

FUTUURI



FUTURES RESEARCHERS EMPOWERING FUTURES

23rd Futures Conference focused on the wide variety of ways we see futures and how futures studies can empower people, societies, and organisations for creating more just and sustainable futures. We invited participants to think of changes and challenges in the current turbulent situation of world politics. 'Empowering Futures – Long-term Governance, Democracy and Futures Research' conference was organised during 14–15 June in Turku, Finland and 16 June 2023 online.

There is an urgent need for long-term futures thinking in order to sustain possibilities for alternative and creative solutions to complex crises and empower futures. How can the scientific community contribute to empowering futures? What and whose futures are being empowered, and by whom? What impacts climate change, security threats and wars could have on democracy? How can futures research help enable and empower just transitions, and how may just transitions impact our futures? What are the scientific contributions in identifying risks and opportunities and in building sustainable futures?

With these essential questions in mind, we wanted to create a cross-disciplinary platform where participants could meet, share and discuss issues concerning futures, democracy, trust and responsibility.

The three conference days consisted of keynote lectures, parallel sessions and participatory workshops. Together with 300 participants from 38 different countries, we succeeded to generate multidisciplinary and insightful discussions that promoted co-creating and networking between people from different backgrounds. At this point, we would like to thank warmly our excellent master's student **Alisa Belmas** for her invaluable work helping us to organise the event smoothly.

During the conference, the audience heard a group of high-level keynote speakers, who all focused on the issues at hand from different viewpoints. Our warm thanks and gratitude to all the distinguished speakers: Professor **Maija Setälä** (University of Turku, Finland), Dr. **Erik F. Øverland** (President of World Futures Studies Federation, Germany), CEO **Rosa Alegria** (Perspektiva, Brazil) and Director **Elizabeth Strickler** (Georgia State University, USA). This Futuuri special issue includes articles giving insight to the keynote speakers based on their speeches.

Special thanks to all the writers in this issue for their contribution and of course to our whole conference team: Scientific Committee and all the session chairs and moderators. Thank you for your hard work and good spirits!

We hope that those of you who joined the conference enjoyed your visit in Turku or your participation virtually.

The next theme for the Futures Conference will be 'Futures of Natural Resources'. We will then talk about issues like land use, soil, water and food. You can find more information about the event in this Futuuri issue on page 11. ●

*We hope to see you all in June 2024
in Turku, Finland!*



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Visions make it possible to create a future that is different from the present although its seeds are in the present.

– Eleonora Barbieri Masini, 2006

Democratic Myopia and Future Regarding Governance

Professor of Political Science **Maija Setälä** from the University of Turku focused on her keynote to alleviate the short-sightedness of democracy. She proposed a solution of Futures Regarding Governance (FRG). It is a system that considers future generations' interests and promotes long-term thinking. However, FRG also raises several challenges, such as the tension between expert knowledge and democratic participation. Professor Setälä argues that these challenges can be mitigated by enhancing informed and inclusive deliberation in FRG.

The electoral representative system tends to be presentist, produces short-term policies and fails to pay attention to the future adequately. At the same time, when the system attempts to incorporate long-term thinking, it instead generates policy investments to benefit either present or future generations over the expenses of another, such as infrastructure development projects, pension systems, and climate change mitigation. Such facts suggest that democracy is suffering from myopia, which results in intergenerational conflicts and issues of intergenerational justice.

The struggles to have long-term views come from psychological and institutional factors

Psychologically, the complexity of conflicts, uncertainty of the future, and lack of saliency of future consequences of policies create poor information and judgement to focus on issues closer to present in representative systems. Institutionally, as the policies taken by previous governments may be reversed when the governments change over time, the fragility of political commitment occurs and leads to long-term governance problems. This gives birth to the policy investment where either the present or future generations become cost-bearers in policymaking.

To alleviate the myopia, we steer and check democratic processes to be more focused on future issues by establishing Officials for Future Generations (OFGs) and a coalition of expert panels to advise governmental parliaments regarding intergenerational concerns. Additionally, we limit the powers of democratic majorities to assure a place for the unspoken voices of future citizens with legal and constitutional mechanisms. Similarly, we insulate long-term policies by providing author-

ity to technocratic-independent agencies that last longer than representative governments to design and decide on long-term issues. However, these solutions do not entirely answer the challenges of normative and institutional legitimacy in democratic systems when contemplating long-term policy decisions.

Future Regarding Governance (FRG) can be a solution of myopia's root causes but also a tension of democratic systems

The concerns of legitimacy and myopia lead to the idea of adopting Future-Regarding Governance in democratic governments. FRG fundamentally promote conscious foresight (informed assessments of policy impacts on future generations), the balance of current and future generations' interests, and commitment to future-regarding collective action. But FRG does not always radiate in all representative democratic formulas. **Didier Caluwaerts** and **Daan Vermassen** (Vrije Universiteit Brussel) have pointed out that FRG only performs excellently in multi-party governments where the environment is more inclusive and open for more negotiation, leading to deliberative decision-making and less radical policy changes (that usually occur after a substantial power alteration of a single-party-led parliament). This means FRG is crucial but may cause several tensions in democratic systems.

Unlike participatory democracy, which requires political contestation and deliberation in decision-making, FRG relies on knowledge-based expertise. This can bring tension to the democratic process when trust in experts leads to foreclosing possibilities of contestation. Second, FRG advocates the reconsideration of following the majority

voices of the present when they potentially violate the vital interests of future generations. This means FRG could prioritise future interests and undermine present needs. Unless intergenerational justice is incorporated, FRG is likely to create tensions in the popular self-government system. Finally, FRG seeks to ensure long-term commitment despite the change of government. Such an idea can produce tension in reversibility rights that democratic governments can execute to change the course of action in case the previous policy decision may lead to catastrophic results. Yet, these tensions can be mitigated by enhancing informed and inclusive deliberation in FRG.

The informed and inclusive FRG should be implemented without compromising representative democracy to ease the tensions

To establish an informed FRG, the government should pay more attention to the possible impacts of future policies, weigh future generations' interests, and transform people's silent voices to be more audible. In other words, the inclusiveness of future-regarding deliberation in representative systems must be strengthened as it accounts for the pluralistic ideas, correct representation of future interests, and legitimacy of FRG from the acceptability across various groups of citizens in the society. In this regard, several practices are suggested for more inclusive FRG reforms, including Futures-representatives in parliament, a forum of committees for the Future, and deliberative mini-publics. While the exact shape of Future Regarding Democracy is open, there is likely to be resistance against change. It is crucial to continue to develop a robust democratic institution for the possibility of self-government in the future. ●



MAIJA SETÄLÄ

PhD, Professor of Political Science, University of Turku, Finland

Maija Setälä specialises in democratic theory, especially theories of deliberative democracy, direct democracy and democratic innovations.

She led a multi-disciplinary research consortium "Participation in Long-Term Decision-Making (PALO)" (2017-2022), funded by the Strategic Research Council of the Academy of Finland. Currently, she leads the project "Facing Systemic Change Together" (FACTOR) funded by the Academy of Finland (2021-2024).

Her latest book "Democracy and the Future" co-edited with Michael K. MacKenzie and Simo Kyllönen (Edinburgh University Press, 2023) was published in April 2023.

Future Possibilities for Relations between Humankind and Nature Need to be Articulated in New and More Affirmative Ways

WFSF President Dr. **Erik F. Øverland**'s keynote challenged futures researchers to reconsider the concepts that will be needed to think and talk about relations between humankind and nature in the future. Dr. Øverland questioned the continuing usefulness of the categories natural and artificial, argued that the currently prevailing discourses of sustainability and the Anthropocene may have run their course, and called for alternatives to affixing a post-prefix to what we hope to leave behind, encouraging us to instead stake a more daring claim for what we aspire to.

Beyond natural and artificial

Dr. Øverland began with the contention that contemporary environmental and technological changes have made the idea of maintaining a strict division between the parts of the world that are natural and those that are human-made untenable. Across scales from the planetary to the molecular, these categories have become blurrier than ever. There are no longer any natural environments that remain entirely untouched by human activities, and the effects of this anthropogenic influence are increasingly profound. At the same time, technologies have also gone to work on human bodies and minds in fundamental ways, augmenting and altering our capabilities and identities.

What should we make of this? Dr. Øverland argues that although a great deal of responsibility for the Earth's current environmental crises has been attributed to the nature/culture duality in Western thought, the proper remedy is not simply to write this distinction out of existence. Humans would do well to remember that nature is something that we can manipulate but did not invent; having the keys to the Earth system, or even finding ourselves in the driver's seat, does not mean we deserve credit for drawing the blueprints or doing the construction work. Thus, the idea that nature is something other-than-human still has value if humans are inhabiting the world with a view to something more than taking it for a stolen high-speed joyride ending in a fiery crash. Recognizing differences between humankind and nature is needed on one hand to acknowledge unique forms of human inventiveness and those aspects of humanity that are common across societies and cultures. On the other hand, it is also required

to cultivate respect for that which people have not created, but can choose to relate to in more or less responsible ways, as well as all those facets of nature which remain mysterious and unfathomable.

Beyond sustainability and the Anthropocene

This begs the question: What are responsible ways for humans to relate to nature? A global shift in futures thinking over the past 50 years has brought environmental questions to the forefront of research and policy discussions and made concepts like sustainability and the Anthropocene commonplace. These terms have undoubtedly played a significant role in coordinating international action around global challenges. Despite this important success, however, Dr. Øverland questions whether these are terms we will still want to use 50 years from now. While these concepts have been effective diagnostic tools for better understanding what ails our world, their curative value is questionable.

Beyond the many varieties of "post-ism"

What new words could help us cultivate a better future for humans and nonhumans alike? So far, answers to this question have often been expressed as post- something, suggesting that the something in question has been rightly disavowed or rejected. As Øverland duly recognizes, the post-prefix has played an important role in indicating the ambition to depart from familiar patterns in favor of hopeful trajectories toward unknown futures. To state the intention to be post-colonial, post-industrial, post-extractive, etc. is a starting point, but such thinking cannot carry us all the way to a new and more desirable destination. At some point it becomes necessary to speak in affirmative terms about what we want today and for tomorrow. For Dr. Øverland, that time has arrived: we should challenge ourselves to be brave and bold in exclaiming what our place in our more-than-human world should become. ●

ERIK F. ØVERLAND

PhD, President and Chairman of the Board,
World Futures Studies Federation (WFSF), Germany

Erik F. Øverland is the President of the WFSF during 2017-2025. He is also Counsellor, special Envoy for Education and Research, at the Norwegian Embassy in Berlin.

Dr. Øverland has published several books and scientific articles about futures studies, and is one of the most experienced foresight practitioners in Norway. Dr. Øverland was the Project Manager of Norway2030 by the Norwegian Government (1998-2001) and has conducted futures studies for agencies and business enterprises both in Norway and abroad.



Special Session:

Futures for New Normative Policies: Backcasting, Pluralism and Deliberative Democracy

Deliberative democracy in representative systems is being contested for its long-term focuses and the benefits of future generations. This indicates the need to develop normative policies facilitated by transformative foresight processes.

Deliberative democracy can be enhanced by transformative foresight process and backcasting scenarios

Aleksi Neuvonen, the founder of Demos Helsinki, proposed the backcasting scenarios and role-taking to enhance the long-term view. The scenarios should strictly assume the political goals to shape the future, consider uncertainties, and determine alternative developments in complex problems that affect many sectors of society, need major changes, cannot be solved by markets alone, and have

a long-time horizon. The developed backcasting scenarios must at least be target-oriented to answer what can change, pathway-oriented to seek how change can take place, or action-oriented to identify who could make change happen. To obtain such a scenario set, he pointed out that it is crucial to incorporate an art-based approach in facilitating deliberation methods to increase social imagination. Such a way will reduce barriers to participation, foster the apprehension of data linked to the transition, and ensure sufficient consideration of intergenerational justice in society-wide aspects.

A good scenario set must construct plausible but still surprising scenarios

Petri Tapio, a professor of Finland Futures Research Centre, revealed in the study of the

(dis)agreements in the Finnish deliberative energy and climate policy context that (dis)agreements can occur in the form in which participants only agree on a single probable future to disagreeing on everything in desirability, probability or plausibility of scenarios and the scenario process. Therefore, a deliberative scenario process should allow participants equal access to present arguments, state what they really think while respecting the opinions of others, reflect upon all presented ideas, and take the discussion seriously without giving up before reaching a deliberative conclusion. Whereas a good scenario set must construct plausible but still surprising scenarios, respect the pluralism of views and not neglect radical scenarios, enable reviewers or the public to follow the process of making the scenarios and have usability in decision-making processes. ●

TEXT Riku Viitamäki

Workshop:

Performing Postnormal Times – Experiences from the Postnormal Times Simulation Workshops

This experimental workshop invited participants to live postnormal times and try to cope with them. Negotiations were held, disruptions were faced and new solutions were introduced.

Postnormal times – what are they?

Postnormal times are not about the future. They are about the present. They are characterized by the notion that old rules won't work, yet the new rules are yet to be formed. In this era, complexity, chaos and contradictions reign supreme, and ignorance and uncertainty are vital elements of decision-making and society as a whole. This was the context of the workshop. However, this was not spelled out beforehand to participants. Rather, they got to experience these phenomena themselves via simulation.

Living postnormal times

The starting point of the simulation was that there was a city, which needed to reduce its water usage by 10% per decade. However, participants didn't get to discuss this subject as outsiders. Instead, they were encouraged to assume a role of one of the stakeholders in the city. To mention a few, there were an industrialist, a farmer, a tribal leader and even wolves! When the participants had chosen their roles,

the negotiations to reduce water usage started. This led to various innovations and on the other hand, conflicts. Who owns the water, how can water be supplied to those industries and citizens that need it and so forward?

However, just as participants started to get a grasp of the water issue, the cities started to face new threats. According to postnormal times' thinking, disruptions began to emerge. There was, for example, a sudden rainfall that caused huge mudslide. These kinds of disruptions challenged participants' conventional thinking. Such disruptions also challenged the original plans of water usage reductions. New conflicts emerged between stakeholders, which demanded creative solutions so that the whole city hadn't collapsed under the pressure of these unforeseen events.

What did we learn about postnormal times?

Postnormal times challenge and shatter our conventional ways to think. This became apparent during the workshop and especially during the disruptions that every city faced. Finally, as a debriefing there was a postnormal scavenger hunt where participants were introduced to the main concepts of postnormal thinking. This led to rich conversation and contextualized the whole simulation. ●



The workshop was organised by members of the Centre for Postnormal Policy and Futures Studies Christopher Jones and Maya van Leemput, together with Wendy Schultz and Liam Mayo participating online.

An Ode to Intergenerational Dialogue – Transetarian Revolution Transforms the Meaning of Age and Generations

In her thought-provoking keynote speech, the renowned Brazilian futurist and pioneer of South American strategic foresight **Rosa Alegria** said that we have entered a time of transetarian revolution. When customary, discriminatory generational categories are dissolved and human experience becomes ageless, intergenerational dialogue can and should be reinforced both in the society at large, and in foresight in particular.

The concept of transetarian revolution

According to Rosa Alegria, we live in transitional times when many previously clear and self-evident classifications are becoming blurred. In particular, Alegria talks about “transetarian revolution” where the meaning of age and generations are changing and becoming more fluid.

This is due to three simultaneous changes in society. First, hyperlongevity causes more generations to co-exist in our societies. Second, digitalization is becoming more mature and all generations are able to utilize it in communicating and connecting with each other. Third, postmodern subjectivity emphasizes individual's experience of their own age over objective age based on birth-year.

All this leads to new ways of thinking about age and generations, which has implications both on individual and societal level.

Individual level: how do we experience our age?

On the individual level, the transetarian revolution transforms the concept of age from a number fixed by chronological facts into a fluid experience. Thus, an individual's experiences and attitudes become more essential than their chronological age.

Alegria talks about “age sensing” where an individual's experience of their age depends on the circumstances: the company, location and activity you are engaged in all have an impact. For example, when a grandparent is with their grandchildren, they may feel like a little

child too. Many of us can relate to experiences such as these where we feel older or younger than our chronological age. Alegria cites a poem by **Cora Coralina**, which expresses this idea beautifully: “I have all ages within me”.

Societal level: generations as social constructs

On the societal level, the transetarian revolution blurs the boundaries between generations. According to Alegria, the current, clear-cut classification of people into generations – such as boomers and millennials – is a product of the industrial age. In those days, it was (or at least seemed to be) necessary to distinguish between different consumer segments and to discern between different worker groups according to their skills, experience and productivity.

Unfortunately, this has also increased generational conflicts and segregation. Ageism is an extreme example of this, but the segregation can also take subtler forms. For example, time-allocation studies show that people spend an unparalleled amount of time in groups consisting only of their own generation. The ongoing sustainability crisis seems to amplify generational conflicts even further (e.g. discussions on burden sharing between generations in relation to climate change and pensions).

The transetarian revolution offers an alleviation to the aforementioned tensions. It questions the usefulness of grouping people by age. It has become such a standard procedure that we seldom stop to think whether it is actually

necessary or even desirable. Instead, the transetarian revolution emphasizes mutual respect and encourages knowledge sharing and cooperation between generations. When we spend more time together with other generations, we might notice that we have more in common than we think.

In this respect, Alegria has made a very interesting observation in her studies on intergenerational foresight. It seems that attitudes towards futures and the metaphors people use to speak about futures are quite similar across generations – the same variants are quite equally represented in all age groups.

Towards intergenerational futures

The transetarian revolution has implications also for foresight. All generations need to be considered in foresight work, including those who are not born. Alegria claims that intergenerational dialogue brings clear benefits for envisioning and building sustainable futures. Each generation has their own wisdom and can contribute to richer, more robust and more inclusive visions of futures. What is more, an intergenerational dialogue seems to enhance the mental well-being of participants as the feelings of belonging and solidarity are fortified.

Thus, Alegria stresses the importance of having a dialogue between generations within a foresight process. In foresight and the society in general, careful planning and intentional action is needed to realize the potential of the transetarian revolution to move towards togetherness between generations. ●



ROSA ALEGRIA

Futurist, Director of the Millennium Project and Teach the Future in Brazil, CEO Perspektiva Consulting in Strategic Foresight, Brazil

Rosa Alegria is a pioneer in strategic foresight in Brazil, an international consultant and a lecturer.

She is CEO of Perspektiva, trends, scenarios and strategies consulting; co-founder of futures research group at São Paulo Catholic University; co-founder of the startup Pangerapromoting intergenerational dialogue; director of the Millennium Project in Brazil and director of the Teach the Future movement in Brazil.

Special Session:

TEXT Siyada Wittoon

Government Foresight: Creating Future Oriented Structures of Decision Making

The Finnish governmental foresight began in 1993 with the establishment of the Committee for the Future, consisting of 17 Finnish parliament members representing different political parties. At the time, the country faced a severe economic crisis and needed to instigate people that 'there is hope if you just look long enough'.

All 12 ministries participate in scenario work

Essentially, there are two governmental foresight processes facilitated by the office of the Prime Minister. One is for the government report on the Future that all 12 ministries participate in scenario work to create a shared understanding, strategic dialogues, and common frameworks. Another is the future reviews in which each Ministry analyses future scenarios to address the risks, opportunities, actions needed, and contingency plans in their local contexts. Yet, their foresight knowledge also

comes from the bottom-up directions via the participation of business, citizens, civil society, and cities in futures dialogue. To create future preparedness, the government identifies the must-win battles they must do, irrespective of the scenarios and key uncertainties that will become influencing factors in their reports.

Resource constraint drives for better collaboration and adopting foresight as an integral part of Finland.

Finland is a small country that lacks funds, people, and other resources. However, this creates the ability to collaborate cross-ministerially, a widely shared need for foresight, an intrapreneurial mindset to optimise the existing institutions, and the values of openness, trust, co-creation, collaboration, and participation at the institutional level. As a result, Finland has become a very successful country in making foresight an integral part of decision-making. With the rise of complexity in

the operating environment, the country aims to adopt a more comprehensive approach by establishing continuous foresight to monitor changes, improving the futures literacy of the decision-makers, strengthening and widening collaborations with different organisations, and creating new dialogue about alternative pathways and preferred futures. If achieved, Finland will be able to close the gap of foresight capabilities among ministries, develop a cathedral thinking to mitigate the risks of the tyranny of today and have a robust foresight-oriented government in the Future. ●

Workshop was organised by Jaana Tapanainen-Thiess, Ossi Piironen and Venla Kuuluvainen, Prime Minister's Office, Finland.



Workshop: Post-pandemic Futures of Work

TEXT Laura Pouru-Mikkola

Working life is in a constant state of transformation. Changes are happening on various frontiers – some slowly, some more rapidly. The Covid-19 pandemic accelerated many of these on-going changes.

In particular, the sudden shift to teleworking made many workers and employers realise the potential of location-independent work. This has had and will continue to have fundamental implications on employee values, organizational work cultures, physical workplaces and recruitment opportunities. At the same time, the attraction of “global mobile talent” is high on the agenda in the local, national and regional policies across European countries. For example, in the Finnish national policy there is an on-going debate on how to attract the “global mobile talent” and how to simultaneously reduce the so-called work-related “displacement problem”, that is, the simultaneous oversupply of jobs and undersupply of workers.

How do these development paths converge? What kind of opportunities will the post-pandemic working life provide to Finnish organizations competing in the global race for talent and on the other hand, to globally mobile individuals in search for meaningful work?

In order to answer these questions, research project 'Cosmopolitan life, identity and future of work', funded by Academy of Finland and Finnish Work Environment Fund, is envisioning alternative futures of work.

From technology-driven to human-driven futures of work?

With these perspectives in mind, we organized a participatory workshop for the conference participants to share ideas on the topic. At first, as a provocation, we introduced discourse analysis, conducted in the Cosmo project, that reveals a very technology-driven and passive approach to futures of work in the Finnish media. The workshop aimed at challenging this approach and creating alternative images of future for post-pandemic working life.

After a brief group brainstorming exercise, we had productive discussion on themes related to changing spatiality of work: How to create sense of community in a workplace where people are teleworking in different countries? What will be the role of artificial intelligence and metaverse in creating future working environments? What does presence mean in the future: omni-potency from omni-spatiality, like one group suggested.

The discussion continues. The conference workshop was a great kick-off for Cosmo workshop series that will delve deeper into the futures of work during autumn 2023. ●

Workshop was organised by Laura Pouru-Mikkola, Toni Ahlqvist and Niina Nummela, Turku School of Economics. More about Cosmo project: cosmoresearchproject.wordpress.com.

Workshop: The Art of Listening

In her workshop “Time to think – Experiment Generative Futures Thinking” on Thursday 15 June, **Servane Mouazan** introduced the principles of the Thinking Environment approach with several practical applications. London-based Mouazan works as a consultant and coach who specializes in facilitating learning in the context of societal and environmental change. The Thinking Environment has originally been developed by the author and consultant **Nancy Kline**, and is based on two premises “The quality of everything we do depends on the quality of the thinking we do first” and “the quality of thinking is related to how we treat each other”.

Practicing the Thinking Environment

The Thinking Environment can be applied to any endeavor where human interaction and collective thinking is essential to its success. In an organizational context, the approach could

be used in meetings, workshop facilitation, coaching, ideation and problem solving. It is based on the ten components: 1) Attention 2) Equality 3) Ease 4) Appreciation 5) Encouragement 6) Feelings 7) Information 8) Diversity 9) Incisive questions 10) Place.

During the workshop, we practiced the skills of radical listening and giving an undivided attention to others. Our facilitator opened the session with a simple question “What would you most need to feel heard and listened to?” and from there we moved to more complex questions such as “What are you assuming that might be stopping you from radically listening when you are futuring?” The aim was to share personal experience in in a given timeframe, and then actively listen to others without interrupting or sharing comments or thoughts before the person was finished.

As a last exercise, we collaborated to tackle a question that was raised by one of the partici-

pants. We were asked to consider how we have encountered or responded to structural injustices in a workshop setting. Instead of giving advice, each participant was asked to share our lived experience with others. This technique was helpful in creating a safe atmosphere for discussing a sensitive issue.

Reflecting the Thinking Environment

Listening is an essential part of any communicative and collaborative process, but it is seldom practiced as a skill. Thinking Environment can be used to uncover hidden assumptions, minimize the role of power structures and to improve the quality of ideas that are collaboratively produced. Striving for these is an essential skill for any facilitator and are highly relevant to any futures-related work. ●

www.timetothink.com/wp-content/uploads/2019/10/pm-article.pdf
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Poster Session

This year's conference poster session was a little unconventional. Instead of the usual printed posters adorning the walls of the conference site, a virtual exhibition was available in our conference platform.

A curated poster session was held in-person, where five posters were presented, and the audience could comment in each of them, in a rich discussion and intellectual exchange took place at the conference's main auditorium.

Björn Persson and **Johan Granberg**, from the Research Institutes of Sweden (RISE), presented a study that looked at how changes in the environment can influence people's behavior. They used different scenarios to explore these connections, combining behaviour change models and scenario analyses.

Hyun Yim, from the Korea Institute of S&T Evaluation and Planning (KISTEP), researched possible changes in energy consumption in South Korea by 2030. His study also

discussed how advancements in digital technology could help South Korea achieve its carbon neutrality goal and proposed long-term strategies for the country's energy policies.

Lukas Bayer and **Katharina Helming**, from the Leibniz Centre for Agricultural Landscape Research (ZALF), shared their study on managing soil in different regions of Germany in 2050. They used qualitative narratives and Causal Loop Diagrams to show how different factors could impact soil management.

Philipp Koebe, from the Konrad-Adenauer-Stiftung, Germany, focused on the challenges posed by an aging population to social policies and democratic governance. Koebe's work concentrated on Germany and aimed to inform policymakers and society about potential issues arising from different generations coexisting, enabling open-ended conversations about possible upcoming problems.

Finally, **Anna Zimmer** from the University

of Turku, presented the findings from her Master's Thesis in Futures Studies at Finland Futures Research Centre. Zimmer conducted a Delphi survey to understand how life expectancy in Germany will be affected by a multiplicity of factors, such as aging of the population, climate change, advancement of medicine, and lifestyle changes over the decades. Policy implications for long-term governance and preventive measures related to mortality, public health, lifestyle changes, and climate change impacts were considered, and scenarios for 2060 were presented with impressive AI generated illustrations. Designing scenario images using AI is an innovative and creative way to present results in our field, and Zimmer has done it with excellence. Zimmer's work is a perfect example of how new-generation futurists incorporate new technologies in their work, and that we have much to learn from our students. ●

TEXT Marianna B. Ferreira-Aulu



Special Millennium Project Session:

Flourishing Urban Futures to Overcome Polycrisis – Roadmap for Resilience 2050

Preparing for polycrises

The Special Millennium Project Session, organized as an adapted Futures Clinique and moderated by the RESCUE Project and Helsinki Node of the Millennium Project, sought to address a fundamental question: how can cities effectively prepare for the challenges posed by digitalization and rapidly advancing AI, including crises and polycrises? The format of the Futures Clinique proved to be the perfect approach for this task, providing a participatory and explorative workshop to navigate uncertainties, recognize disruptions, and foster innovative ideas.

Eco-smart-resilient cities

Kicking off the session was **Jerome Glenn**, the CEO of The Millennium Project, who delivered an insightful keynote address. He touched upon various subjects, such as anticipatory governance, the different forms of AI, and even drew parallels with the human body's autonomous nervous system, all in relation to eco-smart-resilient cities. Much of the focus was on AI, specifically on how to responsibly develop Artificial Superintelligence by setting the right conditions.

A call to think and act

Professor Emerita **Sirkka Heinonen** followed up with a Futures provocation centered around flourishing futures policy. She encouraged participants to envision solutions for potential polycrises that cities might face in the future, mapping these solutions on a timeline. To spark imaginative thinking and expand

creative capacity, a Futures Window was presented with vignettes, allowing participants to engage in radical and free thinking.

Collaborative input for solutions

The primary goal of the Futures Clinique was to address multiple crises, a polycrisis, by designing and constructing urban environments that are resilient, sustainable, just, and livable. Participants had a hands-on experience, designing their own polycrisis scenarios and proposing elements that could help them cope with such crises, like nature and decentralization, among others. Lively debates ensued around the tables, and it's safe to say that the discussions would have continued far beyond the session's limited timeframe. Participants left the Futures Clinique still engaged in conversations and further deliberations on the topics raised during the event. ●

Reports related to the Session:

Heinonen, Sirkka – Maree, Burgert – Karjalainen, Joni – Sivonen, Risto – Taylor, Amos – Viitamäki, Riku & Pättikangas, Paula (2023) Flourishing Urban Futures to Overcome Polycrises – Roadmap for Resilience 2050. FFRC eBooks 4/2023.
<http://urn.fi/URN:ISBN:978-952-249-592-1>

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How Can We Make the Virtual Worlds Right?

As the closing keynote speaker for the Futures Conference 2023, **Elizabeth Strickler**, Director of Media Entrepreneurship and Innovation at the Creative Media Industries Institute at Georgia State University, envisioned that eventually we all will have a key role, when everything will be recreated in virtual worlds.

Georgia, U.S., has become centric for the motion picture industry, overtaking California and Hollywood. The industry is increasingly virtual, and the wealth of expertise in the field has made Georgia an interesting region for observing, learning, teaching, and ideating virtual worlds.

Elizabeth Strickler noted in her keynote address “The virtual is real – but how can we make it right?” that younger generations already find their virtual presence more important than the physical one. The change towards the virtual is rapid beyond visual entertainment. However, we will have a chance to say, how the future virtual worlds will be like.

The physical, the virtual, and the Metaverse

Elizabeth Strickler asked us to think about everything around us, and imagine, how it could be recreated in a three-dimensional virtual world. To illustrate parallels of virtual and physical worlds, she described novel technologies and how markets are opening for virtual offerings. For example, sneakers have been of importance to the youth for long, but it has become similarly attractive to invest in digital sneakers for avatars, and later in phygital versions, combos of digital and physical items. Digital worlds occupy attention and create sense of community. Digital cultures are adding meaning to our lives.

The standard term for cross-platform, shared, and virtual space is the Metaverse. Created by the emergence of collective consciousness, which transcends boundaries of minds and bodies of individuals in virtuality, the Metaverse allows engaging in real time activities in multidimensional space. It will be like the Internet, but with extended reality: A less flat Internet. The industrial metaverse, with solutions of digital twinning, and the social metaverse, including video gaming, are already well established. On the contrary, the enterprise metaverse solutions for virtual working environments have not developed far.

Self and Community in the Metaverse

Digital technologies are developing and converging fast. Instead of the technical evolution, however, we may rather be ravished by a human evolution. The Metaverse has potential to revolutionize the way we live, learn, and connect with one another.

Strickler explains, how her students learn virtual reality, problem solving, decision-making, and responsibility as technological creators. In the design of virtual experiences, it is necessary to consider widely the ‘self’, the safe space, and the community. Instead of mere technology theory and practical skills, this requires critical thinking on the implications of used technologies.

The future worlds – utopian, dystopian, or protopian – are eventually products of creative collaboration with shared values and insights. The students learn human centered design and development strategy by prototyping within a co-creating learning environment. Strickler finds that the virtual worlds empower, and the challenges met there prepare for the problems of the real world as well.

Making sense of digital worlds

The Internet (Web 1.0) opened globally a vast number of sources to read from, and the current web-based platforms connect us interactively (Web 2.0). The future solutions (Web 3.0) include a promise of decentralized data and ownership. The Metaverse can then be the new town square, where all are invited, but which is not owned by technology companies: A world for telling stories but owning and monetizing own content. Referring to **Jerome Glenn** at the Millennium Project Special Session on polycrises at the Futures

Conference 2023, where he discussed risks of digital technologies and artificial intelligence (AI), Strickler explains that though there are problems that need solving, AI is advancing the development of better digital worlds.

Strickler invites us to think of how the virtual worlds could help us make the real world better. It is finally up to us all to engage and decide the impact of the virtual worlds. It is important to keep reading and looking around, think laterally and divergently without confines, and take part in discussions everywhere. It will be necessary to re-examine our lives, test biases, revalidate ethics, and revisit core principles. When we in the nearby futures will establish ourselves in the virtual worlds, it is good to remember to consider the “self”, who we are and the human in us, and the democratic societies we belong to. The youth are already involved and experienced in virtual worlds, and able to help us make sense of the future digital realities. ●

ELIZABETH STRICKLER

Director of Entrepreneurship Programs in the Creative Media Industries Institute, Georgia State University, USA

Elizabeth Strickler teaches media innovation to undergraduate and graduate students and works with major labels and cultural icons to build web3, blockchain, and virtual production strategies.

Elizabeth Strickler holds academic positions in both the Business School and the College of Arts and Sciences, where she has received multiple grants to research innovation and XR in higher education.



Pentti Malaska Futures Award to TM System Finland Ltd

The Pentti Malaska Futures Award is given to a research-based and groundbreaking visionary innovation that can help with building a more sustainable global future. The University of Turku has granted the €30,000 Pentti Malaska Futures Award to TM System Finland Oy for their industrial scale re-circulation Zero-Ex® emission capture technology.

The award winning solution is the first industrial scale closed-loop re-circulation system to capture airborne emissions, gases, CO₂, odor, and visible vapor from industrial process exhaust air. Zero-Ex® creates controlled circumstances in a closed process of air cleaning by separating emissions such as CO₂, VOC's, odor and other particles from the exhaust air before releasing the exhaust air back to the process. It also collects harmful gases from exhaust air to be stored and utilized in a useful and sustainable way. Zero-Ex® is unique and patented technology.

In addition to solving industrial air pollution challenge by absorbing discharged airborne emissions down to zero, Zero-Ex® simultaneously provides remarkable energy capturing possibilities, water savings and environmental benefits. Zero-Ex® also recovers the heat in demanding conditions where traditional heat exchangers cannot be technically used. This is an important quality factor in the current industrial environment where the importance of emission control targets is equal to industrial energy-efficiency and water-efficiency targets. The Zero-Ex® solution is applicable to all industries with exhaust air.

Game changing solution in solving climate challenges

"The winning innovation will provide solutions to the global challenge of climate change. The award criteria state that the project promotes sustainable development goals and is based on multidisciplinary research cooperation. The solution also has great commercial

potential and will play a very significant role in solving climate challenges in the future. The winner continues Professor Pentti Malaska's interdisciplinary future philosophy by combining visionary thinking, innovative technology, and boundary-crossing collaboration for building a sustainable planetary future with radical solutions," says chair of the jury deciding the winner, Director **Juha Kaskinen** from the Finland Futures Research Centre of the University of Turku.

The Pentti Malaska Futures Award was distributed at the international "Empowering Futures – Long-term Governance, Democracy and Futures Research" conference on 14 June 2023 organised by the Finland Futures Research Centre at the University of Turku.

The members of the award jury were **Linda Fröberg-Niemi** (Director, CleanTurku, Turku Business Region), **Antti Salminen** (Professor, Mechanical Engineering, University of Turku), **Vesa Silfver** (M.Sc.Eng., EMBA) and **Satu Teerikangas** (Professor, Management & Organisation, Turku School of Economics, University of Turku).

The next Pentti Malaska Futures Award will be distributed in 2025

The Award honours Professor Pentti Malaska's (1934–2012) lifework in futures research. Pentti Malaska was a professor of business mathematics and statistics at Turku School of Economics. He established the Finland Futures Research Centre in 1992.

Malaska was a radical, visionary thinker whose research interests crossed a wide range

of academic disciplines from mathematics and electrical engineering to philosophy, ecology and strategic management. His work boldly crossed sectoral boundaries between the academic world, business world and societal influencing.

The University of Turku opens the call for applications to the Pentti Malaska Futures Award again in 2025. The competition is open for Nordic (Finnish, Swedish, Norwegian, Danish, Icelandic) futures researchers and research teams with a future-oriented research approach within any academic field. The presented solution must be at the stage where it has already been developed, prototyped, tested and patented, or where the innovation potential of the solution has otherwise been proven. ●

Read more about TM System Finland Ltd:
<https://tmsystems.com>



CEO Markus Hallapuro from TM System Finland Ltd received the award at the Futures Conference dinner.



PENTTI MALASKA
FUTURES AWARD

Next application period will be open during
February – April 2025

Prize 30.000 €

The winners of the previous Futures Awards:

Woodio Ltd (2021) that develops ecological waterproof solid wood composite.

Solar Foods Ltd (2019) that develops a new kind of nutritious protein by utilising air and electricity.

EnviRate (2017) for developing a mobile application for assessing the state of the environment.

Further information at:

www.utu.fi/futures-award



Research Coordinator and secretary for the award panel **Riikka Saarimaa** (Finland Futures Research Centre), CEO **Markus Hallapuro** (TM System Finland Ltd) and Director **Juha Kaskinen**.

FUTURES OF NATURAL RESOURCES – Regeneration of Land & Water

4 June 2024 | Online ■ 13–14 June 2024 | Turku, Finland

The forthcoming Futures Conference focuses on the futures of natural resources. This main topic covers themes from soil quality, fresh water and food production related to land use activities, climate change, biodiversity loss, energy production, economic development and animal and human rights. The conference will tackle questions like what will evolve when the scarcity of natural resources is getting worse? How to produce food in a changing climate? What kind of solutions futures research can offer to problems created by the shortage of natural resources?

The Futures Conference 2024 will be organised in hybrid mode. Conference day Tuesday 4 of June will be held exclusively in virtual mode. Thursday 13 and Friday 14 of June will be held on-site in Turku and partly online. We encourage in-person attendance, but also welcome virtual participation for both authors and attendees.

The conference program will consist of keynote lectures, parallel sessions and participatory workshops. We will aim to generate multidisciplinary, stimulating and critical discussions that promote networking between people interested in futures issues from different backgrounds and perspectives.

We invite interested contributors from universities, research institutes, companies, governmental and non-governmental organisations to submit their abstracts for the conference no later than January 2024. Call for papers and submission form will be open in early November 2023. ●

Important dates to remember

Call for papers available:
November 2023

Abstract submission starts:
November 2023

Deadline for the abstracts:
31 January 2024

Notification of acceptance:
28 February 2024

Read more about the previous
Futures Conferences at
futuresconference.fi



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Humanity faces existential risks: Climate Change & AI

Professor Emerita Sirkka Heinonen wrote an update on her chapter in the Club of Rome book 'Limits and Beyond'. Read the blog post: <https://ow.ly/IV5A50PIMvS>



FUTURES CONFERENCE PUBLICATION

Futures Conference 2022 'Planetary Futures of Health and Wellbeing' Special Issue of *Journal of Futures Studies (JFS)* will be published on December 2023 at jfsdigital.org.

The issue will consist of eight peer-reviewed research papers dealing both with theoretical, methodological, and conceptual development of futures research and themes related to health and well-being. Guest editors **Matti Minkkinen** and **Sari Puustinen** invite readers to start exploring Planetary Futures with an open imagination and mindful of our place on this shared planet. ●

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The students enrolled in the programme will take a Master of Social Sciences degree, the size of 120 ECTS credits. The two-year programme is instructed in English. The application period for the Master's Degree Programme in Futures Studies is during 3–17 January 2024. ●

Read more: <http://ty.fi/fs-masters>