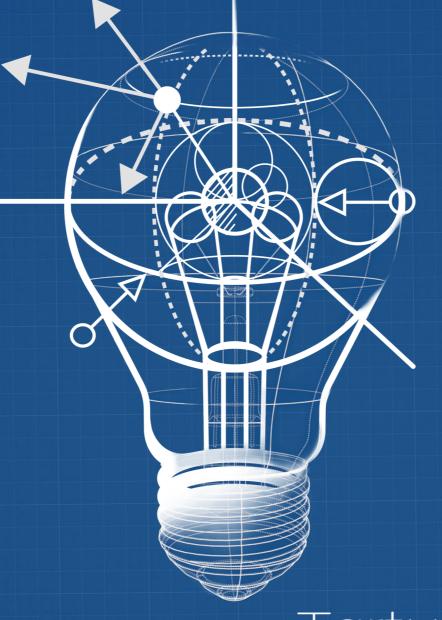# Book of Abstracts

Tartu
SUMMER SCHOOL
of
semiotics

24-27 August 2023

Tartu Summer School of Semiotics
2023

COMING SOON

24–27 August, 2023
Tartu, Estonia

Book of Abstracts

Tartu Summer School of Semiotics 2023 – COMING SOON

Organised by the Department of Semiotics, University of Tartu in cooperation with the Estonian Semiotics Association.

Organising committee:

Katarina Damčević

Katre Pärn

Nelly Mäekivi

Ott Puumeister

Riin Magnus

Silver Rattasepp

Tiit Remm

Book of Abstracts

Edited by Katre Pärn and Silver Rattasepp

University of Tartu, Institute of Philosophy and Semiotics, Department of Semiotics, 2023

For more information

Event page: tsss.ut.ee

Institute of Philosophy and Semiotics, University of Tartu: filsem.ut.ee/en

Estonian Semiotics Assocation: www.semiootika.ee

Email: semiotics@ut.ee

Contents

Programme

DAY 1 – Thursday, August 24		
9:00–10:30	Registration	
10:00–10:30	**Opening**	
10:30-12:00	Plenary talk **JAAK TOMBERG** – On the contemporary realisation of science ficiton Moderator: Silver Rattasepp	
12:00–12:30	break	
12:30-14:00	**Session 1**. Moderator: Eleni Alexandri	
12:30-14:00	Rahul Murdeshwar	Developing a 'spectral chronotope' for analysing hauntological utopias
	Mie Mortensen	City of the Sun, city of the world to come
	Naira Baghdasayan	'Love of my life' with (out) Freddie Mercury: unravelling new meanings through translation
14:00-15:30	lunch	
15:30-17:00	**Session 2**. Moderator: Merit Rickberg	
	Alexandra Milyakina	Learning without a plan: multimodal pedagogy for designing the futures
	Nina Kozachynska	Not knowing by heart what to expect: the present of the future and folk songs listeners
	Ott Puumeister	Dance without organs: the time-image of *Memoria*
18:00	Reception	

DAY 2 – Friday, August 25		
9:00-10:30	**Session 3**. Moderator: Hermann Tamminen	
	Reet Hiiemäe	What future prospects are more relevant, the end of the world or a successful marriage?
	Mari-Liis Madisson, Tatjana Menise	"1984" analogies in conspiracy theories about the Baltics: the Russian case
	Sebastian Moreno Barreneche	The future as a textual construction. Examples from literature, audiovisual fiction, politics and everyday life
10:30–11:00	break	
11:00–12:30	**Plenary talk** **ALEXANDRA ROBERT** – Semiotics in the field of speculative design: Reshaping future visions for data-driven innovation Moderator: Tiit Remm	
12:30–14:00	lunch	
14:00–15:30	**Session 4**. Moderator: James Augustus Bacigalupi IV	
	Alec Richard Kozicki	Why the world needs semiotic consulting
	Lyudmyla Zaporozhtseva	Culture anomaly as a sign: trend hunting as a future forecasting tool
	Ülle Pärl, Triin Padonik	Developing a communication model to analyze and improve the operation of management information systems: a case study approach
15:30-16:00	break	
16:00-17:30	**Session 5**. Moderator: Nelly Mäekivi	
	Israel Chavéz Barreto	Notes for a diachronic semiotics: on some aspects of the mechanisms for change in sign systems
	Ekaterina Velmezova	On the future of language in the categories of (bio)semiotics: Jan Niecisław Baudouin de Courtenay
	Kalevi Kull	One moment in time: prospects for general semiotics

DAY 3 – Saturday, August 26		
9:00–11:00	**Session 6**. Moderator: Riin Magnus	
	Thierry Mortier	Our semiotic future past: a diagrammatic investigation into the visual depiction of a sign to uncover hidden keys to future models
	Tiit Remm	Interventions into semiotic spaces
	Pauline Delahaye	Semiosphere mapping and interspecific umwelt: perspectives on the study of cohabitation
	Stefano Carlini	Umwelt and cities: explanatory utility and pragmatic guidelines
11:00-11:30	break	
11:30–13:00	**Plenary talk** **REET AUS** – Changing the world with design Moderator: Katre Pärn	
13:00–14:30	lunch	
14:30–16:30	**Workshops**	
	On the future of teaching semiotics (Tiit Remm) The aim of the workshop is to share experiences, discuss and outline future perspectives in the field of teaching semiotics.	
	Semiospheric analysis of cultural innovations (Katre Pärn) The workshop explores a way to use Lotman's conception of semiosphere as a tool for analyzing and planning cultural innovations.	
	Umwelt change scenarios in urban planning (Nelly Mäekivi and Riin Magnus) In this workshop, we will walk to places in central Tartu and discuss the impact of urban change on the umwelten of non-human species.	

DAY 4 – Sunday, August 27		
09:00–10:30	**Session 7.** Moderator: Herman Tamminen	
	Mark Mets	Computational cultural semiotics: semiosphere, text embeddings and ousiometrics
	Anna Dobrosovestnova	Peircian semiotics as an inspiration for different imaginaries of human-robot futures
	James Augustus Bacigalupi IV	Sentient technics: from a cybernetic to a biosemiotic mode of growth
10:30-11:00	break	
11:00–12:30	**Plenary talk and workshop** **MATTIA THIBAULT** – Speculative semiotics Moderator: Maarja Ojamaa	
12:30–14:00	lunch	
14:00–15:30	**Session 8**. Moderator: Ott Puumeister	
	Andrey Gavrilin	The "no-future" regime of historicity: how presentism affects the representation of major historic events
	Oscar Miyamoto	Habits of the future: episodic memory as virtual memory
	Silver Rattasepp	The endless same of accelerationist futurology
15:30-…	Intro to the future	

Theme

What – and how – do we *know* and acquire knowledge about the future? What is the link between the past, present, and future? Furthermore, what does the capacity of future-making depend on? The aforementioned are some of the guiding questions through which we aim to shed light on and better comprehend the processes of creation, circulation, and choices of models of the future.

Knowledge about the future states of the world is always semiotically mediated. Omens, prophecies, utopias, prognoses, predictions, visions, plans – these are just some of the means we use to get a tentative glance at what is coming or as a direction for moving towards the desired future. Moreover, the future itself can be conceived and conceptualised in different ways: as something that can be predicted or as a forking pathway with endless possibilities. Times of rapid change call for a better understanding of what the future holds – as a concept, temporal dimension, a body of narratives, as something that arrives or something that is forged.

Tartu Summer School of Semiotics aims to resume the dialogue between different branches of semiotics and related fields in exploring the diversity of ways of engaging with the future(s) in culture, society and nature.

The topics to explore include, *but are not limited to*:

1. Ways and means of modeling futures in culture, society and nature. Humans and non-human animals have different semiosic and semiotic capacities and means for cognising and modeling futures. How do these means impact individual or collective resilience? Some related aspects worth exploring might be:
- empirical and theoretical studies on ways of future-making in different domains,
- semiotic conceptions and approaches to the future(s),
- future(s) of semiotics.

2. Futures consciousness refers to the human capacity to understand, anticipate, prepare for and embrace the future. This capacity can be hindered in times of uncertainty and ambiguity, such as during change and/or crises. Accordingly, some related aspects worth exploring might be:
- ways of fostering futures consciousness in times of heightened unpredictability,
- the role of futures consciousness in meaning-making processes,
- the projection of futures that in turn guide and model behavior in the present.

3. Speculative futures. Some of the more commonplace approaches to thinking about the future involve prediction and management. This means that the future is conceived extrapolatively: it is (or rather ought to be) an extension of the present. A speculative approach, to the contrary, would attempt to rethink futures as independent of current trends and assumptions. It is a thought about future possibilities, and even impossibilities. Some related aspects worth exploring might be:

- semiotics and impossible futures,
- future histories – the present from the perspective of speculative futures.

4. Umwelt changes and the future of human-environment relations. Anthropogenic environmental changes and technological developments affect the umwelts of other living beings. From a non-human perspective, environmental change can result in a radical transformation of umwelts or umwelt transitions. On the other hand, the growing awareness of human impact also prompts the reevaluation and revision of human-environment relations. Some related issues to explore:

- What are the specifics of umwelt changes in anthropogenic environments, but also as resulting from the transformations of organisms through bioengineering?
- How to (re)imagine the future of human-environment relations?
- What are the impacts of the imaginations of the future on the current perceptions of and actions towards the environment.

Abstracts

Alexandra Robert

SEMIOTICS IN THE FIELD OF SPECULATIVE DESIGN:
Reshaping future visions for data-driven innovation

With the accelerating connectivity between individuals, objects and machines, relationships are transformed. Gigantic masses of data are collected and used every day in the world, leading to many tangible/intangible transformations of our economic, social, cultural and ecological environment.

From augmented human beings/experiences to the threat of domination/manipulation, from economic goals to the challenges of sustainable development, the power of data exploitation has aroused as much potential for action on the main issues as risks of provoking other social vulnerabilities. Data representations are often anchored in a past future imaginary led by science-fiction productions. The challenge today is to understand how our visions of the future are shaped to better collectively open up possibilities of emancipation and anticipation. This involves questioning representations and their genealogy so as to extract oneself from these continuous presents or clichés that limit our ability to stimulate sustainable human-centered innovation. Ultimately, it also necessitates the experimentation of collective methods and tools so as to "co-design" re-semiotized narratives of the future, and open debate.

Bionote. Alexandra Robert is a designer and expert in the application of semiotics to marketing and brands. She was art director and communication manager for major brands for more than 18 years before undertaking a Masters in Semiotics at Université Paris Cité and beginning her consulting career in 2013. She advises and manages transition and speculative design projects for companies and organizations and is particularly involved in social and environmental innovation projects in France. Since 2019, she has contributed to the experimentation of co-design methods and workshop tools in collaboration with private and academic partners, with a specific focus on the place of narratives in collective action.

Jaak Tomberg

ON THE CONTEMPORARY REALISATION OF SCIENCE FICTION

The 00s marked the presentist moment in Anglo-American science fiction. Several renown science fiction authors, most notably William Gibson, temporarily gave up future-oriented extrapolations and started writing novels set in the immediate present. Gibson's three novels of the decade – *Pattern Recognition* (2003), *Spook Country* (2007), and *Zero History* (2010) – convincingly read as realist reflections of contemporary reality. But at the same time, they also *felt like* science fiction, suggesting that already by then, the globalized segment of contemporary reality, characterized by increasing acceleration, interconnection, and technological saturation, generated the same kind of cognitive estrangement that science fiction had usually done. In other words, the premise behind Gibson's realist turn seems to have been that science fiction had somehow already *realised itself*, and the writer, in order to write science fiction in the 21st century, only had to reflect upon a reality that was already present. (Gibson's realist turn also marked a moment of generic realisation about science fiction: that it is not that different from realism; that the two share a solid poetic common ground.)

Generalizing these developments, my presentation outlines the contemporary realisation of science fiction. I claim that in many aspects, the present technoculture enacts itself by preempting and appropriating structures that have long been central to science fiction – that the same structural devices that were earlier used to create science-fictional worlds can now be used to efficiently characterize and comprehend our own. From this perspective, I take a closer look at extrapolation, speculation, parallel worlds, and alternative histories.

Bionote. Jaak Tomberg is a literary scholar, a co-professor of Contemporary Literature at the University of Tartu who is interested in the philosophy of literature, science fiction, utopia and utopian thought. His new book, entitled *How to Fulfil a Wish* (*Kuidas täita soovi*, 2023), is about the fate and status of utopian imagination in a modern culture whose technological saturation has brought about a decisive proximity between realism and science fiction.

Mattia Thibault

EXPLORING SPECULATIVE SEMIOTICS

Speculative semiotics is a scientific project within the larger umbrella of speculative studies. It aims to explore the potential of semiotics by stretching it in time and space, sometimes far beyond its normal limits. While future-oriented, the final goal of Speculative Semiotics is not that of accurately forecasting the future. Instead, it makes use of a forward-looking and creative perspective to reflect critically on the general workings of communication and on its ideological understandings.

Starting with the projects of "nuclear semiotics" that investigated how to communicate across thousands of years and building on key concepts, such as Lotman's *explosions* and Eco's *metatopia,* we will explore some of the different dimensions of speculative semiotics.

To a theoretical and methodological part, we will also join a practical activity with a short workshop to speculate on posthuman communication.

Bionote. Mattia Thibault is a semiotician and an Assistant Professor (Tenure Track) in Translation in the Creative Industries at Tampere University. His interests include semiotics and translations, speculative research, and playfulness and the built environment (real and digital). He is a member of the Language Unit and collaborates with the Gamification Group, the Centre of Excellence in Game Culture Studies and the Flagship project UNITE - Forest-Human-Machine Interplay.

Reet Aus

CHANGING THE WORLD WITH DESIGN

Bionote. Reet Aus is a fashion designer, environmental activist and senior researcher at the Estonian Academy of Arts Sustainable Design and Material Lab. Since 2002 Reet has been creating collections based on upcycling practices. She is a pioneer in the field of industrial upcycling for fashion, and has developed the UPMADE® certification, in order to pass on her knowledge to brands and factories. Reet's guiding mission in life is to save the fashion industry from itself, and to show that there is a way of ending the throwaway culture that causes so much waste and destruction around the world.

Alec Richard Kozicki

WHY THE WORLD NEEDS SEMIOTIC CONSULTING

This presentation touches upon how the unfamiliar profession of semiotic consulting utilizes the characteristics of transparency, empathy, and intentionality to enhance the conceptualization and design process of future societies. Semiotic consulting is an ad hoc service that is closely linked to design and is specifically tailored for various stakeholders within a society, such as individuals, institutions, and organizations. In general, a semiotic consultant is a specialist who spearheads the perceived subjective boundary when an object or convention represents a "lack of meaning". The design process for developing a society with the future always in mind requires an understanding of the complex, interwoven relations between the stakeholders in the society, along with the distinction of the linear process of deliberate acts and the non-linear path of intentionality that leads to unexpected emergent outcomes.

Specifically, the presentation examines how semiotic consulting can enhance the design outcomes related to the current quantified planetary boundaries of the Anthropocene, which must be addressed from a societal level and has a dire impact on a global perspective that is potentially irreversible. There are three zones of planetary boundaries, which includes being below boundary (safe), in zone of uncertainty (increasing risk), and beyond zone of uncertainty (high risk). This presentation will focus on three semiotic theories which are beneficial for semiotic consultants, their clients, and the global awareness of planetary boundaries that are modeled as increasing or high-risk boundaries.

We will first examine how to apply the theory of De-sign, which was created by the architect and semiotician, Farouk Seif. The heart of the De-sign theory contains what Seif considers as a creative evolutionary love. The process of a creative evolutionary love is a design process which contains a linear process of deliberate acts and non-linear trajectory of intentionality. Additionally, De-sign is a vital theory for expanding imaginative discourse, reconstructing reality, evoking transparency, creating and acting with integrity, and harnessing uncommon sense to persevere through the boundaries of absoluteness. Utilizing De-sign for semiotic consulting theoretically sheds light on how creative evolutionary love can be the imputation to enhance a designed object, such as constructing a sustainable future that goes beyond human semiosis.

The second theory discussed is created by Kalevi Kull and identifies four degrees of nature within semiotic ecology. This is a novel model since it greatly relates to humans' perception and meaning-making process of nature; understanding the degrees of meaning-making a human has with nature offers excellent grounding to implement a

strategy to alter the perceptions, actions, and conventions that exist in relation to the current planetary boundaries.

The third theory discussed are the semiotic components identified by the semioticians Cary Campbell, Kalevi Kull, and Alin Olteanu. The four semiotic components of resources, affordances, scaffolding and competence are useful for modeling the meaning-making interactions of an organism in an environment. From the biosemiotic perspective, applying this model structures how the organism co-develops with an environment, which is significant for establishing the building blocks of semiosis.

Together, these three models can be utilized in design thinking to enhance potential design outcomes and design deliverables which are intended to reduce relations to specific planetary boundaries. This requires a collective effort from scholars, specialists, industry leaders, policy makers, the individual, and the collective system in which the individual is a part of. As we will see in this presentation, semiotic consulting and the mentioned theories can adapt our collective perception on how we perceive nature and earth, and collectively we can establish a present trajectory to minimize potential irreversible changes for our future.

Bionote. Alec Kozicki, from Marietta, Georgia, is a second-year PhD student in the University of Tartu's semiotics program. The design of techno-living spaces is the main focus of his dissertation; he also researches value relations from the perspective of cultural psychology and the psychological processing of inner speech and meaning-making.

Alexandra Milyakina

LEARNING WITHOUT A PLAN:
Multimodal pedagogy for designing the futures

The understanding of sign production as an interest-driven process is central to multimodal pedagogy, yet it is hardly reflected in the formal systems of education oriented towards pre-defined learning aims and objectives. As a key instrument of governmentality, formal education shapes the efforts of individuals towards particular social roles and places students, teachers and institutions into a bureaucratic line of control. Vernacular learning practices, in their turn, usually imply that the engagement takes place on terms of the student's interest, which may be considered as "destabilizing" and "provocative" by formal education systems (Hamilton *et al*. 2015: 32). The multimodal approach to learning as a process of design implies a constant remaking of ourselves and the world around us, which inevitably challenges the stability and canonicity of knowledge. Since a *truly* multimodal pedagogy undermines the very basis of formal education, in which settings could it be realized to its full potential? Vernacular learning practices foster the virtues and attitudes that may guide us to this projected future. According to Kress, the interest-driven approach to meaning-making acquired beyond the school walls "is likely to be applied in all instances of communication", subsequently transforming the whole semiotic environment (Kress 2010: 38-39).

The processes of divergence and convergence create a moment of unpredictability, which makes meaning-making in the highly mediated environment "no more nor less than individual, unassessable chaos" (Hunt 2000: 111). Being "socially shaped and culturally given phenomena" (Kress 2010: 79), modes reflect the hierarchy of values: whereas older pages "embodied notions of authority and authorship", contemporary pages "are designed on the basis of a quite different social relation of author, reader and meaning-making" (Ibid., 37-38). We suggest that this shift of semiotic agency from makers to users, teachers to students could be addressed from the perspective of anarchist pedagogy, which entails the rejection of hierarchies, confronting the technologies of governance (both state and corporate) as well as free experimentation without a blueprint (Suissa 2006: 75). Additionally, the digital and medial aspects of bottom-up decentralized learning have been analyzed by Scolari *et al*. (2018) in their study of transmedia learning strategies. By integrating the principles of anarchist pedagogy, the multimodal approach and transmedia studies, we will explore the potential futures shaped by such practices as well as face the criticism directed at their efficiency, measurability and scalability.

The theoretical argument is supported by the example of Estonian Film Classics, a digital educational platform developed by the Transmedia research group at the University of Tartu. The platform examines Oskar Luts' *Spring* and its eponymous adaptation against the background of multiple metatexts in various discourses and media, as well as encourages students to develop their own metatexts of *Spring* in the form of rap songs, social media retellings, memes, etc.

References

Hamilton, Mary; Heydon, Rachel; Hibbert, Kathryn; Stooke, Roz (eds.) 2015. *Negotiating Spaces for Literacy Learning: Multimodality and Governmentality*. Bloomsbury: London, New York.

Hunt, Peter 2000. Futures for children's literature: evolution or radical break. *Cambridge Journal of Education* 30(1): 111–119.

Kress, Gunther 2010. *Multimodality: A Social Semiotic Approach to Contemporary Communication*. Routledge: London.

Scolari, C.A., Masanet, M.-J., Guerrero-Pico, M., Establés, M.-J., 2018. Transmedia literacy in the new media ecology: Teens' transmedia skills and informal learning strategies. *EPI* 27, 801-812.

Suissa, J. 2006. *Anarchism and Education: A Philosophical Perspective* (1st ed.). Routledge.

Bionote. Alexandra Milyakina, PhD, is a researcher at the Department of Semiotics, University of Tartu. The main research interests include literary education, semiotics of culture, transmedia and digitalization. Alexandra is a member of the Transmedia research group at the University of Tartu and a co-author of the digital educational platform "Education on Screen".

Andrey Gavrilin

THE "NO-FUTURE" REGIME OF HISTORICITY:
How presentism affects the representation of major historic events

The difficulties with imagining the future as different from the present have been described as a characteristic of contemporary society by many authors. One of the most well-known theories in this field is Mark Fisher's "capitalist realism". Fisher argued that the status-quo (and, namely, capitalism) has become so grounded in what we see as "reality" that it becomes impossible to imagine any kind of a major change. This becomes especially visible with the example of imaginary apocalyptic scenarios: in most of them, the society can only change in two ways – either by going extinct, or by spiraling into complete chaos and barbarism.

This theory can be grounded in the philosophy of history by supporting it with Francois Hartog's theory of "regimes of historicity". Such regimes are akin to a narrative template which determines what direction do we "impose" on history: either it is going forwards, repeats itself, or has completely stopped its motion. The latter case is reflected in the regime of historicity which he calls "presentism": a regime in which the present is seen as the "end of history" and history as not going anywhere anymore.

As it has been foreshadowed above, presentism not only affects our perception of both history and our society, but also influences our political and historical imaginary. This change can determine how certain events – past, present and future ones and both real and imaginary – are narrated and represented. It can affect the narration of past, present and future events: the past is then represented in terms of the present, as if it always was like it is now (e.g. describing medieval societies in capitalist economic terms); the present events – as leading nowhere or as a mere reflection of some underlying essence instead of being a radical novelty (for example, the Russian invasion in Ukraine can be described as a mere part of the fall of the USSR or as a part of continuous unending war); the future events – as either improbable (e.g. climate denial) or not causing any social change (or as apocalyptic, if the avoidance of a major catastrophe demands the society to change).

In the presentation I am going to demonstrate the characteristic effects of presentism on the representation of major historic events, focusing on the apocalyptic fictional plots and on the current ongoing war. Moreover, I will demonstrate the effects that other regimes of historicity can have, thus demonstrating that the described effects belong to presentism.

Bionote. Andrey Gavrilin is currently a first year PhD student in the University of Tartu (philosophy). His thesis topic is *Catastrophic Events and Presentism: Ending the "End of History"*. In the thesis he describes the theory of major historic events as collisions between regimes of historicity, also connecting these regimes to ideologies. Previously he has finished the MA program in Tartu with the topic *Alienation and Resignation: Why Don't We Act Against Apocalyptic Futures?* This thesis was devoted to analyzing the inactivity against the climate change from the point of view of Marxist theory of alienation.

Anna Dobrosovestnova

PEIRCIAN SEMIOTICS AS AN INSPIRATION FOR DIFFERENT IMAGINARIES OF HUMAN-ROBOT FUTURES

In my work as a human-robot interaction researcher, I frequently encounter empirical research into human-robot communication. More often than not, the studies about how to design robots to communicate 'efficiently' with people, and how to recognize the 'states' and the intentions of the so called 'users', are (inadvertently) based on what Jung (2017) refers to as the 'signaling' paradigm of communication, in which the assumption is that a given communicative cue (or a signifier) – a gesture, a sound, or a scripted dialogue – can be mapped (reliably) onto a specific meaning (or signified). Against the signaling paradigm, situated interaction between robots and people reveal how the meaning behind different expressions of the robot is situated and emerges *in* the interactions. The premise of the meaning as subjectively, situationally and culturally shaped invites a theoretical re-configuration of human-robot interactions through the prism of semiotic frameworks that allow to account for meaning as a situated act of interpretation. With this in mind, in my presentation my aim is to discuss how Peircean semiotics – specifically his 1903 interim account of the classification of sign types – could advance the field of human-robot interactions (HRI) towards more nuanced and complex understandings of communication between human and technological actors beyond the signaling paradigm. My intention is to explore, with case studies of selected robots in the intended contexts of their use, how the ten classes of signs all (could) play a role in driving situated interactions. Through this bottom up exploration, my hope is also to identify the (phenomenological and semiotic) dimensions of interactions that are currently ignored by the dominant theoretical approaches in the field.

In line with the theme of this year's Summer School, I will also speculate how accounts of human-robot communication grounded in Peircean semiotics, and more nuanced and creative explorations of interactions between different elements of sign-vehicles, objects and interpretants as enacted in human-robot interactions, could inform and inspire different imaginaries of human-robot future(s). It is my hope that these imaginaries can have the potential to transcend the standard technoliberal narratives of robots functioning as 'useful and efficient' helpers to humans that ignore the historically racialized and gendered reality behind such ideas of 'usefulness' (see e.g. Atanasoski and Vora, 2019).

To conclude, by taking part in the Summer School, my hope is to invite further conversations among expert and novice semioticians about the potential of HRI and social robotics as new promising fields for applied semiotics research.

References

Atanasoski, N., & Vora, K. 2019. *Surrogate humanity: Race, robots, and the politics of technological futures*. Duke University Press.

Jung, M. F. 2017. Affective grounding in human-robot interaction. *Proceedings of the 2017 ACM/IEEE International Conference on Human-Robot Interaction* (pp. 263-273).

Bionote. Anna Dobrosovestnova's background is in semiotics and culture studies (BA, University of Tartu), media studies (Mag, University of Amsterdam) and cognitive science (MSc, University of Vienna). In the last 5 years, she has been working in trans- and interdisciplinary projects that investigate emerging technologies (robotics, brain-computer interfaces, etc.) through arts based research, philosophy of science and Science and Technology studies (STS) perspectives. Currently she is working towards her PhD degree in Human-Robot interaction at the TU Wien. While she has not been an active part of the semiotics community for some time already, she sees the Summer School as an opportunity to reconnect with fellow semiotics researchers as it is her strong belief that semiotics has a lot to offer to the field of human-robot interaction.

Ekaterina Velmezova

ON THE FUTURE OF LANGUAGE IN THE CATEGORIES OF (BIO)SEMIOTICS:
Jan Niecisław Baudouin de Courtenay

Jan Niecisław Baudouin de Courtenay (1845-1929) was one of the most famous and versatile linguists in Central and Eastern Europe in the late 19th and early 20th centuries. His scientific heritage is so diverse that it contains, at least in germ, almost all of the central topics dealt with by linguistics over the course of the last century and that they still often deal with today. One of these was the theme of the "humanization" of the human language (in the sense of its origin and derivation from the "primitive" and "animal" state)—that is, the question of its "development" and "evolution", including attempts to predict its future state. Reasonings of this kind were no exception in the era of Baudouin de Courtenay. They were also present in the works of linguists working in various countries at the time: Otto Jespersen (1860-1943), Nikolai Marr (1864-1934), Hugo Schuchardt (1842-1927), Dmitry Ovsyaniko-Kulikovsky (1853-1920) and others. Analyzing the works of Baudouin de Courtenay devoted to the question of the "humanisation" and the future evolution of human language, in our paper we will try to answer the question of how much the topic of "humanisation" of language, which involves the question of boundaries between animal language-*langage* and human language-*langue* and which is of interest to modern biosemiotics (see the problematisation around the "linguistic threshold"), as well as the theme of the future state of the human language, was developed by Baudouin de Courtenay in categories which today can be considered to be semiotic (sign, iconicity, arbitrariness, etc.).These topics seem interesting not only because one of the historical roots for biosemiotics comes from (general) linguistics, but also because, for several years (1883-1893), Baudouin de Courtenay worked in Tartu (Dorpat). Both during this period (when, in particular, Jakob von Uexküll studied at the university there) and later, Baudouin de Courtenay could therefore be familiar with the reflections of the "holistic orientation", which gave rise to one of the trends in (bio)semiotics in the 20th century.

Bionote. Ekaterina Velmezova – Dr. Hab., invited professor at the Department of Slavic Studies of the University of Tartu, and full professor at the Department of Slavic Studies of the University of Lausanne. Main fields of research interest: Russian and Czech ethnolinguistics, history of structuralism and semiotics in Eastern and Central Europe, linguistic analysis of text.

Israel Chavéz Barreto

NOTES FOR A DIACHRONIC SEMIOTICS:
On some aspects of the mechanisms for change in sign systems

It is assumed that a characteristic trait of the object of study of semiotics is its unpredictability. For instance, to the extent that languages can't be planned in advance, it is assumed that a relation like the one holding between a signifier and a signified is, in principle, unpredictable. If this assumption is true, and sign systems should be regarded as objects that are able to change, how can we ground an analysis of them without reducing them to fixed synchronic relations? An answer could be that, to the extent that semiotics does not study *concrete* sign relationships as such but rather the *conditions of possibility* for sign relations to arise, we could, in principle, conceive of a diachronic theory of semiotics that could be able to provide an account of the tendencies exhibited by sign systems' patterns of change. Such model, however, would have to be built, again, not based in concrete sign systems, but rather in the likeliness of a possible future state of a given sign system.

Our main claim is that the possible future states of a given sign system are, in principle, constrained by the organization exhibited by said sign system in a given synchronic cut. A second claim will be that the organization of a sign system depends upon how the sign system is regarded. We will draw a distinction between two way of regarding sign systems, namely: (1) as enabling practices or as (2) ordering perception. We will show that the distinction is relevant because, in the first case, it is assumed that the main function of a sign system is to function as an expression for other sign systems, whereas in the second case, the main function is that of endowing other sign systems with content. The first case can be exemplified by the conception of verbal language as a communicational tool, the second case can be exemplified by the conception of language as a modelling system: thus, in the first case, change will be dependent upon the expressive potency of a sign system, whereas in the second case, change will be dependent upon its modelling potency. Hence, the theoretical model we will present will explore how different organizations that are revealed by highlighting either one of the sign system's functions leads to different sets of possible future states of a sign system.

Bionote. E. Israel Chávez Barreto holds a PhD in Semiotics and Culture Studies from the University of Tartu, and is currently carrying on his research at the Department of General Linguistics of Palacký University, Olomouc. His main interests are the history and epistemology of semiotics and linguistics, phonological theory, and general semiotics.

James Augustus Bacigalupi IV

SENTIENT TECHNICS:
From a cybernetic to a biosemiotic mode of growth

The current human mode of material growth is not sustainable. As argued in Lewis Mumford's *The Myth of the Machine: Technics and Human Development* (1967), this sustainability problem stems from the myth that we can control our natural world and ourselves. The logic of this myth asserts that, if only we can fashion our world like a machine with its clockwork precision and expected outcomes, we can live forever via what I call the Cybernetic Mode. This unsustainable mode of growth, predicated on this myth, will be outlined in the first of three parts of this presentation.

The second part will propose a solution to this problem: Sentient Technics (Bacigalupi *in press*). Ironically, existing technics – the machines and the institutions that produce them – of the Cybernetic Mode only generate objects that are dead upon creation, despite the promise of everlasting life in this cybernetic future. *Nature, on the other hand, continuously grows and complexifies life here and now*. In this spirit, one possible solution is to imbue our creations with attributes of life: technics capable of veritable semiogenesis, i.e., Sentient Technics.

In support of this proposal, the final section will describe a Lotmanian shift (Lotman 2005) from the current Cybernetic Mode of growth to that of a more sustainable Biosemiotic Mode via Sentient Technics. Central to this argument will be a "trojan horse", whereby Sentient Technics will initially enhance the translation of local semiogenesis into commodities compatible with global exchange, addicting the Cybernetic Mode to these novel local technics. In time, however, a transition will occur whereby semiogenesis, intrinsic to Sentient Technics, will evolve to increase local untranslatability with global extraction, thereby mitigating the Cybernetic Mode. Subsequently, it will be illustrated how the Cybernetic Mode can transform into a Biosemiotic Mode of adaptive and sustainable growth more aligned with the living dynamics of our only known biosphere.

References

Bacigalupi, J. A. in press. *Creativity: Transcending the Cybernetic Mode via the Virtuality of Relevant Noise*. Angelaki.

Lotman, J. 2005. On the Semiosphere. *Sign Systems Studies*, 33(1), 205–229.

Mumford, L. 1967. *The Myth of the Machine*. San Diego (Calif.), New York, London: Harcourt Brace Jovanovich.

Bionote. J. Augustus Bacigalupi is a Junior Research Fellow at the University of Tartu, in the department of Semiotics. As a PhD candidate under the supervision of Kalevi Kull and Donald Favareau, his research in biosemiotics is focused on *semiogenesis*, which explores the transfinite virtual potential of *relevant noise* in the continuous, irreducible and irreversible process of semiosis.

Kalevi Kull

ONE MOMENT IN TIME:
Prospects for general semiotics

Observing the recent trends in semiotics, we see that semiotics is in a phase of slow growth. The number of journals and book series which identify themselves as semiotics is slightly increasing (see *Sign Systems Studies* 50.4). Conferences are regular (Lacková et al. 2020), international lecture and seminar series are active, e.g. the regular semiotics seminars in Paris, the recent lecture series devoted to John Deely, the seminars of 'biosemiotics glade'. Handbooks in semiotics are being published (including the four-volume collections *Bloomsbury Semiotics*, ed. by Jamin Pelkey, 2022, and *Open Semiotics*, ed. by Amir Biglari, 2023), and strong centers of semiotic teaching and research are blooming (e.g., in Italy, France, Czechia, Mexico, Brazil, Canada, Estonia). But what about theory?

Based on a personal view, I try to characterize what is currently happening in biosemiotics, what are its most discussed topics and how it can be related to other areas and times.

Remarkable new events include the target articles by biologists Denis Noble and Eva Jablonka together with many responses in the journal *Biosemiotics* in 2021 and 2022, in the context of discussions on the extended evolutionary synthesis and the (extended) paradigm change in biology, which was declared already in 2001 in *Semiotica*. Recent volumes in the book series 'Biosemiotics' (Springer) and the growth of interest towards the ideas of Jakob von Uexküll (Michelini, Köchy 2020) provide links to more distant moments and contexts in this dynamic of biosemiotic thought.

These activities are related to the work and discussions on some fundamental problems in general semiotics which have not yet received a satisfying solution: how is semiosis responsible for creating the internal time or spacetime; what are the necessary and sufficient conditions for the semiotic indeterminacy and choice (Kull 2023); what are the implications from the process-relation duality principle of semiosis for semiotic research (Kull, Favareau 2023), etc.

References

Kull, Kalevi 2023. Freedom in living beings: Arbitrariness and the forms of semiotic indeterminacy. In: Biglari, Amir (ed.), *Open Semiotics*, vol. 4: *Life and its Extensions*. Paris: L'Harmattan, 81–97.

Kull, Kalevi; Favareau, Donald 2023. Neurosemiotics: A brief history of its development and key concerns. In: García, Adolfo M.; Ibáñez, Agustín (eds.), *The Routledge Handbook of Semiosis and the Brain*. New York: Routledge, 13–29.

Lacková, Ľudmila; Rodríguez H., Claudio J.; Kull, Kalevi (eds.) 2020. *Gatherings in Biosemiotics XX*. (Tartu Semiotics Library 20.) Tartu: University of Tartu Press.

Michelini, Francesca; Köchy, Kristian (eds.) 2020. *Jakob von Uexküll and Philosophy: Life, Environments, Anthropology*. (History and Philosophy of Biology.) London: Routledge

Bionote. Kalevi Kull is a Professor of biosemiotics in the Department of Semiotics, University of Tartu, Estonia. His research mainly focuses on modeling the processes of meaning-making, thus attempting to develop both semiotics and theoretical biology. He is a founding member and current president of the International Society for Biosemiotic Studies, co-editor of *Sign Systems Studies* and book series *Biosemiotics* (with Alexei Sharov, Donald Favareau and Claus Emmeche) and *Semiotics, Communication and Cognition* (with Paul Cobley).

Lyudmyla Zaporozhtseva

CULTURE ANOMALY AS A SIGN:
Trend hunting as a future forecasting tool

Can an anomaly in a culture be a sign of a future? An anomaly is something that deviates from what is expected. Anomalies can evoke fear and disorientation, they break the chain of predictability and causality, violate boundaries and create the field of unpredictability. Anomaly encompasses a sense of change, a spirit of historical moment. Whereas we are often scared of any sort of anomalies in everyday life, experts in future forecasting are hunting for culture anomalies as important markers of process of cultural evolution. This presentation aims to demonstrate the methodology of trend hunting for tracing an image of inevitable future.

Trend hunting is a research methodology for the detection of cultural transformations and trends through a search for cultural anomalies. It is based on a "Diffusion of innovations" theory elaborated by Everett M. Rogers. His main insight is that all social systems are changing through innovations. In their turn, innovations are introduced by visionaries (innovators) through outstanding and controversial pieces of art, scientific inventions, and new technologies. We can name a large number of examples from the history of humankind in which avant-garde ideas were rejected by the wider public, but which finally became a cultural and social norm. For the trend-hunting methodology, the social dimension is important inasmuch as it becomes a marker of reaction to new ideas. Trend hunters collect precedents of new artistic forms, any kind of cultural experiments, new ideas and scientific/technological inventions; ecological and sociopolitical shifts are also considered. All those cultural events in socio-cultural reality are units for analysis and constitute a scope of interest for the researchers. As they disrupt the conventional balance between conflicting tendencies, a constellation of homogenous anomalies can be regarded as an indication of a possible cultural explosion, as they evoke abrupt changes, which are in turn symptoms of a transformation of culture and, thus, trace directions of a possible future.

Trend-hunting methodology helps to put together controversial signals and outline strict directions of a possible future. It has practical implications for decision-making and uncovering insights for new products and services in times of change and chaos.

Bionote. Lyudmyla Zaporozhtseva, PhD in Semiotics and Culture Studies (University of Tartu), musicologist (Bac., M.A. in Musicology), expert in marketing semiotics, full-professor at School of Communications (HSE). Lyudmyla has 10 years of experience in

qualitative, marketing semiotic research and strategic consultancy for brands. One of the major fields of her expertise is audiobranding.

Mari-Liis Madisson,
Tatjana Menise

"1984" ANALOGIES IN CONSPIRACY THEORIES ABOUT THE BALTICS:
The Russian case

The popularity of George Orwell's dystopian fiction novel *1984* has exploded in the last decade. It was turned to *en masse* after the scandalous whistleblowing of Edward Snowden and during the turmoil of post-truth that surrounded the Trump presidency. In the context of Russian culture, interest in the book has further escalated since 2022, when this novel of repression topped Russian audiobook bestseller lists.

Orwell's dystopia stands as one of the bleakest works in its genre, and it may be regarded today as a transnational code or cultural myth that taps into fears of a dark future and total surveillance. While *1984* is often associated with a "liberal code," interestingly people with diverse and even opposing worldviews agree that Orwell's novel can be seen as a foreboding prophecy. A puzzling question remains: Who, then, is the Big Brother pushing society towards the Orwellian world? As noted by John David Frodsman in 1985, "...Big Brother is a creation of the Right as well as of the Left and is every bit as fascist as he is communist." The re-actualization of the book in various contemporary contexts reinforced a flood of analogies to Orwell's legendary dystopia in conspiracy theories, which as a rule do not rely on fiction. References to the myth of *1984* are primarily used to outline the conspirators' destructive manipulation and control methods.

This presentation delves into the use of such analogies in conspiracies centered on the Baltic States and presented in the Russian Language. Utilizing digital methods, we compiled a small corpus of Facebook posts published from 2020 to 2023 and discovered that authors primarily employed the novel to reflect on the role of Latvia, Estonia, and Lithuania in the broader anti-west conspiracy.

The presentation aims to explore the predominant function of *1984* tropes and delve into more general theoretical issues of representing reality through artistic text affordances. We are interested in how the tropes from this famous dystopia can bring both creativity and novelty to discourse while simultaneously imposing constraints and fostering a stagnation of thought.

References

Frodsman J. D. 1985. A Sinister Freedom: Orwell's 1984 Reconsidered. In J. George, G. L. Sheets and J. E. Bynum (eds.), *International Journal on World Peace* 2(4): 13-15.

Bionotes. Mari-Liis Madisson is a Research Fellow at the Department of Semiotics at the University of Tartu. Her research combines cultural semiotics, political semiotics, communication and media studies. Her research interests lie in online culture, conspiracy theories, information influence activities and extreme right communication. She is the author of *The Semiotic Construction of Identities in Hypermedia Environments: The Analysis of Online Communication of the Estonian Extreme Right* (2016) and *Strategic Conspiracy Narratives* (Routledge 2020, co-author Andreas Ventsel).

Tatjana Menise is a Postdoctoral Researcher on the REDACT project at the Department of Semiotics, University of Tartu. She also works as a lecturer at Riga Technical University. Her background is in semiotics and literary studies, and her dissertation is devoted to transmedia storytelling and classic fairy tales in transformative cultures.

Mark Mets

COMPUTATIONAL CULTURAL SEMIOTICS:
Semiosphere, text embeddings and ousiometrics

I explore the connections between Lotmanian cultural semiotics and computational methods, specifically text embeddings and ousiometrics. Both the Lotmanian theory of semiosphere and a number of computational approaches rely on spatial conceptualization to describe cultural meanings. Despite this connection, these fields have rarely been contrasted or combined. Their relation is relevant in order to understand the future role of semiotics together with computational methods, including increasingly popular approaches like ChatGPT. The aim of the study is to examine the affordances of each method and how they can complement each other in analysing complex cultural meanings in large corpora of texts. The role of the researcher as the interpreter, the languages used, and understanding the transformations of cultural meanings taking place are highlighted.

Text embeddings and ousiometrics are similar in the sense that both computationally transform the complex cultural meanings and project them into two-dimensional space, yet there are important differences. Using text embeddings means mapping the text based on the co-occurrence of units of text, like words or sentences. In comparison, ousiometrics relies on the existing human ratings of words to map them in relation to each other. As such, text embeddings relies more on the text itself, while ousiometrics is more dependent on human interpretations. This raises a relevant question, which is often hidden in the background of computational studies: what is the role of the interpreter in these methods? In the end, just as in the case of cultural semiotics, it is the researchers who transform the complex cultural meanings through their interpretation. In addition, different languages are used to convey the research findings, providing different affordances and constraints for interpretation; for cultural semiotics, it is more often a textual format, while computational studies rely more on visual graphs.

Both the differences as well as the similarities may contribute to the combination of cultural semiotics with different computational methods, as long as we recognize that their relation is more than a clear-cut distinction between qualitative and quantitative. As computational methods based on spatial representations and ChatGPT-like models are making such tools much more accessible across different fields, computational cultural semiotics can make use of them to describe culture at scale, but can also offer much needed explanations for how meanings are transformed in the process.

Bionote. Mark Mets is a PhD student at the Tallinn University's program of Cultural Studies and a junior researcher at the research group of Cultural Data Analytics. He did his master's in Semiotics at the University of Tartu.

Mie Mortensen

CITY OF THE SUN, CITY OF THE WORLD TO COME

Ivan Leonidov (1902-1959) was an architect who never produced any architecture. Known for his dreamy drawings of fantastic cityscapes, his works were never realized. With the change in aesthetic preferences announced by the Stalin regime in the late 1920s, his otherwise promising career at VKhUTEMAS was halted and he was accused of producing unrealizable "paper architecture" out of tune with the regime's finances and resources, and the term "Leonidovshchina" would be applied to anyone making a similar mistake. In the last two decades of Leonidov's life, while he is professionally isolated and disillusioned by the war, he produces a mysterious project allegedly titled "City of the Sun." Much like Campanella's eponymous philosophical novel, this series of drawings, paintings, and wood cuts appear to envision a utopia of the future. While scholars have often emphasized the utopian dimension of the works and their dreamy focus on a big sun, my paper proposes a more concrete analyses. Drawing on Leonidov's background and personal connections, as well as on theory about the visual space of the Russian Orthodox icon, I argue that the images from Leonidov's "City of the Sun" should be seen as closer to religious imagery than to architecture. I thus suggest that their function, like that of the icon, is to create a unique relationship between the viewer. The "architecture" that emerges is thus one that is present in the same way a saint is present in a religious image.

Bionote. Mie Mortensen was working towards PhD about the Soviet architect Ivan Leonidov at Columbia University in New York until the Covid pandemic forced her to return to her native Denmark. She now teaches Danish language and culture in the Scandinavian Studies Department at the University of Tartu.

Naira Baghdasayan

'LOVE OF MY LIFE' WITH(OUT) FREDDIE MERCURY:
Unravelling new meanings through translation

Holograms and different optical illusions have become a new way to pay respect to artists who have passed away. It has become so common that researchers and practitioners have started studying its ethicality and legality (Drecolias 2014). On the one hand, optical illusions are exact repetitions of the artists' previous performances. On the other hand, those repetitions take place in a new dimension of space-time.

In the case of an optical illusion or a hologram, there is no intention to create a 'self'. When it comes to duplications, Colapietro *et al*. (2021) mentioned that "there is no self that accounts for an object generating a replica of itself and, in turn, that replica being itself capable of generating myriad interpretants" (Colapietro *et al*. 2021: 182). Thus duplications, such as holograms and optical illusions, posit a challenge for the agency of humankind. It has been also argued, however, that they can be just another level of spirituality in this digital age (Mcleod 2015). One can also claim that in cases of hologram-based performances, the self is granted to the performer by the self-reflection of the audience. There can be different 'selves' given to the same projection.

The convergence of two realities (with and without) and the tangled web of space and time create new meanings, which under the given constraints, i.e. the physical absence of a given artist, are acquiring particular forms. The creation of new meanings is also a consequence of the fact that some elements of Peirce's triad are being changed. This process of meaning making is what Kobus Marais called 'negentropic work' (Marais 2019:125).

Using the example of two performances of the song 'Love of my Life' by Brian May and Freddie Mercury (with and without F. Mercury), this work illustrates how the shows with an optical illusion of a dead artist can be considered translations and how 'a self' can morph into different 'selves' as a result of that translation. The analysis refers to the conceptualization and categorization of translation by Kobus Marais (2019). The work finds the cases of representamen translation, object translation and interpretant translation in separate aspects of the two performances. In the representamen translation, the work discusses the connection between Brian May and Freddie Mercury and its materialization. The object translation refers to the very character of Freddie Mercury in the performance and how his 'self' is built. The change in time and space also changes the interpretant. The optical illusion of F. Mercury attaches a new meaning to the concert which, along with other things, grants more liveness to the artist (Kim 2017).

References

Colapietro, V.; Nöth, W.; Cestari, G. H. D. O.; Bittencourt Neto, L. H. 2021. What is the semiotic self? *TECCOGS: Revista Digital De Tecnologias Cognitivas*, *22*. https://doi.org/10.23925/1984-3585.2020i22p179-195

Drecolias, M. S. 2014. *Tupac and Beyond: The Implications of the Tupac Hologram on Copyright and the Right of Publicity and What it May Mean for the Future of Music*. eRepository @ Seton Hall. https://scholarship.shu.edu/student_scholarship/427/

Kim, S. Y. 2017. Liveness: Performance of Ideology and Technology in the Changing Media Environment. *Oxford Research Encyclopedia of Literature*. https://doi.org/10.1093/acrefore/9780190201098.013.76

Marais, K. 2019. Conceptualizing a semiotic theory of translation. In: *A (Bio) Semiotic Theory of Translation: The Emergence of Social-Cultural Reality* (pp. 120–157). Routledge. New York.

McLeod, K. 2015. Living in the Immaterial World: Holograms and Spirituality in Recent Popular Music. *Popular Music and Society 39*(5): 501–515. https://doi.org/10.1080/03007766.2015.1065624

Bionote. Naira Baghdasaryan is a second year Master's student in Semiotics at the University of Tartu. In addition, she holds a Master's degree in Social Sciences from the Johan Skytte Institute of Political Studies. Naira is engaged in research consultancy related to local development, youth and women empowerment, as well as evidence-based decision making.

Nina Kozachynska

NOT KNOWING BY HEART WHAT TO EXPECT:
The present of the future and folk song listeners

The work focuses primarily on the present of the future category as outlined by St. Augustine – that is, expectation considered as a cognitive process of folk music listeners, which tends to stem from Ricoeur's prefiguration (pre-understanding of life material) and reveals itself both during configuration (constitution of the work) and refiguration (reconstruction of the work). Thus the work is not intended to define/evaluate canonical musical forms or disparate musical signals; it rather pursues an analysis of folk songs by means of hermeneutics, particularly Ricoeur's impure narrativism.

Expectation will be analysed as a phenomenon of perceptual experience occurring at the time of listening to a particular folk song. Adhering to the unity formed by the instrumental part and the themporality of the lyrics, the work will nonetheless attempt to trace the coexistence and interpenetration of the abovementioned semantic units in a twofold narrative plane. Following Negretto's distinction, the work will differentiate the category of expectation as a generalised feeling of moving toward a musical – and overall narrative – course and anticipation, which is the strong expectancy for a particular musical action. Despite primarily concentrating on the phenomenon of expectation, the work deprives the anticipation category of attention neither at the text level (exact rhymes giving an idea of the next word) nor in musical accompaniment (repetitive harmonical consonances).

Alongside devoting attention to the compositional features of canonical works, encouraging potential expectation and anticipation, e.g. an insufficient amount of information in lyrics (Lotman), or tonal hierarchy (Meyer), lyrics as a horizon of possible experience will be considered. The latter, from Ricoeur's viewpoint, implies a mediation between man and the world – referentiality; between man and man – communicability; between man and himself – self-understanding. Therefore, the work will also aim at analysing how a perceiver may investigate one's *ipse* via resorting to the character's *idem*, touching upon various kinds of mediation in times of re-listening.

Bionote. Nina Kozachynska is a second year MA student in Semiotics whose interests include ontological hermeneutics, Ricoeur's impure narrativism, phenomenology of temporality and corporeality, but are not limited to these exclusively.

Oscar Miyamoto

HABITS OF THE FUTURE:
Episodic memory as virtual memory

"In the flow of time in the mind, the past appears to act directly upon the future, its effect being called memory, while the future only acts upon the past through the medium of thirds" (CP 1.325). What could that retroactive medium be, and how could it be characterized semiotically?

Current neurocognitive research suggests that Episodic Memory (EM) is the main meaning-making system by which we model our personal future actions in a verisimilar and flexible fashion. However, EM studies still provide contradictory answers to the following questions regarding the long-term phenomenology of lived time.

First, is there a difference between memory and imagination, and between retrospective (reconstructive) and prospective (re-creative) thinking? Second, does EM need to be causally grounded in physical reality (e.g. objective spatiotemporal relations)? And third, does EM require the mental manipulation of diagrammatic representations? Roughly speaking, these questions have been elsewhere dubbed as the 'discontinuity', the 'non-causality', and the 'representational' gaps. I will address these gaps in two movements.

First, I will recur to Donna West's semiotic definition of virtual habits (VH), as the "pre-enactment of specifically framed episodes in the inner world" (West 2017: 61), "projecting egocentric and allocentric perspectives into sequential event frames" (West 2018: 92). Following West, I will make the case that VH are the driving mechanism for episodic phenomenology by means of which a *lived*, enacted, past (e.g. "earlier") is meaningfully different from a *yet to be* lived, optionally enacted, future (e.g. "later"). Because of this, I will argue, EM could be regarded as a Virtual Memory or simulation that, nonetheless, entails a temporal continuity, a grounded causality, and a representational plasticity.

Second, in light of the above, I will explain the episodic phenomenology of lived time as a 'retro-causal' process, where "the future" is not a result, but a *cause*. This is to say, contrary to common sense, past does not become present, and present does not become future, but the other way around (De Tienne 2015: 42). Such an anticipatory ontology goes hand in hand with the temporal nature of semiosis itself, where the interpretant's *precedence*, as a habitual disposition, makes possible the representamen's *simultaneity* and object's *succession* (Fernández 2010: 294).

In other words, it is the virtual (a general 'future') that *habitually* influences the actual (a particular 'past') *by means of* the phenomenal (a living 'present'). The latency of many possible futures 'collapses' into the actuality of a past thanks to our goal-oriented agency. This could be seen, I conclude, as a form of *semiotic causation* or final causation, by which "relations of Thirdness occur in and with the establishment of a connection between the universe of possibilities that is Firstness and the plethora of events that is Secondness" (Hoffmeyer 2008: 67).

References

'CP' followed by a volume and paragraph number refers to the *Collected Papers of Charles Sanders Peirce*, vols. 1–6. Charles Hartshorne and Paul Weiss (Eds.); vols. 7–8 Arthur Burks (Ed.). Cambridge: Harvard University Press, 1931–35, 1958.

De Tienne, André 2015. The Flow of Time and the Flow of Signs: A Basis for Peirce's Cosmosemiotics. *The American Journal of Semiotics*, 1-2(31): 29–53.

Fernández, Eliseo 2010. Life and temporality: The place of biosemiotics within Peirce's general semiotics. *Chinese Semiotic Studies* 4(2): 289–300.

Hoffmeyer, Jesper 2008. *Biosemiotics*: *An Examination into the Signs of Life and the Life of Signs*. London: University of Scranton Press.

West, Donna 2018. Fashioning episodes through virtual habit: the efficacy of pre-lived experience. *Studia Gilsoniana* 7(1): 81–99.

West, Donna 2019. Semiotic Determinants in Episode-Building: Beyond Autonoetic Consciousness. *Filozofia i nauka. Studia filozoficzne i interdyscyplinarne* 7(1): 55-75.

Bionote. Oscar Miyamoto's main research interests are animal episodic memory and the visual pragmatics of scientific diagrams. Being a science journalist by training, he aims at using semiotics as an interdisciplinary theory to advance and communicate evidence-based research. His latest published work is featured in *Biosemiotics*, and his latest journalistic work is featured in *Symmetry*.

Ott Puumeister

DANCE WITHOUT ORGANS:
The time-image of *Memoria*

This presentation will explore Apichatpong Weerasethakul's film *Memoria* (2021) proceeding from Gilles Deleuze's concept of time-image. With this concept, Deleuze attempts to unearth representations of time that would not be based on movement and spatio-temporal coherence. Instead of personalised characters and identifiable causes and effects between occurrences (plots), these representations present us with events whose spatio-temporal actualisation remains obscure. They visualise potentialities or intensities of the emergence of worlds rather than the already extensional gallery of identities and coordinates of worlds. It is no longer a question of what happened, but who, where, will emerge as potential actors. Through films that use time-images, it is thus possible to refashion both the constitution of political actors, social worlds and relations. This is what Deleuze understands by the political dimension of cinema: it calls for a people that does not yet exist. We might also add that it calls for a redistribution of the present, the past and the future, possibly confusing these categories altogether. And through this, it is possible to apprehend future – rather than the past or present – in ontological terms. I will use *Memoria* to reflect on what this might entail.

Bionote. Ott Puumeister is a research fellow in semiotics at the Univeristy of Tartu. He is an editor of *Sign Systems Studies* and *Acta Semiotica Estica*. He defended his PhD thesis (*On biopolitical subjectivity: Michel Foucault's perspective on biopolitics and its semiotic aspects*) in 2018.

Pauline Delahaye

SEMIOSPHERE MAPPING AND INTERSPECIFIC UMWELT:
Perspectives on the study of cohabitation

Cohabitation is a word used to describe a situation where two species are living in the same space without relying on each other, which excludes most complicated situations like parasitism, symbiosis, predation or exploitation. Therefore, when issues appear in cohabitation situations between human beings and other species, there is no need for lethal or radical solutions (as it could be in situations of parasitism, for example) and a good evaluation can lead to more relevant and conservative measures.

This presentation will focus on how to make such a good evaluation of a hybrid environment through the example of the city, created by humans and for humans, but which became the main living place for various different species. In this sense, this presentation aims to explore the interactions between human and animal *umwelten* in the area of anthropogenic environmental change. From a semiotic point of view, the urban context influences what normal and ecological behaviour is (both regarding humans and other animals), how living beings are interpreting the signs in this environment and how they are interacting with it. Consequently, context has a major impact on the way humans and liminal animals are co-constructing their common semiosphere.

This presentation will show how semiotic tools and models can be useful and fruitful both for the diagnosis of these cohabitation issues and for the choice and creation of the best solutions possible to solve these issues. But it will also propose other perspectives, such as the valorisation of cohabitation in terms of ecological services or well-being both for humans and other species

Bionote. Pauline Suzanne Delahaye is a post-doctoral researcher in the Semiotics department at the University of Tartu, Estonia. She is a zoosemiotician, specialist in animal complex emotions and human-animal cohabitation, in particular in urban environments. She owns a PhD degree in language science from Sorbonne University, France. Dr Delahaye is also an involved popularizer and a volunteer in public education in science for various associations, initiatives and projects.

Rahul Murdeshwar

DEVELOPING A 'SPECTRAL CHRONOTOPE' FOR ANALYSING HAUNTOLOGICAL UTOPIAS

We wish to develop a novel 'spectral chronotope' and apply it to an examination of the utopian impulse in retrofuturistic aesthetics in pop cultural texts.

The motifs and devices in retro-inspired pop music and visual cultural texts represent 'lost futures', as described in Derrida's hauntology (1993) interpreted through Mark Fisher (2014) among others. Applied to selected examples, we will outline how nostalgic and retro content used in pop culture has been articulated through the concept of the spectre as a model for the cultural traumas and abandoned futures of past eras that haunt us today. As Fisher and others have shown, the function of retro-pastiche pop music is to refurbish the old canons and thereby disguise the 'disappearance of the future as its coming'.

After establishing the haunted nature of such texts, we can then try to analyse the utopian landscapes generated in them through a chronotopic analysis at a topographical, psychological and metaphysical level. We will first try to use the chronotope of the haunted house (Prosser 2015), based on the Bakhtinian Gothic castle chronotope – however, we will see that this chronotope is limited to specific novelistic texts. Instead, we will proceed to develop a broader spectral chronotope. In our model, the spectral chronotope manifests those semiotic devices that are forcibly excluded from the present signification at textual, intertextual and subtextual levels. The resultant chronotopicity produces an anachronic disjunction of time and space, a disarticulation of place and an indeterminacy of meaning. We will be able to speculate on the embodied character of the chronotope, in that it produces a haunting that can be analysed through the characteristics of spectrality as described by Derrida. The spectral chronotope will allow us to better describe the hauntological plot mechanisms in visual and musical retro pop cultural texts. We also hope to articulate the spectral chronotope through a general treatment (Torop 2019), and so examine its exchange with the real world. In conclusion, we can articulate the spectral chronotope in a viewpoint of contemporary hauntological social culture.

References

Derrida, Jacques 2011[1993]. *Specters of Marx: the state of the debt, the work of mourning and the new international* (P. Kamuf, trans.). London: Routledge, Repr.

Fisher, Mark 2014. *Ghosts of my life: writings on depression, hauntology and lost futures*. Winchester: Zero books.

Prosser, Ashleigh 2015. No Place Like Home: The Chronotope of the Haunted House in Peter Ackroyd's The House of Doctor Dee. *Aeternum: The Journal of Contemporary Gothic Studies* 2(1): 1–19.

Torop, Peeter 2019. Cultural Languages and value of chronotopical analysis. *Fronteras Semioticas De La Emocion Los Procesos Del Sentido en Las Culturas: Libro Homenaje a Desiderio Navarro*. 63–92.

Bionote. Rahul Murdeshwar is a student of semiotics in the Department of Semiotics at the University of Tartu. His current research interests include chronotopic analysis, hauntology, critical semiotics, conceptual metaphor theory and umwelt theory.

Reet Hiiemäe

WHAT FUTURE PROSPECTS ARE MORE RELEVANT,
the end of the world or a successful marriage?

The wish to know the future and other secrets of life has been characteristic of Estonian vernacular culture since ancient times, and observing signs and omens is still an integral part of the daily life of many people. Based on Estonian archival folklore sources from the beginning of the 20th century and preceding times, contemporary interviews and grassroot online comments to newspaper articles, this presentation will give an overview of the main foci in vernacular foretelling practices, the reasons why foretelling small-scale personal life-events (e.g., getting married in the coming year, a future husband) has been in most cases considered more important in older folklore than foretelling major societal or even global events (e.g. wars, end of the world), and analyze why such beliefs have not lost their topicality, even though there are some shifts in emphasis and argumentation observable over time.

Bionote. Reet Hiiemäe is senior researcher of folklore and religious studies at the Department of Folkloristics, Estonian Literary Museum. She has written numerous academic and popular articles and books on folklore as mental self-defense, analyzing the psychological aspects of vernacular beliefs and belief narratives. She has also edited collections of research articles and special issues of academic journals (e.g. in 2020 a special issue on the cultural meanings of silence in the journal *Mäetagused*; also in 2020 a special issue Health&Pandemic that compared the reactions to the Covid-19 crisis in various countries in the journal *Folklore. Electronic Journal of Folklore*). Hiiemäe's main topics of research are vernacular beliefs and their impact on people's life, the functions of folklore as a mental protective mechanism.

CV and publications in ETIS: https://www.etis.ee/CV/Reet_Hiiemäe/eng

Sebastian Moreno Barreneche

THE FUTURE AS A TEXTUAL CONSTRUCTION.
Examples from literature, audiovisual fiction, politics and everyday life

In 2023, many discourses revolve around the future, like in the case of global warming and climate change. The proposal for the Summer School consists of discussing the nature of the future as a time that is constructed in texts and accessible for individuals through these texts. Following the work of the linguist Émile Benveniste, the presentation will distinguish an ontological conception of time – independent of human cognition – from a *semiotic* conception of time, that is, one that is based in a cultural construction of past, present and future events in discourse as belonging to different times of history. By reviewing some recent works by semioticians on the topic of the future, the presentation will focus on shedding light on how the future can be studied from a socio-cultural semiotic perspective. The theoretical argument will be illustrated with specific cases from literature (dystopian fiction, namely Margaret Atwood's *The Handmaid's Tale*), audiovisual fiction (namely, the series *Black Mirror*, by Charlie Brooker), politics (with a focus on political promises and on the issue of climate change) and everyday life (the Covid-19 pandemic will be used as a case study). To sum up, participants can expect to be confronted with an argument that will evidence how, from the perspective of semiotics, the future is always a textual construction that is informed by the past and the present and that might have an impact on the actions we carry out in the present.

References

Appadurai, Arjun 2013. *The Future as Cultural Fact*. London: Verso.

Giannitrapani, Alice; Lorusso, Anna Maria 2021. Futuri passati. *E/C,* 32: 1-11.

Lorusso, Anna Maria 2020. Pensando al futuro: memoria e posterità. *Versus*, 131: 313-330.

Moreno Barreneche, Sebastián 2022. The Imaginary Construction of the Political Future. *Versus,* 134: 143-164.

Moreno Barreneche, Sebastián 2023. La construcción de futuros plausibles en la literatura distópica: una aproximación teórica desde la semiótica social y de la cultura. *Anclajes*, 27(1): 59-77.

Moreno Barreneche, Sebastián 2023. El futuro como construcción textual: el aporte de la semiótica al estudio de la discursividad temporal. *Andamios*, 51: 39-54.

Salerno, Daniele and Lozano, Jorge 2020. Future. A Time of History. *Versus*, 131: 189-206.

Bionote. Sebastián Moreno Barreneche is Associate Lecturer at the Faculty of Management and Social Sciences of Universidad ORT Uruguay (Montevideo, Uruguay). He holds a doctoral degree in Social Sciences by the Ludwig-Maximilians University of Munich, Germany, and is a researcher in Semiotics, with a focus on contemporary culture and society.

Silver Rattasepp

THE ENDLESS SAME OF ACCELERATIONIST FUTUROLOGY

Extrapolation is probably the most common form of imaginary of the future: an attempt at prediction and prescription by means of extending present conditions to the future, a future that is merely a slight reconfiguration of the present. This failure of imagination often, and surprisingly, also extends to forms of futurism that ostensibly present themselves as radical. One such example of the endless repetition of the Same under the guise of a radical re-envisioning of the future is what has come to be known as Accelerationism. In brief, the accelerationist vision is a forced reconfiguration of the future by accelerating the functioning of already existing systems, such as capitalism, until their eventual collapse under the weight of their own internal contradictions. The presentation will attempt to show two things. First, the ways in which accelerationists have not, in fact, extricated themselves from the mode of extrapolation, and second, that this represents a particular mode of failure of living in the contemporary condition of looming climate disasters: a situation in which collapse and radical change have already happened and come to pass, but which nevertheless have yet to arrive at its full force. Accelerationism represents that mode of failure of future imaginary which is life in the endlessness of end times.

Bionote. Silver Rattasepp is a researcher at the Department of Semiotics, University of Tartu. His interests include umwelt theory, animal studies, posthumanism, ontology, and science and technology studies.

Stefano Carlini

UMWELT AND CITIES:
Explanatory utility and pragmatic guidelines

Urbanization is undoubtedly the anthropogenic phenomenon that changes pre-existing ecosystems in the most radical ways, altering the availability of resources in and around them and generating new heterogeneous spaces (roads, parks, buildings, poles), in which natural elements are often mixed with artificial ones. This makes cities a major source of biodiversity alterations, rapidly creating new ecological opportunities for some species and dangers for others.

For these reasons, it is necessary to investigate how living species relate not only to the physical and chemical factors of cities (e.g. the effects of pollutants on the health of organisms), but also to the radical changes that urbanization exerts on the Umwelten of urban fauna.

To do so, I expound the concept of Umwelt as developed by von Uexküll and the different ways in which the philosophical and scientific literature uses this notion. Indeed, the term "Umwelt" is sometimes used in reference to the set of physical properties to which a species has access, sometimes in reference to the world of vital and practical meanings of the individual organism (Feiten 2020).

I argue that both of these uses of the Umwelt concept can play an important role in explaining both the adaptive and maladaptive behaviors of organisms subject to urbanization, as well as in delineating some management strategies for urban wildlife (regardless of which normative theories we choose to adopt).

The first sense of Umwelt, which refers to the species-specific perceptual and operational capacities of a living being, allows us to account for certain maladaptive behaviors due either to the lack of certain signals in the organism's perceptual world, or the reliance on certain environmental cues that turn out to be ecological traps. An example of the first phenomenon is the arrival of certain species of fish to urban canals in winter, attracted by the milder water temperatures, only to encounter a reduction in numbers and reproductive capacity due to certain pollutants (Zuñiga-Palacios *et al*. 2021: 6); an example of the second phenomenon is the oviposition by dragonfly populations on windows or solar panels that horizontally polarize light, a perceptual signal that such organisms use to locate bodies of water (Robertson, Blumstein 2019: 5). From a practical perspective, the species-specific notion of Umwelt suggests that we should pay attention to instances when traits irrelevant to human inhabitants take on

the role of important environmental signals for other living things, and to what operational functions are evoked.

The second sense of Umwelt, on the other hand, refers to how the individual organism modifies or constructs new semiotic relationships. Some populations of a given species may adapt to new urban contexts by developing new operational responses to certain signals, or by learning to attribute meanings to stimuli that, in the natural context in which their species evolved, are absent or of no practical interest. Such instances of intraspecific semiotic variation may be caused either by the presence of different emotional conditions (*Stimmung*) of an urban population compared to conspecifics in nature (e.g., urban fauna are known to be bolder than those in nature), or by learning phenomena (acquisition of new semiotic relationships). From a practical perspective, the constructionist notion of Umwelt urges us to take into account the environmental variables that influence the emotional states of organisms, as well as their different mechanisms of semiogenesis (Sharov, Tønnessen 2021).

References

Feiten T. E. 2020. Mind after Uexküll: A Foray into the World of Ecological Psychologists and Enactivists. *Frontiers in Psychology*, 11 (480), pp. 1-10.

Robertson B. A.; Blumstein D. T. 2019. How to Disarm an Evolutionary Trap. *Conservation Science and Practice* 1(11): 1-14.

Sharov A.; Tønnessen M. 2021. *Semiotic Agency. Science beyond Mechanism*. Springer, Cham.

Zuñiga-Palacios J.; Zunida I.; Castellanos I.; Lara C.; Sánchez-Rojas G. 2021. What Do We Know (and Need to Know) about the Role of Urban Habitats as Ecological Traps? Systematic Review and Meta-Analysis. *Science of the Total Environment* 780: 1- 11.

Bionote. Stefano Carlini is a Master's Student of Philosophy at IUSS Pavia and recently received a Master's Degree in Philosophy at the University of Pavia, with a thesis on the significance of embodiment in animal cognition. His research interests include topics from Philosophy of Mind, Cognitive Sciences, and Philosophy of Biology.

Thierry Mortier

OUR SEMIOTIC FUTURE PAST:
A diagrammatic investigation into the visual depiction of a sign to uncover hidden keys to future models

"[...] utterly overlooking the construction of a diagram, the mental experimentation, and the surprising novelty of many deductive discoveries" (CP 4.91), there is ground for disappointment about the manner in which *the irreducible triadic sign* of C.S. Peirce is visually represented in semiotic literature – especially when its potential to unlock deep-rooted cross-pollination from other fields of study appear to be hindered as a result.

The argument is gradually built up by examining the most dominant diagrams representing Peirce's *irreducible triadic sign* in terms of their visual and diagrammatic properties and how they succeed or fail in representing what they are meant to represent, namely *irreducible triadicity* as a formalistic characteristic. In the words of Floyd Merrell the form "evinces no genuine triadicity, but merely three-way dyadicity" (Merrell 1997: 133).

From a visual focal point, the dominant symbolic depictions are lacking in iconicity to genuinely mimic key characteristics of *the irreducible triadic sign*, such as three-dimensionality, conditional lack of hierarchy, plurimorphity, topological transformation, and above all the *concrete vagueness* to properly illustrate Peirce's *precision*.

As Merrell describes eloquently in *Entangling Forms* (2010): "...focal signs that have been endowed description, explanation and interpretation as signs of *generality*, are invariably *incomplete*, and they are largely *underdetermined*... they may eventually reveal their *incompleteness* and they may be replaced with signs deemed possibly more appropriate...".

Building on visualizations by Floyd Merrell, Paul Ryan, Ogden & Richards *et al*. and testing formalistic characteristics of *the irreducible triadic sign* as described by T.L. Short, K. Kull, D. Chandler, U. Eco, F. Nöth, P. Määttänen *et al*., an alternative to the dominant visual representations will be presented for evaluation: 1) to serve future models of semiotics and 2) to serve as a key to enter directly into other fields of research, including but not limited to mathematical knot theory, quantum mechanics, topological transformations, logic, AI and many more. Fields that have taken inspiration from C.S. Peirce and that can now offer novel approaches to semiotic conceptions.

References

Bakker and Hoffmann 2005. *Diagrammatic reasoning as the basis for developing concepts*. Springer.

Chandler, Daniel 2002. *Semiotics: The Basics*. Routledge.

Kilstrup, Mogen 2015. Naturalizing semiotics: The triadic sign of Charles Sanders Peirce as a systems property. *Progress in Biophysics and Molecular Biology,* 119 (3): 563-575.

Ľudmila Lacková, Claudio Rodríguez, Kull, Kalevi 2020. Gatherings in Biosemiotics. Tartu Semiotics Library 20. University of Tartu Press.

Määttänen, Pentti 2007. Semiotics of space: Peirce and Lefebvre. *Semiotica* 166: 453–461

Peirce, Charles Sanders. *Collected Papers*.

Ryan, Paul 2002. Gender and Threeing. *Semiotica* 138, 1.4: 371-392.

Ryan, Paul 1991. "A Sign of itself". In Myrdene Anderson and Floyd Merrell (eds.), *On Semiotic Modeling*. Berlin, Boston: De Gruyter Mouton, pp. 509-524.

Ryan, Paul 2009. *The three person solution*. Purdue University Press.

Short, T.L. 2007 *Peirce's theory of signs.* New York: Cambridge University Press.

Bionote. Thierry Mortier is a visual artist (BE/SE) and freelance commercial semiotician consulting on making semiotic insights actionable in business. He has published in *Semiotica* and has been a recurring speaker at Semiofest and TSSS. Mortier's main research focus is to approach semiotics diagrammatically, i.e. *can it be drawn?*

Tiit Remm

INTERVENTIONS INTO SEMIOTIC SPACES

Intervention is typical to all semiosis. More specifically, the interest here regards intervention as a future-oriented semiotic act, an act for influencing semiotic space. Established types of interventions in the sociocultural domain include artistic, medical and social (scientific) interventions. In this paper, I discuss the nature of intervention as a semiotic process and focus on the urban semiotic space. From building to naming, changes in the city are related to meanings and values and aim to influence interpretations and actions, and are thus interventions into the urban semiotic space. They can be realised, for example, by building and landscaping, representations, shifting of the experience, expression of rules, and designs of affordances. Urban developments and new trends in urban culture related to urban nature and community building bring together societal and artistic interventions. This paper, therefore, asks about differences in semiotic modelling involved in various interventions in the urban environment and semiotic space.

Bionote. Tiit Remm is a researcher of semiotics and director of curricula in semiotics in the University of Tartu. His research is focused on sociosemiotics and semiotics of space, particularly on urban semiotics and the use of spatial environment and spatial concepts for societal management as well as semiotic aspects of spatial modelling in humanities and social sciences in more general.

Ülle Pärl,
Triin Padonik

DEVELOPING A COMMUNICATION MODEL TO ANALYZE AND IMPROVE THE OPERATION OF MANAGEMENT INFORMATION SYSTEMS:
A case study approach

The effective use of management information systems (MIS) in organizations is essential for informed decision-making. As highlighted by Pärl (2014), Wibbeke and Lachmann (2020), Szukits (2022) MIS plays a crucial role in shaping and directing organizational activities towards desired outcomes. Through its influence on activities and operations, MIS can enhance the performance and competitiveness of an organization in the marketplace in the future. Thus, the strategic use of MIS represents an essential component of effective organizational management and decision-making.

Despite its significance, research on the social aspects of MIS is currently fragmented, and there is no widely accepted model for studying these issues (Wibbeke & Lachmann 2020: 276). To fill this gap, this study aims to develop a communication model for analysing the operation of MIS in organizations and identifying bottlenecks.

Effective dialogic communication is essential for business information to be relevant and functional (Catasus *et al*., 2007; Pärl 2014; Kalogiannidis 2020). Pärl (2012) highlights that without human creation and sharing of interpretations, MIS cannot exist, as indicators, reports, and graphs are just "ink on paper" without communicative use. However, despite its benefits, the selection, implementation, or use of a suitable system often fails.

To better understand the social processes of MIS, Pärl (2012) uses the dialogical communication model, which is based on R. Jakobson's model of communication theory (Jakobson 1985[1956]) and J. Lotman's theory of cultural semiotics (Lotman 2000[1992]). The model emphasizes that the sender and receiver of information perceive communication elements differently, highlighting the importance of understanding how these perceptions influence the use of information in MIS (Pärl 2019). The model is based on the idea that in any communication act, a hierarchy is presumed to exist in the structure of the message, and the dominant function influences the general character of the message (Pärl 2012). In summary, effective use of MIS involves understanding the dynamic nature of information, the interpretation processes

involved in its use, and the perceptions of individuals involved in the communication process.

The study focuses on addressing employee dissatisfaction with the flow and usage of information in a company and issues with a key performance indicator, the cost of chemicals per product unit (CCPP). The study consists of two parts, with the first part focusing on analyzing the use of MIS and its key features, emphasizing the importance of effective communication in MIS. The second part involves data collection through semi-structured interviews and questionnaires, aimed at gauging the attitudes of employees towards the comprehensibility and sufficiency of the MIS system. Based on the analysis, the study provides recommendations on how to develop effective MIS systems that facilitate better-informed decision-making. The study contributes to the growing body of literature on the social aspects of MIS and emphasizes the need to analyze the human and organizational conditions required for effective use of MIS.

References

Ballard, A. 2019. Promoting Performance Information Use Through Data Visualization: Evidence from an Experiment. *Public Performance & Management Review* 43, pp. 1-20.

Catasus, B., Ersson, S., Gröjer, J.-E., Wallentin, F.Y. 2007. What gets measured gets... on indicating, mobilizing and acting. *Accounting, Auditing and Accountability Journal* 20(4): 505-20.

Jakobson, R. 1985. Metalanguage as a linguistic problem. *Selected Writings VII. Contributions to Comparative Mythology. Studies in Linguistics and Philology,* 1972–1982. Hague: Mouton Publishers, pp. 113–121

Kalogiannidis, S. 2020. Impact of Effective Business Communication on Employee Performance. *European Journal of Business and Management Research* 5(6).

Lotman J. 1990. *Universe of the Mind. A Semiotic Theory of Culture.* Bloomington: Indiana University Press.

Pärl, Ü. 2012. *Understanding the role of communication in the management accounting and control process.* University of Tampere.

Pärl, Ü. 2014. The role of dialogue between executives and ground-level employees mediated by MACS. *Baltic Journal of Management* (9)2.

Pärl, Ü. 2019. Models for: The Relational Constructivist Approach to Management Accounting and Control (MAC). *Acta Baltica Historiae et Philosophiae Scientiarum* 7, pp. 121-134.

Szukits, A. 2022. The illusion of data-driven decision making – The mediating efect of digital orientation and controllers' added value in explaining organizational implications of advanced analytics. *Journal of Management Control* 33, pp. 403–446.

Wibbeke, L-M., Lachmann, M. 2020. Psychology in management accounting and control research: an overview of the recent literature. *Journal of Management Control* 31, pp. 275-328.

Bionotes. Ülle Pärl has earned her PhD degrees at the University of Tartu (in Economics) and the University of Tampere, Finland (in Business Administration and Accounting).

She is an associate professor of Accounting at the University of Tartu and the Estonian University of Life Sciences. Ülle Pärl has been interested in communication and interpretation aspects of information and accounting. More recently, her research projects have focused on integrated thinking and reporting. She is an author of more than 30 scientific publications.

Triin Padonik has earned her master's degree at the Estonian University of Life Sciences (in accounting and financial management). She works as a production and financial analyst at the international company AS Estonian Cell and is also the company's sustainability manager.