives in cognitive narratology.

Herman explains the concept of the storyworld in the Introduction of his seminal work, *Story Logic* (2002). It is supposed to "capture what might be called the ecology of narrative interpretation" (Herman 2002, 13). The concept of storyworld is connected to that of *recentering*, or the *deictic shift*, which refer to the power of stories to transport interpreters from the here and now to the "then" and "there" of the given story. Storyworld is a very

[55] In the sense of textual, verbal narratives.
[56] See for instance, the volume entitled *From Perception to Meaning: Image Schemas in Cognitive Linguistics* edited by Beate Hampe (2005).

broad category compared to the traditional concept of story, and it is chiefly tailored to the approaches and concerns of cognitive narratology. When interpreting a narrative, readers do not only follow what happened and how in a story, but they also reconstruct "the surrounding context or environment embedding existents, their attributes, and the actions and events in which they are more or centrally involved" (Herman 2002, 13-4). Herman stresses that although it has been long overlooked, this environment in any story is "perspectivally filtered" and "spatiotemporally structured" (Herman 2002, 14) and storyworld applies to fictive narratives and non-fiction alike (Herman 2002, 16). Storyworlds are basically mental models, or

> mentally and emotionally projected environments in which interpreters are called upon to live out complex blends of cognitive and imaginative response, encompassing sympathy, the drawing of causal inferences, identification, evaluation, suspense, and so on. (Herman 2002, 16-7)

This conceptualization makes it somewhat more difficult to approach narratives as objects of study, as there are numerous phenomena which seem inaccessible through the text[57], for instance parts of the storyworld that are not explicitly put into words in a literary narrative, yet might play an essential role in the production of meaning. Marissa Bortolussi's and Peter Dixon's method of investigation seems rather useful in this respect. Their theory of psychonarratology assumes that there are two types of phenomena that can be examined in narratives, "textual features", which "refer to anything in the text that can be objectively identified", and "reader constructions" which are the results of the interaction between the text and the reader (Bortolussi and Dixon 2003, 26). According to Bortolussi and Dixon, textual features are directly accessible to the researcher through "a suitable, objective analysis of texts" (Bortolussi and Dixon 2003, 33), while reader constructions are to be researched and assessed through empirical research[58] (Bortolussi and Dixon 2003, 33). In my analyses I rely on textual features which are accessible through close reading, as well as structural and formal phenomena that the recurrent use of these features produce.

In the literary analyses of this thesis, I will concentrate on the representations of literary characters' embodied experiences. Besides narratology, I examine these through the

[57] In the sense Mieke Bal uses it in her categorization of the levels of narratives, referring to any medium (Bal 2009, 15).

[58] Researchers are to approach these phenomena "indirectly by synthesizing a variety of observable signs such as verbal reports, response latencies, and degrees of accuracy in the performance of specific tasks" (Bortolussi and Dixon 2003, 26)

studies of human cognition and neuropsychology. This is not to say that I confuse literary characters with real people. What I claim is that the representations of literary characters' experiences potentially share the structures and patterns of real people's experiences. I also agree with Bortolussi and Dixon, who claim that "even though literary characters and real people are ontologically distinct, they are processed in much the same way. In other words, literary characters are processed as if they were real" (Bortolussi and Dixon 2003, 140). On the other hand, when aiming at understanding their experiences, not all characters are equally suitable for analysis. The literary characters one has the most access to are the narrator and the focalizer character. I will concentrate on these characters, in line with the idea of Bortolussi and Dixon, who "believe, [...] that it is not useful to conceptualize narrative as communication between the author and the reader, and that hence it is more appropriate to think of these communicative inferences as pertaining to the narrator" (Bortolussi and Dixon 2003, 16). In the present thesis, since I am interested in subjective experience, I will focus on the focalizer character instead of the narrator. In the stories that I will examine there is either a third person narration where the focalizer character is the protagonist, or a first person narration where the narrator, the protagonist and the focalizer are all the same character.

2.3.1.3. Focalization

The term 'focalization' was constructed in structuralism, and it has remained one of the oldest and most important concepts in narratology (Herman and Vervaeck 2005, 70). "The term refers to the relation between that which is focalized – the characters, actions, and objects offered to the reader – and the focalizer, the agent who perceives and who therefore determines what is presented to the reader" (Herman and Vervaeck 2005, 70). It cannot be restricted to the problem of what is "seen by whom," since it involves all the senses, moreover all other cognitive faculties of the focalizer character "such as thought and judgment" (Herman and Vervaeck 2005, 70).

Naturally, the mental state of the focalizer character heavily influences both the content and the form, i.e. the organization of information in a story. Narrative spaces are largely constituted by the focalizer's experience of it, especially when the emphasis is on the representations of abnormal circumstances or abnormal ways of perceiving. "The Ivory Acrobat", a story with a focalizer who becomes obsessed with her experiences of space, is a sterling example of this. I will analyize stories, which employ internal focalization or first-

person narration, where the narrator is the focalizer. Mental states of a heavily corporeal nature such as panic, anxiety, or mental illnesses which entail the use of peculiar mental structures, such as Tourette's syndrome can significantly influence narration. In the following part, I will provide an overview of the ways spatial perception may take part in focalization, and through it, in *storyworld* construction.

2.3.2. Narration and Effect

I will read the stories that I will analyze as representations of a narrating consciousness or the consciousness of the given protagonist (and focalizer), which is the very site of the experiences that I am interested in, therefore it is important to consider the techniques of narration that these works employ. While I would not speculate about the exact effect of the stories that I will examine, it is crucial to assume that they can have an effect on their readers, and it may be possible to hypothesize, which are the parts and aspects of a story that engage and affect the reader. Narration, especially perspective, manner, and vocabulary as well as discourse structures are arguably among these.

Among the stories included in this dissertation, *Motherless Brooklyn*, "The Pit and the Pendulum", and Johnny's parts of *House of Leaves* are narrated in the first person, while Navidson's parts in *House of Leaves*; *The Original of Laura*, *Invitation to a Beheading*, *The Body Artist*, and "The Ivory Acrobat" are all narrated in the third person with internal focalization.

Researchers, who attempted to test the effect of literary works usually focused on experimenting with stories of certain topics, for instance racism, instead of "the workings of specific text qualities per se" (Hakemulder 2000, 46). On the other hand, it is generally assumed that the style of a story does make a difference in the reading experience. As for characterization, readers tend to "strategically focus on the character's mental perspective while disregarding their own point of view" (Hakemulder 2000, 65).

Reading literature seems to be an ideal action on which researchers can test emotional responses since it requires "a special *reading strategy*, a strategy that is more time consuming than others" (Hakemulder 2000, 67). Research shows that readers who are convinced that they are reading literary works of art instead of a news article or popular romance novels read much slower (Hakemulder 2000, 67), and probably more attentively. Besides text types, other features of the texts are also potentially important. As tests show, one reads narratives that

foreground characters' experiences slower than "'action stories' that are full of suspense enhancing elements […] This suggests that readers of 'experience stories' are involved in deeper, more reflexive processing of the stimulus events (Hakemulder 2000, 67).

All of the narratives that I will analyze favor experience over event. Some of them, for instance the two DeLillo stories favor experience so much that they contain strikingly few events and little plot. Although, it cannot be guaranteed that these stories would become significantly similar experiences for all readers, the above-mentioned effect of texts with a focus on experience indeed might be at work in the process of reading them.

When it comes to narration, the first person perspective, which is potentially the most personal way of storytelling, is probably exceptional due to its role in one's everyday mental activity, where it is "generally associated with the mental states of one's own person; mental states of another person cannot be experienced in first person perspective" (Northoff, Heinzel 2003, 42), therefore it may trigger identification in the reader in an unreflected process. *Free indirect discourse*, which is the equivalent of Dorrit Cohn's *narrated monologue* (Cohn 1978), also appears to have a special effect on readers. In free indirect discourse characters' mental states, speech, and thoughts are presented through and together with the narrator's voice, principles, and other psychological characteristics.

Free indirect discourse is assumed to elicit empathy from readers (Hakemulder and Koopman, 2010, 42), and possibly entail identification with characters (Hakemulder and Koopman, 2010, 43). Empirical testing has shown that compared to external focalization, internal focalization significantly increases readers' sympathy with a character, although reader variables such as age can easily overwrite this effect of stories (Hakemulder and Koopman, 2010, 44). Other experiments have shown that characters, whose inner life is represented through free indirect discourse, appear more rational, and in general, more understandable for readers (Hakemulder and Koopman, 2010, 45). Readers have also reported to have learnt more about the psychology of the character through free indirect speech than readers of the same story narrated also in the third person, where the same amount of information was shared, only in a different manner (Hakemulder and Koopman, 2010, 55). Hakemulder and Koopman emphasize the significance of reader variables in narrative comprehension but maintain that the style of the narration also contributes significantly to the readers' experience, and it probably interacts with reader variables (Hakemulder and Koopman, 2010, 56) in complex ways. Free indirect discourse occurs often in the narratives that I will analyze, and it possibly takes part in building the effect these narratives have on readers.

2.3.2.1. Disnarration

Besides first person narration and free indirect discourse, there is one more manner of storytelling that may significantly influence the readerly experience of the stories that I will examine. Gerald Prince examined a particular phenomenon in narration, which he termed *disnarration* (Prince 1988). This is a category of storytelling that "covers all the events that do not happen but, nonetheless, are referred to (in a negative or hypothetical mode) by the narrative text" (Prince 1988, 2). Disnarration can be found in most of the narratives that I will examine, and in some of them, especially in Danielewski's *House of Leaves*, it has a rather significant role as well. According to Prince,

> alethic expressions of impossibility or unrealized possibility deonic expressions of observed prohibition, epistemic expressions of ignorance, ontologic expressions of nonexistence, purely imagined worlds, or intended worlds, unfulfilled expectations, unwarranted beliefs, failed attempts, crushed hopes, suppositions and false calculations, errors and lies and so forth (Prince 1988, 3)

all belong to this category. From the point of view of cognitive narratology, the weakness of the category may be that by definition it has too many subcategories. For instance, "ontologic expressions of nonexistence" and "false calculations" definitely have profoundly different cognitive backgrounds. In my analyses I will concentrate on a smaller number of subcategories, which potentially involve remarkably similar cognitive processes[59]. These are imagined or intended worlds, suppositions, and false calculations.

Prince argues that the disnarrated is not essential to narrative (Prince 1988, 4), which is obvious, if one imagines narrative as a series of events that took place in the past. On the other hand, if one accepts that narrative is to be understood as a mental structure, anything that is narrated, the organization of information in a narrative and the form it assumes can be of great importance besides the actual content or truth-value of the recounted events and experiences. Nevertheless, disnarration as a storytelling strategy describes various alternatives of what indeed happens in the diegetic world, and through this pluralization, necessarily creates (temporary or lasting) uncertainty. Prince claims that narrative "lives in certainty [...] And dies from (sustained) ignorance and indecision" (Prince 1988, 4). Consequently, the more disnarration a text includes, the more it loses from its narrativity (Prince 1988, 4).

[59] Empirical testing of the background of these mental structures and processes is unfortunately beyond my capacities, although I would find it intriguing and important to refine the category and functions of the disnarrated through the consideration of the theories of cognition.

As for the functions of the disnarrated, I believe, it can be connected to the effects of narration that I have previously outlined. For instance it can "become a rhythmic instrument by regularly slowing down narrative speed" (Prince 1988, 4), therefore facilitate a slower reading, where the reader is more inclined to get immersed and gain a deeper understanding and feel more empathy about the characters of the story. What is probably even more significant in the present dissertation, the disnarrated may also function as a device of characterization

> [s]ince it frequently consists of hopes, desires, imaginings and ponderings, unreasonable expectations and incorrect beliefs, since it depicts what is not or what is might be and is often linked to carelessness, ignorance, or limitations resulting from insanity, delirium, an obsession, a psychological trauma. (Prince 1988, 4)

Prince also states that the "disnarrated provides one of the important means for emphasizing tellability: this narrative is worth narrating because *it* could have been otherwise, because *it* usually is otherwise, because *it* was *not* otherwise" (Prince 1988, 5). However, he also assumes that the disnarrated highlights the fact that

> narrative is not only a matter of counting, accounting, and recounting, but also one of discounting. It insists upon the ability to conceive and manipulate hypothetical worlds or states of affairs and the freedom to reject various models of intelligibility, of coherence and significance, various norms, conventions or codes for world– and fiction-making. (Prince 1988, 6)

This is an especially important aspect when it comes to conceptualizing narratives as cognitive structures. In my understanding, in the case of the analyses that will follow, the disnarrated is not less important than any other part of the narration, in fact, to me it emphasizes the overall importance of plans, imagination, and even the miscalculations and other deficits in human cognition, which accompany the experiences that I will investigate in the second half of this thesis. These are not less important factors and content of our mental life than memories of what actually happens to us.

2.3.3. Space in Narratology and in Neuropsychology

Narrative space has been a neglected category[60] in the earlier phase of modern narratology, as it was judged to be an aspect inferior to time. It had been traditionally regarded as an intranarrative component: the spatial characteristics of the narrative world where the story is set. However, it has been recognized as being more relevant in the construction of narratives than it was previously assumed (Herman 2010, 712).

Conceptualizing narrative as a text-type, as opposed to argumentation, listing, or descriptions may altogether be on the wrong track. On the one hand, because as Genette states in connection with the two types of representation[61], the different forms of representation can be blended together (Genette in Herman 2002, 266), and on the other hand, because it favours language at the expense of other media. Mikhail Bakhtin's concept of the chronotope, or space-time, developed in his study, "Forms of time and of the chronotope in the novel" (1981) is on a similar track, and Elena Gomel also follows this logic when she claims that "[t]here is no separate space and time at all but only spacetime, a unified medium of the universe" (Gomel 2014, 3). According to Greimas, narrative space "involves quite complicated inferencing techniques and […] plays a crucial, not a weak or derivative, role in stories" (Herman 2002, 268).

In postclassical narratological theory and especially in cognitive narratology, narrative space has necessarily gained more attention in new ways. In Herman's conceptualization, doing research on narrative space means examining "the role of space in narrative, as well as the role that narrative plays in helping create mental representations of space" (Herman 2002, 263). During the reading process readers "spatialize storyworlds into evolving configurations of participants, objects, and places" (Herman 2002, 263). The task of the cognitive narratologist is to examine the way this spatialization is carried out. According to Hilary Dannenberg, the bodily experience of space is an underestimated but crucial factor in literary works. As she begins her explanation,

> the bodily experience of negotiating and perceiving space underlies many sense-making operations, including the comprehension of time. The negotiation of space is one of the first orientational steps in life any human being must undertake; this knowledge is used to make sense of or metaphorically "map" other experiences. (Dannenberg 2008, 65)

[60] Although space itself shortly became a very popular object of study in the second half of the twentieth century. See more on this topic in Löw (2016), Lotman (1972).
[61] Those of actions and events vs. those of people and objects.

Space and time — the experiential dimensions which cannot be wholly separated — have lately become important objects of narrative theory. The two are intertwined and presuppose each other, and, as Teresa Bridgeman observes, they are to be understood as essential constituents of the "fabric" of narratives as they fundamentally influence our understanding of fictive worlds (Bridgeman 2007, 52–53). Spatial imagery has inspired the work of Hilary Dannenberg, who studies the theories of image schemata as skeletons of plot patterns[62]; for instance, she considers the metaphors of PATH or CONTAINER in terms of plot line or the setting of the story. Dannenberg has examined "the ability of narrative texts to re-create the schemata of real-world orientation learned and performed by the human mind and body in its cognitive interaction with space" (Dannenberg 2008, 75). Dannenberg also claims that spatial schemata have a vital role in the reader's immersion in the text (Dannenberg 2008, 65). Peter Brooks detects dynamics and movement in narratives in his study[63], *Reading for the Plot: Design and Intention in Narrative* (1984), when he claims that the reading of a plot brings about a "narrative desire" that drives us onward towards the ending of the story.

What I plan to examine in the second part of in this thesis is the constitution of space and movement on the story-level as well as traces of spatial experience in discourse structures. The embodied experience of space and movement is a central theme in neuropsychology, while it is also an important concern of narrative theory. In the following section I will briefly overview some findings of neuropsychology, which might help reconsider or enrich some concepts of literary theory.

2.3.3.1. Perception(s) of space

To fully understand the phenomena that this dissertation seeks to investigate, it is important to know the basics of the perception of space. This section will serve this purpose and briefly explain the nature and some of the functions of the way humans make sense of space as these processes are conceptualized in the neuropsychology of perception. As it will hopefully become clear, this level of human cognition is significant in the processes during which we make sense of narratives as well.

As experimental psychologist Susanna Millar points it out, the principles of spatial coding are extremely difficult to trace (Millar 2008, 3) partly because there are diverse sources from which we gain information as regards to space. On the other hand, to

[62] This view, while it is on the right track, seems to somewhat misunderstand the nature of image schemas, by disregarding the fact that they are extremely flexible and dynamic.

[63] Although his is a psychoanalytical approach which originally probably did not conceptualize these phenomena with spatial cognition in mind.

understand the way we gain and process information about space, movement (Millar 2008, 12) is important in probably more fundamental ways than we have previously assumed, as it has become apparent in Gibson's ecological theory of vision. Vision is important when it comes to the construction of spatial experience, but it is only one of a number of sources that contribute to the sensing of space. I chose not to focus on vision because it already seems to be highly overemphasized at the expense of the other senses, and some even claim that it provides a false metaphor for perception itself altogether[64].

What I wish to focus on is nonvisual perception. Besides vision, spatial judgments are made based on inputs coming chiefly from touch and hearing among the five senses. Besides these, lesser known ways of sensing also contribute. I find these senses to be potentially important but overlooked contributors to the construction of characters and, through them, narrative space and narrative discourse as well. This kind of logic is in line with Monika Fludernik's theory of natural narratology, according to which there are no narratives without a human or anthropomorphic experiencer, and also with Barbara Tversky's conceptualization of mental spaces which "[subserve] thinking in many other domains" (Tversky 2005, 24), such as emotion, language, or other forms of interpersonal interaction.

The vestibular system, which is located in the inner ear, collects information about balance, chiefly by monitoring the position of the head, and it is "the dominant system with respect to sensory input about our movement and orientation in space" (Evans and Chilton 2010, 26). This sense can be regarded as primary because it "is, in phylogenetic (i.e., evolutionary) terms, one of the first systems to have developed. In ontogenetic (i.e., developmental) terms it is the first to fully develop, by six months after conception" (Evans and Chilton 2010, 27).

The haptic system, another contributor of spatial experience, is a complex system of perception, which "includes the combined sensory input from the receptors for touch in the skin and *proprioception receptors*" (Evans and Chilton 2010, 28). Proprioception is the sensing of one's own body. It is such an essential sense that in fact we experience it as more of an ability[65], which allows one to be aware of the position, posture and location of different parts of one's body even without seeing them. "To get a sense of how it functions close your eyes and then touch your nose with a fingertip. Your ability to do this comes from proprioception" (Evans and Chilton 2010, 29).

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[64] It is one of the main tenets in Alva Noë's monograph, *Action in Perception* (2004).

[65] Although it is possible to lose this sense, an important account of such a case was written by Oliver Sacks in *The Man Who Mistook His Wife for a Hat* (1999) under the title "The Disembodied Lady".

Since different sensory modularities contribute to the construction of spatial experience, it is logical that space for humans is not a seamless unit in which individuals exist. When it comes to embodied experience, spatial processing can be classified into two categories based on the origin of the information from which the experience is built. Egocentric space is made up by information that comes from our bodies, for instance proprioception or touch, while the information making up the broader category, allocentric space, comes from external sources which one senses through hearing or seeing (Kállai et al 1998, 83).

Between these categories of the experience of space, there is a dynamic relationship: the structure of the allocentric space, which is one's immediate environment, is understood and constructed through the individual through his or her egocentric filter (Kállai et al 1998, 84). These are the parts that make up the cognitive map, which is to be imagined as a constantly monitored, map like representation, the main function of which is to maintain the conceptualization of the current spatial position of the individual and his or her environment (Kállai 2013, 46).

The cognitive map constantly includes the perceiver as well as his or her environment (Kállai 2013, 58), in line with the way second generation cognitive theories imagine embodiment, there is no clear distinction between the self and the world in this scheme (Kállai 2013, 59, Kállai et al 1998, 99). Not unlike numerous other cognitive processes which have long been imagined as unified and consistent[66], cognitive maps, "appear to be fragmented, schematized, inconsistent, incomplete and multimodal" (Tversky 2005, 9). Millar points it out that the "perceptual systems have evolved to detect information actively" (Millar 2008, 16). According to this thought, 'dynamic' is indeed a key word in understanding spatial experience, moreover, there are cognitive processes and states which can modify, in some cases distort our spatial experience, such as events which are heavy with emotions.

2.3.3.2. Space, conceptualization, and language

Our spatial experience is claimed to be largely responsible for cognition on a formal and structural level, and if narratives are to be understood as cognitive structures, spatial experience must also be traceable in their form and structure, too. This understanding of cognition apparently rejects the idea of cognition as symbol manipulation, as first-generation

[66] Such as the processes of memory.

cognitive science imagined it, for instance the idea of *Mentalese* (Vecsey 2010), which is to assume that cognition works similarly to language, according to the logic of syntax in particular. There is undoubtedly a strong relationship between language and thought but instead of imagining lower level cognitive processes working according to the complicated principles of abstract ones, theorists of second-generation cognitive science, who place the emphasis on embodied experience, imagine abstract cognitive processes as being built on and feeding from lower level, simple cognitive processes.

One of these fundamental, low level processes is arguably the construction of spatial experience and orientation in space. This process, the working of "the first sense" both in evolutionary and in individual development (Evans and Chilton 2010, 27) plays an important role in cognition before the developing of symbolic language, because according to this approach the infant starts thinking before he or she starts to learn speaking (Kállai 2013, 59). Preverbal conceptual representation is chiefly composed of information derived from the body[67] (Kállai 2013, 59). Importantly, as Kállai explains, the role of spatial understanding in preverbal representations is not to verbalize the concepts of spatial experience, but to make a foundation for the mental structures of linguistic organization, such as the logic of the concepts of "before" and "after"[68] which are basic organizing elements of our mental processes (Kállai 2013, 59). Among other roles, sensorimotor schemas organize perception and direct action, take part in switching perspectives, and adaptation (Kállai 2013, 59). Symbolic representations such as language are built on these schemes, while there remains a lower level of all symbolic interactions with the world that is ruled by the same principles. Concepts of mechanic motion, collision, touch, and many more (Kállai 2013, 60) are basic underlying principles of logic for symbolic language as well. In this sense human mental development fundamentally evolves from spatial concepts, therefore our first concepts are not of objects but of spatial expressions such as "move" or "contain", which are not yet propositional (Kállai 2013, 60-61)[69].

Freudian psychoanalysis usually focuses on the one hand on the workings of high level, symbolic representations, and on the other hand, on content instead of form or

[67] Kristevan psychoanalysis or Kaja Silverman's theories (Silverman 1988), although often along different tracks, arrives at the same conclusion.
[68] This is also a good example for how space and time are inseparable concepts.
[69] Kristeva also theorizes spatial and corporeal foundations of symbolic systems, (acceptance) and projection (rejection), which also incorporate a spatial aspect through the concept of directionality, are the foundations of affirmation and negation in language (Kristeva 1982)

structure[70]. The theories of psychoanalysis are also highly interpretative and often impossible to test. Consequently, it is usually understood as an epistemologically completely different approach from other branches of psychology, for which empirical testing and repeatability are essential (Kállai et al. 1998, 168). A newer approach within psychoanalysis, represented most notably by Daniel Stern examines the development of the human psyche with a focus on the form of mental activities instead of their content (Kállai 1998, 168). Stern introduced the concept of vitality affects, which are, like most concepts of the preverbal, presymbolic psyche, not completely clearly defined. Vitality affects are imagined as non-reflexive, embodied experiences, chiefly understood as spatial and temporal structures, intensities, or forms such as crescendo, decrescendo, leaping, etc. (Kállai 1998,168). According to these findings of psychoanalysis, the development of the self is characterised by these preconceptual, experiential, embodied experiences instead of the traditional approach focusing on objects and contents of early memories (Kállai 1998, 168, Kristeva 1984). It is easy to understand the experiences that vitality affects refer to as they are claimed to be best and most authentically represented by the modern artistic experiments that deconstructed the early essential forms and structures such as cubism or futurism (Kállai 1998, 168).

As has been mentioned, these early spatial experiences play a vital role before and during the development of symbolic language. One way of connecting this branch of psychoanalysis and neuropsychology with linguistics is through the theory of image schemas, one of the most successful areas of research in cognitive linguistics. As Mark Johnson claims, in general "there's no thought without a brain in a body in an environment", and it "applies to all forms of symbolic human interaction and expression" (Johnson 2005, 16), which renders the conceptualization of space and the role of spatial understanding in conceptualization a primary aspect of cognition.

As explained in *From Perception to Meaning*, image schemas are one of the most important embodied anchors of the human conceptual system. Image schemas are "directly meaningful, highly schematic gestalts, continuous and analogue patterns beneath conscious awareness, prior to and independent from other concepts; internally structured and highly flexible" (Hampe 2005, 1-2). They are mental structures "between perception and conception" (Hampe 2005, 7), they are below our conscious awareness (Johnson 2005, 21),

[70] Lacan famously stated that the unconscious is structured like a (foreign) language. Therefore, he did theorize the structure of language and the structure of the psyche, although he referred to structures of structuralist linguistics, which are quite different from the structures of embodied cognition.

however they are often traceable in directly available mental processes as well, for instance in the structures of a written paragraph as Kimmel has argued (Kimmel 2009). Or on the level of larger pieces of narratives, and perhaps in complete narrative discourses, as I will attempt to demonstrate.

However, in linguistics they are most often examined in conceptual metaphors, which are observable in smaller units of language, and which are one of the most accepted examples of how it is possible for us to employ the logic of our sensorimotor experience to perform high-level cognitive operations (Johnson 2005, 26). It is important that image schemas are "psychological entities, not only linguistic fictions" (Gibbs 2005, 114). According to Raymond Gibbs, they are "best understood as experiential gestalts that momentarily emerge from ongoing brain, body, and world interactions" (Gibbs 2005, 115). They remain embodied too, in the sense that they "provide a kinesthetic feel" (Gibbs 2005, 119), and they are "continually recreated and re-experienced during cognitive and perceptual activity" (Gibbs 2005, 132).

A great example for the working and the nature of image schemas is provided in Tim Roher's study, where he discusses the empirical evidence for these mental structures. It is worth quoting at length:

> *I want to hand you an idea that at first may seem hard to grasp, but if you turn it over and over again in your head until you finally get a firm handle on it, it will feel completely right to you.* Now, if I could make a movie of what your brain was doing as you read that last sentence, it would most likely look very similar to a brain movie of you turning an unfamiliar object over and over again in your hand until you found a way to grip it well. Your primary motor and somatosensory cortices would be active in the areas mapping the hand and the wrist, and the premotor and secondary somatosensory hand cortices would also be active. (Roher 2005, 166, emphasis in original)

This example and its explanation are important because they show how symbolic meaning emerges from simple embodied experience and how the comprehension of the example sentence involves parts of our brains that were traditionally believed to have nothing to do with language comprehension. Indeed, one of the most important results of such experiments is the finding that "language makes much more use of the brain's processes of spatial, visual and mental imagery than previously thought" (Roher 2005, 166).

Since "image schema reasoning in narrative comprehension seems to involve the construction of embodied simulations" (Gibbs 2005, 130), considering their role in narrative

understanding is primary. The theory of image schemas may also be crucial in the project that Schneider recommends, namely the reconsideration of the conceptualization of schemas in narratology so that we may understand them as more dynamic (Schneider 2017, 489) and more directly connected to embodied experience. Although Schneider mentions only genre schemas, which is closer to hermeneutics than cognitive science or neurology, mental structures on different levels of narrative understanding also have to be considered. Mirror neurons, one of the most popular theories of the past few decades in neurology may also become crucial in this understanding if we consider the fact which Schneider seems to miss, that is to say these neurons fire not only during the processing of visual input but during hearing or even reading as well (Schneider 2017, 486).

2.3.3.3. Disorders in Spatial Experience

To understand the role of spatial experience in cognition in general is to understand the significance of the potential deficits that may occur in the perception and processing of spatial information. Besides the obvious medical consequences, these deficits may potentially involve problems of cognition in general, and possibly narrative intelligence as well. The construction of the spatial experience and the cognitive map is also crucial to understand the ways they can become disordered. Spatial representation is a complex web of different, more and less abstract systems that are normally all interconnected (Kállai 2013, 43). However, since our mental image of our own body and its environment is built of elements, they are prone to falling apart, and functions that are normally synchronized might become dissociated (Kállai 2013, 43). If such a thing happens, besides the disorders of the visual representations it is not uncommon that the body schema and the body image becomes deconstructed as well, for instance sensing one's own body may change radically (Kállai 2013, 68).

Space can become subjectively distorted due to problematic mental states or illnesses. The problem can be the inability to acquire new information form the allocentric space, which means the inability to update one's current cognitive map or the structuring of a new one (Kállai 2013, 68). For instance, serious anxiety may cause asymmetry in the construction of the egocentric reference system (Kállai 2013, 72). Panic attacks entail a radically narrowed attention, which focuses less on the environment and more on one's own body, and simultaneously, a lack of exploration (Kállai et al. 1998, 122). The consciousness of a person suffering from a panic attack is chiefly filled with spatial information derived from

their own body and their egocentric space. The deficits of spatial experience are traceable in various linguistic, visual, motoric, proprioceptive perceptual types of deficits, disorders of representation, and in the inability to switch spatial frames of reference (Kállai 2013, 70). Many of the phenomena that are potentially influenced by the problems of spatial experience, are fundamental concepts in narratology such as perspective, (narrative) space, or the overall system of interconnected mental functions that is behind a coherent experience.

2.3.3.4. Embodied Emotions: Fear and Anxiety

The focus of my dissertation is on the embodied experience of space and motion and the effect these fundamental experiences can have on narratives. Navigating in space and the feeling of gravity holding us in a vertical position are experiences on which our conceptual systems are based. However, this process of structuring works the other way around as well: human experience of space can be extremely subjective, as it can be influenced by the state of mind of the experiencer. On the other hand, fear and anxiety are often connected to space. For instance, "agoraphobic fears", which include fear from large open spaces as well as claustrophobia (Öhman 2008, 711) are among the most important factors of fear altogether. But space is also important when our conceptual frames automatically get reconsidered in the presence of danger due to which places that were previously occupied safely become "mentally tagged" as dangerous, and places such as closets are suddenly regarded as safe places to be (Tooby and Cosmides, 2008, 118). Therefore, spatial experience and the experiencer's state of mind mutually influence each other in complicated ways.

The majority of the stories that I will analyze are very similar in the sense that they are concerned with negative emotions, especially different kinds of fear and anxiety. In the stories that make up my corpus these emotions appear as dominant and embodied central phenomena that heavily take part in the make-up of the narrative. In this part, I will outline the way they are conceptualized in my method.

"Fear and its close ally, anxiety" (Öhman 2008, 709) are similar but distinct emotions. Both are anticipatory emotions concerned with danger or some kind of threat (Miceli, Castelfranchi 2015). However, while the object of fear is danger, which may or may not be uncertain, in the case of anxiety, the core of the emotion is the contemplation of an event or a situation that can lead to an indeterminate threat (Miceli, Castelfranchi 2015). Importantly, in anxiety there is "a mixture of, and conflict between, fear and hope [as] anxious people […] anticipate both positive and negative experiences, and typically 'oscillate' between them"

(Miceli, Castelfranchi 2015). From an evolutionary perspective, undetected danger can be a very costly thing, hence it seems that "it is likely that perceptual systems are biased toward discovering threat" as early as possible (Öhman 2008 712). In fact, this bias for threat, may be responsible in some cases for having anxiety for an extended course of time (Öhman 2008 718).

Fear may entail different reactions such as escaping, fighting, or becoming paralyzed. As for anxiety, "the nature and location of the threat remain more obscure and thus are difficult to cope with by active defensive maneuvers" (Öhman 2008 710), and it can be

argued that in general "when coping attempts fail […], fear is turned into anxiety" (Öhman 2008 710). Another general assumption is that "if one doesn't know what he or she is 'afraid' of, he or she is experiencing anxiety, not fear" (Miceli, Castelfranchi 2015).

Fear and anxiety are parts of a healthy life, yet clinical forms of these emotions exist, such as post-traumatic stress disorder or phobias. The narratives that I am about to analyze are often centered on very strong or even clinical forms of these emotions. Compared to healthy fear and anxiety, their pathological version is "more recurrent and persistent; […] its intensity is unreasonable, given the objective danger or threat; […] it tends to paralyze individuals, making them helpless and unable to cope; and […] it results in impeded psychosocial or physiological functioning" (Öhman 2008, 710).

As I will try to demonstrate, these emotions and the spatial experience that they are in connection with have a strong influence on narratives, which is observable and also influential in the reading process in characterization, narrative techniques, and on the level of discourse structures as well. Overall, I believe, the stories that I am about to analyze are particularly potent in engaging readers emotionally and they may even have an effect on a bodily level through their mode of narration and discourse structures. On the other hand, these significant aspects and parts of stories do not affect the reader in and of themselves, but in interaction with other characteristics of the story as well as numerous reader variables. Since the structures that I will discuss in this dissertation are strongly connected to preverbal and presymbolic levels of cognition it is very likely that they only provide what I have called a "raw material" for meaning, a feeling of atmosphere rather than clear symbolic meaning or easily reportable opinion about the given literary works, which are quite ambiguous and confusing on the level of topic and events as well. These components of the production of meaning in fact may contribute to the meaning in a negative way: hindering the construction of symbolic meaning or making it impossible altogether.

PART II. NARRATIVES IN MOTION: NEURO-NARRATOLOGICAL SPACE IN LITERARY ANALYSES

CHAPTER 3. Embodiment, Materiality and Mediality in Vladimir Nabokov's *The Original of Laura*

"I believe in stressing the specific detail;
the general ideas can take care of themselves."
(Nabokov 2011, 48)

In the previous part, I have mentioned different approaches to the concept of space and the human body. This chapter seeks to provide a complex example of the approaches to human embodiment and materiality in literary theory, and an introduction to some of the most important concepts and phenomena with which this dissertation is concerned. In fact, it is a transitory chapter in several ways regarding its position between the theoretical and analytic halves of the dissertation, and between the concerns of embodiment from a social and a from a physiological perspective, not to mention that the examined work of art is also at a transitory stage. Through an analysis of Vladimir Nabokov's last, unfinished novel, *The Original of Laura*, I will touch upon the problems of the production of meaning, embodiment, characterization, and even neurology. Unlike the rest of the narratives that I will examine, *The Original of Laura* is a work of fiction in the case of which the process of its creation is quite important; therefore, I will discuss the circumstances of its publication and its reception before analyzing the work itself.

In his diary Nabokov first mentioned writing this novel on the 1st of December, in 1974, under the title *Dying is Fun*, and he kept working on it until his death in 1977 (Leving 2011, 199). After the first title, the manuscript was retitled *The Opposite of Laura*, and eventually *The Original of Laura*. The plot of the protonovel is truly fragmentary and misshaped. This work is especially important because it allows one to see some of the concepts that I will apply in this dissertation in a literary work that is in the making.

An elderly, overweight professor, Philip Wild is married to a young and unfaithful woman, called Flora. While Flora keeps lovers, her husband's source of pleasure is a peculiar practice of meditation, where he wipes out a mental picture of his aching, aging body. Wild writes notes about his experiences while one of Flora's lovers, an author of fiction writes a novel, "a maddening masterpiece" (Nabokov 2011, 246) entitled *My Laura* about their affair.

These are two incomplete novels within *The Original of Laura*. The lover "destroys" Flora in the act of portraying her in his novel. The two plot lines (the lives of Flora and Wild) are not quite connected, in fact, after a few chapters, the whole text becomes more and more fragmented and disorderly, and towards the end, some of the cards have only one or two lines on them.

The protonovel is mainly about different forms of creation and destruction, composition and decomposition. There are at least two novels inside it caught in the process of creation; the life, death, and rebirth of the characters are repeatedly presented literally as well as in several acts of portraying them in the novels, or in paintings, or in their own imagination. Regarding the characters, as Bozovic puts it, the work is full of "characters dying of love or loving to die" (Bozovic 2011, 5). The "original" nature that the title addresses shows the quality of being a source, of being endlessly productive, not by determining a point of origin but by offering an infinite potential of creation, not unlike the alphabet.

When the posthumously published manuscript of *The Original of Laura* was published in 2009, it was harshly criticized because its sparse, fragmented text and misshaped narrative are unusual in the oeuvre, and supposedly not worthy of it. However, I see *Laura* as an exceptional work of art, which problematizes several aspects of narratology and mediality in a systematic manner, rendering the work an example of what Wolfgang Hallet calls the "multimodal novel" (2009). As far as narration is concerned, characters, and the plot itself are caught between getting removed and (re)created. As far as materiality is concerned, the pages of the volume are perforated, inviting the reader to rearrange the manuscript. As Hallet explains, "'meaning' can no longer be explained as resulting solely from natural human language" (Hallet 2009, 139). Intermedial and transmodal ways of meaning-making show how meaning is made across (and simultaneously through) a variety of different semiotic symbol systems, media and generic modes, and how a combination of modes and media can result in integrated meaning (Hallet 2009, 139). It is a crucial aspect of the multimodel novel, but, as I will demonstrate in the rest of the analyses, it can be found in other genres as well.

I will not deal with ethical questions or the place of the novel in Nabokov's oeuvre as much of the critical corpus does, much as it would be justified for the numerous themes that are typical of his works: chess, nymphets, Russian emigration, or the theme of the unfinished manuscript of a masterpiece[71]. What I plan to do is tracing the way(s) the protonovel engages

[71] The last work of a great artist is already of crucial importance in *Pale Fire* (1962).

the reader in the creation of meaning(s), which is especially fascinating in this case since *Laura* cannot be considered a story. It can be completed by the reader due to the editing and designing but when it comes to close reading, it is but a set of panels, themes, and structures that do not add up to a discourse that is in any sense complete. I will examine its motifs of fragmentation and disappearance, rewriting and recreating to examine its structure, which is provided by parallel mechanisms of its (inter)medial, narrative, and textual characteristics, often intertwined with peculiarities of corporeality. In my view, despite the allegedly opposite intention of the author, the text does have plan and a design worthy of positive critical response as well as elaborate examination especially concerning human embodiment and cognition.

The exquisite edition of *The Original of Laura* by Knopf finally came to light in 2009. It was edited by Dmitri Nabokov and designed by Chip Kidd, a famous American graphic designer. It invites the analysis of the various semiotic media, i.e., image, mental image, text, paper, human body, the nature of which *Laura* exploits, placing the stress on the play between different modes and media in order to determine the reader's (inter)medial encounter with the novel. According to Hallet, multimodal novels "introduce the materiality and technology of 'sign', 'language' and 'text', i.e. paper, colour, ink, print, handwriting, font-types and so forth. Thus, a multimodal novel will often contain a number of texts and passages which are not in 'regular' print" (Hallet 2009, 146). Such material aspects are all important features of the reading experience of *The Original of Laura* since the "emphasis on the materiality and mediality of signification brings to the reader's mind an awareness of the processual character of discursive practices with their conditions, obstacles, and dangers, and the impact of the material side of cultural signification on meaning" (Hallet 2009, 146). In this respect *Laura* is an ideal multimodal novel to examine the reading process, the production of meaning, and human embodiment and cognition.

The "novel in fragments" consists of 138 handwritten index cards, which, especially towards the end, amount to a mass of notes, making up no singular plotline. The whole text is less than 10000 words (Hetényi 2015, 819). The harsh welcome the protonovel met after its publication is mainly due to the misconception that it would be another Nabokov novel that shows the stylistic and structural quality of his earlier stories. The romantic myth of the author renders *The Original of Laura* unworthy of publishing in the majority of its reviews. "[T]here's not enough of it to be properly reviewed," and it is just "frustrating to read," claims David Gates, a reviewer for the *NY Times* (2009). Moreover, Nabokov clearly stated that he wanted the manuscript burnt if it is not finished before his death; therefore, critics

often find its publication unethical: "Dmitri and the Penguin team have seriously and unforgivably betrayed Vladimir Nabokov.... With *Laura,* readers have been invited to rip into Nabokov quite literally," (Bozovic 2013, 212). Marijeta Bozovic also points out that

> [t]he implication is that Dmitri sold his aged, dying father at a time when his son should most have tried to protect and hide him from the world—that Laura exposes Nabokov not only because it is unfinished and unpolished, but because of his already diminishing powers at the time of writing: in other words, because of the embarrassment of old age. (Bozovic 2013, 212)

The Nabokov reception often tends to attribute an unusual amount of agency to the author[72]. He is often referred to as the genius, the maestro, even the legend: "The Nabokovian scholar has implicit faith in everything touched by the genius"; his creations and even their fragments are treated as relics (Bozovic 2013, 214), while his readers are quite often demoted to fans, inferior admirers. This is the attitude due to which it is taken as unethical to expose the aging Nabokov and his fading health: believing that his readers could not respect him in that state and would "rip him apart."

Polemics about the supposedly negligible literary merit of *Laura* as well as the ethical questions concerning its publication were loud, and Dmitri Nabokov, the author's son, heir, and translator was often personally criticized. William Skidelsky *The Guardian*'s reviewer states that "this book will have a more significant impact on the size of Dmitri Nabokov's bank balance than it ever will on the world of letters" (Skidelsky 2009). Zsuzsa Hetényi also claims that *Laura* is not a literary work, only the pupa of one (2015, 819). The disputes began long before the publication of the work and have not changed much after it (Bozovic 2013, 206), suggesting that the criticism of *Laura* often still has little to do with the protonovel itself.

It has to be acknowledged that besides Nabokov, numerous influences and persons have shaped *Laura,* such as Dmitri as well as the audience, or Chip Kidd, who designed the volume. The order of the index cards was decided by Dmitri, who seems to have accepted incompleteness as an artistic value. For example, the last card, which lists a bunch of synonyms for "death" ("efface, erase, delete, rub out, X, wipe out, obliterate" [Nabokov 2011, 300]) is not a part of the story, it is genuinely a note, and more than likely it would

[72] As opposed to the dominant tendencies of poststructuralism and postmodernism, sometimes there is no clear boundary between Nabokov's art and his biography. Apart from that, the old myth of the genius artist is also obvious in the assumption that exposing his unfinished work would hurt or "embarrass" the artist in any way (Bozovic 2013, 212).

have been discarded later, but here it is included and given a very important role as the closing line of the work. The perforated pages and the appearance of the volume were designed by Kidd, and some critics even claim that it was the publishing house that invented *The Original of Laura* (Bozovic 2013, 210). Last but not least, the plot is entirely to be constructed, or reconstructed by the reader, by reordering the cards and completing the narrative, which has numerous key parts missing. *Laura* proves an exceptional work from many aspects with an "intelligent book design built on a deep respect for the manuscript" (Anderson 2009), offering a rare chance to get a glimpse at the imperfect person behind the perfect artworks, which has a humanizing effect. As Sam Anderson observes, "[t]his glimpse shouldn't hurt his reputation; if anything, it should help" (Anderson 2009). When describing Nabokov, the storyteller, and the Nabokovian narrative, Brian Boyd observes that

> a Nabokov novel always intimates that the narrative is also something else, a strategy as much as a story: an image or a metaphor, a joke, a problem, a design, a playful puzzle, or a series of interlocking puzzles prepared by the author for us somehow to solve. The riddling strategy nevertheless arises out of the particular circumstances of the story, out of some special constraint or situation in the story, rather than being imposed on it arbitrarily, and is therefore different from work to work (Boyd 2011, 161)

In this sense *The Original of Laura* is a riddle or a puzzle (quite literally) for the reader to solve, the difference between other Nabokov novels and Laura is in the degree of interaction that the reader is expected to do.

2.4.1 Intermediality and Incompleteness in *The Original of Laura*

The Original of Laura is incomplete on several levels, and, in fact, in a rather structured manner, which is partly due to its design, editing, as well as its content. From almost every aspect the work is simultaneously in-the-making and in-the-unmaking. For instance, it is quite difficult to find out who would have become the protagonist of this novel. Furthermore, the characterization is also deliberately "blurry" in the work. Regarding Flora, "[e]verything about her is bound to remain blurry, even her name which seems to have been made expressly to have another one modelled upon it by a fantastically lucky artist" (Nabokov 2011, 110). In the novel within the novel, *My Laura* the main character is "a neurotic and hesitant man of letters, who destroys his mistress in the act of portraying her" (Nabokov 2011, 146). The reader encounters several perspectives; however, it is not clear on which one the focus would have been if the final version was created by Nabokov.

The story is abundant in various, mostly artistic acts of creation and deconstruction. There is always perseverance and pluralization in deletion and destruction, as well as death and dissolution in the act of rewriting. The novel thematizes these in parallel processes on several levels. The content heavily shapes the surface since, proving Deleuze and Guattari's point that the topic (of the manuscript) seems to have a strong influence on the mode of representation (quoted in Kérchy 2009), as well as on its media. For instance, the critic Anderson sees the novel's design as an intelligent invention that is integrated in the life and work of Nabokov (Anderson 2009).

The in-between nature of the novel requires a complex reading process, for in the creation of its narrative meaning significant roles are played by media other than language:

> While still relying to a considerable extent on the traditional language of the novel, multimodal novels incorporate a whole range of non-verbal symbolic representations and non-narrative semiotic modes. (Hallet 2009, 129)

A semiotic mode is "used in recognisably stable ways as a means of articulating discourse" (quoted in Hallet 2009, 129), such as the reproductions of Nabokov's index cards in *Laura,* as well as the fact that they can be taken out from the volume. Such "systematic integration of non-narrative elements" cannot be explained by the theories of paratext or complementary editorial elements, and they are not simply additional elements to the text of an otherwise traditional novel (Hallet 2009, 129-30). As Hallet argues,

> although these modes will be identified as originally non-novelistic, they do not in multimodal novels normally have a disruptive or disturbing effect on the reading process. Rather, readers will perceive them as an integral part of the novel and will thus incorporate them in their cognitive construction of the narrated world and narrative meaning. (Hallet 2009, 131)

One of my most important concerns in the remaining analyses will be phenomena other than language, and characteristics of texts and stories, which are difficult to pinpoint on the level of words. Hallet acknowledges the fact that they can play a crucial role in the production of meaning when it comes to interpreting a narrative. I am interested in the ways in which these phenomena can contribute to this process.

The perforation of the index cards renders their removal and reordering possible, therefore, by establishing a new order, the reader can create his or her own version of *The Original of Laura*, although the cards cannot be reinserted in the volume. The notes

constituting half of the "novel in fragments" both represent a mode different from the printed text and thematize the process of writing. It is the form of writing that is halfway between making something permanent and cancelling something: "the note (that we write to remember, to know something) is [also] a place of non-knowledge, the place where we undo ideas" (Piper 2010). The very physicality of the book is one of its features that make the usual reading process impossible: the process-like nature of the production of meaning seems to be stripped to its bits and fragments, potentially stretched into infinity by the repeated acts of deletion and falling apart on pages that are supposed to be taken apart. Miles Beller, commenting on the binding of the volume, goes as far as claiming that it is "literature as sculpture" (Beller 2011, 367) due to its physical quality and strong visual effect.

2.4.2. Embodiment in *The Original Of Laura*

The human body plays an immensely important role in the story. The book is permeated by embodiment, especially by the sexualized and the sick body, actually the whole work is a "sketchy skeleton" (Hetényi 2015, 820). In fact, as Hetényi observes, several of the words on the last index card are connected to the human body in one way or the other. The face is there in "efface," and the medical technique of expunge (the removal of pus) and wiping also kindle very vivid images of human embodiment in the reader's mind (Hetényi 2015, 829).

Representations and roles of the human body, and through them those of embodiment and cognition are not only emphasized but also problematized in the novel. The complicated relationship of text, image and body – and through these, embodiment intertwined with cognition – are foregrounded all through the novel. The bone structure of Flora is claimed to provide the structure for a novel: "Her exquisite bone structure immediately slipped into a novel—became in fact the secret structure of that novel, besides supporting a number of poems" (Nabokov 2011, 8). In fact, Flora's body is repeatedly fused and confused with literary texts: her sex life can only be understood by being identified "with an unwritten, half-written, rewritten difficult book" (Nabokov 2011, 11-2), and when she prepares to cheat during her exams at college, she writes many notes on her hands and arms. As Bozovic puts it, "[o]ne way or another, [her] body is all book" (Bozovic 2011, 7).

Hans Belting understands the images of our memory and imagination as phenomena, which emerge in our own bodies, rendering it a living medium (Belting, 2003, 15). Wild, and other similar characters are preoccupied solely with their own bodies and the

auto-dissolution of these bodies. Before turning his experiences into text by taking diary-like notes, a character named Delling uses his imagination to get rid of his body. He literally imagines pictures of himself, as if they were drawn on a blackboard and he wipes it off from the feet up. He sees this ritual as a kind of suicide. The body is the medium of this practice, as it is explained:

> The student who desires to die should learn first of all to project a mental image of himself upon his inner blackboard. This surface which at its virgin best has a dark-plum, rather than black, depth of opacity is none other than the underside of one's closed eyelids. (Nabokov 2011, 157)

The symbiotic relationship of the eyelid and the image gets further complicated by including the medium of written language: the very image he creates of himself is an intriguing mixture of text, image and corporeality:

> I then tried various stylizations: a Delling-like doll, a sketchy skeleton. Or would the letters of my name do? Its recurrent "i" coinciding with our favourite pronoun suggested an elegant solution: a simple vertical line across my field of inner vision could be chalked in an instant, and what is more I could mark lightly by transverse marks the three divisions of my physical self: legs, torso, and head. (Nabokov 2011, 160-2)

Besides foregrounding the corporeality of the characters, the novel also requires the reader to physically interfere with the book, when he or she takes out and reorders the cards, not to mention that the physical movements of Vladimir Nabokov are also preserved as his handwriting is incorporated in the final edition. Furthermore, the act of meditation and (re)mediation have a physical effect on the body of the character. Considering the role of the (mental) images in the novel, which, by definition, are copies or replacements of other entities (Szőnyi 2004, 9), we see that they display the power that is traditionally attributed to them, namely that images threaten the entity they represent with annihilation (Nabokov 2011, 185). In fact, since ancient times there has been an analogy between images and death (Belting 2003, 165). The image is a constructed, symbolic body that stands for our own, mortal body. Our acts of constructing images is a means of gaining agency and understanding concerning death, which is otherwise incomprehensible (Belting 2003, 167). In the novel destruction is always inherent in the act of depiction, and it usually also involves corporeality. This is how Wild explains his meditative act of auto-dissolution:

> I had always restored, on my mental blackboard, the symbols of deleted organs before backing out of my trance. Scientific curiosity and plain logic demanded I prove to myself that if I left the flawed line alone, its flaw would be reflected in the condition of this or that part of my body. (Nabokov 2011, 184)

Wild finally manages to produce bodily responses to his own mental practice as his toes become senseless when he does not completely restore the image of his body before he comes out of his trance:

> I scrambled out of the tub, landed the tiled floor and fell on my face. To my intense joy I could not stand properly because my ten toes were in a state of indescribable numbness, they looked all right, though perhaps a little paler than usual, but all sensation had been slashed away by a razor of ice. (Nabokov 2011, 190-2)

Belting claims that speech is closer to the body than writing because in written text the voice is missing (Belting 2003). Apparently, Belting talks about printed text as handwriting is itself the sum of the bodily movements of a person. Besides performing their poems, Russian futurist poets often worked with manuscripts instead of printed texts to keep themselves closer to the body. The identification of body and written signs can also be traced back to Russian symbolism and early futurism (Hetényi 2015, 825).

While, as previously mentioned, some claim that the protonovel's "scholarly interest far outweighs [its] value as art" (Bozovic 2013, 215), Anderson, reviewer of the *New York Magazine*, clearly enjoys reading the manuscript, going as far as to question whether it is really unfinished at all. He calls it "literary performance art, carefully engineered by Nabokov," and plays with the idea that Nabokov wanted his last novel to be published exactly as it was and that "[t]hose 30 years of drama, perhaps, were part of the work itself" (Anderson 2009). Without assuming that Nabokov himself, who was known to be obsessed with control when it came to writing, engineered it this way, I also see *Laura* as a piece to be performed, inviting the reader to participate. *Laura* is literally a sculpture to form or a puzzle to put together—and, as Hetényi points out, the recurring expression "delicious dis*solution*," (my emphasis) as a method, seems to include the solution to the puzzle, which is but the deconstruction and the reconstruction of a literary work, not unlike a demetaphorization of his writing practice (Hetényi 2015, 826).

TOOL becomes a tool not only for re-branding Nabokov as Yuri Leving claims (2011, 214) or a new tool of Nabokov Studies (Bozovic 2013, 216). Although Bozovic is definitely on the right track when she states that

> *Laura* provides a rich and useful resource for reading the ways that we read – from the frustrated close reading these fragments render impossible, to the distant readings that foreground publication and distribution over the text itself. In other words, *Laura* calls attention to itself as a material object and consumer product, and forces us to see all those things that Vladimir Nabokov *par excellence* was so remarkably good at obscuring (Bozovic 2013, 216).

Laura proves an excellent tool of depicting and understanding the complicated process of reading and interpretation. The "novel in fragments" may also be a tool for the author's own deletion, or dissolution, not unlike Wild's practice of meditation which obliterates and recreates him: the text has emerged while Nabokov was literally "disappearing"—dying. The "text-life continuum," as one of the reviews addresses it that often comes to surface in Nabokov novels is extremely significant in *Laura*, as the text and the author's life are clearly intertwined. One could even say that one of the chief Nabokovian themes, an unspecified transcendental domain seems to be embodied in *Laura*:

> There are phenomena and aspects of the world, . . . that can hardly be conceived of as, or translated into, verbal information. The incorporation of visual or graphic information in a narrative text is, in a sense, an admission of the limitations of verbal narration" (Hallet 2009, 147)

On the other hand, emphasis on embodiment as an object of natural science appears in the notes Nabokov made while he was working on the novel, about the workings of the brain and human consciousness, for instance there are notes about the functions of "an enk[c?]ephalin" (Nabokov 2011, 152). Wild, who is incidentally a famous neurologist, works at the *Ganglia* University (which is the plural of ganglion, a nerve cell cluster), and as for a more direct example, there is even a "Medical Intermezzo" about a certain surgical intervention that one of the characters needs to undergo (Nabokov 2011, 200). Wild actually attempts to come up with a new theory of cognition:

> I do not believe that the spinal cord is the only or even the main conductor of the extravagant messages that reach my brain. I have to find out more about that — about the strange impression of there being some underpath so to speak along which the commands of my willpower are passed to and fro along the shadow of nerves rather [than] along the nerves proper (Nabokov 2011, 218)

These parts of the literary work itself and of the notes show an interesting early example[73] of the type of novel that I will examine in the remaining part of the dissertation. Nabokov's protonovel seems to make understanding the roles of embodiment one of its central topics.

2.4.3. The Reading Process in *The Original of Laura*

In this case Dimitri and Kidd, as well as the reader have to be understood as the creators of *The Original of Laura* as much as Nabokov. The reader, as I have already stated**,** becomes an active participator, not only activator, but one of the producers of the work. Claiming that the reader can play Nabokov while reading *Laura*, Anderson finds the Knopf edition fascinating, as readers have the chance to experiment with the index cards the same way Nabokov probably did in the course of writing his novels (2009). But the reader can be conceived as the cooperator of the author(s), who is not only Nabokov, but Dimitri and Kidd as well. With the chance to reorder the index cards the reader is free to experiment with the narrative discourse. As Sean Burke claims, the birth of the reader is not exactly the death of the author, but the pluralization of the author (1998, 61). Last but not least, the plot is entirely to be constructed, reconstructed, or performed by the reader, by reordering the cards and completing the narrative, which has numerous key parts missing. In *Laura*, , "[t]he textual world that is created, and the narrative world that the reader constructs, are fed from a variety of semiotic resources which, on the reader's side, are perceived through different senses" (Hallet 2009, 140-41), for instance, the "narration leads . . . to a synchronization of reading and looking" (Hallet 2009, 142). In the course of writing and reading, or, as Hallet puts it, the "transmodal construction of narrative meaning" (Hallet 2009, 150) the reader is being written and read, as Attila Kiss explains *vis–à–vis* the postsemiotics of the (subject of the) reading process (Kiss 1995, 13). The corporeality of the characters maintains a dynamic relationship with images and text in the novel, and the same applies to the reader, as his or her liquidity becomes central instead of his or her liquidation.

Conclusion

The Original of Laura has been referred to as a creative laboratory (Leving 2011, 210), since it opens up Nabokov's writing process. In fact, it does much more. Taking into consideration

[73] *Laura* was published in 2009, but Nabokov worked on it in the 1970s, long before the cognitive revolution or neurology started to influence the arts and the humanities.

the pluralization of the author, the characters and the media and modes of the novel, the novel reads and functions as the laboratory of the reading process, which, as here it is emphasized, represents the writing process itself, including the creating and recreating of the author, the reader, and the text. And the laboratory stands for the consciousness where these processes take place.

The materiality of literature and the materiality as the object of literature become palpable through the semiotic media of the novel. Since the cards, of which the novel is initially constructed, make up a half-written novel (a rather early stage of writing a story), it shows the anatomy of the author's strategy, which, quite wisely was not coated later. The reader is invited to enter and interfere in a rare intermedial play that concerns text, paper, image, and embodiment both in its story and in the process of interpretation. Quite intriguingly many multimodal novels seem to "deal with the retrieval, discovery, restoration or reconstruction of lost or damaged artefacts and documents" (Hallet 2009, 146)—the chief problem that *Laura* thematizes from several aspects both in the diegetic and in the real world.

While some of the aspects discussed in this analysis are the concerns of corporeal narratology rather than cognitive narratology, I see this chapter as an introduction of several problems that I will deal with in the rest of this dissertation. I will come back to the problem of the reading process and possible phenomena which contribute to meaning-making in the analyses of other works, most notably in Don Delillo's *The Body Artist* and in the comparative analysis of Nabokov's *Invitation to a Beheading* and Edgar Allan Poe's "The Pit and the Pendulum". The possible roles of embodiment in narratives will be revisited in the examination of DeLillo's "The Ivory Acrobat". The problems of characterization are to be further discussed during the analysis of *Invitation to a Beheading* and Jonathan Lethem's *Motherless Brooklyn*. The genre of the multimodal novel will be revisited in the examination of Danielewsi's *House of Leaves*. Finally, what this analysis did not discuss, only touched upon, was the importance of neurology, neuropsychology, and sense perceptions in literary analysis. The following analyses will put more emphasis on these concerns.

Chapter 4. Sense perceptions and representation of consciousness in Vladimir Nabokov's *Invitation to a Beheading* and Poe's "The Pit and the Pendulum"

"How frightened I am. How sick with fright"
(Nabokov 2010, 67)
"I was sick - sick unto death with that long agony"
(Poe 1951, 231)

In this chapter I will analyse a rather early Nabokov novel and a short story by Edgar Allen Poe, with a focus on sense perceptions, and the embodied experience of anxiety and fear (of death). Nabokov's oeuvre is of special interest in my investigation. Reading his works is an experience for all the bodily senses. For instance, the quote from *Invitation to a Beheading,* "to breathe the dust of this painted life" (Nabokov 2010, 68) engages vision and smell, as well as the sense of the movements of breathing, not to mention physical pain. Martin Amis has claimed that Nabokov's prose is "[t]he nearest thing to pure sensual pleasure" (Nabokov 2010). One has the impression that Nabokov's texts are always colourful, dense, alive, and moving. Nabokov was an exceptional reader as well: he was a well-known synesthete, which means he experienced for instance a plethora of colours and textures when he read a text.

I plan to explore the modes in *Invitation to a Beheading* (first publication, in Russian: 1935-6) that engage sense perceptions and therefore create the peculiar nature of his texts. This novel can be read as social criticism (although Nabokov repeatedly claimed he never had the intention to tackle any problems on a social level), as a representation of a surreal world, but several of its scenes can also be interpreted as representations of experiences of a heavily corporeal nature, such as anxiety. Besides the author's astonishing techniques of depicting ordinary and synesthetic sense perceptions and his extraordinary vocabulary, the patterns of dynamic structures and mechanisms of human perception sometimes seem to structure and motivate the whole of his texts as well as the plots of his novels. My aim is to examine where sense perceptions are traceable in Nabokov's prose and what can their function be in a narrative when it comes to the formulation of *storyworlds* and the production of meaning. I aim at further developing the dialogue of cognitive science, neuropsychology, and literary theory to better understand the complex relationship of the human consciousness, body, and literary narratives.

One of my claims is that besides the author's techniques of representation of sense perceptions, and the vocabulary of his works, the patterns of dynamic structures and

mechanisms of perception may occasionally structure and motivate his stories even on the level of the plot, thereby contributing to the entirety of the production of meaning a reader carries out when reading his stories. I will also investigate the role of sense perceptions in the formulation of the characterization and the diegetic world of the novel through examining vocabulary and figurative language, and also what may be beyond them. I will narrow my focus to the representations, and the different potential roles of sense perceptions in the process of reading a Nabokov story. In the second half of this chapter, with the help of a comparative analysis with Poe's "The Pit and the Pendulum," I will examine how this understanding of the representations of Cincinnatus' sense perceptions and consciousness influences the way we make sense of the story, with special regard to its genre.

4.1. Embodiment, sense perception, and consciousness in Nabokov's works

Some Nabokov stories, despite the fact that they are obviously the result of very conscious writerly organization, planning, and styling, due to their topic, such as the problems of memory, fear and anxiety, and their strong focus on the consciousness of their protagonists reflect or represent universal characteristics of these states of mind, such as their temporal or spatial structure, or their embodied experiences of the represented events of the *storyworld*. As I will attempt to show, the representations of sense perceptions of the focalizing characters of these stories are sources for examining these narratological problems.

As for the reading process, during the interpretation of literary works the reader constructs a series of simulations. Even if due to their mediated nature we do not directly experience things when we hear, or see, or read about them, according to empirical evidence, we embody them through the simulation process (Barlassina and Gordon 2017). Cognition, and therefore language and narratives, are deeply and meaningfully tied to sensory and motoric bodily processes and to the environment. According to the theories of embodied simulation and readerly experience, several aspects of embodiment can motivate the construction of narratives and their interpretations. When it comes to sense perceptions, Marco Caracciolo's theory of understanding the "dynamics that [supposedly] tie together readers' familiarity with perception and their imaginative responses to stories" (Caracciolo 2014a, 93), explains that "people's imaginings can take on a sensory aspect, resulting in what is commonly known as mental imagery and sensory imagination" (Caracciolo 2014a, 93). Performing a mental simulation therefore involves quite simply "imagining undergoing

an experience" (Caracciolo 2014a, 94). As for the process of this phenomenon, as empirical evidence shows, the structure of sensorimotor patterns is the same in perceptual and simulated experience (Caracciolo 2014a, 95).

At the beginning of *Speak, Memory,* as he tries to recall his earliest experiences, Nabokov explains that memory, which, in his view works the same way as imagination, is often guided by perception: "In probing my childhood (which is the next best to probing one's eternity) I see the awakening of consciousness as a series of spaces flashes, with the intervals between them gradually diminishing until bright blocks of perception are formed, affording memory a slippery hold" (Nabokov 1999, 10). It shows that such supposedly abstract and disembodied cognitive processes as imagination, memory, or even the interpretation of a text and sense perception, a typically low-level cognitive process can be strongly intertwined. In fact, as has been mentioned, according to cognitive theories, narrative itself is an organizational principle for human experience. This is one of the occasions where embodiment and cognition visibly cooperate. After a brief discussion of the role(s) of embodiment and sense perceptions in Nabokov's prose, I will examine *Invitation to a Beheading* to see which parts of a story are capable of triggering a similar reaction in the reader and therefore contribute to the production of meaning possibly on a presymbolic level.

While in the analysis of *The Original of Laura* the writing and publishing process as well as the reception was of great importance, in the case of *Invitation to a Beheading*, it is more useful to have an overview of the way Nabokov used the themes of embodiment, sense perceptions, and consciousness in his works. In Nabokov's stories embodiment is an immensely important element in many respects. Themes related to sexuality or the problematization of identity through characters' bodies, among many others, are recurring in the *oeuvre*. Representations of sense perceptions, especially vision, are important and characteristic of his stories. Different images of reflections in water, in puddles, or patches of light that break through the foliage of a tree leave strong impressions in the readers and have an influence on the whole process of the production of meaning. In this section, I will consider examples from his work where embodied experiences play important roles.

As I have discussed in the previous chapter, in the posthumously published protonovel, *The Original of Laura* (2009), text, narrative, (mental) image, and corporeality are strongly intertwined: The bone structure of Flora is claimed to provide the structure for a novel (Nabokov 2011, 8) and her figure is repeatedly confused with literary text (Nabokov 2011, 11-2). The image a character named Delling creates of himself in the course of representing,

remediating, and obliterating his body is an intriguing mixture of text, image and corporeality (Nabokov 2011 D3-4 (160-2)). The mental image that is constructed, incidentally on the blackboard of the back of his closed eyelids, therefore becomes a combination of text, picture, image, and body. Therefore, interestingly, in the creation of the narrative meaning of Nabokov's texts significant roles are played by phenomena other than language, or the symbolic meaning of words.

It is crucial that Nabokov is always interested in the individual, in the representation of the consciousness of a character. He strongly rejected social or political connotations, as he claims in *Strong Opinions*, "I have no social purpose, no moral message; I've no general ideas to exploit, I just like composing riddles with elegant solutions" (Nabokov 2011, 14). Brian Boyd also notes that each of Nabokov's novels are driven by a character (Boyd 2011, 161) as the writer "constructs his stories to reflect the unique, unpredictable rhythm of an individual character's mind" (Boyd 2011, 174). Thus, Nabokov tends to build stories around the dramatic experiences that go on in a person's consciousness, apparently through very conscious narrative composition, but embodiment also has a crucial role in unconsciously shaping consciousness, hence narratives. In my analysis I will treat sense perceptions as parts of the human (or, in this case, the characters'[74]) consciousness.

Focusing on the reader with the evolutionary cognitive poetics' approach Brian Boyd claims that we have an "avidity for pattern," stating that in general the human mind delights in finding patterns (Boyd 2011, 324), moreover, the very act of getting engaged in reading (for example finding patterns) matters before creating the meaning of a particular piece of fiction (Boyd 2011, 325). But the discovery of a pattern can also be understood as a contribution to the production of symbolic meaning.

The patterns of consciousness are also easily observable in *The Defence*: as Caracciolo explains, this novel gets readers *to* "*engage* with [Luzhin's] consciousness," as opposed to simply understanding or categorizing it, as he submerges himself in the "chess world," a virtual reality that restructures his consciousness as he internalizes it. It is only possible through the representations of Luzhin's experiences, among which his perceptions, e.g. what he sees and how he interprets it play an important part. Luzhin's story can be read as "an allegory of the relationship between narrative patterns and experience" (Caracciolo 2014). I am currently looking for different roles for these patterns in a Nabokov story. Through sense

[74] In this respect I share the idea that the representations of literary characters' experiences potentially share the structures and patterns of real people's experiences (Bortolussi and Dixon 2003, 140).

perceptions one can have access to the consciousness of the protagonist, which, in my analysis, may organize the whole narrative world for the reader to engage with. It is important to keep in mind that there are always more than one sense engaged at a time, and that there are more than five senses (such as the sense of balance or pain). In the following section I will examine how senses and perceptions contribute to building narrative meaning in *Invitation to a Beheading*.

4.2. Liquidity, current, and "the idea of revolution"

In order to show how sense perceptions can become significant in a story, I will examine examples from the vocabulary, characterization, the construction of the time and space of the *storyworld*, as well as the narrative dynamics of Nabokov's novel. I also aim at tracing the potential experience these phenomena elicit from the reader. I am developing an idea of a dynamic, changeable plot structure, which in fact, fits the way Nabokov saw reality: as an elusive and unattainable thing[75].

In *Invitation to a Beheading*, through twenty chapters and twenty days we follow the experiences of the protagonist, Cincinnatus, who is sentenced to death. We witness his last days, or, I should rather say, the last days he spends in the (seemingly) absurd, theatre-like, nightmarish world where he does not belong. In my analysis I will attempt to examine what different representations of sense perceptions allow the reader to learn about the consciousness of the focalizer character and how they contribute to the overall readerly experience of the narrative. In the second half of the chapter, through a comparative analysis of the protagonists' sense perceptions and other embodied experiences in *Invitation* and Edgar Allan Poe's "The Pit and the Pendulum," I will claim that the scenes of the novel, which are traditionally interpreted as absurd, can be understood as defamiliarized representations of quite ordinary embodied experiences.

Sense perceptions

The importance of sense perceptions in the story is obvious if one observes the passage where Cincinnatus is led to a terrace on the top of the tower to look around. As they march

[75] In *Strong Opinions* he explains the different views of reality and the problem of its imitation (Nabokov 2011, 101-102) and points it out that "[w]hatever the mind grasps, it does so with the assistance of creative fancy" (Nabokov 2011, 131), therefore dismisses the idea of a unified, objective reality in favour of subjective, unstable versions of reality.

up, the narrative space around the characters is entirely built by the descriptions of the light or the lack of it:

> Here and there it was necessary to turn on a light; a dusty bulb, up above or at the side, would burst into bitter yellow light. Sometimes, also, it would burn out, and then they would shuffle on through dense darkness. At one spot, where an unexpected and inexplicable sunbeam fell from above and glowed mistily as it broke on the eroded flagstones […] (Nabokov 2010, 26)

The sight (or the lack) of rays of sunlight, the light of sunsets and the moon repeatedly appear and take part in forming the atmosphere, the mood, and the overall meaning and experience of the story. The novel also repeatedly drives our attention to the perceptions of different kinds of the sight and feel of water and other liquids. Besides water, vaporized and melted liquid 'qualities' are extremely important on different levels of the story. For instance, when the Tamara Gardens and the sight beyond them are first described as Cincinnatus is taken for a walk to a terrace, the reader is mainly given descriptions of lights and water in the scenery:

> […] *an amethystine shimmer* at the end, where the famous *fountain* played; and still farther, towards the hazy folds of the hills that formed the horizon, there was the dark stipple of oak groves, with, here and there, *a pond gleaming like a hand-mirror*, while other *bright ovals of water* gathered, *glowing* through the tender mist, over there to west, where *the serpentine Strop* had its source. (Nabokov 2010, 27, my emphases)

As for its vocabulary, as most Nabokov texts, it engages the reader by incorporating into the text various, often unusual, somatic cross-modal, or synesthetic experiences. A good example is at the very beginning of the novel, the narrator calls the unread part of the novel 'untasted' (Nabokov 2010, 1), inviting the reader to be conscious of yet another sense indirectly. Cincinnatus imagines his execution in terms of an intriguingly vivid, painful and tense bodily experience, but not as an actual beheading: the removal of an aching tooth: "the wrenching, yanking, and crunch of a monstrous tooth, his whole body being the inflamed gum with his head that tooth" (Nabokov 2010, 52). The horrific scene is a fantasy of his future execution, while the 'inflammation' metaphors and the pain attempt to render his present experience. This description of the execution is bound to make a strong impression, which, since it concentrates on the removal, might divert the attention from the fact that it

also reveals a lot about Cincinnatus's present condition that is one of the chief motivators of the *storyworld*, namely that psychologically he is in the painful, "inflamed" state.

At the beginning of the third chapter, Cincinnatus hears voices from the corridor. Voices of various depths "whizzed," "surged up," there was a "hubbub," "bass," "bustle," "whining," "muttering," as well as "cracking," "booming," "huffing," and "clattering" sounds. All of these expressions are crowded on about half a page, which makes this part dense with voices and noises (Nabokov 2010, 20), and potentially triggers an intense series of simulations in the reader. The text therefore repeatedly takes up a strongly corporeal quality, which invites the reader to embody sense experiences in the form of mental simulations.

The protagonist spends his free time writing a journal to himself about himself, and the process is crucial partly because it is also an important source of anxiety as he does not know whether he will have time to put everything he wants to into words. In chapter eight, Cincinnatus deeply suffers from the difficulties of expressing himself and explains that "brought up in the air, the word bursts, as burst those spherical fishes that breathe and blaze only in the compressed musk of the depths […]" (Nabokov 2010, 70). This image, which contains experiences of vision, seeing light, movement, as well as a sense of pressure, the feeling of water, and the anguished struggle of a fish that has been yanked out of its natural environment, regarding the embodied experience of pressure, the fear of an unknown threat[76] and an inability to escape the situation, can be interpreted as the representation of the state of mind of someone who suffers from severe anxiety.

When it comes to characterization, the sight and feeling of evaporated and liquid qualities are, again, foregrounded. Already at the beginning, when the judge announces the sentence to Cincinnatus, his movements resemble the image of a sticky, dense liquid: "he was moving as though ungluing himself" (Nabokov 2010, 1) from Cincinnatus. As for evaporation, characters sometimes simply disappear, vanish, for instance the director when he is introduced "in spite of his majestic solidity, he calmly vanished, dissolving into the air" (Nabokov 2010, 4), or Cincinnatus when he takes off his body parts as if they were items of clothing:

> He stood up and took off the dressing-gown, the skullcap, the slippers. He took off the linen trousers and shirt. He took off his head like a toupee, took off his collarbones like shoulder straps, took off his rib cage like a hauberk. He took off

[76] Hence his inability to express himself.

> his hips and his legs, he took off his arms like gauntlets and threw them in the corner. *What was left of him gradually dissolved, hardly colouring the air*. (Nabokov 2010, 19, my emphasis)

As for liquids, and melting, M'sieur Pierre's first description is also remarkable with regards to the material he is "made of":

> Seated on a chair, sideways to the table, as still *as if he were made of candy*, was a beardless little fat man, about thirty years old, dressed in old-fashioned but clean and freshly ironed prison pyjamas; […] a limpid aquamarine sparkled on his auricular finger, his *honey-blond* hair was parted in the middle of his remarkably round head, his long eyelashes cast shadows on his cherubic cheek, and the whiteness of his wonderful, even teeth gleamed between *his crimson lips*. He seemed to be all *frosted with gloss, melting just a little* in the shaft of sunlight falling on him from above. (Nabokov 2010, 40-41)

This description, crowded with metaphoric vocabulary, such as the candy, the honey coloured hair, or the red lips[77] plays with the sight of a person and a piece of confection product. M'sieur Pierre even appears to be melting in the sunlight. Emmie in another scene is "splashed out" by Rodion from the cell to the corridor as though he was emptying a water bucket (Nabokov 2010, 81), and, when getting out of the prison through a tunnel, Cincinnatus "oozes out" of the fort like a drop of water (Nabokov 2010, 131). In all of these examples characters "behave" or appear as liquids, therefore through these instances of characterization also evoke the sight and feel of liquids in the reader and contribute to the overall nature of the work.

The quality of the body of Cincinnatus is a problematic question, as it is rather undefinable, as he evokes different sense impressions in different people. He is described as being "light as a leaf" (Nabokov 2010, 3), small, and skinny, with light complexion for the reader, and we know that in the eyes of others he is opaque. Therefore, when compared to other characters in the *storyworld* sometimes it is him who appears heavy, dark, and unusually thick: "he was impervious to the rays of others, and therefore produced when off his guard a bizarre impression, as of a lone dark obstacle in this world of souls transparent to one another" (Nabokov 2010, 11). "He seemed pitch black to everyone else as though he had been cut out of a cord-size block of night" (Nabokov 2010, 13). His figure is unstable and quite difficult to imagine for the reader due to the oscillation of the descriptions.

[77] In the Russian original and in the Hungarian translation (which is based on the Russian) his lips are claimed to look like a cherry, which further strengthens the mental image of a confectionary product.

Narrative space and motion

The instability of Cincinnatus' character also contributes to the overall nature of the novel, which is mainly shown through sense impressions. Throughout the story the reader encounters confusing changes in the degree of density of things and characters: they melt, turn into air or water. There is an overarching process of unstable and unreliable motion on almost every level of the story. Eventually the whole *storyworld* collapses, disappears into a cloud, but even before this happens, it already operated completely unpredictably. In this nightmarish world, the reader repeatedly sees Cincinnatus wandering the corridors of the fort, seemingly getting farther and farther from his cell, but eventually it turns out that the corridors never lead him away from his cell, in fact they always take him back there.

The unstable stream of events also shows in the way the narrative time is conceptualized and constructed. As it has been suggested, narrative time does not exist independently from narrative space (Gomel 2014, 26) and *Invitation* is a sterling example of that, since narrative time seems to follow the nature of narrative space in this story. Time is in fact quite regular in a way as each chapter contains the events of one day, but it is subverted as well, as we know that the clock in Cincinnatus' cell is quite unreliable. The story therefore does represent a very forceful kind of motion, a current one might say, flowing in circles regarding the chapters – each one begins with a new day, but with a similar issue: Cincinnatus inquiring about the time of his execution, or his torturers showing up in his cell with various enthusiastic ideas of activities, always dismissing Cincinnatus' questions, wishes, and demands. Considering the plot, it is just as whimsical, and seemingly unmotivated as the whole *storyworld* is to Cincinnatus, who feels out of place and alien all his life.

The events are unpredictable, exactly like the perceptions and thoughts of Cincinnatus, due to his tormented state of mind. He is running in circles, sometimes metaphorically, sometimes almost literally: he involuntarily ends up back in his cell each time he thought he had left it. The unreliable, unstable state of things (from objects to places, to characters) might reflect on the unstable mental state of Cincinnatus, who perceives and attempts to make sense of his environment. This impression is strengthened by the continuous representations of everything melting, evaporating, or simply moving as water does. As I demonstrated, it is a characteristic of the narrative on the level of vocabulary, metaphors, characterization, and discourse as well. This characteristic might contribute to the overall

understanding of the narrative. While narrative comprehension is a very complex process, I think one can and one has to observe its parts, which are available to our conscious examinations even if eventually the whole process is always more than the sum of its parts. I do not believe that today one can tell why and how exactly, yet it has to be described in as much detail as possible. This chapter is meant to be such an attempt. In the next, last section I will explain how my approach to these representations entails a different process of the production of meaning, which might shed new light on the genre of the novel that is traditionally absurdist and thereby renders certain scenes meaningless.

4.3. Embodied experience and the absurd: "How frightened I am. How sick with fright."

A typical Nabokov story usually unfolds in a European or American location and follows the life story of an aristocratic or intellectual (usually *émigré*) protagonist, often starting with an account of the protagonist's childhood. *Invitation to a Beheading* is an unmistakable, but not quite typical Nabokov story. It seems to abandon realistic representations for the sake of creating abstract and absurd scenes (Hetényi 2015, 385) in an uncanny fictional world. The parallel between the dictatorial system of this world and the soviet regime might seem obvious (Hetényi 2015, 401). The novel has also been assumed to have a strong connection with Kafka's nightmarish world, although Nabokov has rejected the idea and claimed that he did not even know about Kafka's work at the time he created *Invitation to a Beheading* (Nabokov 2010, vii). As I have already mentioned, the author has also rejected the idea of discussing social or political issues altogether.

Without an interpretative frame of some kind, this novel truly remains extremely elusive. If we accept Nabokov's claim that he is interested in the experiences of the individual, I believe the absurd scenes gain a mundane meaning, i.e. they are representations of the embodied experiences of Cincinnatus' anxiety and fear, and the distorted, and sometimes hallucinatory sense perceptions are caused by his psychological state. This way, what is usually understood as absurdity becomes an emphasizing force in a representation of the processes of cognition of an individual, who is sentenced to death, but not told the time of this certain and untimely death.

The beginning of the first chapter of the novel could be interpreted as a full-blown absurd scene:

> In accordance with the law the death sentence was announced to Cincinnatus C. in a whisper. All rose, exchanging smiles. The hoary judge put his mouth close to his ear, panted for a moment, made the announcement and slowly moved away, as though unglueing himself. Thereupon Cincinnatus was taken back to the fortress. [...] He was calm; however, he had to be supported during the journey through the long corridors, since he planted his feet unsteadily, like a child who has just learned to walk, or as if he were about to fall through like a man who has dreamt that he is walking on water only to have a sudden doubt: but is this possible? […] Cincinnatus took off his silk jerkin, put on his dressing-gown and, stamping his feet to stop the shivering, began walking around the cell. […] Who was becoming sea-sick? Cincinnatus. He broke out a sweat, everything grew dark, and he could feel every rootlet of every hair. (Nabokov 2010, 1-2)

How does one move away from someone else "as though unglueing himself?" What makes Cincinnatus sea-sick in his cell? While scenes such as this leave a lot to the reader's imagination, and are easy to interpret symbolically, since Cincinnatus is the focalizer character in the story, I believe that besides a description of his physical condition, these can be understood as representations of his state of mind and his ability to perceive what happens around him after learning what his sentence is. He walks unsteadily because all his strength leaves him as fear takes over his mind, and by saying that he walks "like a child who has just learned to walk, or as if he were about to fall through like a man who has dreamt that he is walking on water only to have a sudden doubt" Nabokov shows his skill of creating an artistic representation of an ordinary feeling, therefore the absurd scenes can be understood as instances of defamiliarization.

When contrasted with the beginning of another story, Poe's "The Pit and the Pendulum," which employs first person narration, but which is remarkably similar to *Invitation* in its topic, it is easy to observe that the embodied experiences of the protagonist are the same as Cincinnatus'. Poe's short story helps attributing meaning to the absurd parts of Nabokov's *Invitation*.

> I WAS sick—sick unto death with that long agony; and when they at length unbound me, and I was permitted to sit, I felt that my senses were leaving me. The sentence—the dread sentence of death—was the last of distinct accentuation which reached my ears. After that, the sound of the inquisitorial voices seemed merged in one dreamy indeterminate hum. […] presently I heard no more. Yet, for a while, I saw; but with how terrible an exaggeration […] then, all at once, there came a most deadly nausea over my spirit, and I felt every fibre in my frame thrill as if I had touched the wire of a galvanic battery […]I had swooned; but still will not say that all of consciousness was lost. What of it there remained I will not attempt to define, or even to describe; yet all was not lost. (Poe 1951, 231-232)

What Poe's narrator does not even attempt to describe, Nabokov's does at the very beginning of *Invitation*. Nabokov's descriptions are rather indirect, though. The difference between the two strategies of storytelling is the difference between showing something or telling something in a story. Nabokov shows where Poe tells, and this makes the Nabokovian story more impulsive[78]. Cincinnatus' sea-sickness is Poe's protagonist's nausea, and when he feels "every rootlet of his every hair," he probably feels what Poe's unnamed narrator puts into the words, "I felt every fibre in my frame thrill as if I had touched the wire of a galvanic battery".

In fact, all through the novel, Cincinnatus' consciousness is almost as unstable as that of Poe's narrator's, who suspects that he is drugged by the Inquisition, although it is not spelled out, probably because Cincinnatus is not aware of it, at least not to a point where he could reflect on it. In Nabokov's novel each chapter contains the events and experiences of one day in Cincinnatus' life. The beginnings and the ends of each chapter therefore show the first and last significant event, or the first and last memory Cincinnatus has of the given day. Hence, abrupt, awkward endings and beginnings without introductions might reflect processes in Cincinnatus' consciousness such as fainting, especially in chapter five and eight, which end with "it" becoming dark. In chapter eight, it definitely means that the lights went out in the cell while in chapter five it possibly means that his senses were leaving Cincinnatus, especially considering that he is very confused, and wakes up slowly at the beginning of chapter six. Chapter six begins with a description of a state of mind, the happiness entailed by the promised visit of his wife, Marthe, slowly forming after Cincinnatus wakes up:

> What was it – through everything terrible, nocturnal, unwieldy – what was that thing? It had been last to move aside, reluctantly yielding to the huge, heavy wagons of sleep, and now was first to hurry back […] swelling, growing more distinct […] (Nabokov 2010, 48)

Chapter nine ends midsentence, with the words "The door slammed with a crash. It was hard to believe that in this cell, only a moment ago –" (Nabokov 2010, 81). A possible explanation for this is that throughout the novel the perceptions of Cincinnatus are reported,

[78] This part is also an example of free indirect discourse, which is a very effective mode of storytelling.

switching to internal focalization occasionally, which results in awkward stops in storytelling, such as the ending of chapter nine, when Cincinnatus loses consciousness.

One of the most absurd scenes of the story can be found in the first chapter, after Cincinnatus's sentence is announced, when Rodion comes to Cincinnatus's cell after the sentence was announced and they start to waltz around in the fortress. Considering that it ends with the statement that it was a brief "swoon's friendly embrace" (Nabokov 2010, 3), the waltz is a delusional vision that Cincinnatus sees as he swoons, which, in the English translation, is incidentally the same word that Poe's narrator uses for when he faints after learning his sentence. There is another example of fainting and the sense perceptions that come with it, this time represented as a feeling of getting tangled and sinking in water after the cell had 'turned into' water:

> Here the walls of the cell started to bulge and dimple, like reflections in disturbed water; the director began to ripple, the cot became a boat. Cincinnatus grabbed the side in order to keep his balance, but the oarlock came off in his hand, and, neck-deep, among a thousand speckled flowers, he began to swim, got tangled, began sinking. Sleeves rolled up, they started poking at him with punting poles and grappling hooks, in order to snare him and pull him to the shore. They fished him out. (Nabokov 2010, 39)

This is arguably the description of a scene of Cincinnatus collapsing in his cell and the others helping him up.

When characters disappear, turn into air in Nabokov's story, it is deemed absurd because these scenes lack an explanation. Poe's narrator also remembers that the judges "magically" disappeared after the sentence was announced: "the figures of the judges vanished, as if magically, from before me; the tall candles sank into nothingness" (Poe in 1951, 232), but right after telling this, adds that the experience was due to him swooning in that moment. This explanation perfectly fits all the disappearance and transformation experiences of Cincinnatus. With this view, the above scene told in the third person would simply state that Cincinnatus collapsed and the people around him helped him up. The novel in fact ceases to be absurd if we accept that in these scenes it is not the diegetic world that collapses, changes, and works completely unpredictably, but Cincinnatus' perceptions and understanding of it.

These scenes in my reading are the defamiliarized representations of the mental and embodied experiences of the protagonist, who goes through the extraordinary, yet natural feelings of the fear of death, and extreme panic and anxiety, which is especially visible when

compared to Poe's short story. Nabokov's strategy of representing these feelings results in what can be interpreted as sheer absurd, but actually it may be an artistic, metaphoric representation of the embodied consciousness of a person who is sentenced to death without the knowledge of the time of his execution.

Conclusion

According to the theories of embodied cognition, human consciousness is heavily shaped by perceptions. What I attempted to show in this chapter is that a story that is built around a consciousness might also share the nature of its perceptions. I believe Nabokov's *Invitation to Beheading* is such a story, and this chapter was an attempt at reading the novel with this approach. Besides placing a special focus on the representations of perceptions in its vocabulary and also in its descriptions of the narrative space, the novel thematises the perceptions (mainly through vision and touch) of liquids in characterization and in the description of Cincinnatus' experiences of metaphoric or literal scenes of swimming, sinking, or evaporating. Through representing the movements of water in its structure and the advances of the narrative itself, I claimed that the story pulls the reader into the current of its plot and contributes to the reader's construction of the meaning of the novel. A narrative that is constructed through a consciousness that is mainly characterized by anxiety, panic, and fear, follows the nature of this consciousness, which in *Invitation* is manifested by the metaphorically in the unpredictable and unstable movements of water and other liquids.

The reader, who is evolved to be sensitive to patterns, to the basic structure of the things he or she encounters and, according to embodied cognitive theories, evolved to engage with them on a mental as well as on a corporeal level may feel the familiar structures of his or her perceptions and the experiences they build – even if they are not constructed in an experience in the real world, but with a mediated experience of a *storyworld*. The reading process of a Nabokovian story, which is full of patterns of nature and human embodiment on several levels: on the level of its vocabulary, its representations of events and characterization, and even in its discourse, is an exceptionally good example of such an experience.

As for the process of the production of meaning, I believe this method of interpretation helps the reader gain an understanding of scenes in the novel, which are assumed to be meaningless and interpreted as sheer absurd. If one investigates the patterns of sense perceptions in the novel and if one accepts that Cincinnatus' consciousness is represented in

the story, the absurd scenes can be understood as representations of the anxiety and the fear that the protagonist goes through. Edgar Allan Poe's description of the experiences of another man who had been sentenced to death in "The Pit and the Pendulum," helps one adopt an interpretative frame to the odd scenes in *Invitation to a Beheading* with which the absurd becomes the defamiliarized representation of subjective embodied experiences of fear and anxiety, with the help of the distorted sense perceptions that they entail, and the scenes where characters vanish, places transform, and the world falls apart actually become not only meaningful in their own right, but reasonable and logical.

Chapter 5. Perceptions of Space in Don DeLillo's prose

5.1. Narrative experience as kinetosis for the reader: Spatial perception in *The Body Artist*

One of the reasons why popular art is popular is that it relies on its power to stir feeling and emotions. In Film Studies well-known theories describe the mechanisms of reception. For instance, porn, or sentimental film (a.k.a. the "tearjerker"), characteristically cause calculated effects on the viewer, usually because the reader identifies with the characters on screen (Williams, 1991). All art has powerful, if not properly recognized, somatic potential and can elicit bodily reactions in their audience, because all experience, as Merleau-Ponty has asserted, is embodied experience, and the very process of the production of meaning is anchored in our physicality. Such mechanisms of the reception of literary texts have largely remained unreflected. This part of the thesis is an attempt to describe an aspect of these, which one can grasp with the help of the phenomenology of perception and cognitive science, and which potentially enrich the definition, especially the function of narrative discourse.

One of the major propositions of cognitive narratology is that the structure of literary texts necessarily depends on the architecture of the human mind, and one of its main concerns is to discover the cognitive processes that take part in the processing of narrative texts. As for second generation cognitive narratology, one of its main concerns, which is also my main interest in this chapter, is to suggest that the rules that govern the production

of meaning and the experience of the reader are motivated by presymbolic embodied experiences.

Systematic explanation is still needed for the relationship between the structure and the effect of literary texts (Szabó 2012, 115). The views of embodied cognition theory also entail the consideration of the physical body as a component in the process of the production of meaning, and the examination of the possible somatic effects that a text can have on its reader. With the help of image schema theory and narratology, in the following sections I will outline the working of a reading model, which incorporates (the experience of) the human body as an active participator in the processing of narratives.

Norman Holland explains, leaning on neuropsychology, that when we are immersed in a story, "prior, memory-based knowledge [is] outweighed by . . . one's current involvement in the narrative" (Holland 2009, 65). I assume that in this situation, which Holland likens to a "trance," and Marie-Laure Ryan (2012) calls "immersion," peculiar narrative and representational techniques can contribute to the process of interpretation may result in bodily experience.

I plan to focus on representations of space and the characters' experience of it, both in vocabulary and on the level of the whole narrative. I will trace spatial metaphors in plot patterns, which may have an effect on the reader's body. As for the analysis, I am particularly interested in the representation, (the protagonist's) perception and (the reader's) interpretation of space and movement in Don DeLillo's novel *The Body Artist* (2001).

I hypothesize that spatial metaphors, which are abundant in all languages, have a crucial role in constructing plots and influencing the reader's experience. In my view, besides serving as the skeletons of plots, as Hilary Dannenberg argues in her monograph *Coincidence and Counterfactuality* (2008), they enter into a dynamic relationship with the cognitive activity of the reader, and the two mutually influence each other. Based on this relationship, I will construct a reading model which includes the text as well as the mind and the body of its reader as active participators in the reading process. In line with the theories of second-generation cognitive science, I understand the (narrative) text as a part of the environment of embodied human consciousness, which is in a dynamic interaction with it. Through examining DeLillo's novel, *The Body Artist*, I will elaborate on the working of this model: in particular, I will attempt to trace the spatial imagery that possibly motivates certain plot patterns, as well as the reading experience of the interpreter of the novel.

4.1.1. Image schemas and conceptual metaphors in literature

Alva Noë claims that when we apply abstract mental structures in cognition, we are aided by our experience of embeddedness in the world, and also by our embodied abilities to explore the material reality of which we are a part (Noë 2004, 24). Like Gibbs, Noë also refuses the idea of modeling perception as something that takes place only inside the brain, for it "directly involves not only the brain but also the animate body and the world" (Noë 2004, 30).

Conceptual linguists and philosophers, notably George Lakoff, Mark Johnson, Mark Turner, Gilles Fauconnier, and Zoltán Kövecses have developed the theory of image schemata and conceptual metaphors, which can provide an account for one of the basic sense-making patterns in linguistic, and other cognitive categories. Metaphor, as Johnson states in *The Body in the Mind* (1992), is "one of the chief cognitive structures by which we are able to have coherent, ordered experiences" (Johnson 1992, xv). "Schemata are typically thought of as general knowledge structures, ranging from conceptual networks to scripted activities to narrative structures and even to theoretical frameworks" (Johnson 1992, 19). They are not "abstract conceptual and propositional event structures" but "embodied patterns of meaningfully organized experience (such as structures of bodily movements and perceptual interactions)" (Johnson 1992, 19). It is important to emphasize that these cognitive patterns precede symbolic concepts, and that we use them unconsciously (Hampe 2005, 1) in the course of "explor[ing] the experiential embodied nature of human rationality" (Johnson 1992, 100). Johnson explains that "we are dealing with preconceptual levels at which structure emerges in our experience via metaphorical extensions of image schemata" (Johnson 1992, 85). The level of the image schemata, therefore, has a lot to do with bodily experiences, and it proves to be the organizer, the engine, of conceptual metaphors in language.

Due to these metaphors we are able to comprehend certain ideas in terms of others: for instance we understand quantity in terms of directionality when we say "prices rise," or we can conclude that in our conceptual structures "difficulties are impediments to motion" which we see when we say "He got over his divorce" (Kövecses 1998, 66). We know that prices do not actually move in any direction, and that the concept of divorce has little to do with spatial perception, yet that is the way we conceptualize them: in terms of being and living (in) a body. Moving along a PATH, or BALANCE are also typical cognitive metaphors with the help of which one can easily understand the logic behind an argument or a narrative (Turner 1996, 16).

Conceptual metaphors are not ends in and of themselves. While they still generate debates among linguists and psychologists, they are regarded as significant tools for understanding the human cognitive system. Although the theory of image schemata and conceptual metaphors is usually examined on the level of words, phrases or sentences, it is assumed that the larger, higher, macro levels of a text might also have the same underlying, organizing systems. Hence, plot patterns might get constructed in the same unconscious manner as cognitive metaphors. In the course of a close reading of DeLillo's *The Body Artist* I will attempt to explore the nature of this constructing process and see how it relates to the body of the reader. According to the theory of embodied cognition, literary texts can be understood as the environment of the human consciousness. In what follows I will attempt to describe how the presymbolic level of image schemata may have significance in the construction of symbolic meaning in the process of reading a literary work.

A key concept in the question of experience and mental imagery is simulation. Simulation is a process accompanying the comprehension of language, during which lived, experiential, sensorimotor patterns get activated (Szokolszky 2011, 4). It is an example of the finding which has been mentioned, namely that the brain makes use of its spatial and other mental structures tied to embodiment more often that what was previously assumed. Image schemas and cognitive metaphors therefore might have a role in the workings of the abstract, complex levels of narratives. Thematically linked and consistently piled cognitive metaphors are called a *megametaphor* (Stockwell 2005, 122; Kimmel 2009, 173). This definition might sound like that of the allegory, but importantly megametaphors and cognitive metaphors are not literary devices in the way metaphors and allegories are, hence the different terms.

Kimmel chiefly detects the significance of embodiment in language, on the level of words, and he is less interested in the effect these may have on the reader. Marco Caracciolo connects the construction of readerly experience to characterization and explains the ways one identifies with the perspectives, feelings, and experiences transmitted by the characters (Caracciolo 2011, 118), and later he theorizes the embodied experiences that seem to be overarching phenomena in certain narratives, such as the rhythm of the heartbeat in Poe's short story, "The Tell-Tale Heart," where the beating of the heart becomes foregrounded in a way that, over a "spill-over" effect, seems to provide structure to the text and the simulation process of the reader (Caracciolo 2014a). Hilary Dannenberg attempts to include the theory of image schemas and cognitive metaphors in narrative theory (2008), by understanding image schemas as the rigid "skeletons" of narratives. For instance, Dannenberg imagines

plots as PATHS we move along as we read them, and rooms serving as narrative spaces as CONTAINERS. Following her idea but viewing image schemas as more dynamic and flexible structures, I imagine plot structures are motivated by presymbolic, embodied experiences. These structures are potentially able to influence the reader's simulation process, since, as it has been theorized in cognitive poetics, during reading, knowing that since even dangerous situations can be experienced without the actual risk of danger – although indirectly –, we experience feelings and sensations unintentionally more intensively (Keen 2006, 220; Gallese and Wojciehowksi 2011).

In the remainder of this chapter, I will analyse Don DeLillo's novel *The Body Artist* to trace the bodily experience of space and movement on which the spatial imagery of the novel is based and to further elaborate the mechanism I have outlined. I will examine the topographical level of the novel's narrative world, and the protagonist's experience of space and movement as well as the overall design of the narrative. I will elaborate on how image schemata might be projected into the plot patterns of DeLillo's novel, and provide an example for the functioning of image schemas in the plot structure.

4.1.2: Plot model in motion in DeLillo's *The Body Artist*

DeLillo thematizes language and human embodiment in several of his novels. According to David Cowart, he often problematizes the roles of signs from several aspects. Besides language, he thematizes the signifying potential od images, culture, and mass media (Cowart 2002, 2) and the body, and, in the case of the latter, its subversive potential in symbolic system. *Great Jones Street* (1973), *The Names* (1982), or *Falling Man* (2007) are great examples for that. The simultaneous thematization of the human body and language reaches its peak in *The Body Artist* (2001), where the protagonist, a performance artist processes a trauma and creates a performance chiefly through the experimenting with motion and motionlessness as well as speaking and silence.

The Body Artist is an enigmatic work. Its protagonist and focalizer character is the eponymous performance artist, Lauren Hartke, who is left with a psychological trauma after her husband's suicide. After the tragedy she stays alone in the large country house they had rented together, to cope with mourning alone. However, she shortly finds herself in new company: that of a mysterious man of undefinable age and appearance, who shows up in her house, in one of the rooms upstairs. The man, whom Lauren names Mr. Tuttle, is incapable of normal dialogues. His speech is incomprehensible, disorganized, although, as Lauren

notices after a while, he repeats parts of the conversations she had with her husband, word by word, he even imitates their voices and gestures. After a while the man disappears as simply and abruptly as he had appeared.

His character can be interpreted in various ways, he may appear to be a homeless man, a mentally challenged person, or the ghost of Rey, the husband. Considering my approach, the most convincing interpretation is that Mr. Tuttle is the projection of Lauren's trauma (Cowart 2002, 205). Tuttle embodies the experience of trauma with his disorganized speech, his constantly being in the present (he has problems with the use of tenses, too), and his resistance to motion (he is usually depicted sitting still).

The novel is seemingly disorganized and fragmentary both on the level of the text and of the plot. For its reading, the 'moving along a path' metaphor definitely cannot be applied. The reason for this is that, as Laura DiPrete points it out, the novel shows the quality of the traumatized consciousness, where the fabric of time and space are disintegrated, become disjointed (DiPrete 2005). The novel therefore represents a psychological trauma and the process of mourning, where the problem of the psyche often manifests on the level of the body, in problems of processes of perception and motion.

The word 'body' is in the title, and, through the art and the problems of Lauren her body is quite emphasized throughout the novel, hence the attention of the reader might automatically shift to his or her own body. There are a number of descriptions in the novel, where embodied experience is heavily emphasized. For instance, at the beginning of the story, where Rey is still alive, and has breakfast with Lauren, the narration devotes a long description to the smell of soy, which is in fact interpreted as *the* smell:

> The smell of the soya was somewhere between body odor, yes, in the lower extremities and some authentic podlife of the earth, deep and seeded. But that didn't describe it. […] Nothing described it. It was pure smell. It was the thing that smell is, apart from all sources. […] it was as though some, maybe, medieval scholastic had attempted to classify all known odors and had found something that did not fit into his system and had called it soya […] (DeLillo 2002, 16)

There are examples for crossmodal sensing, for instance, when Lauren tears the wax-paper and "hears" it along her spine (34). Descriptions of Lauren's stretching and breathing exercises are recurring in the story. During the breathing exercises, for the protagonist's life becomes one with the process of breathing, be it steady or heavy breathing, or panting.

The novel is short, however the pace of the storytelling is slow, and from time to time, when Lauren's exercises are described, narrative time nearly stops. The reader's attention is

directed on Lauren's movements therefore the narrative time follows the rate of the protagonist's extremely slow movements. Lauren usually stretches her body slowly or gets into contorted positions and holds still for a long time. As the following quote illustrates, when this happens, Lauren slips into a meditative trans-like state:

> Her bodywork made everything transparent. She saw and thought clearly, which might only mean there was little that needed seeing and not a lot to think about. But maybe it went deeper, the poses she assumed and held for prolonged periods, the gyrate exaggerations, […] It made her go taut and saucereyed, arteries flaring in her neck, these hours of breathing so urgent and absurd that she came out the other end in a kind of pristine light, feeling what it means to be alive. […] and her slow-motion repetitions of everyday gestures, checking the time on your wrist or turning to hail a cab, actions quoted by rote in another conceptual frame, many times over and now slower and over, with your mouth open in astonishment and your eyes shut tight against the intensity of passing awareness. (DeLillo 2002, 57-58)

As for the narrative space, the reader does not get much information about it, passages that would describe it are short and few. In fact, one can only explore space through Lauren's experience, which is distorted by the trauma. The following passage is an example of the way Lauren experiences egocentric space, feeling her own body as alien, and occasionally sensing it 'from the outside':

> She climbed the stairs, hearing the sound a person makes who is climbing stairs, and she touched the oak grain of the newel when she reached the landing. […] Her body felt different to her in ways she did not understand. Tight, framed, she didn't know exactly. Slightly foreign and unfamiliar. […] (DeLillo 2002, 33) She climbed the stairs, hearing herself from other parts of the house somehow. (DeLillo 2002, 37)

These descriptions are ambiguous, they are representations of abnormal perceptions. Lauren senses her own movements and the sound they make from the outside. It is possible that in the old house the floor creaks at several places as Lauren walks on it, and that is why she hears "herself" from other points of the house, although this is also an unusual condition. The interpretation of such situations is left to the reader entirely, but Lauren certainly has problems with sensing her own body:

> In the first days back she got out of the car once and nearly collapsed — not the major breakdown of every significant function but a small helpless sinking toward the ground, a kind of forgetting how to stand. (DeLillo 2002, 33)

The novel is largely dominated by the inertia of the characters, and the narrative space, and its experience is often foregrounded and often gets problematic. In Lauren's consciousness there are often more than one cognitive map active at the same time, and the differences between these may be responsible for the above described loss of balance. The phrase "here and there" is mentioned quite often in the narration meaning that Lauren (or Tuttle) is 'present' at two places simultaneously, therefore has two different experiences of space at the same time.

In the opening scene of the novel, Rey and Lauren are having their last breakfast together. Lauren is reading a newspaper, and the story that started in a linear manner suddenly gets disrupted by the actions and the places that Lauren reads about in the paper, the places and the characters get pluralized from time to time in the remainder of the first chapter. In the following scene Lauren is involved in two entirely different situations, the one she is actually in and the one she reads about, and she experiences them as equally real:

> She sat over the bowl of cereal. She looked past the bowl into a space inside her head that was also here in front of her. She folded a section of newspaper and read a line or two and read some more or didn't, sipping tea and drifting. […] She read and drifted. She was here and there. The tea had no honey in it. She'd left the honey jar unopened by the stove. He looked around for an ashtray. She had a conversation with a doctor in a news story. (DeLillo 2002, 23)

Throughout the scene real events and the news that Lauren reads about randomly get confused. The reader also gets a glimpse of what Lauren experiences, narrated in the second person:

> when you look at a page and distinguish one line from another it begins to gather you into it and there are people being tortured halfway around the world, who speak another language, and you have conversations with them more or less uncontrollably until you become aware you are doing it and then you stop, seeing whatever is in front of you at the time, like half a glass of juice in your husband's hand. (DeLillo 2002, 19)

The protagonist often sinks into reveries, has discussions and acts, and at the beginning of the description of these scenes it is often unclear whether these events actually take place or not. In some cases, it turns out later that Lauren, who has been walking has been actually sitting or standing still. These scenes turn out to be unreal in retrospect, but to some extent Lauren – and due to the internal focalization, the reader – experiences it.

The traumatized protagonist therefore cannot construct a unified and reliable cognitive map from her cues. She experiences space, time, and her body as alien, unpredictable and fragmented. The reader is confronted with different, unexpected conceptual frames. The most visible and radical among these is the uncertainty of the narrative space. One gets limited, partial, and occasionally false descriptions of space, which makes it impossible to process space and motion in the usual topographical sense.

Other problematic parts of the story may not always represent difficulties in Lauren's perceptions, but surely make it difficult for the reader to interpret the story. For example, when it is impossible to tell what happens as Lauren "looked, half looked, not looked in expectation but something else — a meaning so thin she could not read it" (DeLillo 2002, 35). A similar situation is described later in a scene where Lauren gives Mr. Tuttle a bath "wordlessly naming" his body parts (DeLillo 2002, 68). At this point it is not clear whether Lauren speaks or not. A multiplicity of possible meanings is observable again at the beginning of chapter five, where we find Lauren doing her exercises in the morning. "She stood nude in the workout room, bent left, eyes shut, checking the time on her wrist. *Or sat cross-legged*, back straight, breathing dementedly. […] *Or went about on all fours*" (DeLillo 2002, 73, my emphases). Due to representations like these, the reader might start asking questions: Does she move here? Or is she standing still? The process of interpretation might be similar to the experience when one sits on the train and for a second cannot tell whether it is his or her train that started moving or the one next to it. Apparently, as for the above exercise scene, it is possible that Lauren takes one position after the other, but the conjunction "or" makes the simulation uncertain. These parts could be understood as disnarration, however, since the reader can hardly be sure whether the events and actions narrated this way happen or do not happen, this strategy of storytelling entails even more uncertainty than disnarration as Prince understands it.

The disorganized representations of space and the movements within it is DeLillo's dominant representational technique in this novel. Experiences of space and motion are built from inconsistent, fragmented, or partly false impressions. In fact, inconsistencies of both the representation of space and the reading experience are traceable to the uncertainty caused by the situations where we do not know whether (metaphorical or literal) movements actually take place.

Occasionally representations of actions or events are questioned or 'taken back,' for instance, when during the breakfast scene Lauren "folded a section of newspaper and read a line or two and read some more or didn't" (DeLillo 2002, 23). The text and the logic of the

narrative are also fragmented and inconsistent in the traditional sense. Towards the middle of the story there are numerous short paragraphs, with spaces between them, which makes the text visibly fragmented as well. Moreover, these paragraphs could be read in any order, they would not make up a coherent, linear whole either way. It is difficult to illustrate this nature of the narrative with quotes from its text, since looking at only certain parts of it has a very different effect from what looking at the whole narrative, and hence experiencing its underlying logic, has. The pattern of the whole of the narrative can be understood as its *megametaphor*. This is the level of the story that we only see when we look at a wider context, therefore, as Kimmel points it out, this is an influence of the reading process which we cannot pinpoint in the text (Kimmel 2009, 188). In Joseph Conrad's *Heart of Darkness* this megametaphor is TRAVELING IS THE CHANGING OF A PERSON (Kimmel 2009, 182).

The Body Artist represents an uncertainty and a loss of balance due to which the reader does not understand what it is that he or she does not understand. This experience is not unlike the loss of balance that Lauren reports. This is caused partly by the mechanism of the *megametaphor* of the narrative. Behind the confusing nature of the text a bodily experience of a similar nature should be detected. The novel shows a trauma, which can be understood as psychological loss of balance, and which is represented often by the descriptions of problems with sensing one's own body and environment. The embodied experiences of the characters, the events of the *storyworld*, and the text and the plot itself are characterized by the same fragmented quality: undecidable or incompatible events and impressions. Such a phenomenon might contribute to the whole reading process. This experience may be similar in structure to the experience of incompatible sense impressions. There are not many bodily experiences of this kind since different senses usually contribute to the same, more or less unified experience. But there are exceptions, most notably the condition called motion sickness or *kinetosis*. The sensing of space and motion is built from diverse sources (Millar 2008, 3), and therefore discrepancy in spatial processing is possible. One of the most accepted explanations of the condition is that it is caused by incompatible cues[79]: a conflict occurs between the visual and the vestibular systems, which are in connections with each other physically as well, the eye does not sense motion and the inner ear does, or vice versa. A similar condition is cyber-sickness, where the condition is due to the visual stimuli of motion, while the body does not move (LaViola 2000, 47).

[79] Hence it is not a pathological state. Nonetheless, the symptoms of *kinetosis* may be feelings of disorientation, lethargy, or nausea.

In the light of the above analysis it can be said that the condition called *kinetosis* can serve as the *megametaphor* of the narrative on the level of image schemas: TRAUMATIZED EXPERIENCE SPACE AND MOTION IS KINETOSIS. While I do not believe that the narrative would have the same effect on any reader, it is conceivable that the reader – since similarly to the focalizer character he or she cannot simulate narrative space in the usual sense – becomes somewhat disoriented. The effect, the physical reaction is apparently much less than that of a direct experience of *kinetosis*, but it may show similarities in structure.

Conclusion

This chapter was an attempt in grounding the process of reading in embodied experiences. I was looking for patterns in the process of interpretation which are motivated by our embodiment, and in the light of embodied cognition, might be able to cause embodied experiences in the reader.

The analysis is based on the presupposition that the literary text can be understood as the environment of the reader's mind. The comprehension of literary texts is imagined as the comprehension of language, where the reader experiences a series of simulations. Our interactions with our environment leave traces of experiences in us, which are reactivated in the course of creating mental simulations. Symbolic language and presymbolic bodily dimension work together, interdependently in this process.

In the second half of the chapter I analyzed the constructions of the representations of narrative space and its experience Don DeLillo's *The Body Artist*. The novel problematizes and thematizes these through the story of a performance artist who strives to cope with a psychological trauma.

In the novel the reader is confronted with unusual, deautomatized representations of spatial experience, the lack of such representations, as well as disnarration, and absolute uncertainty on the narrator's part. Due to the focalizor character the reader experiences several incompatible inputs on the level of the text as well as the narrative schemas. In my analysis the fragmented, disorganized narrative is grounded in a fragmented and disorganized embodied experience by having the same structure. The condition named *kinetosis* seems to be perfectly suitable regarding its structure.

If we accept that simulations of literary narratives are influenced not only by the vocabulary, character's perspectives, and the pace ad rhythm of the text, but by the overarching structure of the plot, in *The Body Artist* we find incompatible impressions, which make the simulation of narrative space and therefore spatial experience, and which

are similar to *kinetosis* in structure. No consistent experience of space and movement can be constructed from the text, not even in retrospect.

Incompatible sense impressions have a similar (even if not the same) effect regardless of being experienced directly or simulated. Therefore, the narrative, not unlike conceptual metaphors, seems to be grounded in a preconceptual dimension, structured by embodied experiences. A strong relationship between environment, human embodiment and consciousness is observable in this narrative, which probably has an effect on the reading experience. This effect in and of itself is apparently insufficient to explain the whole of the reading experience. It can only be a part of a complex reading model where social and cultural aspects of the experience are also taken into consideration.

5.2 Narrative Space and Motion(lessness) in "The Ivory Acrobat"

In this chapter, I will examine the construction of the narrative space of a story by Don DeLillo. I aim at explaining how the perceptions, especially hearing, of the protagonist organize its narrative space and I will explain how it affects the overall character of the narrative, which is an existing but unexplained notion in the DeLillo reception. The critical reception of Don DeLillo so far has been focusing on the recurring themes in his oeuvre and has been addressing questions of American history and culture, the roles of (visual) arts and artists, as well as those of language and fiction[80]. When it comes to discussing his style, DeLillo scholars usually agree that the author's prose is slow (Karnicky 2009, 5-18, 10-11; Mark Osteen 2005, 64-81, 68; Peter Boxall 2009, 190). Few movements of plot, still images, "slow time", and the suspension of time all seem to be prominent features of his novels. In fact, he has been criticized for creating too little plot development in his novels. As recent theories in cognitive poetics would argue, when we talk about speed or rhythm, we talk about human embodiment, since we conceptualize these phenomena through our bodies (Marco Caracciolo 2015, 49-73, 59), even in such abstract forms as the "rate of motion" of a literary work.

Therefore, a discussion of DeLillo's prose with a focus on embodiment can be a significant new area in the reception. In what follows, I will examine the role of sense perceptions in the constitution of his short story, "The Ivory Acrobat", and define their role in creating a "slow narrative". There are a number of ways for slowing down and suspending narrative time in the DeLillo oeuvre. My present concern is corporeality, the experience of the lived physical body and its influence on human cognition, and narrative space(s) and movement(s). There are complete stories built around it in the DeLillo oeuvre, such as *The Body Artist* (2001) or "The Ivory Acrobat" (1988). In these texts subjective bodily experience often seems to overwrite the importance of all other possible themes, to the extent that the conceptualization of the time and space of the narrative world is regulated by such experiences, be it Lauren Hartke's traumatized experience of time and space, or Kyle's constant, obsessive listening for the rumbles and tremors in the walls. I will investigate the dynamics of the construction(s) of spatiality and (the lack of) movement in DeLillo's prose through bodycentred sense perceptions on the story-level phenomena and on the level of the plot. I will do this in detail through a reading of "The Ivory Acrobat". I will claim that the

[80] For a more thorough contextualization of DeLillo's works with a contemporary point of view see László Sári B's *Mi jön a posztmodern után? Változatok poszt-posztmodern amerikaifikciós prózára.*

dynamic of this narrative is structured by certain cognitive processes of the sensing of space and the human body, resulting in what we call a slow narrative.

What I will address in the following is the constitution of space and movement on the story-level as well as in the narrative discourse. Narrative space has for long been a neglected category, as it was judged to be an aspect inferior to time; however, it has now been recognized as being more relevant in the construction of *storyworlds* than it had previously seemed; moreover, time and space are in fact inseparable, which is especially obvious when it comes to discussing (narrative) movement. Narrative spaces are largely constituted by the focalizer's experience of it, especially when the emphasis is on the representations of abnormal circumstances or abnormal ways of perceiving. "The Ivory Acrobat", a story with a focalizer who becomes obsessed with her experiences of space, is a sterling example of this. While DeLillo's narratives are often concerned with visuality and the visual arts, especially film, occasionally other bodily senses become significant in the oeuvre as well, for instance hearing in the egocentric representations provided by the focalizer of "The Ivory Acrobat," who claims to be reduced to an animalistic level of sense perceptions. In order to understand DeLillo's fiction and the role of sensory experience in it more fully, I will elaborate on them in the next section.

4.2.1. Cognition and Embodiment DeLillo's Fiction

Recently, a significant part of the DeLillo reception reads him as an author who represents a "quality or a value that survives postmodern depthlessness and offers some kind of an opposition to it" (Boxall 2006, 12). As Peter Boxall points out, David Cowart sees language as the vehicle of redemption in DeLillo's work, while Mark Osteen claims the same thing about art. What these two undoubtedly important themes have in common in DeLillo's work is the human body. It is the artist's body that is foregrounded in *Falling Man* or in *The Body Artist*, to mention only two of the numerous examples. As for language, it is widely known to be deeply connected to embodiment[81]. The way I see it, DeLillo often reflects on language (especially its power and its limits) and embodiment simultaneously, regularly highlighting the relationship between the two. For instance, it is often the body that becomes the signifier on the threshold of language, as the following example from his novel, *Players* shows: "They waited for [Lyle] to say something. He sat, moving slowly as possible. His nose started

[81] As the gains of cognitive linguistics have shown, for instance in the works of George Lakoff and Mark Johnson.

bleeding again. This became the joke, of course. It was funnier than anything he could have said." (DeLillo 1991, 83.) When Lyle becomes speechless, his body comes into the fore and "speaks for him", carrying on the conversation. An even more striking example for the same technique can be found in the much-quoted lines from the beginning of *Falling Man*:

> [After the suicide bombers' attacks] the survivors, the people nearby who are injured, sometimes, months later, they develop bumps, for lack of better term, and it turns out this is caused by small fragments, tiny fragments of the suicide bomber's body. The bomber is blown to bits, literally bits and pieces, and fragments of flesh and bone come flying outward with such force and velocity that they get wedged, they get trapped in the body of anyone who's in striking range. […] They call this organic shrapnel. (DeLillo 2007, 16.)

This is a powerful scene of the physical violation of the skin, literally by the body of another (albeit dead) human being. At this point the narration of *Falling Man* is suspended and is replaced by a dramatic image of injured bodies. The personal trauma of the protagonist[82] is not spelled out, only implied by the extremely aggressive corporeal image of the "organic shrapnel". The influence of character bodies on the stories' discourses is not a completely new concern in DeLillo reception, either. In the analysis of *The Body Artist*, Cowart focuses on temporality, and he claims that "DeLillo emphasizes the body […] in which time literally pulses" (Cowart 2002, 207). Boxall observes the suspension of narrative time caused by the suspended body of the artist in *Falling Man* (Boxall 2009, 175). What I will examine is a partially similar manipulation of the narrative stream, but of a different nature: that of lived experience. I will also try and attribute significance to this in the larger context of DeLillo's oeuvre. There is a shared belief in DeLillo criticism that his prose often seems to reach for something beyond symbolic systems, to a spiritual or otherwise intangible dimension. As Boxall elegantly puts it, "DeLillo's fiction moves constantly beyond itself. The rhythm and the shaping of his sentences produce a kind of a poetic excess; his sentences lead to a kind of deathly beyond that is secreted in language itself" (Boxall, 2006, 16). What I claim is that a possible source of this quality of his text is the way it foregrounds how language is intertwined with embodiment. His works are often called meditative. In my view, just like in the case of meditation, the spiritual and intangible dimension might have a lot to do with physicality and the human body. In an interview with Jonathan Franzen, DeLillo was asked "How important is meaning to your writing?" And he answered "Meaning? It is

[82] He is a survivor of the 9/11 attacks, who manages to escape from the towers with minor injuries but sees one of his friends and numerous strangers die.

not the primary force at all. I think of myself as a writer of sentences and I will always follow language and will sometimes yield meaning to words, just to words [...].” In his short story “Midnight in Dostoevsky”, one of the main characters claims the same thing when he says that they should “abandon meaning to impulse” (DeLillo, 2011). In my view, this notion may be connected to the “beyond” in DeLillo’s fiction, since beyond symbolic systems we find materiality and human corporeality in his works. The author also explains how he often starts the construction of a story with imagining, creating a consciousness, around which he builds an environment: “I just start writing and *through a character* arrive at a sense of an overarching scheme, perhaps, under which he moves […] It frequently happens that I begin a novel with just a visual image of something, a vague sense of people in three dimensional space” (Binelli 2007). His explanation of the creation of *The Names* (1982) is rather thought provoking:

> In *The Names* I spent a lot of time searching for the kind of sun-cut precision I found in Greek light and in the Greek landscape. […] I mean there were periods in Greece when I tasted and saw and heard with much more sharpness and clarity than I’d ever done before or since. And I wanted to discover a sentence, a way of writing that would be the prose counterpart to that clarity—that sensuous clarity of the Aegean experience. Those were my conscious goals […] (DeCurtis 1991, 60)

Here DeLillo states that prose can have the same nature or structure as an embodied (sensory) experience, therefore bodily perceptions potentially organize the structure of the narrative. It is important to note that the short story that I am about to examine is also set in Greece, and although it was written several years later (*The Names* was published in 1982 and “The Ivory Acrobat” was written in 1988), it potentially feeds on the strength of the above described sensory experiences. In the next part, I will examine “The Ivory Acrobat” focusing on sense perceptions and corporeal experience, which are extremely significant in this story regarding both its content and its discourse.

4.2.2. Sensing and Constructing Space in the "The Ivory Acrobat"

"The Ivory Acrobat" focuses on an earthquake and its aftershocks, and therefore the problems of movement and space. What makes it exceptional is that instead of the sense of vision, it concentrates on what is called "body-centered" or "egocentric" spatial processing, where the source of information about space is the body itself and its immediate environment (Millar 2008, 44).

The story is driven by the protagonist and sole focalizer of the short story. She is a music teacher named Kyle, who lives in Athens. The area where she lives is stricken by an earthquake, and while the possibility of serious danger is gradually disappearing during the days following the quake, Kyle's fear is constantly growing. Anxiety and fear gradually take over and restructure her consciousness as she becomes obsessed with the fear of aftershocks. The story is driven by Kyle's character, for whom the sense of hearing is extremely important. The story is slow in the traditional sense: it is rather uneventful and relatively long passages are devoted to the representation of perceptions, which is typical of slow sections (Bal 2002, 107). The narration is closing in on the (embodied) focalizing consciousness, and eventually not much of the *storyworld* remains available outside Kyle's own body. Slowing down of the narrative stream works like a magnifying glass (Bal 2002, 107), as relatively little actual time and space gets "stretched out." The fashion in which the story is told is rather significant. Most of the scenes are slow and sparse, the characters usually move either slowly, or they are completely motionlessness. Simple actions and the processes of perception, for instance listening to rumbles in the walls, appear several times on almost every page, together with the act of standing still, paralyzed. Suspense is created and maintained both on the level of events, by the lack of movement, and, regarding the discourse, by the repetitive representations of constant fear of aftershocks.

Since narrative space is constructed and understood through Kyle's embodied consciousness, it is important to point out that her body and cognition are not quite ordinary. Kyle is a music teacher, her sense of hearing is very sophisticated, and throughout the story it becomes increasingly sensitive. Slowing down and suspending time and movement is due to her experience of tense listening and hearing that is extended to the whole body of the protagonist in the form of muscle tension and paralysis. The organs of the sense of hearing and that of proprioception and balance are all in the ear, which is Kyle's primary source of sensory experience in the short story, along with her skin and muscles. There are several recurring themes of unstable spaces and unpredictable, dangerous movements in the short story. They provoke motionlessness, which embodies a state of suspense, of being "on the

verge" of a disaster, as an embodied experience which might look similar to, but which is in fact in opposition to, balance. This results in the increasingly slow pace and, eventually, pauses in the narrative. The embodied experience of suspense has its influence on the space and movements of the whole narrative. For instance, the earthquake is an unpredictable natural disaster, where the physical world literally collapses, falls apart. There are also rather unclear concepts of "inside" and "outside" concerning different categories of space. For instance, each time Kyle senses an aftershock approaching in her apartment, she stands under the lintel, on the threshold, because that is supposed to be the most stable, thus safest part of a building during an earthquake. Conceptual shifts such as this are common in one's mental activity when one experiences fear. These include "the automatic imposition of categories such as 'dangerous' or 'safe'" (Tooby and Cosmides, 2008, 118), even if they overwrite previously existing categories. That is exactly what Kyle does, who obviously never spent time standing motionless on the threshold earlier. In her world, where an earthquake may hit anytime, inside becomes dangerous and outside becomes safe in general. The threshold between the inside and the outside is a crucial motif in the story, which can also be associated with suspense. In my understanding this categorization gets generalized in her psyche and invade her body later in the story.

In the first scene of the story we see the streets of Athens after the earthquake. It is a description of a panicking crowd, strangely full of words and expressions that suggest an uneasy stillness:

> The horns grew louder in a kind of cry, an *animal awe*. The panic god is Greek after all. […] The long lines of cars, knotted and bent, made scant gains forward. *Paralysis*. She thought *the scene resembled some landscape* in the dreaming part of us, what the city teaches us to fear. (DeLillo 2011, 55-56, my emphases.)

It quickly turns out that Kyle's whole life can be described as being in a state of constant suspense. She is away from her home, in a transitory place; even in her flat she uses a sofa for a bed with an airline pillow, both objects suggesting that she would only stay for a short time. As she is introduced, the narrative places a swiftly narrowing focus on her bodily experience of fear and anxiety. She starts listening and waiting for the nearing aftershocks more and more often, and when she does this, she freezes into whatever position she happens to be in, as the following description illustrates:

> *She lived inside a pause*. She was *always pausing*, alone in her flat, to listen. Her hearing developed a cleanness, a discriminating rigor. She sat at the small table where she ate her meals, listening. The room had a dozen sounds, mainly disturbances of tone, pressures releasing in the walls, and she followed them and waited. (DeLillo 2011, 60, my emphases.)

In fact, Kyle is often described in the act of listening, being statue-like, motionless, and eventually her character is reduced to sensory experiences:

> "[…] *I used to have a personality*. What am I now?"
> "Try to understand it's [the disaster] over."
> "I'm down to *pure dumb canine instinct*."[83] (DeLillo 2011, 62, my emphases.)

Kyle's pathological obsession is obvious at this point. Her fear remains even though she is conscious of her isolation, and she is repeatedly confronted by the fact that the danger is most likely imaginary. Constantly listening to the rustle in the buildings becomes her chief activity, while her bodily movements are more and more reduced. Simultaneously, her sense of hearing is sharpened.

When one experiences fear, changes in perception and attention are, in fact, normal. For instance, "[one] may suddenly hear with far greater clarity sounds that bear on the hypothesis that [one is] being stalked, but that ordinarily [one] would not perceive or attend to, such as creaks or rustling" (Tooby and Cosmides, 2008, 118). Kyle's problem is the persistence of these changes in her attention and perception, which are characteristic of clinical anxiety. Since she has "difficulties disengaging attention from threatening information", she is "getting stuck on *ruminative worry*" (Öhman 2008 718, my emphases). As a result of that, Kyle is preoccupied with obsessively imagining over and over again what she would do in case of an emergency:

> She rehearsed her exit mentally. So many steps from the table to the door. So many stairs to the street. She thought if she pictured it beforehand, it might go more smoothly. The lottery man cried, "Today, today." (DeLillo 2011, 61)

Soon every event and conversation in the story gets infected by Kyle's paralysing anxiety. For instance, the last line of the above quotation, the otherwise innocent words of the lottery man, sound clearly threatening after the preceding lines, implying that "today"

[83] It is mentioned in the story that dogs sense, and therefore can escape, earthquakes before they hit.

may be the day day she has to escape running from the earthquake. As Kyle's state gets worse psychologically, she becomes isolated from others, while somatically the border between her body and her environment becomes less and less clear in terms of subjective experiences. At the beginning of the story, Kyle is part of a crowd. Later, as the crowd refuses to panic when the aftershocks hit, she is alienated from others, and a colleague named Edmund remains her only companion. Towards the end of the story, he leaves the city and Kyle is left alone with the tremors and the rumbles. The borders of her self become problematic, as she is folding in onto herself in the repetitive routine movements and losing connection with other people.

After a while, due to the repetitious, convulsive acts of listening, Kyle feels that the tremors become a part of her body, in fact one of the essential constituents of her body. This is where the mental categories of the inside, the outside, and the threshold enter her body. The aftershocks intrude and gradually invade her corporeal frame. They blur the border between her and her environment: "[T]he tremors entered her blood stream," they "lived in her skin and were part of every breath she took. She paused over her food. A rustle. An easing reedy tilt. She stood and listened, alone with the shaking earth" (DeLillo 2011, 61-62).

The consciousness of psychiatric patients suffering from panic attacks is almost exclusively filled with information from their own bodies and their egocentric space (Kállai et al. 1998, 123). While she does not show any other symptoms of panic attacks, Kyle's spatial experience is very similar to that of people suffering from panic attacks. The following part is worth quoting at length:

> *She was deprived of sentiments, pretensions, expectations, textures*.
> The pitiless thing was time, threat of advancing time.
> *She was deprived of presumptions, persuasions, complications, lies, every braided arrangement that made it possible to live*.
> Stay out of movies and crowded halls. *She was down to categories of sound, to self-admonishments and endless inner scrutinies.*
> She paused, alone, to listen.
> She pictured her sensible exit from the room.
> She looked for something in people's faces that might tell her their experience was just like hers, down to the smallest strangest turn of thought. […]
> *She heard everything*. […]
> *She was deprived of the city itself. We could be anywhere*, any lost corner of Ohio. […]
> Take the stairs everywhere. Take a table near the exit in cafés and tavernas.
> And everything in the world is either inside or outside. (DeLillo 2011, 69-70)

The changes in Kyle's psychological state clearly show in her attitude and her appearance as well. Before the earthquake she had been a graceful woman, but now she is lumbering, as her friend, Edmund observes. When he runs out of arguments to convince her that the danger is gone, he gives her a gift, a small ivory statue of a Minoan bull-leaping acrobat, a "young woman [...] in the act of vaulting over the horns of a charging bull" (DeLillo 2011, 65). The figurine, the eponymous ivory acrobat, is meant to be an attempt to remind her of her old self: lithe, flexible and full of life. Kyle cannot identify herself with bull-leaping acrobats, although the parallel between her and this particular figurine is obvious. The statue is broken and the bull, the signifier of danger, is missing, just as real danger is missing from Kyle's experience most of the time: we only know from the position of the figure that she is bull leaping, and usually we only know from Kyle's bodily position that an aftershock is to be expected. Eventually, at her workplace she comes across the ivory acrobat that she had forgotten about. The problem with the figurine, as Kyle realizes is that "she didn't know what to do with it, how to underpin or prop it. The body was alone in space, with no supports, no fixed position […]" (DeLillo 2011, 71). The following are the closing lines of the story:

> [the statue of the acrobat] was a thing in opposition, defining what she was not, marking the limits of the self. She closed her fist around it firmly and thought she could feel it beat against her skin with a soft and periodic pulse, an earthliness. She was motionless, with tilted head, listening. [...] She looked toward a corner of the room, concentrating tightly. She listened and waited. Her self-awareness ended where the acrobat began. Once she realized this, she put the object in her pocket and took it everywhere. (DeLillo 2011, 72)

The boundaries of Kyle's self have been intruded by the environment, especially by the movements of the earth. Her perception of the world is problematic, her self awareness ends at the surface of her body, which means that she has lost the dynamic relationship with her environment that the theories of embodied cognition presuppose. When she grabs the figurine, she finally seems to find balance—but she has to take the figurine with herself everywhere, as if the balance depended on it, as it is "the thing in opposition" with her instability. By the end of this short story the reader is left with an extremely subjective and narrow focus through which the *storyworld* is to be interpreted and, due to the increasingly slow pace and pauses in the narrative, with a feeling of suspense that is not actually eased. Due to Kyle's obsession, the space of the *storyworld* is reduced to her body, more precisely

the parts of her body that take part in the sensing of danger, the necessities of the "pure, dumb, canine instinct."

At the beginning of the argument, I stated that this story is not eventful in the traditional sense. But in terms of bodily experience, it is extremely rich and dense. It might remind one of Lauren's opinion about her own performance in *The Body Artist*: "I know there are people who think the piece was too slow and repetitious, I guess, and uneventful. But it's probably too eventful. I put too much into it. It ought to be sparer, even slower than it is, even longer than it is" (DeLillo 2002, 106). For Lauren, "event" obviously means embodied human experience. Both *The Body Artist* and "The Ivory Acrobat" are focused on the protagonist's embodied consciousness, therefore they rely on representations of subjective, often bodily experience for their stories to unfold, in fact, that is what makes them dense and engaging. The embodied experiences are so emphatic that narrative time and space move with the character's body: when Kyle freezes, so does the time of the *storyworld*, and the narrative space shrinks to her body. This happens when DeLillo builds his story around a character's consciousness, an act that results in the narrative organized in accordance with a lived bodily experience. As we know, suspense means the suspension of time, which is here due to the representations of the embodied experience of fear and anxiety of the aftershocks, which, on the level of the story, slow the narrative pace and (re)structure the discourse.

Conclusion

In this chapter, I have examined DeLillo's stories and scenes with a focus on the nature and the process of building narrative space and movement. I have examined the possible roles of embodiment in the DeLillo oeuvre by way of narrowing down my focus on the short story, "The Ivory Acrobat." I have found that in the story the representations of consciousness and of certain cognitive processes are placed in the foreground, and the structures of embodied consciousness motivate narrative composition and emplotment. DeLillo himself also claims that his texts are frequently created through a character's consciousness, who is occupying a three-dimensional space. *The Body Artist* is certainly one of these (Binelli 2007), and so is his new novel, *Zero K*[84] (2016). I have also examined "The Ivory Acrobat" with a special emphasis on the representation of the protagonist's bodily

[84] DeLillo, Don. Speech presented at the "Fiction Rescues History" DeLillo Conference in Paris, France, Paris, February 18–20, 2016.

experiences, which seem to have an influence on the way the *storyworld* as well as the plot structure are built. The short story itself is based on tropes of unpredictable motion (the earthquake or the raging bull) confronted with motionlessness (the paralyzed protagonist or the ivory figurine) as well as problematic, unstable concepts of space, which results in a state of being on the verge, a state of suspense concerning elements and existents of the *storyworld* as well as the nature and the making of the plot. Through the protagonist's body-centered perceptions of space and motion, the rumbles and the tremors, the "dull-witted terror," in DeLillo's words, of the impending disaster and its bodily experience, overwrite any other possible themes, and the suspense they create gradually takes over all aspects of the narrative. Therefore, "The Ivory Acrobat" can be read as the "fictional expression" of an unstable psychological state, which, not unlike in *The Body Artist*, is enacted through the body of a character. Here, through concentrating on characters' bodies, DeLillo is abandoning meaning for the sake of impulse, therefore reaching beyond symbolic systems. He creates what is called the fiction of momentum, through following the structures of human embodiment.

Chapter 6. Disorientation, dislocation, and disnarration in Mark Z. Danielewski's *House of Leaves*.

"I'm floating or falling or I don't know what."
(Danielewski 2000, 468)

In this chapter I will examine the ways *House of Leaves* creates a complex experience of uncertainty both with its themes and content, such as fear, mental problems, and its form and structure. These phenomena are often deeply intertwined with concepts of spatiality. Besides that, the novel seems to construct an especially strong and influential engagement with its reader, which I believe is due to its multimodal nature and its peculiar strategies of narration. I am interested in the ways the novels constructs the narrative world and creates meaning through the examined phenomena.

Summarizing the novel is not easy. It is fiction; however, it exists in its own diegetic world as a nonfiction book. There it is based on a manuscript of an academic monograph written about a documentary film, *The Navidson Record* that was found by a man, Johnny Truant, who organized it and completed it with long footnotes. The whole thing was later

published with unnamed editors under the title *House of Leaves*. What I will mainly focus on are Johnny's footnotes and *The Navidson Record*. As this brief summary shows, Danielewski's novel is a complex book composed of different text types and styles, and it simultaneously belongs to several genres. It has numerous larger themes, however, and the majority of it revolves around a house that violates the laws of physics and logic.

One of the genres that *The House of Leaves* is assumed to belong to is horror fiction. It employs several themes that classic horror fiction does, for instance the haunted house or a mysterious monster. But arguably what enables the novel to get under one's skin is the way it attempts to represent the experience of fear itself instead of providing descriptions of the feeling or relating scary events. The novel employs structures and strategies of narration that attempt to portray either the experiences of fear and anxiety, or phenomena that cause these feelings, thereby also meeting the requirements of the genre of experimental literature. In this manner the novel addresses perceptual experiences and thematizes mental states of a heavily corporeal nature such as fear, anxiety, psychosis, phobia and other mental disorders.

Another genre which the book is assumed to belong is satire, the satirical representation of academic works and criticism in particular. The "main text" of the novel consists mainly of lengthy discussions of mythology, physics, philosophy in an academic style. These attempts usually focus on space, perception, and a monster figure which is more of an idea than anything else: most characters talk about sensing it in some way, which is far enough to drive some of them insane, but in fact nobody encounters it. What everyone hears is a constant, menacing, growling sound. However, nobody ever gets attacked by the monster in the novel, or even sees it[85]. At one point, it is even suggested that the "persistent growl is probably just a sound generated when the house alters its internal layout" (95).

The novel starts with an Introduction written by Johnny, a young man in his mid-twenties, who obtains a huge pile of notes and printed text that turns out to be a manuscript written by a recently deceased old man, Zampanó. The manuscript is the description and the theoretical reception of a documentary film titled *The Navidson Record*. Johnny completes the manuscript with footnotes, which are occasionally relevant to the main text, but most of them are his personal journal entries. He starts reading, organizing and finalizing the manuscript, and he slowly goes insane in the attempt by the end of the book, the process of which one can witness in his footnotes and journal entries.

[85] In Zampanó's manuscript, the monster in the ever-changing dark space within the house is heavily tied to the mythological figure of the Minotaur in the labyrinth.

The Navidson Record is a documentary about a failed attempt to explore a house that appears to violate the laws of physics and basically any kind of human logic. The film is created by the Pulitzer prize winner photojournalist, Will "Navy" Navidson, who moves into the house with his partner and their two children. At the beginning, they are clueless about what waits for them in the house, Navidson only wants to document how his family settles in their new home. As they realize soon after moving in, the house is slightly bigger on the inside than on the outside. After this the interior of the house quite disturbingly starts to change: new doors and hallways appear, they are completely dark and unreasonably cold, and they have an utterly menacing atmosphere. These newly appeared spaces turn out to be enormous and unpredictable. Navidson, who is attracted by danger, eventually cannot resist entering the new hallway. He quickly gets lost because the new space turns out to be much larger than expected, moreover, it is constantly in motion: it is narrowing, expanding, and reorganizing itself seemingly unpredictably. With a little luck that one time he finds his way back alone. Later expeditions and rescue missions are sent "into the house," and they spend several days wandering inside. Everyone who spends some time in there changes dramatically, and always in a negative way. Some suffer psychologically, some get seriously injured, and some die.

6.1 Engaging and dislocating the reader

House of Leaves can be understood as a multimodal narrative as well, which employs numerous strategies to engage the reader, especially through emotions and sense perceptions. It is a very visual and interactive novel that constantly calls attention to its materiality, not unlike Nabokov's *The Original of Laura*. There is "an elaborate engagement with the shape and meaning of the narrative", as it is stated on the back cover of the novel (Danielewski 2000). First of all, when characters enter the most problematic space in the narrative world, i.e. the hallway the text gets fragmented, and there is usually very little text on one page. On these pages the text takes unusual shapes, for instance that of a gradually narrowing tunnel (Danielewski 2000, 443-461), which adds to the experience of the internal shape of the house and the narrative space of the novel. The text and the graphic design therefore often seem to enact or perform the ideas represented (Taylor 2012, 113), and take a significant part in creating the meaning, which, in the case of multimodel novels, is not a result of "natural human language" exclusively (Hallet 2009, 139).

The content and the style of the novel share an elusive quality, which may have an especially strong effect since I believe, through specific strategies, the novel creates an unusually strong engagement with the reader. A good example of this is the first time Johnny describes a scene where he suddenly gets sick. He experiences short episodes of sickness which are most likely attacks of pathological anxiety that borders on psychosis, involving psychological and physical agonies of a very ethereal nature. During this attack he feels the presence of the monster that he never actually sees. He does not simply provide a description of this though, but encourages the reader, whom he addresses in the second person, to imagine what he experiences with the help of the book that the reader apparently holds in front of him or her:

> To get a better idea try this: focus on these words and whatever you do, don't let your eyes wander past the perimeter of this page. Now imagine just beyond your peripheral vision, maybe behind you, maybe to the side of you, maybe even in front of you but right where you can't see it, something is quietly closing in on you […] Right at this moment. But don't look. Keep your eyes here. Now take a deep breath. Go ahead take an even deeper one. Only this time as you start to exhale try to imagine how fast it will happen, how hard it's gonna hit you, how many times it will stab your jugular with its teeth, or are they nails? […]
> Don't look.
> I didn't.
> Of course I looked.
> I looked so fucking fast I should of ended up wearing one of those neck braces for whiplash. (Danielewski 2000, 26-27)

In fact, through this 'exercise', the reader is expected not only to imagine but to enact Johnny's experience. Moreover, he or she is also expected to participate in a creative way as Johnny partly guides the reader's imagination with questions instead of descriptions.

Another unusual strategy of engaging the reader is observable towards the end of the novel, where a collection of letters can be found. They are sent from an asylum, to Johnny, by his mother, who is seriously ill mentally at this point. One of the letters is written "in code": one has to read only the first letter of each word and build up the actual letter from them. Since in each word only the first letter is important, the letter is fairly long. Naturally, it can only be read much more slowly than a regular text and it is difficult to keep in mind what one has deciphered in the course of reading. The easiest way to "decode" it is if one simply writes down each letter that is needed to understand the message. Therefore, the reader – after having read several increasingly insane messages by Johnny's mom as her condition deteriorates – eventually encounters the most insane, paranoid, and disturbing one

hand-written by him or herself, in the first person, which can be a rather upsetting experience.

On the other hand, the reader, despite an extraordinarily strong engagement with the story, frequently gets disoriented or dislocated in it. For instance, throughout the book the reader is confronted with different text types and led to skip from main text to footnotes and later back to the main text. There are also switches between perspectives especially as after reading Zampanó's manuscript written in an academic style the reader visits a footnote that discusses one of Johnny's personal memories, in a very informal style, that may or may not be connected to the previous train of thought. The reader constantly gets unexpectedly dislocated from his or her position, throughout the reading process, which arguably leads to a state of general uncertainty.

6.2 Storytelling and the poetics of uncertainty: disnarration and its effect

"Don't look.
I didn't.
Of course I looked"
(Danielewski 2000, 27)

Uncertainty and the fear it generates is in fact present on multiple levels of *House of Leaves*. In Zampanó's text it is provided by the space in Navidson's house, which keeps altering its interior, entailing the literal disorientation of the characters. This part of the story is narrated by Zampanó. At times the text is a simple description of *The Navidson Record*, narrated in the third person, and at other times it employs Navidson as focalizer character. With the exception of one scene, the movements of the house can never be seen, but motion within the house is constant. Once someone enters the hallway and goes somewhat deeper in the empty, dark rooms, it becomes a question of pure luck when and whether they can get back to where they started. So much so that it is more or less useless to remember which turns one took because the design of the house would always be quite different on the way back. Because of this the narrative space of *The Navidson Record* becomes impossible to map, even in retrospect.

The characters occasionally get seasick in the house possibly because it continually moves.

> Navidson speculates Reston's sea sickness […] may have something to do with the changing nature of the house: 'Everything here is constantly shifting. It took Holloway, Jed and Wax almost four days to reach the bottom of the staircase, and yet we made it down in five minutes. (Danielewski 2000, 165)

There seems to be little logic in the way the house keeps redesigning its interior, but it is suggested that the space always alters itself according to the psychological state of the character who is in it. It is assumed that the horrors in the house are the manifestations of the characters' troubled psyche (Danielewski 2000, 21), and at another point, the space of the house is referred to as an "interactive Rorschach test" (Danielewski 2000, 197). Although the narrative space of *The Navidson Record* is clearly unreal, its peculiar logic is in line with the principles of neuropsychology, according to which humans' spatial experience can be heavily influenced by their mental states.

Within the house the rest of the existents of the *storyworld* seems to share the nature of the narrative space. When Holloway Roberts, a "professional hunter and explorer" (80) goes on an expedition in the newly appeared part of the house with two colleagues, and the group spends several days exploring the place with dire consequences, they place neon markers at certain points in order to find their way back later. The markers are later found torn apart. It can be assumed that the monster that believed to be lurking around in the empty rooms destroys them. But, importantly, the neon markers are not the only type of things that get "destroyed".

> [...] Jed also begins to notice how more than a few of his buttons have vanished. Strips of velcro have fallen off his parka, shoe laces have shredded forcing him to bind his boots together with duct tape. Amazingly enough, even his pack frame has 'crumbled' - the word Jed uses.
> "It's kind of scary" Wax mutters in the middle of a long ramble. "Like you stop thinking about something and it vanishes. You forget you have pocket zippers and pow they're gone. Don't take nothing for granted here." (Danielewski 2000, 126)

The issue of not taking the most basic things in life for granted is tackled throughout the novel. At quite an early point, Navidson observes that "the floor *begins to assume a new meaning*. It can no longer be taken for granted. Perhaps something lies beneath it. Perhaps it will open up into some deep fissure" (Danielewski 2000, 67). Towards the end of Zampanó's manuscript Navidson wanders in the hallways alone and quickly gets more and more disoriented and eventually loses the sense of what is probably the single most basic thing in life on Earth in general: gravity. He claims, "I'm no longer sitting on anything. The

slab, whatever it was is gone. I'm floating or falling or I don't know what" (Danielewski 2000, 468). This confusion and loss of direction becomes even more severe when he later claims to have "no sense of anything other than [himself]" (Danielewski 2000, 471), and still later claims he is falling but feels like floating (Danielewski 2000, 472-3). He then soon runs out of film, therefore, although he survives, we never learn what really happened to him, if, in effect, anything really happens. It is not unlikely that Navidson only hallucinates.

Another kind of disorientation is presented in Johnny's journal through his storytelling strategy. Here, instead of alternative spatial designs, alternative actions and events appear almost in parallel. This strategy is similar to that of DeLillo's *The Body Artist*, when from time to time it is impossible to make out what really happened and what did not take place or whether the narrator can even tell what happened. It is reported that Lauren "read some more or didn't" and she is often "here and there" at the same time. This technique is used relatively rarely in Lauren's story but in Johnny's journals there is a special stress on it. With the help of this, the diegetic world gets pluralized, yet the newly opened possible worlds, just like the hallways in Navidson's house, usually lead to nowhere.

If what really happens becomes clear at all, it is always only in retrospect, hence in the course of reading the reader never knows what is going to prove false eventually. Most of these are sterling examples of Prince's disnarration (Prince 1988), the narration of phenomena that do not actually take place. Johnny has been traumatized as a child[86], and he is a heavy drinker and a drug addict, therefore the exact cause of his symptoms would be difficult to find, but he strongly believes that they are connected to his reading Zampanó's manuscript. His theory is that his sickness is caused by the textual representation of the film about the Navidsons' house and the discussions of its main themes. The disnarrated parts sometimes turn out to be the fantasies of Johnny, for instance the scene where he twists his boss' head off:

> […] before another synapse could fire within my bad-off labyrinthine brain, he was already lying on the floor. Or I should say his mangled body was lying on the floor. His head remained in my hand. Twisted off like a cap. Not as difficult as I'd imagined. The first turn definitely the toughest, necessitating the breaking of cervical vertebrae and the snapping of the spinal cord, but after that, another six turns, and voilá - the head was off. Nothing could be easier. Time to go bowling.
> My boss smiled. Said hello.

[86] His mother accidentally pours boiling oil on his forearms, which leaves huge scars on them, and later she attempts to strangle him. After that she is admitted in The Three Attic Whalestoe Institute, as she appears to suffer from a mental illness that is not specified, but certainly involves paranoia.

> But he wasn't smiling or saying hello to me.
> […] I couldn't even imagine twisting his head off for a second time. (Danielewski 2000, 51-52)

At first there is no evidence that the twisting off of the head is a case of disnarration, although it is unexpectedly gory, then confusing and suspicious as the boss is reported to smile and say hello, and clearly a fantasy eventually, when Johnny mentions that he only imagined it.

But most often such descriptions of events directly concern Johnny's condition, especially his perceptions. Similarly to Kyle's experiences in "The Ivory Acrobat", Johnny's journal entries of his life are about the people he meets and works with, and his relationship with them. But as his condition gets worse and worse, he starts to focus more and more on it, and on himself, and other characters gradually disappear from his stories as he stops going out. The outside world does not only get excluded by him, rather, it becomes unavailable for him. At the same time, longer descriptions are devoted to egocentric contemplations, for instance there is a fairly long description of the "mutilated" inside of his cheeks, which he chews on when he grinds his teeth in his sleep (Danielewski 2000, 179).

His episodes of sickness seem to come randomly, there is nothing that would trigger them. In fact, a few days after the first instance of these attacks, Johnny mentions that he is not even sure anymore if anything happened at all (Danielewski 2000, 35). He becomes quite sure later on though, at least about his own condition, as it gradually gets worse and worse. The disnarrated plays a key role in these parts as well. In the following quote he discusses his experience of one of the attacks.

> I started to taste something extremely bitter, almost metallic. *I began to gag. I didn't gag*, but I was certain I would […] *I started to throw up*, watery chunks of vomit flying everywhere, sluicing out of me onto the floor, splashing onto the wall, even onto this. *Except I only coughed. I didn't cough. I lightly cleared my throat* and then the smell was gone and so was the taste. (Danielewski 2000, 43, my emphases)

Hence, the event that started out as violent vomiting turns into coughing first, and then into a light clearing of the throat. To add to the confusion Johnny can also mix his perspective with that of others. In this part, the reader cannot be sure whose belief he is talking about:

> I stub my toe. I'm falling down the stairs, tripping over myself, […] The wind's knocked out of me. It's not coming back. *Here's where I die, I think. And it's true*, I'm possessed by the premonition of what will be, what has to be, my

> inevitable asphyxiation. *At least that's what they see*, my boss and crew, as they come running to the back [...] (Danielewski 2000, 72, my emphases)

The assumption that Johnny is dying does not only turn out to be false, it is not even clear whose assumption it really was, to whose mind it belongs to.

Perhaps the most dramatic use of disnarration is in this scene(s) where Johnny is about to leave his house:

> I even momentarily blacked out, but came to just in time to watch *the truck, still hurtling towards me until it was actually slamming into me*, […] all that steel was grinding into me, instantly pulverizing my legs, my pelvis, the metal from the grill wedging forward like kitchen knives, severing me from the waist down.
> People started screaming.
> Though not about me.
> Something to do with the truck.
> It was leaking all over the place.
> Gas.
> It had caught fire. I was going to burn.
> *Except it wasn't gas.*
> *It was milk.*
> *Only there was no milk. There was no gas. No leak either. There weren't even any people.* Certainly none who were screaming. And there sure as hell wasn't any truck. *I was alone*. My street was empty. *A tree fell on me*. *So heavy, it took a crane to lift it. Not even a crane could lift it*. There are no trees on my block.
> This has got to stop. (Danielewski 2000, 108, my emphases)

The last sentence suggests that Johnny is not fully in control of the narration he produces here. Possibly getting hit by a truck and a tree are hallucinations. But perhaps Johnny is in control of the narration, and of what he is not in control are only his experiences. In this case, the accidents with the car and the tree are just metaphorical descriptions of a condition Johnny experiences and decides to express in a defamiliarized manner, not unlike the sinking scene in *Invitation to a Beheading*. In this sense, he narrates the above scene(s) instead of simply stating that he feels so sick as if he had just been hit by a car or as if a tree fell on him. Either way the narrative becomes pluralized at these points in a way that the reader is completely unprepared for them, therefore each possible world is considered as the only possible diegetic world and soon after, most of them are taken back, or discarded, making all of the following events that Johnny narrates suspicious and uncertain.

6.3 Dislocation, disorientation, disnarration and the functioning of cognitive schemas

I have provided numerous examples of the ways the novel may create a complex sense of uncertainty in its reader. As for its content, its narrative space is impossible to map, therefore the *storyworld* is entirely unpredictable. The themes of insanity, pathological fear, and anxiety, and possible hallucinations entail a state of mental instability. Due to the style and the form the reader often gets dislocated and forced to take a different position from which he or she can make sense of what he or she reads. Although one of the genres that the novel is associated with is horror, and it does employ several classic horror themes, I believe the novel is less concerned with fear than with pathological anxiety. As has been mentioned, if one cannot tell what he or she is afraid of, what he or she experiences is not fear but anxiety (Miceli, Castelfranchi 2015). The mysterious monster figure is perhaps the simplest illustration of anxiety in the novel: it always lurks around the characters, it drives some of them insane, without them ever finding out[87] what it actually is. However, the rest of the phenomena and narrative strategies are not less confusing and disorienting either, and they constantly create uncertainty.

Incidentally, uncertainty is also a key word in the definition of anxiety. There is also assumed to be a "strict relationship between anxiety and need for control" (Miceli, Castelfranchi 2015). Apparently, having anxiety means the fear of lacking the control of a possible future situation, which can be a very practical issue, for instance when one is anxious about asking another person to go on a date with them. However, the type of control that is relevant in the analysis of *House of Leaves* especially for the reader is called *epistemic control* (Miceli, Castelfranchi 2015). According to Miceli and Castelfranchi,

> the need for epistemic control is a need to know with the highest degree of certainty "how things are" and, as far as the future is concerned, how things will be (good or bad as they may be), rather than a need to adjust one's perception of the world, oneself, and one's own skills and capabilities so as to protect one's perception of control over events. In functional terms, epistemic control is of course instrumental to pragmatic control. (Miceli, Castelfranchi 2015)

Having epistemic control during reading may be a key element in the "cognitive backgroung" of the reading process. In this sense, *House of Leaves*, through its storytelling strategies and its content, seems to be systematically playing with the reader's need for epistemic control. As for the effect this narrative can potentially have, I believe it is useful

[87] Holloway and Johnny are the two characters who get the most obsessed with it, but Holloway eventually commits suicide in the course of hunting the monster and being (or believing to be) hunted by it, and Johnny simply disappears eventually, therefore there is no event in the novel where the monster attacks anyone.

to compare it to the phenomenon of surprise, and the way its experience has been conceptualized with the help of cognitive schemas. According to Rainer Reisenzein, the experiences of surprise

> begin with the appraisal of a cognized event as exceeding some threshold value of unexpectedness or schema discrepancy, continue with the interruption of ongoing information processing and the reallocation of processing resources to the investigation of the unexpected event, and culminate in the analysis and evaluation of this event (Reisenzein 2000, 264)

This is the full circle of the experience, in which the "schema-discrepancies or of mental interrupts" (Reisenzein 2000, 274) are of crucial importance, and they are followed by a revaluation or replacement of schemas. In the case of the narrative structures of *House of Leaves,* certain events often get either clearly discarded or just questioned, creating complete uncertainty by disregarding the readers' need for epistemic control. The reader only encounters the interruption or the schema-discrepancy, but without the chance to replace the previous schema with one that fits the given event better. As for cognitive processes, *House of Leaves* seems to confront the reader from time to time with the exact moment when a schema is deconstructed and a construction of a new one is not complete or not even possible.

The novel seems to be thematizing and problematizing a part of the automatic practice of using cognitive schemas, and suggests that schemas are, as Schneider suggests, much less static than they were believed to be (Schneider 2017). The horror in the novel seems to be an attempt to express the moment when no suitable cognitive schema is at hand (yet) to have a firm grasp on the world around us. As the novel illustrates and as the neuropsychology of spatial experience explains, many of our most basic conceptualizations are built on our understanding of spatial structures. The genre of the multimodal novel is especially adept at showing this through its ways of expression beyond verbal communication, as it is usually about phenomena that language fails to express. The phenomena that I have examined in *House of Leaves* may stand without symbolic meaning but definitely not without effect (Danielewski 2000, 60) or significance. They may contribute to the production of meaning in this sense in a negative way by creating an atmosphere of complex uncertainty and instability through the deconstruction of cognitive schemas of space and events in the narrative.

Chapter 7: Storytelling with Tourette's Syndrome in Jonathan Lethem's *Motherless Brooklyn*

The following chapter contains the most abstract analysis of this dissertation because, on the one hand, its topic is quite different from that of the previous ones as there is no focus on the emotions of fear and anxiety in it, and the body of the protagonist is not as obviously foregrounded as it is in the previous chapters. I will attempt to show that *Motherless Brooklyn* still includes phenomena that is traceable and worthy of examination with the help of a method built on the theories of embodied cognition. Embodiment and spatiality in this section are to be understood as the organizers of narrative structure just as early spatial experience structures conceptualization and language in general. Therefore, in the discussion of the aspects of the plot, embodiment is less of a direct experience in *Motherless Brooklyn* and more of a structuring principle, contributing to the "raw material" of meaning rather than symbolic meaning. It covers the individual's processes of navigation and exploration in a metaphoric sense, rather than the experience of one's egocentric space, especially one's own body. On the other hand, the discussions of the syndrome and the symptoms that concern high level processes of consciousness such as language use are often discussed through the processes of the somatosensory system.

Jonathan Lethem's *Motherless Brooklyn* (1999) is a detective novel and a *neuronovel*. The two genres are not difficult to merge, in fact, the traditional protagonist of the detective story, the detective is often depicted as a person with a peculiar mental state, for instance the figure of Sherlock Holmes. *Motherless Brooklyn* is a crime novel, the protagonist (narrator, and focalizor character) of which is a young man named Lionel Essrog, who lives with Tourette's syndrome, and tries to find his boss's murderer as a self-appointed detective. Due to Lionel's position in the story, it is possible to read it as the representation of his consciousness. In the novel, the investigation and the consciousness of a person with Tourette's syndrome are described in parallel, and I will examine the structure and the relationship of them. Lionel is a so-called unreliable narrator, who often uproots the traditional steps of the investigation involuntarily. He is characterized by compulsive physical and mental actions, uncontrollable thoughts and movements, for instance, he obsessively repeats certain expressions, while he strives to get ahead with his investigation, which lends the story a peculiar form and rhythm, and apparently makes the result of his work quite predictable.

I am interested in the narration of the story, with special regard to the way the perceptions of the narrator become alienated due to his neurological disorder, and the way it affects the process of the investigation. For people with Tourette's syndrome, motor and language functions become problematic simultaneously and interdependently. Since in my view both of these functions are strongly connected to narrative intelligence, I hypothesize that it is important to examine the effects of these symptoms[88] in the organization of the narrative. I aim at describing the characteristics of different narrative levels of a *storyworld* that is created by and through the consciousness[89] of a person who lives with Tourette's syndrome in. I will chiefly focus on the way information is collected and organized, the way the reader's attention is led, and the way the Tourettic logic influences the narration of the story.

7.1. Tourette's syndrome. "'I consist of tics—there is nothing else'"

The most famous description of Tourette's syndrome is in Oliver Sacks' work entitled *The Man Who Mistook His Wife For A Hat and Other Clinical Tales* (1985). Lethem also references Sacks' essays when he tells about his novel in an interview (Köves 2011). Sacks explains Tourette's syndrome as a condition that is in opposition with "neurology's favourite term," (Sacks 1999, Introduction of Part 2) deficit. While neurological disorders usually entail the loss of a skill or a function, Tourette's syndrome is understandable as "an excess or superabundance of" (Sacks 1999, Introduction of Part 2) certain functions.

> Tourette's syndrome […] is characterized by an excess of nervous energy, and a great production and extravagance of strange motions and notions: tics, jerks, mannerisms, grimaces, noises, curses, involuntary imitations and compulsions of all sorts, with an odd elfin humor and a tendency to antic and outlandish kinds of play. (Sacks 1999, "Ticcy Witty Ray")

Besides these symptoms, people with Tourette's syndrome often also suffer from obsessive-compulsive and attention deficit disorders (Takács et al. 2017, 33). These conditions are also observable in Lionel's narration. His environment does not even try to hide the fact that they view him as funny, annoying, pathetic, or all three. He is often referred

[88] Such as tension, obsessiveness and outbreaks both in cognition in general and in speech, and in physical movements in particular.
[89] Which, due to its peculiar logic, might strike one as chaotic first.

to and even addressed as “Freakshow” or “free circus.” Even if involuntarily, Lionel is used to playing the role of the “Tourettic clown” (Sacks 1999, “Ticcy Witty Ray”) in social situations.

7.2. Tourette’s syndrome versus storytelling

Motherless Brooklyn is an unconventional detective story. Its protagonist and “detective,” Lionel Essrog is a man in his early 30s, who suffers from Tourette’s syndrome and lives in Brooklyn in the 1990s. He works with three other men, called the “Minna men,” together with whom he was raised in an orphanage. Their boss, idol, and father figure is a man named Frank Minna, who started “employing” them occasionally in his hazy businesses when they were teenagers. Minna, who has a fun-loving and easy-going side, due to which he develops a unique relationship with Lionel, is in fact an insignificant mobster in the Italian-American mafia circles of New York. At the beginning of the story, Lionel and the other men work for the so-called Minna Agency, which is a detective agency disguised as a car service business. At least that is what Lionel, and therefore the reader, believes, and from their errands, such as monitoring people or buildings, one could indeed conclude that. These errands never require creativity or responsibility, as Lionel puts it “Agency Men were the markers – like Monopoly pieces […] to be moved around [the] game board” (Lethem 2011, 3).

Although he understands their position clearly, Lionel does not realize that what they assist is not detective work, but the business of the mafia. At the beginning of the first chapter Lionel and another Minna man, Coney sit in a car in front of a building. Minna ordered them to do that with no explanation. He shortly shows up and enters the building, and the only direction he gives to Lionel is to follow them in the car if they come out and get into one. The tailing fails, Lionel and Coney lose the car they are supposed to follow. They find Minna in a dumpster with several stab wounds, and he dies shortly after they take him to a hospital. Lionel is determined to find the man who murdered him. His mission is not easy though due to his powerless position he has little information of what happened, and his neurological disorder also hinders him considerably.

The plot line of the crime is not actually too complicated, and the investigation often falls out of the narrator’s focus. What makes the novel engaging and unique is the representation of the syndrome, which is best captured in the way(s) the story is narrated. There is an interplay between the way Lionel attempts to tell a story; the way this attempt is constantly interrupted by the syndrome. Lionel refers to his condition as another self of his,

not unlike another narrator. Lionel is a good listener and he can read people's behaviour very well, which are the characteristics of a great detective. He indeed may be one, if it was not for his condition and the powerless position in which it casts him. The way the reader probably expects to learn about the story due to the well-known strategies of the genre is arguably another constant aspect.

The most striking thing about Lionel's condition is his linguistic creativity. His linguistic tics, while they are unintentional, regarding their rhythm and associational logic, often take poetic forms (Schleifer 2001). The protagonist unexpectedly bursts into utterances such as the one below, often in the most embarrassing moments:

> I gritted my teeth while my brain went, *Guy walks into the ambulance ramp stabs you in the goddamn emergency gut says I need an immediate stab in the garbage in the goddamn walk-in ambulance says just a minute looks in the back says I think I've got a stab in the goddman walk-in immediate ambuloaf octoloaf oafulpoe.*
> "*Oafulpoe*[90]*!*" I screamed, tears in my eyes. (Lethem 2011, 27, emphasis in original)

This piece of logorrhea can be found in the scene at the hospital where Lionel and Coney take Minna after they finally find him. "Guy walks into" and "says" are parts of a joke Lionel was telling Minna on the way to the hospital to divert his attention from his wounds, the made-up words towards the end are partly made of the word "octopus," which was also a character in the joke. These are mixed with further expressions and phrases, most of which Lionel has recently heard in the hospital, finally making up an incoherent monologue, the last word of which is pronounced, making Lionel feel even worse. This is what he calls the Tourettic language. But it does not only come to the fore in emotionally charged situations. Sometimes it intrudes the most mundane conversations: "Any calls? See that *homosapien, homogenize, genocide, can'tdecide, candyeyes,* homicide cop?" (Lethem 2011, 124), he asks later on, succeeding in pronouncing the word 'homicide' on the sixth try. There are countless similar examples in the novel. Besides these the reader gets numerous examples of the subjective experience of having Tourette's syndrome, through which one gets a glimpse at the structure of the experience since Lionel often tries to explain how they are constructed. On the other hand, these are the parts which show the dramatic side of the condition that causes suffering to the individual while it often appears creatively playful or comical.

[90] Throughout the novel the italics mark the language of the "Tourettic self" of Lionel.

In Lionel's consciousness language itself appears to have agency. For example, in the hospital scene as he remembers a joke, he cannot resist telling it, although the timing could hardly be worse. "The bargain had been struck, at a level beyond my control. The joke would be told. I was only a device for telling it" (Lethem 2011, 32). His mind gets distracted by the most insignificant details, for instance in the middle of a conversation, without him having a chance to act in any other way: "the power window had seduced my magpie mind and now demanded purposeless raising and lowering" (Lethem 2011, 11). Language, often along with compulsive movements are forces, which can only be resisted for a brief time, and even during that time they cause tension and suffering for Lionel. As he puts it, "my brain sizzled with language, my body with gestures" (Lethem 2011, 140). In another situation he explains with another metaphor, "jabber was building up in the ocean of my brain like flotsam, and soon a wave would toss it ashore" (Lethem 2011, 138). Linguistic tics come like seizures, as he puts it, "I squeezed my eyes shut to interrupt the seizure of language" (Lethem 2011, 175), sometimes causing Lionel considerable mental and even physical suffering: "I kept my tongue wound in my teeth, ignored the pulsing in my cheek, the throbbing in my gullet, persistently swallowed language back, like vomit. It burned as hotly" (Lethem 2011, 48). In the following instance language itself distracts the narrator's attention: "Barnamum Bailey. Like Osmium, Cardamom, Brainium, Barnamum, Where'smymom […] Not now, I begged my Tourette's self. Think about it later" (Lethem 2011, 22). Apparently, it is the Tourette's self, that Lionel sometimes experiences as something quite separate from him, that is in control of language (and therefore the narration) use in these instances.

The constant distraction of attention and the constant reflection on the attention disorder both belong in Lionel's symptoms. Tourettic narration often wanders and "forgets" the investigation for a brief time and starts focusing on the condition. The syndrome is described and illustrated with more and more examples, and these descriptions visibly take the place of the building of the plot. There are in fact more than enough similes and metaphors in the text that serve explaining the syndrome. This is due to the fact that the attention of the narrator compulsively gets focused on his own symptoms again and again. The Tourettic self is responsible for this by rather aggressively intruding Lionel's storytelling.

> Here's the strangeness of having a Tourette's brain, then: no control in my personal experiment of self. What might be only strangeness must always be auditioned for relegation to the domain of symptom, just as symptoms always

> push into other domains, demanding the chance to audition for their moment of acuity or relevance, their brief shot - coulda been a contender! - at centrality. Personalityness. There's a lot of traffic in my head and it's two-way. (Lethem 2011, 131)

At other times, he projects his condition on various kinds of phenomena:

> *Conspiracies are a version of Tourette's syndrome*, the making and tracing of unexpected connections a kind of touchiness, an expression of the yearning to touch the world, kiss it all over with theories, pull it close. Like Tourette's, all conspiracies are ultimately solipsistic […] (Lethem 2011, 178, my emphasis)

> *[T]here is a vaguely Tourettic aspect to the New York City subway*, especially late at night–that dance of attention, of stray gazes, in which every rider must engage. (Lethem 2011, 237, my emphasis)

> *Insomnia is a variant of Tourette's*–the waking brain races, sampling the world after the world has turned away, touching it everywhere, refusing to settle, […] as though if it were to blink, then doze, the world might be overrun by some encroaching calamity, which its obsessive musings are somehow fending off. (Lethem 2011, 246, my emphasis)

As I have mentioned, there is quite a striking number of examples such as the ones above in the novel. They are very loosely connected to the investigation, usually they are associations inspired by minor details of the story. Lionel is aware of it, and he leaves no room for speculation about it:

> Have you noticed yet that I relate everything to my Tourette's? Yup, you guessed it, it's a tic. Counting is a symptom, but counting symptoms is also a symptom, a tic plus ultra. I've got meta-Tourette's. Thinking about ticcing, my mind racing, thoughts reaching to touch every possible symptom. Touching touching. Counting counting. Thinking thinking. Mentioning mentioning Tourette's. It's sort of like talking about telephones over the telephone […]. (Lethem 2011, 192)

The concept of "meta-Tourette's" is probably the best illustration of the logic of the condition and the irresistible outbreaks of movements and language, which appear in the narration of *Motherless Brooklyn*. The following example shows how the syndrome leads Lionel's investigation and narration on the side-tracks from time to time. Lionel watches Tony, another Minna Man from a car, and tries to collect his thoughts by composing questions based on what he knows already and what he is observing: "What was the giant

waiting for? What did Tony want to find in Minna's files? Why were his sandwiches in the car? Why had Julia flown to Boston? Who was Bailey anyway?" (Lethem 2011, 246). The first four questions are relevant, the answers to them would help the investigation. But the fifth is perfectly irrelevant: Bailey is just a name Lionel uses in his compulsive cursing. Lionel thinks a lot about how he started using this name since he never knew anybody named Bailey. This problem obviously has nothing to do with Minna's death, but being put on the list of questions above this thought dislocates Lionel's thinking about the case as well as the reader's attention. Although, this can be understood as a narrative function: the reader is forced to question every statement of the narrator with regards to relevance, therefore the narration guided by the logic of Turette's syndrome may call the reader's attention to what actually would be the proper next step or important piece of information in the investigation.

Lionel's missions both as the narrator and as a detective are doomed to failure, and these indeed get only a secondary role behind the – sometimes voluntary and sometimes involuntary – representation of his condition. Although his behaviour is very unique on the level of his tics and other symptoms, behind them the pattern of his self-centeredness and obsessive-compulsive way of thinking is quite simple.

In the light of the above examples it is hardly surprising that in the course of his investigation Lionel, who is constantly interrupted by his own Tourette's self, keeps missing the majority of the important events and fails to collect enough relevant information. In fact, due to his ineffectiveness he is partly responsible for Minna's death as they lose track of the car they were supposed to tail and by the time they find Minna, it is too late to save his life. On the other hand, despite his disadvantages Lionel is not an altogether hopeless detective, moreover, his obsessive nature proves quite useful in some situations:

> Coney and the other Minna Agency operatives loved doing stakeouts with me, since my compulsiveness forced me to eyeball the sight or mark in question every thirty seconds or so, thereby saving them the trouble of swivelling their necks. A similar logic explained my popularity at wiretrap parties – give me a key of list of trigger words to listen for in a conversation and I'd think about nothing else, nearly jumping out of my clothes at hearing the slightest hint of one, while the same task invariably drew anyone else toward blissful sleep. (Lethem 2011, 4)

Besides his rare instances of successful concentration, he is talented at reading people's behaviour and tone of voice. When Tony, another Minna Man tries to question Lionel about what he had found out, he reads from his behaviour perfectly: "'Where?' But

Tony's eyes said he knew perfectly well where, only needed to measure what I knew. He looked a little panicked, too" (Lethem 2011, 180). Eventually, "with his questions Tony was telling [Lionel] more than [Lionel] was telling him" (Lethem 2011, 183).

Unfortunately, despite these skills, due to his condition and the insignificant position he has in Minna's businesses he does not manage to get ahead with the investigation. Lionel eventually does not solve any mysteries because he is unable to take up someone else's perspective. Insignificant events get stuck in his mind, often simply because a phrase or a word sounds interesting to him, and keeps thinking about these, making the reader question which pieces of information count as a clue and which do not. Lionel notices numerous important details either too late or not at all. He makes the traditional steps of investigation: he goes to the important scenes of the crime, talks to people who might know something about it, etc., but all his efforts are subverted by the logic of Tourette's syndrome. He keeps thinking about obviously irrelevant events, while he does not even attempt to find out anything for instance about Minna's past, which would help the investigation.

Investigation can be understood as interaction with one's environment. But in Tourette's syndrome it does not work that way. Besides the verbal tics Lionel reacts to his environment by touching and poking at everything, including people. From strangers it elicits distrust and suspicion, and the people who know him look down on him and try to exclude him from the case. He is often told that he does not understand the situation, and in fact, everyone around him is convinced – not quite mistakenly – that he does not know anything important.

7.3. Narrative organization

Lionel mentions it several times that he sees the world and (the workings of) his own brain as the same thing. This means that by describing the world he describes his own consciousness. Hence Tourette's syndrome as a neurological disorder becomes relevant for literary theory not only because linguistic tics have poetic forms. The above examples are observable not only in the dialogues and the distinct steps of the investigation. Lionel's tics intrude the narrative organization, they break it, stop it, hijack it on every level of the narrative. In the narration irrelevant details keep coming up, such as the octopus in the hospital scene, and also on higher levels of organization, for instance in the titles of chapters. The first chapter is titled "Walks into" which is also from the joke with the octopus that starts with the cliché joke format: "a guy walks into a bar…". This can also be understood as a manifestation of Tourette's syndrome: the title of the opening chapter is the opening

line of a joke that is being repeated compulsively several times, and behind which is actually a terrible, traumatic meaning since it is the joke Lionel tells Minna before he dies in an attempt to divert his attention from his wounds. The titles of chapters usually serve the organization of a narrative or at least emphasize a significant event in it, but here this function is overwritten by Lionel's nervous excess of energy and inability to focus.

Motherless Brooklyn is a great example of Marco Roth's observation, according to which in *neuronovels* characters whom were previously given only minor roles become central, moreover, Lethem emphasizes this throughout the novel. Lionel mentions several times that he is in an isolated, unimportant position even among the Minna Men, who are all treated as board game pieces. By the end of the novel it becomes clear that Minna's death was due to his conflict with more powerful mobsters. But the readers learn it not through Lionel's investigation, but through the telling of Julia, Minna's widow, who eventually feels sorry for Lionel seeing how he struggles with trying to find out what happened and tells him everything. This choice of revealing the actual crime story suggests that it is secondary to the way Lionel attempts to carry out and narrate his investigation.

As for the Italian-American mobsters, the Minna Men have met them earlier and the businesses they had with them are good illustrations of the whole "investigation" Lionel was trying to carry out. "The Clients were discontinuous too. They were fractured stories, middles lacking a clear beginning or end. [...] we were only tools, glancing off the sides of stories bigger than we understood, discarded and left wondering at the end" (Lethem 2011, 167). Lionel's knowledge due to his position is extremely limited. The concluding thought of the investigation is merely the following: "Then somewhere, sometime, a circuit closed. It was a secret from me, but I knew the secret existed" (Lethem 2011, 304). The homicide detective to whom the case is officially assigned is simply not motivated to solve the case, and the incident is eventually sorted out by the mafia: the official and the Tourettic detective both fail. Lionel is unable to come close to understanding the important events, let alone influence them, all thorough the story he narrates the events from a position where he cannot see them clearly. He finds this out only when he learns what had really happened and realizes how far he was from solving the case.

The closing sentences of the novel are further examples of his work as a narrator:

> The world (my brain) is full of dull men, dead men, Ullmen. […] I can't feel guilty about every last body. Ullman? Never met the guy. Just like Bailey. They were just guys I never happened to meet. To the both of them and to you I say:

> Put an egg in your shoe and beat it. Make it like a tree, and leave. Tell your story walking. (Lethem 2011, 311)

The work closes with two puns and a simple slight insult, all inherited by Lionel from Minna. This can be understood as closure, as a last tribute to Frank Minna, but regarding narration, these sentences work the same way the joke does in the first chapter: these are funny but otherwise insignificant thoughts that burst out of Lionel in place of coherent and concluding ones, hence, yet again, the Tourette's self takes over the narration.

In the light of the phenomena I have discussed above, it seems important to take into consideration the neuropsychological and cognitive characteristics of a condition in the analysis of certain literary works. As I have pointed it out when I outlined my method, due to the early stages of neuro-narratology it would be difficult to draw a general conclusion or to build a comprehensive model for the construction or comprehension of narratives in this field. In the present case, since the narrator's condition seems to rule the whole of the *storyworld* he creates, narrative organization itself can be understood as part of the protagonist's characterization.

One of the basic principles of cognitive narratology is that narratives are to be understood as structures that play an important role in the organization of our consciousness. Considering second generation cognitive narratology this means a structure which operates in a dynamic and flexible way, as a part of the mind-body-environment system. Lethem's narrative "embodies" the nervous excess of energy that characterizes Tourette's syndrome (Schleifer 565). The plot seems to be the manifestation of the excess of energy, which is stopped from time to time then jumps ahead in a random direction, while at the same time it also embodies the compulsive logic that keeps returning to certain points.

The plot is far from linear but its construction is not arbitrary either. It cannot be modelled as a (slow or fast) linear movement, because at each point it is more like a set of movements in several directions due to the problematic strategy of the narration. Therefore it can be another example of the "plot model in motion" that I have discussed in connection with DeLillo's *The Body Artist*. As for structure, these plot models are always to be imagined as models of certain embodied experiences. Narrative structures are traditionally conceptualized as high level, abstract cognitive structures, in this sense they are to be imagined to be based on nonverbal, sensorimotor patterns. This theory is in line with Martin A. Conway's studies about imagination and memory: Conway sees the base of all conceptual knowledge in these patterns (Conway and Loveday 2015, 575). Narratologist Richard Walsh

also claims that narratives are never purely narratives, they only foreground narrative meaning, which is always heavily influenced and enriched by other (for instance lower, presymbolic) forms of cognition. This theory of the construction of plots can be viewed as part of the research project Schneider suggests: the revision of the concept of schemas in narratology. Such a quality of structural phenomena in narratives is usually unreflected although it can contribute to the process of the production of meaning. Not necessarily reaching a conscious level of cognition, these phenomena serve as the raw material of narrative meaning. It would be an overstatement to claim that these phenomena are equally present it all narratives, but in the case of *neuronovels* they are often observable and worthy of further analysis.

Conclusion

This chapter served as a case study, an examination of a narrative and a *storyworld* that is constructed through the consciousness of a narrator who lives with a neurological disorder. The development of the theories of neuro-narratology may be especially fruitful through the analysis of a *neuronovel*, since these narratives, not unlike neuro-narratology, apply the findings of neurology and neuropsychology. Besides these novels it can be fruitful to examine any literary work that focuses on a character who has a problematic neurological condition, or a character put into an unusual environment that deautomatizes and problematizes the processes of perception and cognition[91].

Jonathan Lethem's *Motherless Brooklyn* is narrated and focalized by a character with Tourette's syndrome. Mechanisms of certain symptoms of this condition, especially the excess of nervous energy, obsessiveness, and attention disorder are embodied in this narrative on the level of dialogues, plot, and discourse as well. Besides what the reader would normally expect because of the expectations elicited by the genre of the crime story, one is confronted with the struggle caused by the interplay between Lionel's attempt of narrating and the intrusions of his Tourette's self, largely influenced by an inability to focus. Examinations of literary works such as Lethem's novel may contribute to the revision of certain concepts of narratology connected to perception, attention, or memory, and they can be useful in psychology and medical practice as well, where the subjective experience of patients is hopefully becoming a more and more important aspect. On a more popular level

[91] Another extremely useful category of texts would be non-fiction texts and narratives produced by people who live with a neurological or psychiatric disorder.

stories about illnesses always help raising awareness about illnesses. *Motherless Brooklyn* not only humanizes persons with Tourette's syndrome, but, through the explanations of the subjective experience of the conditions educates its readers, which is an additional, potential social effect of neuronovels.

Conclusion

The claim that the goal of this dissertation was *not* to present a completely revolutionary approach might sound like a plea or an excuse. But as I hope to have demonstrated, in contemporary narratology it is not too much of an exaggeration to state that it is easier to build a new approach than to synthetize or even merely survey the already existing ones. My aim was to gain a better understanding of older concepts, which, due to the changes in the field of literary theory (and numerous other fields of study) became important to reconsider in the light of relevant new findings and theories.

The attitude that I have just described is not quite original either. Cognitive narratology has already enriched several key concepts of narratology with the help of cognitive sciences. Actually, this is the kind of research and the very approach that I would like to contribute to with my work. In the first chapter, I started with providing an account (and an alternative account) of modern narratology because there seems to be a trend of returning in a sense to classical narratology nowadays, and I believe a survey of the ways narrative has been conceptualized and investigated in the past century (more or less) helps understanding today's concerns and endeavours in narrative studies.

I also described a tendency that went on largely in parallel with the evolution of 20th century narratology, which can be understood as an epistemological crisis that was heavily felt in almost all scientific disciplines from physics to literary theory. There was a need for this because, in the broadest sense, the dissertation is an attempt to contribute to the genuine dialogue between the sciences and the humanities. It happens when not only concepts are borrowed but more general views are integrated into one field from another. I hope that the way I attempted to model the conceptualization of narrative (discourse) structures and narrative understanding with the help of the theories of navigating and exploring our environment through our bodies will prove to be such an attempt. In chapter two, I have described several problems of interdisciplinary research that combines such supposedly

opposing fields as literary theory and cognitive science and neurology. At the intersection of these disciplines one finds cognitive narratology, which inherited numerous problems from cognitive science, such as those of consciousness and embodiment. These problems are discussed in the first half of chapter two.

Cognitive science is a field ruled by two sets of theories that often appear mutually exclusive, one attempting to model human mental operations as computational, algorithmic, and solipsistic processes that, besides some input, require only brain activity (this is called cognitivism) and another, which imagines cognition as a dynamic embodied process embedded in and sensitive to the individual's environment (embodied cognitive theory or second-generation cognitive theory). Many theories of these approaches have been imported into narrative studies. Those of the latter make up the approach known as *second-generation cognitive narratology* among narrative theories. This, combined with the neuropsychology of spatial experience, is what one might see as the backbone of this dissertation.

Neuro-narratology, as the very new branch of narratology might be called, resulting from the above-mentioned incorporations, is currently more of a set of questions and risky hypotheses than a theory or an approach yet, but the fact that neurosciences have become more and more popular in many disciplines can be interpreted as an inspiration for literary theorists as well.

My hypothesis was that the structures of the processes of perception can be investigated in literary narratives. In my analyses I have focused on the nonvisual perception of space and movement. The conceptualization of spaces subserves other domains of human cognition such as emotion, language, or other forms of interpersonal interaction. Spatial experiences, therefore, play a crucial role in the development of human conceptual systems, such as language, or, arguably narratives. I have examined narratives that are either narrated in the first person or employ internal focalization, therefore may be interpreted as consciousness representation. Moreover, these narratives emphasize human embodiment and spatial experience, especially the sensing of one's egocentric space and one's own body.

A more specific hypothesis therefore was that structures of spatial experience may fundamentally influence narrative organization and potentially contribute to the production of the meaning of the given narrative. I imagine plot structures are motivated by presymbolic, embodied experiences. Narrative structures are traditionally conceptualized as high level, abstract cognitive structures, in this sense they are to be imagined to be based on nonverbal, sensorimotor patterns. I believe, embodiment has a powerful role in the creation of symbolic meaning at an early stage of the process of the production of meaning.

Therefore, structures and functions of embodiment seem to function as the raw material of meaning in narratives. But these "components" of meaning probably do not always aid the construction of symbolic meaning. Through creating uncertainty and ambiguity they potentially make the reading experience richer, however, they may work against and hinder the construction of symbolic meaning.

The most influential theory that attempts to explain how language is anchored in our embodiment is that of image schemas. Considering the role of image schemas in narrative understanding is important and may help us reconsider the conceptualization of schemas in narratology so that we may understand them as more dynamic, therefore more natural. The majority of the stories that I analyze are very similar in the sense that they are concerned with negative emotions, especially different kinds of fear and anxiety. Spatial experience and the experiencer's state of mind mutually influence each other in complicated ways. These significant aspects and parts of stories do not affect the reader in and of themselves, but in interaction with other characteristics of the story as well as numerous reader variables. Since the structures that I discuss in this dissertation are strongly connected to preverbal and presymbolic levels of cognition it is very likely that they only provide a feeling of an atmosphere rather than clear symbolic meaning or easily reportable opinion about the given literary works, which are quite ambiguous and confusing on the level of topic and events as well, hence, in the analyzed stories they often hinder the construction of symbolic meaning, or, in fact, make its construction impossible.

However, I find this level of understanding narratives crucial because human cognition always involves such a level. Episodic memories, which we constantly rely on, consist of so-called episodic elements, which are regarded as vital units of the cognitive system in general, as Martin Conway explains. The episodic elements, just like image schemas, are "non-verbal and sensory-perceptual in nature". Richard Walsh claims that in the course of understanding a narrative there are always several modes of cognition involved, such as spatial cognition. I also find the interdisciplinary method necessary because I agree with Sommer, who claims that narrative theories could not fully explain everything that needs to be explained in connection with narratives. For instance, in the reading process one constructs symbolic meaning through an extremely complex process of comprehension that it built as a result of the workings of several mental processes. Nabokov assumed that imagination and memory work in the same way. Today it seems that researchers of memory, neuropsychology and cognitive science have proven his point.

All the analyzed narratives create uncertainty through the pluralization of possible events through ambiguous narration (*Invitation to a Beheading*) or disnarration (*The Body Artist, House of Leaves*), the representations of narrative space usually through the focalizer character's body. Stories that deal with anxiety and psychological traumas tend to have similarities on the level of content as well. For instance, the loss of balance is in general a rather obvious theme to illustrate these problems[92], and all the five stories[93] that focus on embodiment have it as an important theme. But there is an even more precise common theme that is otherwise not very common in literature: motion sickness, which can be found in three[94] out of the previously mentioned five stories. I understand such phenomena as expressions of natural cognitive processes instead of simply artistic expression, and therefore claim that these link narratives more directly to other processes of human cognition.

Importantly, I do not claim that embodiment is significant in all narratives to the same extent. Human consciousness,[95] the product of the brain,[96] itself has long been an important topic of literature. The most important idea of cognitive narratology in this work is that narratives are to be understood as basic structures of the human mind. I find it crucial in the development of neuronarratology to choose the narratives, the analysis of which is possible with the method of close reading as well. For this purpose, I believe, neuronovels provide excellent material because they tend to foreground deficits in narration[97], in the case of my analyses alienated or deautomatized perceptions, which highlight the way embodiment takes part in cognition and therefore in the workings of narrative intelligence.

What I have found is that structures of embodied experiences that are precisely described in neuropsychology, for instance the way one senses space when one is traumatized or experiences pathological fear or panic, are traceable in the structures of literary narratives. These structures, through focalization, may contribute to characterization, as is the case in Lethem's *Motherless Brooklyn*, may take part in constructing narrative space, as it happens in DeLillo's "The Ivory Acrobat," or may even organize the complete discourse of a narrative, as they do in the case of DeLillo's *The Body*

[92] And, incidentally, it is a fundamental experience of living in a body.
[93] "The Ivory Acrobat", *The Body Artist, Invitation to a Beheading*, "The Pit and the Pendulum" *House of Leaves.*
[94] *The Body Artist, Invitation to a Beheading, House of Leaves.*
[95] That also has been termed mind, soul, psyche, or psychology, depending on what was the popular term for it in the given era.
[96] Although, according to my approach, definitely not *solely* the brain.
[97] They also became popular simultaneously with the study of the human brain in the 1990s.

Artist. Narrative phenomena, just like all other parts of human cognition, need to be understood as elements of the mind-body-environment system[98], and to be seen as more dynamic and flexible than previously assumed. I believe, taking into consideration the aspects of embodiment that I have traced helps us do that.

I see two potential further ways of future research regarding this project besides analysing more literary works with similar methods, which is also needed considering the present (infant) stage of neuro-narratology. One would be to carry out empirical research to test whether these aspects of a literary work indeed contribute to the production of meaning making, which would be very difficult due to the fact that the majority of the process of meaning-making is unconscious. Another way to help develop neuro-narratology, if one is interested in problematic, in the traditional sense dysfunctional or pathologic ways of storytelling, could be to carry out analyses of (fictive or nonfictive) narratives produced by individuals who live with diagnosed mental or neurological disorders, and possibly contrast these narratives with analyses of literary works such as the ones I have analysed here. Such research could significantly contribute to our understanding of natural narratives and the ways they function, and through that, a deeper understanding of human cognition.

[98] As second-generation cognitive narratology models the system from which human consciousness emerges.

Reference List

Abbott, Porter H. 2002. *The Cambridge Introduction to Narrative*. Cambridge: Cambridge University Press.

Alber, Jan, Stefan Iversen, Henrik Skov Nielsen, and Brian Richardson. 2010. "Unnatural Narratives, Unnatural Narratology: Beyond Mimetic Models." *Narrative* 18.2: 113–36.

American Psychiatric Association. 2013. *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington.

Anderson, Sam. 2009. "A Glorious Mess." Review of *The Original of Laura (Dying Is Fun)*, by Vladimir Nabokov. *New York Magazine*, November 15. Accessed January 10, 2116. http://nymag.com/arts/books/reviews/62036/.

Bal, Mieke. 2009. *Narratology: introduction to the theory of narrative*. London: University of Toronto Press.

Barlassina, Luca, and Robert M. Gordon. 2017. Folk Psychology as Mental Simulation. In *Stanford Encyclopedia of Philosophy*. Accessed on 07. 07. 2017: https://plato.stanford.edu/entries/folkpsych-simulation/

Barthes, Roland. 1975. "Introduction to the Structural Analysis of Narratives". In: *New Literary History* 6 (No. 2): 237-272.

Beller, Miles. 2011 Review of *The Original of Laura (Dying Is Fun)*, by Vladimir Nabokov. *Psychological Perspectives* 54: 367–72. doi: 10.1080/00332925.2011.597291.

Belting, Hans. 2003. *Kép-antropológia. Képtudományi vázlatok*. Translated by Kelemen Pál. Budapest: Kijárat kiadó. Originally published as *Bild-Anthropologie. Entwürfe für eine Bildwissenschaft*. (Fink: München, 2001).

Binelli, Mark. 2007. 'Intensity of a plot. Mark Binelli interviews Don DeLillo' In *Guernica. A Magazin for Art & Politics*. Accessed May 03, 2015. https://www.guernicamag.com/interviews/intensity_of_a_plot/

Bortolussi, Marisa and Peter Dixon. 2003. *Psychonarratology: Foundations for the Empirical Study of Literary Response*. Cambridge: Cambridge University Press.

Boxall, Peter. 2009. *Since Beckett. Contemporary Writing in the Wake of Modernism.* New York: Continuum International Publishing Group.

Boxall, Peter. 2006. *Don DeLillo. The possibility of fiction.* London: Routledge.

Boyd, Brian. 2011. *Stalking Nabokov. Selected Essays*. Columbia University Press. New York.

Bozovic, Marijeta. 2011. "Love, Death, Nabokov: Looking for The Original of Laura." *Nabokov Online Journal* 5: 1-19.

Bozovic, Marijeta. 2013. "The Critics' Laura." In *Shades of Laura: Vladimir Nabokov's Last Novel, "The Original of Laura,"* edited by Yuri Leving, 205-16. Montreal: McGill-Queen's University Press.

Bridgeman, Teresa. 2007. "Time and space." In *Cambridge Companion to Narrative*. Edited by David Herman, 52–65. Cambridge University Press.

Burke, Seán. 1998. *The Death and Return of the Author: Criticism and Subjectivity in Barthes, Foucault and Derrida*. Edinburgh: Edinburgh University Press.

Calvo, Paco and Antoni Gomila eds. 2008. *Handbook of Cognitive Science: An Embodied Approach*. Elsevier. New York.

Caracciolo, Mark, Cécile Guédon, Karin Kukkonen, Sabine Müller. 2017. "The Promise of an Embodied Narratology: Integrating Cognition, Representation and Interpretation" In *Emerging Vectors of Narratology*. Edited by Per Krogh Hansen et al., 435-460. Berlin: De Gruyter.

Caracciolo, Mark. 2014a. *The Experientiality of Narrative. An Enactivist Approach*. Berlin: De Gruyter.

Caracciolo, Marco. 2011. "The Reader's Virtual Body: Narrative Space and Its Reconstruction." *Storyworlds* 3: 117-138.

Caracciolo, Marco. 2013. "Experientiality". In *The living handbook of narratology*. Edited by Hühn, Peter et al. Hamburg: Hamburg University. Accessed January 30, 2016. http://www.lhn.uni-hamburg.de/article/experientiality

Caracciolo, Marco. 2015. "Tell-Tale Rhythms: Embodiment and Narrative Discourse." In *Storyworlds* 6.2. Accessed January 30, 2016. http://0-literature.proquest.com.fama.us.es/searchFulltext.do?id=R05155516&divLevel=0&area=abell&forward=critref_ft

Caracciolo, Marco. 2014b. "Experientiality". In: Hühn, Peter et al. (eds.): *the living handbook of narratology*. Hamburg: Hamburg University. URL = http://www.lhn.uni-hamburg.de/article/experientiality

Chemero, Anthony. 2009. *Radical Embodied Cognitive Science*. Cambridge, Massachusetts: The MIT Press.

Chihaia, Matei. 2012. "Introductions to Narratology. Theory, Practice and the Afterlife of Structuralism." *DIEGESIS* I (1): 15–31.

Cohn, Dorrit. 1978. *Transparent Minds: Narrative Modes for Presenting Consciousness in Fiction*. Princeton: Princeton University Press.

Conway, A. Martin and Catherine Loveday. 2015. "Remembering, imagining, false memories & personal meanings". In: *Consciousness and cognition* 33: 574-81.

Cowart, David. 2002. *Don DeLillo: The Physics of Language*. Athens, Georgia: University of Georgia Press.

Dannenberg, Hilary P. 2008. *Coincidence and Counterfactuality: Plotting Time and Space in Narrative Fiction*. Lincoln: University of Nebraska.

DeCurtis, Anthony. 1991. "'An Outsider in This Society': An Interview with Don DeLillo." In *Introducing Don DeLillo*. edited by Lentricchia, Frank, 43-66. Durham: Duke University Press.

Delage-Toriel, Lara. 2006. "Brushing through 'veiled values and translucent undertones.' Nabokov's pictorial approach to women." *Transatlantica* 1. Accessed January 15, 2016. http://transatlantica.revues.org/760.

DeLillo, Don. 2011. *The Angel Esmeralda*. New York: Scribner e-book.

DeLillo, Don. 2002. *The Body Artist*. 2002. New York: Picador.

DeLillo, Don. 2007. *Falling Man*. New York: Picador.

DeLillo, Don. 2011. "The Ivory Acrobat." In DeLillo, Don. In *The Angel Esmeralda*. New York: Scribner, Scribner e-book.

DeLillo, Don. 1991. *Players*. New York: Vintage Books.

DeLillo, Don. 2016. Speech presented at the "Fiction Rescues History" DeLillo Conference in Paris, France, Paris, February 18–20.

DiPrete, Laura. 2005. "Don DeLillo's The Body Artist. Performing the Body, Narrating Trauma" In *Contemporary Literature*, (46) 3: 483–510.

Eder, Jens. 2003. “Narratology and Cognitive Reception Theories” In *What Is Narratology. Questions and Answers Regarding the Status of a Theory*. Edited by Kindt, Tom, Hans-Harald Müller, 277-302. Walter de Gruyter. Berlin.

Ehmann, Bea. 2002. *A szöveg mélyén: A pszichológiai tartalomelemzés* [In the depth of the text: Psychological content analysis]. Budapest.

Evans, Vyvyan and Paul Chilton. 2010. *Language, Cognition and Space: The State of the Art and New Directions*. Equinox Publishing Ltd.

Fludernik, Monika. 2005. “Histories of Narrative Theory (II): From Structuralism to the Present” In *Blackwell Companion to Narrative*. Edited by Phelan, James, Peter J. Rabinowitz, 36-59. Blackwell Publishing. Oxford.

Fludernik, Monika. 2002. *Towards a ‘Natural’ Narratology*. New York.

Fludernik, Monika. 2017. “Introductory lecture” Preconference Doctoral Seminar "Cognitive Narratology Today". Prague, September 11.

Fry, Stephen. 2011. *The Fry Chronicles*. Penguin Books. London.

Gallese, Vittorio and Hannah Wojciehowski. 2011. “How Stories Make Us Feel: Toward an Embodied Narratology.” *California Italian Studies* 2 (1). http://www.escholarship.org/uc/item/3jg726c2.

Gates, David. 2009. “Nabokov’s Last Puzzle.” Review of *The Original of Laura*, by Vladimir Nabokov. *New York Times*, November 15. http://www.nytimes.com/2009/11/15/books/review/Gates-t.html?_r=5&.

Gibbs, Raymond W., Jr. 2005a. *Embodiment and Cognitive Science*. Cambridge. Cambridge University Press.

Gibbs, Raymond W. 2005b. “The psychological status of image schemas” In *From Perception to Meaning: Image Schemas in Cognitive Linguistics*. Edited by Hampe, Beate and Joseph E. Grady, 113-136. Mouton de Gruyter. Berlin.

Gibbs, Raymond W. 2005c. “Embodiment in Metaphorical Imagination” In *Grounding Cognition: The Role of Perception and Action in Memory, Language, and Thinking*. Edited by Pecher, Diane and Rolf Zwaan, 65-92. Cambridge: Cambridge University Press.

Gomel, Elena. 2014. *Narrative Space and Time. Representing Impossible Topologies in Literature*. Routledge. New York.

Hakemulder, Jèmeljan. 2000. *The Moral Laboratory. Experiments Examining the Effects of Reading Literature on Social Perception and Moral Self-concept*. Amsterdam: John Benjamins Publishing Company.

Hakemulder, Jèmeljan and Emy Koopman. 2010. "Readers Closing in on Immoral Characters' Consciousness. Effects of Free Indirect Discourse on Response to Literary Narratives" In *Journal of Literary Theory*, 4. 1: 41–62.

Hallet, Wolfgang. 2009. "The Multimodal Novel. The Integration of Modes and Media in Novelistic Narration." In *Narratology in the Age of Cross-Disciplinary Narrative Research*, edited by Sandra Heinen and Roy Sommer, 129-53. Berlin: Walter de Gruyter.

Hamilton, Craig A. and Ralf Schneider. 2002. "From Iser to Turner and Beyond: Reception Theory Meets Cognitive Criticism".In *Style*: 36. 4: 640-658.

Hampe, Beate. 2005. "Image schemas in Cognitive Linguistics: Introduction" In *From Perception to Meaning: Image Schemas in Cognitive Linguistics*. Edited by Hampe, Beate and Joseph E. Grady, 1-14. Mouton de Gruyter. Berlin.

Heinen, Sandra, Roy Sommer, ed. 2009. Narratology in the Age of Cross-Disciplinary Narrative Research. Berlin: Walter de Gruyter.

Hetényi, Zsuzsa. 2015. *Nabokov regényösvényein*. Kalligram Kiadó. Budapest.

Herman, David. 2009. *Basic Elements of Narrative*. West Sussex: Wiley-Blackwell.

Herman, David. 2013. *Storytelling and the sciences of mind*. The MIT Press.

Herman, David, Manfred Jahn, Marie-Laure Ryan eds. 2010. *Routledge Encyclopedia of Narrative Theory*. Taylor & Francis e-Library. New York.

Herman, David and Bart Vervaeck. 2005. *Handbook of Narrative Analysis*. University of Nebraska Press. Lincoln.

Holland, Norman N. 2009. *Literature and the Brain*. Gainesville: The PsyArt Foundation.

Horváth, Márta. 2011. "'Megtestesült Olvasás': A Kognitív Narratológia Empirikus Alapjai." *Literatura* XXXVII. (1): 3–15.

Horváth Márta. 2012. "Az olvasás eredete. Evolúcióelméleti érvelés a kognitív poétikában". In: *Filológiai Közlöny* 2012/4: 465-475.

Horváth Márta and Szabó Erzsébet, eds. 2013. *Helikon irodalomtudományi szemle: Kognitív irodalomtudomány*. [Helikon review of literary studies: Cognitive literary theory] 2. Budapest.

Hustvedt, Siri. 2011. *The Shaking Woman or A History of My Nerves*. London: Hodder & Stoughton General Division

Hyvärinen, Matti. 2010. "Revisiting the Narrative Turns". In: *Life Writing* 7 (No. 1): 69-82.

Iser, Wolfgang. 1993. *Prospecting: From Reader Response to Literary Anthropology*. Johns Hopkins University Press. Baltimore.

Iser, Wolfgang. 2001. "Interaction between Text and Reader". In *The Norton Anthology of Theory and Criticism*. Edited by Leitch, Vincent B., 1673-1682. W. W. Norton & Company. New York.

Jahn, Manfred. 1997. "Frames, Preferences, and the Reading of Third-Person Narratives: Toward a Cognitive Narratology." *Poetics Today* 18.4: 441–68.

Jan Alber, Stefan Iversen, Henrik Skov Nielsen, and Brian Richardson. 2010. "Unnatural Narratives, Unnatural Narratology: Beyond Mimetic Models." Narrative 18.2.

Jay A. Hamm, Bethany L Leonhardt, Rebecca L Fogley, Paul H Lysaker. 2014. "Literature as an exploration of the phenomenology of schizophrenia. Disorder and recovery in Denis Johnson's Jesus' Son" In *Medical Humanities* 40. 2.

Johnson, Mark. 2005. "The philosophical significance of image schemas" In *From Perception to Meaning: Image Schemas in Cognitive Linguistics*. Edited by Hampe, Beate and Joseph E. Grady, 15-34. Mouton de Gruyter. Berlin.

Johnson, Mark. 1992. *The Body in the Mind. The Bodily Basis of Meaning, Imagination, and Reason.* The University of Chicago Press. Chicago.

Kállai, János, Kázmér Karádi, and Tamás Tényi. 1998. A *térélmény kultúrtörténete és pszichopatológiája* [The cultural history and psychopathology of spatial experience]. Budapest: Tetra.

Kállai János. 2013. *Társaskapcsolatok neuropszichológiája*. Medicina Könyvkiadó Zrt., Budapest.

Karnicky, Jeffrey. 2009 "Avian Consciousness in Don DeLillo's *The Body Artist*." *Authrozoös* V. 1: 5-18.

Keen, Susan. 2006. “A Theory of Narrative Empathy”, In *NARRATIVE*, (14) 2006/3: 207–236.

Kérchy, Anna. 2009. “Tapogatózások. A test elméleteinek alakzatai” [“Corporeal Configurations. Towards a Definition of Body Studies”]. *Apertúra* 4 (2). Accessed February 02, 2014. http://apertura.hu/2009/tel/kerchy.

Kimmel, Michael. 2009. “Analyzing Image Schemas in Literature.” *Cognitive Semiotics* 5: 159–188.

Kiss, Attila Atilla. 1995. “Ki olvas? Posztszemiotika” [“Who reads? Postsemiotics”]. *Helikon Irodalomtudományi Szemle* [*Helikon Review of Literary Studies*] 40 (1-2): 5-13.

Kiss, Miklós. 2015. “Film Narrative and Embodied Cognition: The Impact of Image Schemas on Narrative Film.” In *Embodied Cognition and Cinema*. Edited by Coegnarts, Maarten and Peter Kravanja, 43-61. Leuven: Leuven University Press.

Kovács, Ágnes Zsófia. 2012. “What the Cathedral Says: Edith Wharton’s Aesthetic Theory of Visual Arts in a Motor-Flight Through France”. In *AMERICANA: E-JOURNAL OF AMERICAN STUDIES IN HUNGARY*. Volume VIII, Number 2. Available: http://americanaejournal.hu/vol8no2/kazs.

Kövecses Zoltán. 1998. “Metafora a kognitív nyelvészetben” [Metaphors in cognitive linguistics]. In *A kognitív szemlélet és a nyelv kutatása* [Research on the cognitive approach and language] edited by Pléh Csaba and Győri Miklós. Budapest: Pólya Kiadó.

Köves Gábor. 2011. “A betegség neve: Brooklyn - Jonathan Lethem író”, In *Magyar Narancs*. http://magyarnarancs.hu/konyv/jonathan-lethem-iro-52319

Kristeva, Julia. 1982. *Powers of Horror: An Essay on Abjection*. New York: Columbia University Press.

Kristeva, Julia. 1984. *Revolution in Poetic Language*. New York: Columbia University Press.

Kuzmičová, Anežka. 2014. “Literary Narrative and Mental Imagery: A View from Embodied Cognition” In *Style* Vol. 48, No. 3: 275-293

Labov, William. 1972. *Language in the Inner City: Studies in the Black English Vernacular*. Philadelphia: University of Pennsylvania Press.

Lakoff, George and Mark Johnson. 1980. *Metaphors We Live By*. Chicago: University Of Chicago Press.

Lakoff, George and Mark Johnson. 1999. *Philosophy In The Flesh: The Embodied Mind And Its Challenge To Western Thought*. New York: Basic Books.

LaViola, Joseph. 2000. "A Discussion of Cybersickness in Virtual Environments", In *SIGCHIBulletin*, 32. 2000/1: 47–56.

László, János. 1998. "Az irodalmi elbeszélés megértésének kognitív-szociális megközelítése" In *A kognitív szemlélet és a nyelv kutatása*. Edited by Pléh, Csaba and Győri Miklós, 266-276. Pólya Kiadó. Budapest.

Lethem, Jonathan. 2004. *Motherless Brooklyn*. Faber and Faber. New York.

Leving, Yuri. 2011. "Interpreting Voids: Vladimir Nabokov's Last Incomplete Novel, *The Original of Laura*." *The Russian Review* 70 (2): 198–214.

Louisiana Channel. "Siri Hustvedt Interview: Art and Science" March 8 2018. https://www.youtube.com/watch?v=XvdoFBEctPI&t=363s&pbjreload=10

Löw, Martina. 2016. *The Sociology of Space. Materiality, Social Structures, and Action*. New York: Palgrave Macmillan.

Martin, Brice et al. 2014. "Temporal structure of consciousness and minimal self in schizophrenia". In: *Frontiers in Psychology* 5: 1-12.

Martínez, Matías: "Dos Passos instead of Goethe! Some observations on how the history of narratology is and ought to be conceptualized". In: *DIEGESIS. Interdisziplinäres E-Journal für Erzählforschung / Interdisciplinary E-Journal for Narrative Research* 1.1. (2012). 134-142.

Menary, Richard. 2006. *Radical Enactivism: Intentionality, Phenomenology and Narrative: Focus on the Philosophy of Daniel D. Hutto*. Amsterdam: John Benjamins.

Menary, Richard. 2008. "Embodied Narratives". In: *Journal of Consciousness Studies* 15 (No. 6): 63-84.

Millar, Susanna. *Space and Sense*. New York: Psychology Press, 2008.

Nabokov, Vladimir. 2011. *Strong Opinions*. Penguin Classics. London.

Nabokov, Vladimir. 2010. *Invitation to a Beheading*. Penguin Classics. London.

Nabokov, Vladimir. 1999. *Speak, Memory. An Autobiography Revisited*. Alfred A. Knopf. New York.

Nabokov, Vladimir. 2011. *Laura Modellje* [*The Original of Laura*]. Európa. Budapest.

McClelland, James L. 2011. "Memory as a Constructive Process: The Parallel Distributed Processing Approach" In *The Memory Process: Neuroscientific and Humanistic Perspectives*. Edited by Nalbantian, Suzanne, Paul M. Matthews, James L. McClelland, 129-152. The MIT Press. Cambridge.

Noë, Alva. 2004. *Action in Perception*. The MIT Press.

Northoff, Heinzel. 2003 "The self in philosophy, neuroscience and psychiatry: an epistemic approach" In Kircher Tilo, A. David. The Self in Neuroscience and Psychiatry. Cambridge: Cambridge University Press.

Nünning, Ansgar. 2003. "Narratology or Narratologies? Taking Stock of Recent Developments, Critique and Modest Proposals for Future Usages of the Term" *What Is Narratology. Questions and Answers Regarding the Status of a Theory*. Edited by Kindt, Tom, Hans-Harald Müller, 239-276. Walter de Gruyter. Berlin.

Padgett, Ron. 1997. *Creative Reading: What It Is, How to Do It, and Why*. Natl Council of Teachers.

Parnas, Josef. 2003. "Self and schizophrenia: a phenomenological perspective". In: *The Self in Neuroscience and Psychiatry*. Edited by Tilo Kircher, Anthony David, 127-141. Cambridge.

Pecher, Diane and Rolf Zwaan, eds. 2005. *Grounding Cognition: The Role of Perception and Action in Memory, Language, and Thinking*. Cambridge: Cambridge University Press.

Piper, Andrew. 2010. "Media and Metamorphosis: On Notes and Books." A New Everyday. A Media*commons* Project. Accessed January 15, 2016. http://mediacommons.futureofthebook.org/tne/pieces/media-and-metamorphosis-notes-and-books.

Poe, Edgar Allan. 1951. "The Pit and the Pendulum." In Mabbott, T. O. ed. *Selected poetry and prose of Edgar Allan Poe*. The Modern Library. New York.

Pohárnok, Melinda. 2004. "A térben való mozgás narratív dimenziójának vizsgálata borderline és depressziós betegek élettörténeti epizódjaiban" [Examining the narrative dimension of physical movement in space in episodes from the life stories of people

with borderline personality disorder and depression] In: *Az elbeszélés az élmények kulturális és klinikai elemzésében*. Edited by Eros, F. Budapest. Akadémiai Kiadó.

Roher, Tim. 2005. "Image schemata in the brain" In *From Perception to Meaning: Image Schemas in Cognitive Linguistics*. Edited by Hampe, Beate and Joseph E. Grady, 165-196. Mouton de Gruyter. Berlin.

Popova, Yanna B. 2015. Stories, Meaning, and Experience Narrativity and Enaction. New York: Routledge.

Prince, Gerald. 2003. "Surveying Narratology". In *What Is Narratology. Questions and Answers Regarding the Status of a Theory*. Edited by Kindt, Tom, Hans-Harald Müller, 1-16. Walter de Gruyter. Berlin.

Prince, Gerald. 1988. "The Disnarrated" In *Style*, Vol. 22, No. 1: 1-8.

Ramachandran, V. S. 2012. *The Tell-Tale Brain: Unlocking the Mystery of Human Nature.* Cornerstone. London.

Roth, Marco, 2009. "Rise of the Neuronovel. A specter is haunting the contemporary novel" In *n+1 Magazine*, https://nplusonemag.com/issue-8/essays/the-rise-of-the-neuronovel/. Access: 2018. 04. 28.

Ryan, Kevin. "A Critical History of the Embodied Cognitive Research Paradigm. A review of Lawrence Shapiro's *Embodied Cognition*". In *AVANT* Volume III, Number 1: 172-175.

Ryan, Marie-Laure. 2007. "Toward a definition of narrative" In *Cambridge Companion to Narrative*. Edited by Herman, David, 22-35. Cambridge. Cambridge University Press.

Ryan, Marie-Laure. 2010. In *Routledge Encyclopedia of Narrative Theory*. Edited by Herman, David, Manfred Jahn, Marie-Laure Ryan. Taylor & Francis e-Library. Pdf

Öhman, Arne. 2008. "Fear and Anxiety. Overlaps and Dissociations" In *Handbook of Emotions*. Edited by Lewis, Michael, Jeanette M. Haviland-Jones, Lisa Feldman Barrett, 709-729. New York: The Guilford Press.

Oliver Sacks. 1999. *The Man Who Mistook His Wife for a Hat: And Other Clinical Tales.* Harpercollins. Pdf.

Osteen, Mark. 2005. "Echo Chamber: Understanding *The Body Artist*." *Studies in the Novel* 37. 1: 64-81.

Pepperel, Robert. 2018. "Consciousness as a Physical Process Caused by the Organization of Energy in the Brain" In *Frontiers in Psychology*. Available: https://doi.org/10.3389/fpsyg.2018.02091

Punday, Daniel. 2003. *Narrative Bodies: Toward a Corporeal Narratology*. New York: Palgrave Macmillan.

Sári B., László. *Mi jön a posztmodern után? Változatok poszt-posztmodern amerikaifikciós prózára*. Manuscript. Available: http://real.mtak.hu/85210/1/Monografia_kezirat_SBL.pdf

Schleifer, Ronald. 2001. The Poetics of Tourette Syndrome: Language, Neurobiology, and Poetry, New Literary History, 32. (2001/3.): 563-584.

Schneider, Ralf. 2017. "Is There a Future for Neuro-Narratology? Thoughts on the Meeting of Cognitive Narratology and Neuroaesthetics". In *Emerging Vectors of Narratology*. Edited by Per Krogh Hansen et al., 479-496. Berlin: De Gruyter.

Searle, John. R. 1980. "Minds, brains, and programs". *Behavioral and Brain Sciences* 3 (3): 417-457.

Shapiro, Lawrence. 2011. *Embodied Cognition*. London: Routledge.

Shen, Dan. 2005. "Why Contextual and Formal Narratologies Need Each Other." *Journal of Narrative Theory* 35 (2): 141–71.

Silverman, Kaja. 1988. *The Acoustic Mirror. The Female Voice in Psychoanalysis and Cinema (Theories of Representation and Difference)*. Indiana University Press.

Silverman, Kaja. 1996. *The Treshold of the Invisible World*. New York: Routledge.

Skidelsky, William. 2009. "The Original of Laura by Vladimir Nabokov." *The Guardian*, November 22. Accessed January 04, 2016. https://www.theguardian.com/books/2009/nov/22/original-of-laura-vladimir-nabokov.

Snow, C. P. 2012. *The Two Cultures*. Cambridge, Cambridge University Press.

Sommer, Roy. 2017. "The Future of Narratology's Past: A Contribution to Metanarratology" In *Emerging Vectors of Narratology*. Edited by Per Krogh Hansen et al., 593-608. Berlin: De Gruyter.

Sommer, Roy. 2012. "The Merger of Classical and Postclassical Narratologies and the Consolidated Future of Narrative Theory" In *DIEGESIS. Interdisziplinäres E-Journal*

für Erzählforschung / Interdisciplinary E-Journal for Narrative Research 1.1. (2012): 143-157.

Stockwell, Peter. 2002. *Cognitive Poetics: An Introduction*. London: Routledge.

Szabó, Erzsébet. 2012. "Narratívák Olvasásának Kognitív Modellálása." *Literatura* XXXVIII. (2): 115–25.

Szokolszky, Ágnes. 1998. "A tudomány metamorfózisa és a kognitív tudomány: Posztkarteziánus alternatívák" In *Megismeréstudomány és mesterséges intelligencia*. Edited by Pléh Csaba, 273-295. Akadémiai Kiadó, Budapest.

-----. 2011. "Nyelvi Megértés az „embodiment" nézőpontja szempontjából". A Szegedi Akadémiai Bizottság nyelv- és irodalomtudományi Szakbizottsága által szervezett *Kognitív struktúrák. Az interdiszciplinaritás lehetőségei és korlátai* című konferencián tartott előadás átirata. 2016. Szeptember 25.

Szőnyi, György Endre. 2004. *Pictura & Scriptura. Hagyományalapú kulturális reprezentációk huszadik századi elméletei* [Pictura & Scriptura. 20th-century Theories of Tradition-based Cultural Representations]. Szeged: JATEPress.

Takács, Ádám, Yuval Shilon, Karolina Janacsek, Andrea Kóbor, Antoine Tremblay, Dezső Németh, Michael T. Ullman. 2017. "Procedural learning in Tourette syndrome, ADHD, and comorbid TouretteADHD: Evidence from a probabilistic sequence learning task". In *Brain and Cognition.* Vol. 117: 33-40.

Taylor, Mark C. 2012. *Rewriting the Real. In Conversation with William Gaddis, Richard Powers, Mark Danielewski, and Don DeLillo*. New York: Columbia University Press.

Todorov, Tzvetan. 1969. *Grammaire du Décaméron*. The Hague: Mouton.

Tooby John and Leda Cosmides. 2008. "The Evolutionary Psychology of the Emotions and Their Relationship to Internal Regulatory Variables". In *Handbook of Emotions*. Edited by Lewis, Michael, Jeanette M. Haviland-Jones, Lisa Feldman Barrett, 114-137. New York: The Guilford Press.

Turner, Mark. 1996. *The Literary Mind*. Oxford. Oxford University Press.

Tversky, Barbara. 2005. "Functional significance of visuospatial representations" In *The Cambridge Handbook of Visuospatial Thinking*. Edited by Shah, Priti, Akira Miyake, 1-34. Cambridge: Cambridge University Press.

Varela, Francisco J., Evan Thompson, Elanor Rosch. 1993. *The Embodied Mind: Cognitive Science and Human Experience*. The MIT Press.

Vecsey, Zoltán. 2010. “Kognitív narratológia”. In *Studia poetica*, (3): 256-304.

Walsh, Richard. 2017. “Beyond Fictional Worlds: Narrative and Spatial Cognition”. In *Emerging Vectors of Narratology*. Edited by : Per Krogh Hansen et al., 461-478. Berlin.

Williams, Linda. 1991. “Film Bodies. Gender, Genre, and Excess” In *Film Quarterly*, (44) 1991/4: 2–13.