

# From avoiding uncertainty to accepting it: Semiotic modelling of history education at the limits of knowledge

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**Abstract:** This article explicates how different approaches to teaching history can enforce diverse strategies for dealing with uncertainty. Descriptions of three types of historical pedagogy are analysed as three kinds of modelling systems derived from Juri Lotman's theory of semiotics of culture: myth-type modelling, scientific modelling, and play-type modelling. The paper argues that the connection between pedagogical approaches and uncertainty, as an experience that occurs at the limits of knowledge, can be modelled as the relation between a semiotic system and its boundary. The nature of this relation can differ depending on how the division between the internal and external space of the semiotic entity is perceived. Different types of modelling systems establish distinct patterns in order to deal with the indeterminacy of the borderland area. In the process of learning, these patterns can be viewed as semiotic strategies that various pedagogical approaches enforce when arriving at the limits of knowledge and facing the situation of indeterminacy that can cause students to experience uncertainty. Three different strategies are discussed in the context of history education: avoiding uncertainty in the case of the collective memory approach, addressing uncertainty in the case of the disciplinary approach, and accepting uncertainty in the case of the post-modern approach to teaching history.

**Keywords:** uncertainty; Juri Lotman; history education; boundary; modelling systems; semiotic theory of learning

## 1. Introduction

The accelerating speed of change, the rising level of complexity and fragmentation, the inability to predict the course of future events (see Rosa 2013) – all these aspects of our contemporary world instigate uncertainty on various levels of culture, from individuals to whole societies. In the times of “liquid modernity”,

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where, in the words of Zygmunt Bauman, “change is the only permanence, and uncertainty the only certainty” (Bauman 2012: viii) we can observe an increasing interest in uncertainty research in many social science fields, including pedagogy.

Understanding uncertainty as constitutive for learning is not a new idea and has been explored in education theories before (e.g. Dewey 1916; Bruner 1966). However, the need to find new ways in which education can help the students to manage uncertainty in their daily lives has brought about the emergence of a new paradigm of educational research occasionally referred to as “the pedagogy of uncertainty” (see Barnett 2007, 2012; Hall 2010; Wals, Corcoran 2012b; English 2013; Tauritz 2019). Scholars within this research area frame uncertainty not only as a part of the learning process but as a learning objective in itself. For example, Rebekah Tauritz has proclaimed the importance of developing uncertainty competences<sup>2</sup> among students that would “include specific sets of skills, knowledge, attitudes and abilities needed to deal with uncertainty, ambiguity and complexity in diverse contexts” (Tauritz 2012: 299–300).

This new perspective on uncertainty in education has also brought about a shift in the attitude towards this phenomenon. To offer a few examples: according to Arjen Wals (2010: 385), “Instead of putting our academic minds towards minimizing uncertainty and maximizing predictability, it might be more fruitful to put our energy towards living with uncertainty: seeing it as given, something that cannot be conquered”. Mordechai Gordon (2006: 15) argues that “creating a space for perplexity and uncertainty in our classrooms is crucial for the goal of fostering citizens who are critical and independent thinkers”, and Will Buckingham (2014: 10) says that teaching is as much about communicating not-knowing, tentativeness, uncertainty, as it is about communicating knowing, assurance, certainty. Similar ideas have been discussed in edusemiotics texts as well (see e.g. Strand 2013, 2021; Campbell 2016; Peters 2017). For example, Stables and Gough have argued for the importance of the role of education in dealing with uncertainty stating that education provides:

[...] institutional means to influence the direction of ongoing semiotic engagement by learners with the world they inhabit. The role of education, broadly defined, therefore includes the preparation of learners to respond effectively, adaptively, and in collaboration or competition with others, to uncertainty, surprise and novelty. (Gough, Stables 2012: 370)

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<sup>2</sup> The competency-based education model that is governing contemporary education sphere has received both praise and criticism. For more information on this debate see e.g. Morcke, Dornan, Eika 2013; Ruitenbergh 2019; Glaesser 2019. For edusemiotics conceptualizations of competence see Pikkarainen 2014; Olteanu 2017; Campbell, Olteanu, Kull 2019.

Finding new ways of managing uncertainty is currently especially topical in educational fields dealing with global, environmental and sustainability issues (see e.g. Wals, Corcoran 2012a; Tauritz 2019; Jickling, Sterling 2017) where students have to face problems concerning the unpredictable future. At the same time, students' ability to deal with this phenomenon is not shaped only by the school subjects that explicitly address uncertainty. If we understand uncertainty broadly as an "epistemic state at the limits of knowledge" (Wakeham 2015: 716) then we can say that learning as a process that is oriented towards exploring and widening these limits is always to some extent accompanied by uncertainty. However, what is important to note is that different pedagogies approach the limits of knowledge in various ways and thus can implicitly enhance distinctive patterns of handling uncertainty. That is why, when examining how students develop the ability to cope with uncertainty, it is important to involve various school subjects in the discussion including those in which the question of uncertainty does not appear to be prevalent.

In the present article, my aim is to explore how the existing pedagogical approaches in history education influence students' ability to deal with uncertainty. The topic of uncertainty has seldom been discussed explicitly in the context of historical pedagogy (see e.g. Farley 2009; Parkes 2011). One possible explanation why the issue has not received much attention is that experiencing uncertainty is more often associated with the unpredictable future and not the "finite" past and thus dealing with uncertainty may not appear as relevant for history education. However, as Juri Lotman has shown in his works dedicated to semiotic theory of history, the past appears static only due to the fallacy of the retrospective gaze which eliminates all indeterminacy from the historical process (Lotman 2019[1992]: 198, see Lotman 2019[1988], 2000[1990]). Lotman proposes that if we change the perspective and look from the past to the present instead, we can see that history is not a "unilineal process but a multi-factored stream" (Lotman 2019[1988]: 184) which appears before us as a "bundle of unrealized possibilities" (Lotman 2019[1992]: 194).<sup>3</sup> In such a way Lotman shows that indeterminacy is an inherent part of the historical process and historical thinking has to face uncertainties as well. From such a perspective it appears that in terms of advancing our ability to deal with uncertainty history education is in fact no less relevant than those subjects of curriculum oriented towards the present or the future. In fact, in the context of historical thinking the

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<sup>3</sup> In elaborating his ideas regarding the unpredictability of the historical process Lotman was greatly inspired by the work of physical chemist Ilya Prigogine (see Prigogine, Stengers 1984) and his idea of the irreversible processes. According to Lotman the enormous contribution of Prigogine's work was in introducing chance into the mechanism of causality and through that de-automatizing our picture of the world (Lotman 2019[1989]: 89–90).

ways in which we perceive the past, present or future are always interlinked. The yearning to learn about the past goes hand in hand with the need to make sense of the present and the wish to predict the future (cf. Jeismann 1979: 42; see also Segall 2006), which is why the cultivation of our historical consciousness can have a profound effect on shaping the way we model our reality and interact with the world around us, including the way we perceive uncertainty.

In order to answer the main question of this paper, namely how different approaches to history education enforce distinct strategies of dealing with uncertainty, I will examine three orientations of contemporary historical pedagogy: the collective memory approach, the disciplinary approach, and the postmodern approach (Seixas 2000). My aim is to distinguish the dominant type of modelling activity inherent to each type. Following Juri Lotman's ideas on modelling systems, I will discuss three kinds of modelling activity: myth-type modelling, scientific modelling, and play-type modelling. For Lotman, the fundamental aspects of describing any semiotic system are its relation to the world which lies beyond its borders and its static and dynamic relations (Lotman 2009[1992]: 1). These features are directly connected to uncertainty as a phenomenon that occurs on the border of the known and the unknown, as well as to learning that is connected to the system's ability to change and take in new information. These relations are manifested in the notion of the boundary which both connects the system with the external space and separates them (Lotman 2000[1990]: 136). Boundary as the "limit of knowledge" of a semiotic system is characterized by indeterminacy and is thus the place where the experience of uncertainty can potentially occur. Lotman's approach makes it possible to frame the relationship between pedagogical orientations in history and uncertainty in learning as a question about how different types of modelling systems deal with the semiotic indeterminacy of their border areas.

While the theoretical framework of this paper draws largely on Juri Lotman's works, I also initiate a dialogue with various other scholars connected to the line of thought of the Tartu-Moscow school of semiotics. However, in this paper my aim is not to deliver an in-depth investigation of Lotman's theoretical ideas but to use Lotmanian semiotics of culture to elaborate an approach that allows us to analyse how different pedagogies create distinct strategies for handling uncertainty. In comparison with the edusemiotics approach, which is primarily rooted in the Peircean tradition and explores the process of learning and education with a focus on the notions of sign and semiosis (see Deely, Semetsky 2016; Semetsky, Stables 2014; Semetsky 2017), the Lotmanian theory of culture provides a unique perspective for analysing the relation between cultural dynamics and the structural organization of culture focusing on how semiotic models materialized in texts on various levels of culture guide our processes of meaning-making.

## 2. Uncertainty in learning

In order to discuss how different approaches to teaching history deal with uncertainty as it occurs in the process of learning it is first necessary to clarify two questions that are relevant for this paper. First, what is meant by the notion of uncertainty in the context of this article; and, second, what is the relation between learning and uncertainty from the perspective of a semiotic theory of learning (see e.g. Kull 2018; Stables *et al.* 2018a; Campbell, Olteanu, Kull 2019). To answer the first question, it is important to emphasize that the way we frame the phenomenon of uncertainty is inevitably very context-dependent and this notion can be defined in numerous ways. As already brought out in the introduction, in a broad sense, uncertainty can be understood as an epistemic state at the limits of knowledge (Wakeham 2015: 716). The value of such a broad definition is that it allows us to express both the subjective and objective dimensions of this phenomenon (see Tannert *et al.* 2007). As Joshua Wakeham (2015: 716) explains, the limits of knowledge are set by the objective world out there that is knowable only to a degree, but at the same time it can also refer to the subjective limits of an individual experience of the world.

In an educational context, these two analytical dimensions are both relevant. On the one hand, viewing uncertainty as “an individual’s subjective experience of wondering, doubting, or being unsure” (Jordan, McDaniel 2014) is fundamental for the situation of learning because a student can encounter objective uncertainty without this causing her or him to experience uncertainty and at the same time be uncertain about objectively certain information. As explained by Jamie Holmes (2015: 9), “We can’t be confused without some foothold in knowledge. Instead of feeling uneasy because we half understand, we’re as calmly certain in our ignorance as we are assured in our everyday rituals.” From this perspective, it might seem that the subjective dimension of uncertainty appears as primary for analysing this phenomenon in the process of learning. At the same time, considering the objective dimension of uncertainty is relevant if we take the pedagogical perspective, which needs to consider possible objective limits of knowledge that students may face in learning and formulate universal strategies for overcoming these limits. The central focus of the present study is on pedagogical approaches and not on concrete observations of how students experience uncertainty. That is why I treat uncertainty here in terms of a possibility of the occurrence of such subjective experiences as a result of facing the situation of indeterminacy, understood here as the objective dimension of uncertainty in learning.

From the perspective of a semiotic theory of learning, indeterminacy can be seen as a starting point for any learning process. According to Kalevi Kull (2018: 457), “[t]he semiotic concept of learning describes learning as a process that starts

with behavioural indeterminacy (describable also as a situation of incompatibility, confusion, logical conflict, problem-situation, ambiguity). This is a situation in which there are options to choose from.” He proposes shifting the concept of choice to the centre of the semiotic theory of learning<sup>4</sup> for semiosis as the process of interpretation always supposes a choice between options (Kull 2018: 457). In edusemiotics theories, meaning-making activity of the subject or semiosis is usually seen as the foundation of learning and cognition (see Stables *et al.* 2018b: 2).

Consequently, learning as a process founded on semiosis<sup>5</sup> that involves making a choice inevitably creates a situation of indeterminacy that may cause the learner to experience uncertainty. However, that is the case only if the indeterminacy is acknowledged and deemed as relevant from the perspective of the learner. As already stressed in the introduction, what is important for us here is that moving from the situation of indeterminacy to making a choice in the process of learning can follow different paths. In the context of the present article, though, our focus is not on the process of learning itself, but on the models that guide this process. How the situation of indeterminacy can be resolved is to some extent constrained by the meaning-making patterns provided by a particular pedagogical approach. This is not to say that pedagogical approaches entirely predetermine the path of the learner, yet “schools and teachers channel learning in certain directions” (Stables 2018: 20) and can thus influence the way choices are made in learning when facing the situation of indeterminacy.

### 3. Boundary as the space for learning

To explore the relation between different approaches to teaching and the ways in which they deal with uncertainty, I propose to contextualize this relation using Juri Lotman’s theory of semiotic systems. As said above, Lotman sees the relation of a semiotic entity to the extra-semiotic sphere as one of the most fundamental aspects for structural description of any semiotic system (Lotman 2009[1992]: 1; see also Lotman, Uspenskij 1978[1971]). This relation is regulated by unified constructive principles that enable one to perceive the system as a whole. When discussing the semiotic mechanism of culture, Juri Lotman and Boris Uspenskij state that culture implies the construction of a system of semiotic rules for translating direct human life experience into the language of culture and these rules can, in their own turn,

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<sup>4</sup> The possibility of a semiotic theory of choice and learning has also been discussed by Andrew Stables and Stephen Gough (2006).

<sup>5</sup> For edusemiotic conceptualization of learning see also Gough, Stables 2012; Olteanu, Stables, 2018; Campbell *et al.* 2019.

be treated as a program (see Lotman, Uspenskij 1978[1971]: 214). The existence of such a central program that regulates the process of translating the external to the internal can be seen as inherent not only to culture but to other semiotic entities as well. This is due to the principle of the “vertical isomorphism of culture” as the basis of Lotman’s semiotics “through which the analogy of the principles of structure and functioning, as well as mutually exchangeable functionality, is attributed to intellect, text and culture” (Lepik 2008[2007]: 17). In the context of education, pedagogical approaches function as such programs that structure and channel the process of learning.

The dichotomy of internal–external is manifested in the notion of ‘boundary’, described by Lotman (2000[1990]: 136) as the hottest spot for semiotizing activity. He emphasizes the ambivalent nature of the boundary saying that “it both separates and unites. It is always the boundary of something and so belongs to both frontier cultures, to both contiguous semiospheres. [...] it is the place where what is ‘external’ is transformed into what is ‘internal’” (Lotman 2000[1990]: 136–137). This ambivalence can also be noted in the fact that in Lotman’s works we can encounter two different spatial descriptions of the boundary. As explained by Daniele Monticelli, the boundary can be understood both as a line between two spaces functioning simultaneously as an instrument of separation and connection or as a “multidimensional border space that Lotman calls ‘periphery’ and which functions as an instrument of internal differentiation within a given semiotic space (center VS periphery) or an instrument of indifferentiation between different semiotic spaces” (Monticelli 2020: 430).

In both cases, the border has a dual nature – on the one hand, it is a part of the semiotic system and, on the other hand, it does not fully belong to the latter. Monticelli (2012: 70) has described this feature of being the “no man’s land” as follows:

Non-actuality, unpredictability, indeterminacy characterize the periphery as a place of suspended (insignificant and unidentifiable) existences or of potential significance without fixed meanings, where all may be significant precisely because there is no more/not yet meaning in place.

The boundary is the space where uncertainty can occur exactly because of this quality of being “in-between”. Indeterminacy as the main characteristic of the border space (Monticelli 2019) allows the plurality of meanings, which in turn creates the possibility of choice and thus opens up the space for learning and with it a space for uncertainty as well.

How a semiotic entity deals with the indeterminacy of its border areas can vary depending on the type of rules governing the semiotic processes. In the present article, I discuss three types of modelling systems with the focus on how they

construct the relation between internal–external and how this, in turn, affects the way semiotic indeterminacy of the border area is handled. I differentiate between myth-type modelling, scientific modelling and play-type modelling,<sup>6</sup> based mainly on Lotman’s and Uspenskij’s (1978) descriptions of typologies of culture and also on Lotman’s article “The place of art among other modelling systems” (1967). My aim is to explicate what types of modelling systems are dominant in different pedagogical approaches of contemporary history education and through that describe how these approaches channel students’ ability to deal with uncertainty.

#### 4. Dealing with uncertainty in history education

The fact that most history classes do not explicitly address the topic of uncertainty does not mean that the role of history education in developing uncertainty competences is insignificant. On the contrary, if we think about the wider purpose of history, we can say it is directly connected to coping with one of the most fundamental sources of uncertainty in human lives – the experience of time. As explained by Jörn Rüsen (2005: 10): “Time is seen as a threat to normal human relations, casting them into the abyss of uncertainty.” Rüsen (2005: 10) sees history as a response to this challenge that helps to overcome uncertainty by seeing a meaningful pattern in the course of time. In a similar manner, Norbert Elias (1994[1986]: 129) wrote that this meaningful pattern challenges the experience of a constant change by revealing what is eternal and permanent in our culture, thus helping people to lessen the fear of their own transience. In this sense, the past can be used to avoid the feeling of uncertainty by rationalizing the knowledge of previous practices and memories to match them with present and future circumstances (Aarelaid-Tart 2014: 242).

Therefore, our ability to think historically enables us to experience the unity of time. This ability is usually explained through the notion of historical consciousness that can be understood as the inner coherence of interpretation of the past,

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<sup>6</sup> Some comments about these three types. First, it is relevant to note that Lotman does not use the term ‘myth-type modelling’. However, he has discussed different mythological structures as semiotic models in various works (Lotman 2000[1990]; Lotman, Mints 1981; Lotman, Uspenskij 1975; Lotman, Uspenskij 1978[1973]; see also Lepik 2008[2007]) that for typological purposes are integrated into this one notion in this article. Second, the three types discussed here are selected based on the relevance for discussing pedagogical approaches in history education and are not meant to represent a complete typology of modelling systems in Lotman’s works. In the article “The place of art among other modelling systems”, in comparison to scientific modelling and play-type modelling Lotman (1967) describes also artistic modelling that is structurally isomorphic with play-type modelling with the main unifying characteristic being the simultaneity of multiple meanings (Lepik 2008[2007]: 195).



understanding of the present, and perspective for the future (Jeismann 1979). The main mechanism for establishing this coherence is narrative. The historical narrative represents the experience of change through language. According to Jürgen Straub, change itself is synonymous with historical time as “history basically *is* change; historical-narrative representation is [...] the thematization and management of change” that concerns “coming and going, emergence and disappearance, permanence and mutability” (Straub 2005: 60). Through historical narrative, the process of change ceases to be unintentional and acquires an inner logic to itself. Within this inner logic of narrative structure, the meaningful connection between past, present and future is established.

Although many of the stories that form one’s historical worldview are encountered outside of the school walls, it is still in the history class where students acquire a framework that enables them to systematize this knowledge in a meaningful and coherent way. History lessons offer guidance for facing the perplexing experience of time, there we learn to deal with contradicting versions of the past and acquire knowledge of how to handle the plurality of various types of historical accounts. Compared to the “history lessons” we learn from our daily interaction with the world around us, curricular history can be seen as a higher-order structure that provides a framework for making sense of all these diverse experiences. This framework organizes our perception of history by differentiating meaningful historical entities and establishing connections between them. In this sense, history education provides us with models that enable us to systematize our historical experience of the world.

How the historical experience is modelled can vary greatly depending on the pedagogical approach applied in a history class. In what follows, I explore a widely discussed (e.g. Segall 2006; Parkes 2009; Whitehouse 2015; Virta 2017; Elmersjö *et al.* 2017) classification of pedagogical approaches proposed by Peter Seixas (2000). In this classification, Seixas distinguishes three orientations towards historical pedagogy and epistemology: the collective memory approach, the disciplinary approach and the postmodern approach.<sup>7</sup> Discussing this three-way

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<sup>7</sup> On the epistemological level the classification offered by Peter Seixas relates to many other typologies in the sphere of history theory. For example, it overlaps to a large extent with the distinction of three genre positions of historical scholarship – the reconstructionist, the constructionist, and the deconstructionist ones proposed by Keith Jenkins and Alun Munslow (see Jenkins, Munslow 2004; Parkes 2009; Elmersjö *et al.* 2017). We can also find parallels with dichotomies postulated by Pierre Nora (see Nora 1996; Whitehouse 2015) and Seixas himself (see Seixas 2000) draws parallels with Lowenthal’s (1998) categories of heritage and history. However, as the main aim of this article is to analyse different ways of relating to the past in the context of history education, I will be focusing primarily on Seixas’ work which, unlike the aforementioned theories, is already grounded in historical pedagogy.

pedagogical paradigm in the present article does not bear the purpose to divide the current landscape of history education into clear-cut categories. It is clear that distinctive tendencies that can be formulated on the level of pedagogical theories or educational policies cannot be found in real-life classrooms where distinctions blur and fuse into hybrid forms of teaching practices. History teachers can find a variety of supporting educational sources from the Internet as well as other sources, which means that study materials based on very different pedagogical approaches can appear side by side in the same lesson. Hence, it is important to emphasize that this article does not deal with pedagogical practice but with pedagogical models that shape and give direction to these practices, while the two cannot be seen as identical to each other. While any model can never represent its object in its entirety and thus inevitably simplifies it in some aspects, at the same time it also offers the possibility to exceed the limits of singular case studies. In a similar manner, the following discussion aims to provide a holistic framework for conceptualizing history teaching that allows aiming for a higher-order understanding of the relation between history teaching and uncertainty, while acknowledging the gap with actual school practices such attempts unavoidably create.

In what follows I briefly sketch the main characteristics of these three approaches to teaching history and identify a type of modelling inherent to each pedagogical orientation. Explicating the relation between various modelling systems and their boundaries will make it possible to discuss how these three ways of conducting a history class can influence students' engagement with uncertainty. In each case, I also give an example of a characteristic situation of indeterminacy<sup>8</sup> for each approach and discuss the semiotic strategies for resolving these situations where uncertainty can occur.

#### **4.1. Avoiding uncertainty in the collective memory approach**

In the classification proposed by Peter Seixas the first orientation in teaching history is "enhancing collective memory" or what is here called the collective memory approach. For Seixas the main objectives of this type of history education are "to define who we are in the present, our relations with others, relations in civil society – nation and state, right and wrong, good and bad – and broad parameters

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<sup>8</sup> I will discuss ambiguity, complexity and unpredictability as examples of a characteristic situation of indeterminacy that can cause the experience of uncertainty (cf. Hermans, Dimaggio 2007) to occur in history class, but it is important to emphasize that we are definitely not presenting them here as the only, or even main, possible source for uncertainty in the learning process.

for action in the future” (Seixas 2000: 20). For these purposes, one single best story about the past is chosen and taught as an objective account. To attain the status of the “best”, this one story should, according to Seixas (2000: 22–23), create a strong group identity, enhance social cohesion and provide a compelling moral framework.

Questions such as how exactly this shared narrative was established and by whom are deemed irrelevant in the history classroom and left aside as they do not benefit this threefold function of enhancing collective memory (Seixas 2000: 22). As a result, while learning about the past, the students remain “unconscious of the processes through which historical knowledge is established as [the approach] lacks the ability to critically evaluate the uses to which it is put” (Whitehouse 2015: 16). The most common narrative for enhancing collective memory in a history class is based on the idea of national belonging, in the case of which an emotional bond with the past is established through the stories of “pride and pain” of one nation group (Leeuw-Roord 2008; see Hutchins 2016), although in principle it can centre itself around any other group distinction – like class, gender, etc. This is why the collective memory approach cannot be defined merely by the content of the narrative, but its universal traits lie in the way it presents and organizes information about the past.

If we look at these characteristics of the collective memory approach, we can find that in its structure it resembles the cultural model that Lotman describes as the idealized self-image of culture (see Lotman 2000[1990]: 129). This type of self-image can result from a self-descriptive process in which one of the parts of the semiotic system takes the central role on a meta-level and starts imposing its structure on all other spheres, reorganizing the semiotic space around it (see Lotman 2000[1990]: 162). One of the main functions of this process is to stand against the threat of too much diversity which might result in disintegration and increase the structural unity of a semiotic system (Lotman 2000[1990]: 128). Consequently, from the point of view of this particular metastructure, “it becomes possible to count as one, to understand as a whole, the different systems and languages of the semiotic space, that the plurality of systems is reduced to a ‘single, finite truth’” (Monticelli 2012: 66). This type of modelling activity is predominantly based on the semiotic mechanism of ‘myth’, which, according to Lotman, is characterized by the strive to assume identity between even the most distant spheres in culture by reducing the diversity of the world to invariant images (Lotman 2000[1990]: 152) through which it manages to reconstruct “the world as something totally ordered, with a single plot and a supreme meaning” (Lotman 2000[1990]: 162). Therefore, mythological texts exclude the possibility of multiple meanings and uncertainty (see Lepik 2008: 195). Myth as a modelling

system strives towards unification on both the diachronic and the synchronic axes of culture, by enforcing cyclicity in time and repetition in space. The way the collective memory approach orders the world around us is based on this very same logical structure that I will call ‘myth-type modelling’.

In order to understand how this type of modelling systems affects the students’ ability to deal with uncertainty, it is first relevant to clarify the relation of myth-type models to the world which lies beyond the borders of the semiotic entity. In order to do that, we can draw a parallel with Lotman’s and Uspenskij’s (1978[1971]: 217) differentiation between two types of culture: cultures directed towards expression and cultures directed towards content. Myth-type modelling corresponds to the former. Cultures oriented towards expression are founded on the notion of the correct designation of a predetermined content and perceive themselves as a “correct text” (Lotman, Uspenskij 1978[1971]: 217–218). In these cases, the culture is opposed to anticulture and relates to the external as “correct–incorrect” (Lotman, Uspenskij 1978[1971]: 219). According to the authors, cultures that are opposed to anticulture are prone to separate from the external and limit themselves to their own boundaries (Lotman, Uspenskij 1978[1971]: 221). The modelling potential of similarly structured modelling systems is connected either to their capability to declare those objects which they cannot describe as nonexistent (Lotman, Uspenskij 1978[1971]: 222) or expand their knowledge to the external space as a triumph over falsehood (Lotman, Uspenskij 1978[1971]: 221). The idea of one finite truth is supported in these types of models by complete disregard towards their conditionality, meaning that in myth-type modelling the model is perceived as identical with what it represents. Hence, in the case of the collective memory approach, which is oblivious to the process of mediation, what is presented to the students in the classroom is the past itself. In such systems, periphery as space of indeterminacy is seen as a threat to the system because the potential of simultaneity of multiple meanings undermines the idea of one correct designation of a predetermined content.

Concurrently, collective memory approach being based on myth-type modelling usually manages to avoid uncertainty in the process of learning by designing the learning experience in a way that would allow to sidestep situations of indeterminacy as much as possible. However, it cannot be abandoned completely. One typical way the situation of indeterminacy can occur in a collective memory class is due to ambiguity. While the collective memory approach does not address the possibility of various interpretations of history, ambiguity can still enter the classroom through the personal historical experience of the students attained outside the school walls. If students have encountered historical meanings different than those the story presented in the history lesson is conveying, then a situation of

indeterminacy can occur and cause students to experience uncertainty. A situation where the meaning of a historical event or a figure becomes ambiguous is deemed problematic in the collective memory approach as it counteracts the latter's main functions of enforcing identity, cohesion and moral values. In order to resolve this problem, ambiguity is eliminated in accordance with the "correct–incorrect" logic of myth-type modelling by creating a binary opposition in which the other meaning(s) are evaluated as false or historically incorrect and one's own meaning is declared to be the historical truth.

To give a typical example from the Estonian context, we can imagine that such a situation could present itself in a collective memory lesson when dealing with the topic of WWII. From the perspective of Estonian national history, the meaning of this event is predominantly connected with the story of losing national independence and being occupied by the Soviet Union. At the same time, among the Russian-speaking minority living in Estonia, this event is predominantly linked to the narrative of the Soviet Union's fight with Nazism and the Red Army liberating Europe from Hitler's forces (see Vihalemm, Jakobson 2011). These narratives are not necessarily mutually exclusive as both claims can be considered accurate: the Soviet Union helped to liberate Europe from Nazism, whilst Estonia fell under the occupation of the Soviet Union. However, the ambiguity arises in the figure of the Red Army soldier: a hero in one story becomes a villain in the other. The collective memory approach cannot allow both interpretations to be true simultaneously. The reason for that lies in the characteristic of myth-type modelling discussed above where the historical narration and the past are perceived as identical. Subsequently, accepting the plurality of meanings would mean accepting the plurality of the past, which contradicts the whole logic of myth-type models that can only have one univocal meaning. Thus, by eliminating indeterminacy in the process of learning through imposing this logic of binary oppositions the collective memory approach enforces the strategy of avoiding the experience of uncertainty.

#### **4.2. Addressing uncertainty in the disciplinary approach**

The second type of orientation in history education that Peter Seixas distinguishes is "the disciplinary approach".<sup>9</sup> Compared to the collective memory approach in

<sup>9</sup> The label 'disciplinary approach' is somewhat problematic. First of all, as Seixas (2000: 33) himself mentions "the tools of historiography are themselves historically contingent and positioned" and thus never entirely objective, as they are always shaped by the ideology of the contemporary scientific paradigm. Second, what we call 'disciplinary' depends on the paradigmatic perspective we take. For example, in response to the threefold division proposed by Seixas, Avner Segall argued that "while the disciplinary approach teaches students

which students are presented with one single story, here they encounter multiple different versions of it in history lessons. According to Seixas, this approach is “devoted to learning how to question a historical account, understand the evidentiary base upon which it rests, and to assessing it in relation to competing accounts” (Seixas 2000: 24). Evaluating the validity of multiple accounts that reflect different perspectives and are presented in various formats is the leading principle of disciplinary history.

Learning how to do this in practice requires the students to “do history (in all its complexity), to learn the skills of actual historians and apply them in the classroom” (Elmersjö *et al.* 2017: 3). This means that students are not passive receivers – through analysing the source materials they themselves are expected to formulate plausible and objective interpretations of the past. ‘Historical truth’ is an important concept for this approach as well, but it differs greatly from the usage of this notion in the case of ‘the collective memory approach’. Namely, Seixas emphasizes that the truth claims of the disciplinary approach that rely on the historical method are falsifiable and always open to debate (Seixas 2000: 24). The main aim here is to develop critical thinking. This is why for Seixas (2000: 25) the disciplinary approach is best suited for the purposes of liberal democracies where people need to develop the ability and the disposition to arrive at reasonable and informed opinions independently.

The disciplinary approach corresponds to Lotman’s description of scientific modelling.<sup>10</sup> These types of models bring out the systematic aspect of their object and eliminate everything random and incidental as non-essential (Lotman 1967: 143–144). In a similar manner, when historians write accounts of historical events they have to work through a large number of different sources and from this variability deduce the invariant of the event. For the students to be able to mimic this process in history class they are taught how to use different analytical tools and frameworks. These frameworks function like a type of grammar that makes it possible to understand the rules of how historical data can be turned into

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disciplinary criteria and procedures, it is the postmodern approach that actually teaches them about the discipline” (Segall 2006: 128), which is why “the term ‘disciplinary’ might better define the postmodern approach, rather than what we have come to call the disciplinary approach” (Segall 2006: 139). However, as the focus of this section is on the dominant characteristics of each approach, we will leave the question of naming aside and for the sake of clarity proceed with the terminology proposed by Seixas.

<sup>10</sup> The notion of scientific modelling should not be seen as identical with doing science. Naming this kind of modelling ‘scientific’ indicates a so-called traditional view of scientific thinking and is meant to create a typological difference. For Lotman it was important that in doing science, especially in the humanities, various types of thinking and modelling should be in dialogue (see Lotman in Torop 2000: 13–14; Salupere 2017: 91–92; Pärn 2016).

coherent accounts of the past. For Lotman, this is the dominant characteristic that distinguishes scientific modelling from other types – it reproduces language (Lotman 1967: 143). As the learning process focuses on the analysis of narratives and their creation, there is “an acknowledgment of a gap between the past itself and the histories about the past” (Elmersjö *et al.* 2017: 3). This awareness of the conditional relation to real life and acknowledging its activity as modelling is also something that is inherent to all scientific models (see Pärn 2016: 147).

In order to understand how the disciplinary approach to history teaching deals with uncertainty we have to turn once again to the spatial aspect of scientific modelling systems and see how they relate to their border and to what lies beyond. These types of relations are explained by Lotman and Uspenskij in connection with types of cultures that are oriented towards content and that describe themselves as a system of rules (Lotman, Uspenskij 1978[1971]: 218) and hence function similarly to scientific modelling systems. According to the scholars: “Within the conditions of a culture chiefly oriented towards content and represented as a system of rules, the basic opposition is ‘organized – nonorganized’” (Lotman, Uspenskij 1978[1971]: 219) and it “always conceives itself as an active principle which must expand and sees nonculture as the sphere for its potential expansion” (Lotman, Uspenskij 1978[1971]: 221). The modelling potential of scientific models depends on their ability “to describe as wide a range of objects as possible, which would include as many as yet unknown objects as possible” (Lotman, Uspenskij 1978[1971]: 222). Therefore, scientific modelling systems are oriented towards their borders and open to the world that lies outside of their reach. In the context of the disciplinary approach, this kind of striving towards the world not yet included in the system of knowledge means that indeterminacy is acknowledged as the starting point of learning and concurrently the experience of uncertainty is seen as a normal part of the process of learning.

In the case of the disciplinary approach, the situation of indeterminacy can be predominantly connected to complexity as a characteristic “referring to a great number of parts that have a large variety of relations” (Hermans, Dimmagio 2007: 34). According to complexity theorist Carlos Eduardo Maldonado (2011: 139), history can be seen as “an open system that becomes increasingly complex as the flow of present enriches, widens and deepens it in accordance with the very evolution of science and culture. If true, then history is revealed as the field of indetermination or indeterminacy, as it were, in spite of mankind’s quest for roots, answers, identity and the like in past or backwards.” In a similar manner, approaching history as an open system is common for the disciplinary approach as well, as students are not presented with fixed meanings of historical entities but instead are expected to explore a wide range of historical sources on their own

and establish connections between different scales of analysis. While the starting point of the disciplinary approach presents history as a “field of indetermination”, its final aim is still to arrive at a concrete valid interpretation by describing the non-organized sphere according to its own system of rules.

An example of such a “system of rules” in a classroom-based disciplinary approach would be a very basic analytical tool called the OPVL (Origin, Purpose, Value and Limitations) method,<sup>11</sup> that offers a framework for initial evaluation of historical sources. In a classroom where the disciplinary approach is applied students might need to work with a plurality of different perspectives, presented in different ways and in different media, including newspaper articles, diary entries, photos, politicians’ speeches etc. Considering this huge variability, applying the OPVL tool in the analysis will enable the students to handle the uncertainty caused by the complexity of the presented information by systematizing the source material according to these four categories. Through such organization of information, it will be possible to spot the recurrent aspects in the sources and deduce the invariant of the historical event that the students are exploring.

The disciplinary approach, whilst starting from a point of indeterminacy by inviting students to investigate the plurality of variables, notably still requires and implies the “need for closure” (see also Kruglanski, Webster 1996). The occurrence of the feeling of uncertainty serves merely as an indication towards the direction we need to explore in order to find the answers we are looking for and to integrate them into the already existing system of knowledge. That is why, while the disciplinary approach enforces the strategy of addressing uncertainty through legitimatizing this experience as essential for exploring the meanings “not yet in place”, it is nevertheless oriented toward moving from the situation of indeterminacy to making a concrete choice.

### 4.3. Accepting uncertainty in the post-modern approach

Peter Seixas also distinguishes a third orientation in history education that he calls the post-modern approach.<sup>12</sup> Seixas (2000: 20–21) proposes that “the task for students in the third orientation is not so much to arrive at a ‘best’ or most valid position on the basis of historical evidence as to understand how different groups organize the past into histories and how their rhetorical and narratological

<sup>11</sup> The description on how to apply the OPVL method can be found on the web-page of History and Geography Assignment Help: <https://historygeographyassignmenthelp.weebly.com/how-to-write-source-evaluations---opvl.html> (accessed 10 February 2023).

<sup>12</sup> If the first two types are well researched and widely applied, then the post-modern critique of history has not made a big impact on school education (see Seixas 2000; Parkes 2013: 21; Whitehouse 2015: 17).



strategies serve present-day purposes”. This means that the post-modern approach encourages students to view historical interpretation as an imposition on the past and meanings assigned to historical events as “unstable, inherently subjective and inextricably bound up with language” (Whitehouse 2015: 17). For post-modernism, the impossibility of grasping the real past is deeply rooted in the problem of narrativity: “Historical accounts are organized as narratives, with a beginning, middle, and end, with a meaning expressed through language that conforms to its own rules. The past on the other hand, is not organized at all [...], nor does it have meaning” (Seixas 2000: 27).

This point of view changes the whole setting of the history class. If in the disciplinary approach students were expected to imitate the work of real historians to create knowledge about the past, then in the case of the post-modern approach this question is substituted with the wondering about how the past is represented in different historical contexts. This change of focus also brings along a completely new set of “study materials” allowing works of academic value to appear equally relevant as texts from other spheres like popular culture, art, family, politics etc. As Seixas duly notes, it is difficult to imagine where to draw the limits in this kind of learning process (Seixas 2000: 32). However, what is probably the most relevant difference for the present article is the fact that post-modern history seems to be the only pedagogical approach in history education with an explicit interest in uncertainty. The willingness to greet uncertainty is what defines the post-modern approach (Seixas 2000: 27). As brought out by Keith Jenkins (1959: 9): “The best guides to history today are those who not only know all about the collapse [...] into uncertainty, but who like it and can accept it”.

If we look at the modelling activity of the post-modern approach, we can detect a correspondence with Lotman’s description of play-type modelling. Compared to scientific models that focus on the systematic aspect of the phenomenon, play-type modelling systems bring out its accidental and undetermined side and aim to reproduce its speech (Lotman 1967: 135). That is why we can say that in the case of the post-modern approach the object that is modelled is the historical culture in all its variability, not the past itself as in case of collective memory, or historiography as in case of the disciplinary approach. While focusing on the random, play is instantaneously regular and follows specific rules (Lotman 1967: 135). Still, in comparison to the rules of scientific models, play welcomes unpredictability and does not strive to grasp the totality of its object. Lotman stresses that playing requires the ability of dual perception: the situation should be seen as if both real and conditional at the same time (Lotman 1967: 133, 142). Being simultaneously included in various contexts (the context of the play and the real) makes possible a plurality of meanings. However, Lotman emphasizes that the play-effect is based

not on a rigid coexistence of different meanings, but on the acknowledgement of the possibility of the existence of other meanings besides the ones currently perceived (Lotman 1967: 141). This quality of play-type modelling is crucial for understanding the logic of the post-modern approach to history teaching as well.

If the disciplinary approach as a modelling system was described by its orientation towards its boundary, then in the case of the post-modern approach the modelling system bears the structural peculiarities of the periphery. In Lotman's works, the semiotic activity of the periphery differs greatly from the rigidly organized and rule-governed centre (Lotman 2000: 134). Monticelli (2012: 69) has described this as topological undecidability of the periphery that coincides with its semiotic undecidability. This means that the capability of the periphery of simultaneously belonging to both the internal and the external space (or, it is the same, to neither) manifests itself in a 'so-as' or 'neither-nor' logic (Monticelli 2012: 69). It is exactly this kind of semiotic undecidability of the periphery that makes playfulness – as the ability to comprehend meanings as conditional and as real at the same time – possible. As the post-modern approach is analogous to the peripheral perspective, facing indeterminacy and experiencing uncertainty loses its negative connotation and becomes a normal and even expected state of things. This is why in the case of the post-modern orientation in history education the learning curve lies not in overcoming uncertainty but in acquiring the ability to dwell in it and in gaining a deeper insight into its nature.

A notion that captures this state of mind is 'negative capability', first expressed by the poet John Keats in order to describe a mindset in which a person is capable of dwelling in uncertainties, mysteries, doubts without any irritable reaching after facts and reason (Keats 1899: 227). Since then this notion has inspired different works in the fields of learning and management (see French 2001; Mayer 2003; Edmonstone 2016; Unterhalter 2017) and has been further elaborated in order to conceptualize the strive to accept uncertainty. Management scholar John Edmonstone (2016: 143) explains its benefits as follows:

Negative capability involves a human capacity for containment – for living with and tolerating uncertainty, ambiguity and paradox and for remaining content with halfknowledge – and inevitably experiencing the associated anxiety and fear by staying right in that uncertainty, in order that new thoughts and new feelings can emerge. It involves engaging in a non-defensive way with change, without being overwhelmed by ever-present pressures to react.

This strive to engage with change can also be seen as central for the post-modern history class, which is why the situation of indeterminacy is predominantly linked to the unpredictability of the historical process. Of course, the future appears

objectively unpredictable also in the classroom where either collective memory or disciplinary approach are used. However, these two types described in the previous sections involve ways in which to create a meaningful nexus between past–present–future that makes it possible to perceive the unity of time and thus model the future accordingly. In the case of collective memory and its myth-type modelling it is the cyclicity of time that appears as a repetition of one and the same story told through the prism of different historical events, and thus lies “out of time, endlessly repeated, and in this sense, unchangeable” (Lotman 2000[1990]: 152). In the disciplinary approach, this temporal coherence is accomplished through framing the linear timeline as causal relations of a historical trajectory into a coherent historical account. In both cases, unpredictability is thus eliminated from the pages of history books because “the choice, which was open to chance *before* seems predetermined *afterwards*” (Lotman 2000[1990]: 233). Lotman compares the historian to a fortune teller who, instead of predicting the future, “predicts backwards” – the main difference is that the retrospective gaze eliminates indeterminacy: “what in fact did not take place could not, in the eyes of the historian, have taken place. The historical process loses its indeterminacy, i.e. ceases to be informative” (Lotman 2000[1990]: 236). In the post-modern approach, however, where the main focus is not on the past itself but on the narratives in their historical context, the temporal nexus itself gets broken, opening the possibility to turn the retrospective gaze around and restore the indeterminacy of the historical process.

In order to grasp the unpredictability of the past from the present moment, Lotman (2000[1990]: 233) proposes to picture the movement of history “not as a trajectory but as a continuum that is potentially capable of resolving itself into any number of variants”. By presenting the road from the past to the present not as a straight line but as a bundle of various imaginable variants, we disrupt the experience of linearity of time imposed by dominant historical narratives. One possible option of achieving such a disruption and change in perspective in a history class is to examine various narratives about an historical object, but instead of focusing on the systematic aspect and deducing the invariant account of historical paths as was done in the disciplinary approach, the investigation would be oriented towards maintaining the variability and focusing on the random and the unique instead. The sources and texts that appear as the “odd ones out” are the ones through which it is possible to find those paths that in later times were filtered out by the dominant cultural narratives that govern our understanding of the past in the present. Concurrently, we can restore the unpredictability of the historic momentum that was lost in the retrospective narration.

The purpose of such exploration can be seen as manifold. For one, such a learning process allows us to follow the process of how historical entities appear to acquire fixed meanings in the present, while changing cultural contexts actually continuously shift and shape those meanings in time. At the same time the peripheral playful plurality based on the “so-as” or “neither-nor” logic does not mean that this exercise in historical thinking would inevitably contradict the epistemological foundations of history as an academic discipline or even that it would necessitate the exclusion of narratives serving the function of collective memory. As inherent to all play-type models the play effect (i.e. play-type modelling in other semiotic systems) allows to comprehend the existence of alternative versions whilst taking the meaning of the “here and now” in all seriousness (Lotman 1967: 141; see Pärn 2016).<sup>13</sup> The key stepping stone in developing such “playful” thinking is learning how to accept uncertainty as an essential experience accompanying the strive to navigate in-between meanings.

## 5. Conclusion

In this article, I discussed how the Lotmanian approach to modelling systems can be used to evaluate the relation between historical pedagogy and uncertainty. The connection between the structure of the learning process and uncertainty understood as an epistemic state that occurs at the limits of knowledge was modelled as the relation between a semiotic system and its boundary. As a result, it was possible to explicate how the collective memory approach, the disciplinary approach and the post-modern approach to teaching history all foster specific attitudes towards the experience of uncertainty and enforce different semiotic strategies for dealing with this experience. The key aspects of the discussion are summed up in the concluding Table 1.

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<sup>13</sup> A fascinating parallel with the Lotmanian approach to play-type modelling in education could be drawn with the ‘poetics of openness’ as formulated by Umberto Eco in *The Open Work* (Eco 1989[1962]) and with the ways in which it has been applied in educational context to discuss learning experiences that foster a plurality of interpretative possibilities (see Campbell 2018; Sikkema *et al.* 2021).

Table 1. Semiotic modelling of the relation between historical pedagogy and uncertainty.

|  | <b>I Collective memory approach</b>  | <b>II Disciplinary approach</b>  | <b>III Post-modern approach</b>  |
|--|--|--|--|
| <b>1. Modelling type</b>                                   | Myth-type modelling (metatext)   | Scientific modelling (language, grammar)   | Play-type modelling (speech)   |
| <b>2. Relation between the internal and external space</b> | Correct – incorrect  | Organized – non-organized  | ‘so-as’ or ‘neither-nor’   |
| <b>3. Boundary as...</b>                                   | a threat   | a possibility for expansion  | a zone of semiotic undecidability and playfulness                                  |
| <b>4. Typical situation of indeterminacy</b>               | Ambiguity  | Complexity   | Unpredictability   |
| <b>5. Strategy for dealing with uncertainty</b>            | Avoiding uncertainty as it can lead to the destruction of existing meaning | Addressing uncertainty as a necessary step for overcoming it and arriving at a fixed meaning | Accepting uncertainty as an integral part of the continuous meaning-making process |

As presented in the table, the collective memory approach is based on myth-type modelling and thus divides the internal and external space according to the logical pattern of correct–incorrect. This kind of division results in perceiving the periphery of semiotic space as a threat and consequently enforces the strategy of avoiding uncertainty as it can lead to the destruction of existing meaning structures. The disciplinary approach follows the meaning-making patterns of scientific modelling, which means that the semiotic world is structured as organized and non-organized space. In this case, boundary is viewed as a possibility for expansion. The strive of such semiotic systems endlessly to broaden their boundaries results in openly addressing uncertainty at the limits of knowledge in order to expand the organizing principle of the system onto the external space. Thus, addressing uncertainty appears as a necessary step for overcoming it and arriving at a fixed interpretation.

The post-modern approach appears closest to what Lotman has called play-type modelling which balances between the unpredictable and random on the one hand and the systematic and rule-governed on the other hand. Play-type models relate the internal and external space according to ‘so–as’ or ‘neither–nor’ logic. This type of organizing principle bears the structural peculiarities of the periphery itself and therefore allows the semiotic undecidability and playfulness to appear as a natural part of the system, concurrently accepting uncertainty as fundamental to the endless meaning-making process. In order to illustrate how these relations

are manifested in history teaching, I gave an example of particular situations of indeterminacy characteristic of each approach. In the case of collective memory, I discussed the situation of ambiguity; in the case of the disciplinary approach the situation of complexity and in the case of the post-modern approach I considered unpredictability as a possible cause for uncertainty in this type of history classes.

It is important to emphasize that my goal was not to promote one approach over the others, but instead I aimed to map the influence that pedagogical orientations can have on developing students' ability to manage uncertainty. Handling the uncertainty in the process of learning, as well as in life in general, demands a wide spectrum of techniques and skills and the ability to switch between them, depending on the particular context. There are situations when it is wiser to protect ourselves from too much uncertainty in order to be able to act with determination, and others where we have enough resources and feel safe to explore the unpredictable and ever-changing nature of the world around us. That is why the pedagogical challenge of responding to uncertainty in the 21st century is, first, to understand the connection between various pedagogical approaches and uncertainty; second, to learn how to consciously apply this knowledge in designing the learning process; and, third, to enhance students' capability of applying particular strategies in different contexts. The present article focused on the first challenge with the hope that this research can serve as a foundation to explore further the possibilities to deal with the other two as well.

The discussion I presented in this paper was centred on history education but could be further developed in the framework of general pedagogy as well. However, the context of history education did not serve as a mere illustration. Uncertainty in learning cannot only be discussed as a universal experience, but it is always to some extent influenced by the particular disciplinary context. In the case of history education, uncertainty is deeply rooted in our overall temporal experience of the world and thus learning to think about the past is simultaneously reframing our experience of the present and influencing our perception of the future as well. That is why the wider discussion around how to prepare the students to living in an uncertain world has to operate on universal pedagogical levels, while also incorporating field-specific analysis. In this article I tried to address both aspects within the framework of semiotic reasoning as Lotmanian semiotics of culture allows to integrate these different levels of discussion into one by mapping out the universal tendencies of pedagogical systems, while retaining the specifics of the research object. Therefore, this paper also serves as an example of how semiotic investigations in the field of pedagogy can have the potential to bring together the discussion of various school subjects in the frame of higher-order problems that challenge the contemporary educational system on a wider scale. In this article

I viewed uncertainty as one of such higher-order challenges and showed how investigating the workings of semiotic models of pedagogical approaches allows us to understand the development of uncertainty strategies in the context of learning.

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### **От избегания неопределенности к ее принятию: Семиотическое моделирование исторического образования на краю знания**

В статье рассматривается, как различные подходы к преподаванию истории могут способствовать развитию различных стратегий для преодоления неопределенности. Исходя из теории семиотики культуры Юрия Лотмана в работе описываются три подхода к исторической педагогике как три типа моделирующих систем: мифологическое моделирование, научное моделирование и игровое моделирование. В статье аргументируется, что связь между педагогическими подходами и неопре-

деленностью, как опытом, возникающим на краю знания, может быть описана как отношение между семиотической системой и ее границей. Природа этого отношения различается в зависимости от того, как воспринимается разделение между внутренним и внешним пространством семиотической системы. Разные типы моделирования предписывают различные схемы смыслопорождения для того, чтобы урегулировать неопределенность пограничного пространства. В процессе обучения эти схемы можно рассматривать как семиотические стратегии, которые различные типы педагогики применяют при достижении границ знания и столкновении с ситуацией неопределенности. В контексте исторического образования будут рассмотрены три стратегии: избегание неопределенности в случае педагогики коллективной памяти, решение проблемы неопределенности в случае дисциплинарного педагогического подхода и принятие неопределенности в случае постмодернистского подхода.

### **Ebakindluse vältimisest selle aktsepteerimiseni. Ajaloohariduse semiootiline modelleerimine teadmiste äärealadel**

Artikkel otsib vastust küsimusele, kuidas erinevad lähenemised ajaloo õpetamisele kujundavad erilaadseid strateegiaid ebakindluskogemusega toimetulemiseks. Vaatluse all on kolm pedagoogika suunda ajalooõppes, mis põhinevad erinevat tüüpi modelleerivatele süsteemidel. Lotmani kultuurisemiootilistest ideedest lähtuvalt eristatakse müütilist modelleerimist, teaduslikku modelleerimist ja mängulist modelleerimist. Tekstis käsitletakse pedagoogiliste lähenemisviiside ja ebakindluse kui teadmiste äärealadel tekkiva kogemuse vahelist seost, modelleerides seda kui semiootilise süsteemi ja selle piiri vahelist suhet. Sõltuvalt loogikast, mida kasutatakse semiootilise üksuse sise- ja välisruumi vahelise suhte konstrueerimiseks, kujunevad semiootilistel süsteemidel ka erinevad lähenemised, kuidas tulla toime piiriala kui määramatuse reservi poolt tekitatava ebakindlusega. Õppeprotsessis võib neid lähenemisi vaadelda kui semiootilisi strateegiaid, mida erinevad pedagoogikad jõustavad olukordades, kus informatsiooni määramatus võib tekitada õpilastes ebakindlust. Ajaloõppe kontekstis käsitletakse artiklis kolme erinevat strateegiat: ebakindluse vältimine kollektiivse mälu lähenemisviisi puhul, ebakindluse vähendamine distsiplinaarse pedagoogika puhul ja ebakindluse aktsepteerimine postmodernses ajalooõppes.