

FUTUURI

3|2022

FUTURES RESEARCHERS TACKLING PLANETARY FUTURES OF HEALTH AND WELLBEING

22nd Futures Conference focused on the wide variety of ways people imagine futures and wellbeing in our societies. We invited participants to think of the current changes and challenges in the world in a planetary scale. 'Planetary Futures of Health and Wellbeing' conference was organised during 15–17 June 2022 in Turku, Finland and online as a hybrid event.

There is a common need in the research community to reflect COVID-19 experiences – and also prepare for possible new pandemics, but also concentrate on other prospects of health and wellbeing at the same time. We have to continue to observe the changes and challenges like climate change, biodiversity loss or social and cultural conflicts around the world and struggle to find new solutions to resolve these issues.

With these essential questions in mind we wanted to create a cross-disciplinary platform where participants could meet, share and discuss new ideas and solutions. The three conference days consisted of keynote lectures, parallel sessions and participatory workshops.

Together with 305 participants from 27 different countries we succeeded to generate multidisciplinary and insightful discussions that promoted co-creating and networking between people from different backgrounds. As our brilliant conference facilitator, Professor Emerita **Sirkka Heinonen** concluded, the background of the participants was more diverse than ever before in the futures conferences. Hybrid conferences are always a double opportunity but also a double challenge, she said. Professor Heinonen thanked all the 130 participants in-person and 175 participants attending virtually for making this event a success.

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 **Billie Giles-Corti** (RMIT University, Melbourne, Australia), Dr. **John Grove** (World Health Organization WHO, Switzerland), Director **Bridget McKenzie** (Flow Associates & Climate Museum, UK), Professor **Petri Tapio** (Finland Futures Research Centre, University of Turku), Research Professor **Liisa Tyrväinen** (Natural Research Institute Finland, Luke) and Professor **Tommi Vasankari** (UKK Institute for Health Promotion Research, Finland). This Futuuri special issue includes articles giving insight to the keynote speakers on the basis of their speeches.

At this point we would like to thank warmly our excellent masters students **Anna Zimmer** and **Tolga Karayel** for their invaluable work helping us to organise the event smoothly. Thank you Anna for co-editing the articles in this issue and Tolga for taking photos during the event, among many other things.

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 'Empowering Futures'. We will then talk about issues like democracy and responsibility. You can find more information about the event in this Futuuri issue on page 11. We hope to see you all in June 2023 in Turku, Finland! ●



Professor Emerita Sirkka Heinonen



HOW CAN NATURE SUPPORT AND ENHANCE HUMAN HEALTH AND WELLBEING?

As an opening keynote speaker for the Futures Conference 2022, Research Professor **Liisa Tyrväinen** reminded us that enabling significant shifts to more sustainable human-nature relations can be a major aspect of responding to evergrowing human demand for resources and to biodiversity loss and ecosystem simplification.

In her keynote address "Changing human-nature interactions: How can nature support and enhance human health and wellbeing?" Research Professor **Liisa Tyrväinen** (Natural Resources Institute Finland, Luke) argued that there is increasingly clear and strong scientific evidence that nature areas are a key resource for public health. However, collaborative multi-sectoral research and thoughtful integrated policies are needed to protect and restore ecosystems that must be healthy themselves to provide desired wellbeing benefits for people.

Facing critical challenges

Professor Tyrväinen presented several recent research projects that are at the intersection of two contemporary crises: evergrowing human demand for resources has led to extensive biodiversity loss and ecosystem simplification; at the same time, public health challenges are creating huge economic and social costs. Each of these crises reflects existing institutional failures and

indicates that significant policy changes are needed. What she suggested is that enabling significant shifts to more sustainable human-nature relations can be a major aspect of responding to both of these challenges.

The research projects that Professor Tyrväinen discussed were primarily field experiments in Helsinki's urban forests that looked for answers to questions such as: What kinds of forests are restorative? What qualities do people find desirable in urban nature? What kind of social benefits might derive from nature experiences? and What role might virtual nature environments play in healthcare?

Green spaces as preventative health measures

The contributions that experiences in nature make to human health and wellbeing are increasingly well understood scientifically. Spending time in natural settings provides both short- and long-term benefits and can contribute to reducing health inequalities. The physical and mental health benefits people get from time spent in nature include reduced exposure to noise and air pollution, stress reduction and restoration, opportunities for physical activity, possibilities for both social interaction and time alone, and improved immune function. These ecosystem services are exactly the kind of preventative health measures that over the

long term can reduce spending on treating acute health problems.

The COVID-19 pandemic has brought renewed appreciation for these benefits for many people, especially women. However, a recent IS Global study has concluded that 60 percent of people worldwide have insufficient access to green space.

Urge for better policy integration and collaboration between parties

Professor Tyrväinen concluded that the health benefits of nature can be enhanced by maintaining and restoring nature areas (esp. "hotspots" of public health benefits), making them more accessible, aligning the socio-cultural demands and expectations of users with what ecosystems need to flourish, and increasing cooperation between researchers working on health, climate, and biodiversity issues. These goals would be supported by better policy integration and increased collaboration between ecological experts, health experts, and land use planners. New instruments for supporting pilot projects, research, learning, and communication are also needed.

In crafting integrated policies, Professor Tyrväinen emphasized that it is important to consider which sectors are getting which kinds of benefits, and to develop holistic ways of thinking about tradeoffs when they arise. If we can find the right balance, thriving nature areas will be within everyone's reach, supporting all humans and nonhumans in living healthy lives in the future. ●

LIISA TYRVÄINEN

Research Professor, Dr.
Natural Resources Institute Finland (Luke)
www.luke.fi/en

- Long experience in interdisciplinary research work regarding amenity benefits of forests and other types nature areas, with a strong focus on cultural ecosystem benefits, in particular outdoor recreation and nature-based tourism.
- Author of around 300 scientific publications.
- Member of editorial boards of Urban Forestry and Urban Greening & International Journal of Outdoor Recreation and Tourism.
- Member of board of Directors at Metsähallitus, leading management and utilization of state-owned lands in Finland.



BRIDGET McKENZIE INTRODUCING THE NEW, POSSITOPIAN FUTURES

In her virtual keynote, British researcher and creative curator **Bridget McKenzie** introduced the novel concept of 'possitopian' futures and discussed the multiple roles culture can play in creating more sustainable futures.

Bridget McKenzie is a woman of many hats, and during her keynote speech, hooked up live to the conference plenary through Zoom, she gave a brief fly-by of some of the various activities. She talked about the research and consulting organisation Flow Associates, which she founded in 2006, and where she remains the director. Similarly, she is also the founding director of the Climate Museum UK, which now works as a distributed, activist museum. Finally, she is a co-founder of the climate movement Culture Declares Emergency set up in 2019 to grow, support and mobilise a movement of declarers in the UK cultural sector and to inspire and work with others internationally.

Culture can play a role

Bridget McKenzie continuously highlighted the roles and responsibilities of the cultural sector in facing planetary crises. Inspiring the sector to take further actions seemed to be the common thread through her multitude of activities. Culture, McKenzie stressed, can help society, individuals and organisations look toward the past for strengthening reparation, help look toward the present for strengthen-

ing resilience, and help look toward the future for strengthening regeneration. She also underlined how culture may aid people by being responsive to trauma (such as the trauma caused by the multiple, impending Earth crises), may help people face the future, and may help people create changes. Culture is, in short, essential for enabling changemaking. Inspiring cooperation, alliances and actions from stakeholders across the culture sector is therefore important for raising awareness of important issues and leveraging change. Conference attendees were left in no doubt about Bridget McKenzie's personal engagement, as she passionately recollected her experiences and sought to inspire additional activity from participants. Inspiration, the conference listeners certainly got.

Possitopian futures: Imagining the possible, inspiring actions

The keynote speech's other main element related to so-called 'possitopian' futures. The word possitopian, invented by McKenzie herself, presents her preferred alternative to the usual suspects of either utopian or dystopian futures. Rather than imagining futures

flipping 180 between despair (dystopia) and hope (utopia), our focus should be directed towards possible futures, which tend to fall between the two outer poles, and which are also more inductive to our own actions than utopian and dystopian thinking suggests.

Bridget McKenzie used Voros' famous futures cone, in which the scope for possible futures extends – for better or worse – beyond both probable and plausible futures. Possible futures is the widest possible range of scenarios imaginable, including those one might prefer not to imagine. Possitopian futures thus help human communities or e.g. the cultural sector conjuring up imaginaries of the coming climate disaster future and thus raise important awareness. However, starting from the notion that other alternatives are possible, possitopian futures also help shaping new and viable paths for communities and indeed humanity. Like her call for cultural sector action, the concept of possitopian futures thus communicates Bridget McKenzie's strongest and most important message, as she addressed the Futures Conference 2022: We can and we should act (more) to create more liveable worlds of tomorrow. ●



Bridget McKenzie took also virtually part in panel discussion with Adjunct Professor, Vice Director Katriina Siivonen (FFRC), Research Professor Liisa Tyrväinen (Luke) and Professor Markku Wilenius (FFRC). Discussion was hosted by Professor Strkka Heinonen.



BRIDGET McKENZIE

Founding Director, Flow Associates
& Climate Museum, UK
climatemuseumuk.org

- Researcher and creative curator in culture, learning and environment. Presents and publishes internationally on possibilities of Regenerative Culture.
- 14 years in roles such as Education Officer for Tate and Head of Learning at the British Library.
- Founder of Flow Associates (2006)
- Founder of Climate Museum UK (2019)
- Advisor for Culture Unstained
- Co-founder of Culture Declares Emergency

HEALTHY LIFESTYLES TO BOOST SUSTAINABLE GROWTH

Physical activity levels are declining rapidly in the Western World, and the consequences this might cause to society are many – low fitness levels create economic problems that heavily burden countries' budgets. The keynote speech, presented by Professors **Petri Tapio** and **Tommi Vasankari** at the Futures Conference 2022, addressed the present situation and possible future scenarios of physical activity, as well as the impacts on society – more specifically, Finnish society.

The low volume of physical activity costs 3.2 billion euros annually to Finland, and the high level of sedentary behaviour is responsible for another 1.5 billion euros burdening the Finnish society. The main goal of the STYLE project, led by Professor Petri Tapio, is to understand how different factors influence and can be used to boost physical activity and avoid sedentary lifestyles.

To wrap-up the keynote speech presented by Professors Tapio and Vasankari is that there is no fixed answer to the question of how to better tackle this growing challenge and that a mixed approach is needed to answer both individual and societal issues, with encouraging possibilities coming from the use of technology to track and increase physical activities on individuals.

Drastic change in physical activity

The challenge of counteracting sedentary lifestyle is a tricky one, especially from the socio-logical perspective. As the data presented by Professor Vasankari on physical aptitude in Finnish army conscripts shows, physical fitness profiles have changed drastically in the

past decades, and recent results show that only 5% of recruits were considered to be in optimal physical condition, in comparison to a percentage almost five times higher in 1975. While this data leads to the conclusion that physical ability has decreased, it does not allude to the reasons behind the change.

As Professors Tapio and Vasankari discuss during their keynote, one obvious notion is that Finnish society as a whole changed drastically over the same period of time. Industrialisation and digitalisation increased the wealth of the Finnish society while rapid structural change, drastic technological advances and increased motorisation are major forces that made the worklife more physically passive. Already school children are taught from a young age to remain seated in class, molding their bodies and actions to reflect the rise of academic, mentally focused professions.

Searching for sustainable solutions

This change in the very structure of Finnish society also exemplifies one of the major questions raised by Professor Tapio: should the solution be societal or focus on individuals? The four different scenarios developed in the

STYLE project show different perspectives and possible outcomes to that, not aiming to forecast a future but address different behaviours and changes in the societal context of physical activity. As Professor Vasankari mentions, the importance of futures studies and scenario planning is to help others to get a glimpse of what might happen – and plan accordingly. Yet, scenarios very often fail to address drastic societal changes, as Professor Tapio points out, and these might have a huge impact on physical activity. As the world moves towards a new logic of rapid, drastic changes, these previously gloomy perspectives might become the reality when it comes to understanding and preparing for change.

And there is always a possibility to change, as Professor Vasankari says. The same technology that creates sedentary lifestyles is the one that boosts people towards a more active life through data and information. Better decisions, be it in urban planning or lifestyle choices, are very much empowered by information that allows individuals and societies to make smart choices. ●

TOMMI VASANKARI

**Professor, MD, PhD, Director
UKK Institute for Health Promotion
Research, Finland, ukkinstituutti.fi/en**

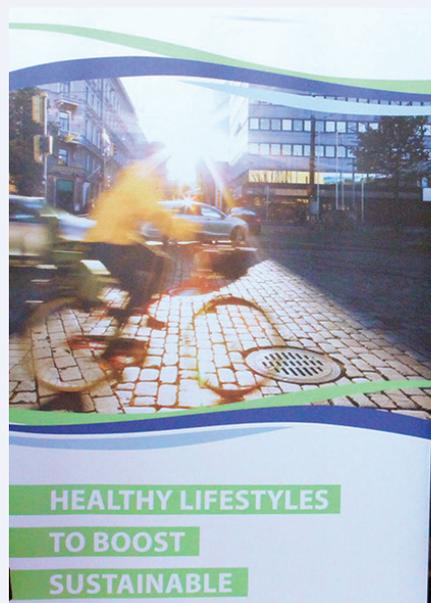
- Part-time Professor of Military Medicine at Faculty of Medicine and Health Technology, Tampere University.
- Focused on accelerometer-based measurement of physical activity, sedentary behavior and sleep in both population samples and interventions aiming to increase physical activity and reduce sedentary behavior.



PETRI TAPIO

**Professor of Futures Studies, PhD
Finland Futures Research Centre,
University of Turku, utu.fi/ffrc**

- Responsible teacher of the major subject of Futures Studies in the Turku School of Economics.
- Research interests include environmental policy strategies, scenarios and future images of transport, energy and agri-food sectors and a diversity of futures research methodology.
- Leader for an interdisciplinary project Healthy Lifestyles to Boost Sustainable Growth (STYLE) (2019–2023).



SESSIONS AND WORKSHOPS AROUND HEALTH & WELLBEING

Abstract submission for the conference started in November 2021 and ended in the end of February 2022. By that time we received more than 120 submissions and were excited to pull together an interesting versatile program consisting of onsite, online and hybrid sessions, with nearly 20 interactive futures workshops. Below just a few of them listed.

- Anticipatory governance to boost crisis preparedness – what policy actions needed for resilient cities and human-friendly AI?
- Biodigital today and tomorrow: exploring innovations, drivers, and shifts towards a biodigital era
- Designing planetary futures – Futures Design as a method
- Dutch future elections – the future belongs to everyone
- Environmental awareness driven by health and wellbeing
- Futures Literacy programs for smart city wellbeing: local and global issues
- How technology is driving an age of consciousness
- Imagining after capitalism
- Imaginative transformations upon sustainable futures
- Multidisciplinary used foresight methodology
- Novel interconnections of health, social justice, land use planning and the environment
- Pathways to planetary well-being: multilateralism for climate stability, balance with living nature, and no pollution
- Planetary futures: philosophy, methodology and ethical consideration
- Planetary health as a foundation for sustainable future
- The roles of imagination and aspiration in building socially, culturally, and ecologically sustainable future(s)
- Understanding the challenges of futures uncertainties and developing robust paths
- Societal structure and individual agency – the Need for Systemic Change?



TEXT Johanna Lamberg, Ira Ahokas & Essi Silvonon

MENTAL TIME TRAVEL TO THE ACTIVE MALL OF THE FUTURE Experiences from the STYLE Workshop

"As the time capsule opens 10 years from now, you find yourself in the lobby of an Active Mall – a place that is a heaven full of interesting things to do..."

The STYLE project took the Futures Conference participants on a journey to the Active Mall of the Future. While some enjoyed the visit, others looked for the exit.

Sensing Futures Through the Mental Time Travel Method

In futures studies, Mental Time Travel works both as a mind-opener technique and data collection method. It guides workshop participants to an imaginary space where they can vision and experience alternative futures. The STYLE project sought to test whether the Mental Time Travel method supports workshop participants' creativity, and whether it can be used to promote innovation processes, for example, in identifying demand for future services and products.

The STYLE session at the Futures Conference took the participants both online and on-site on a journey to an Active Mall. The session began with a short introduction to the method and continued with the exercise. The actual time travel lasted for 17 minutes, fol-

lowed by an individual reflection and a group discussion. While some enjoyed their journey, others felt less comfortable at the destination.

"Look for the Exit and Get Out to Breathe"

For some participants, the visit to the Active Mall was not relaxing or enjoyable. The word 'mall' sparked resistance in some travellers. It reminded them of busy and noisy shopping malls and overstimulating environments when they would have preferred a space where they could be alone. Moreover, many participants did not like being indoors or around technology. They favoured 'real life' over 'virtual experiences': thus, more traditional outdoor spaces, where they could engage in physical activity and get fresh air.

"Flying in the Sky & Total Freedom"

Other participants were able to vision numerous enjoyable activities and experiences. For instance, AR technology was strongly present at the Active Mall, where visitors could time travel, space travel, fly, or go for walks in various destinations globally. The Active Mall as space became a 'not space', as described by one participant; the boundaries of the Active

Mall became multi-dimensional. Interestingly, many participants were able to feel different sensations during their travel: hearing birds sing, feeling the wind on their skin, smelling aromatics, seeing the Northern Lights, and being able to touch different textures, for example.

Taking the Best Out of All Experiences

As in any futures workshop, there are no right or wrong answers in Mental Time Travel. All images give valuable insight into the characteristics of the future destination. Mental Time Travel is a personal journey, and some may be unable to reach the time travel destination in the first place. In our workshops, it was interesting to notice that both experiences at the Active Mall, the good and the bad, were strongly connected to nature: whether it was looking for the exit to go outdoors, experiencing it through technology, or creating a space that is both; a non-space, where the visitor can be both outdoors and indoors. Engaging in physical activity in nature is valuable for many; however, there are countless other opportunities to bring the natural environment around. Finally, it is up to the traveller to imagine and decide. ●

CREATING HEALTHY, LIVABLE, AND SUSTAINABLE CITIES: A GLOBAL PRIORITY FOR PLANETARY AND HUMAN HEALTH

Professor **Billie Giles-Corti** from RMIT University (Melbourne, Australia) leads a global study about creating healthy and sustainable cities. She says how the cities are built affects chronic diseases; thus, something needs to be done differently globally. In 2016, *Lancet*, a famous medical journal, published Billie's first article series: "Urban design, transport, and health." In her conference keynote, she reviewed the literature on the issue from 2016 to 2021, concluding the urgency to transition to healthy and sustainable cities.

Professor Giles-Corti explained that cities are the powerhouse of the economy, and by 2050, the estimates are that 70% of the world population will live in cities. This issue will foster unhealthy and unsustainable lifestyles, expose residents to environmental stressors, cause biodiversity loss, and widen inequities if poorly planned. In addition, cities generate 75% of global energy-related emissions, and 86% of global CO₂ emissions come from higher-income countries.

What should be done?

Therefore, in 2016, in the *Lancet* series, a conceptual framework was built about how cities affected health and wellbeing. Professor Giles-Corti believes this framework helped orient thoughts toward how things could be measured to create healthier cities supporting active and sustainable lifestyles, because what gets measured gets done.

In this framework, they argued, an integrated planning is needed across multiple urban systems like the different policies for transport, social services, education, land-use planning, housing, public open space and recreation, and public safety, which need to work together in an integrated way to achieve better outcomes on the ground. They argued that the eight Ds affect how healthy cities are designed for people, which are categorized into two: regional planning (Destination accessibility, Distribution of employment, Demand management) and local urban design (Design, Density, Distance to transit, Diversity, Desirability).

Then, in the second series, they aim to facilitate the development of a global system of policy and spatial indicators for healthy and sustainable cities.

Billie Giles-Corti believes city planning policies are "upstream" determinants of health and sustainability. She and her team argued that the best-practice policies are consistent with evidence on planning healthy cities with clear and specific actions and measurable and budgeted policy targets. They designed policy indicators focused on nine areas: integrated planning, air pollution, destination accessibility, distribution of employment, demand management, design, density, distance to public transport, and transport infrastructure investment. These policies were assessed across the globe. Some important policy gaps were identified, such as design management.

In this part, they have done a new exceptional work: they have used open data collected by citizens. This way, others can replicate the indicators, benchmark, and monitor over time then new cities jump on board. They recruited over 80 collaborators in 25 cities, 19 countries, and six continents to conduct the study. The nine indicators of urban design and transport features were depicted on maps by colors in the studied cities. This way, the amount of each indicator easily showed up itself.

In summary of the key findings, Professor Giles-Corti said that: It is feasible to measure city planning policies, urban policies lack measurable targets, there are thresholds for urban design on transport features, it is fea-

sible to create consistent spatial indicators of high health-supportive environments, and there were substantial spatial inequalities in access within and between cities.

What Next?

In the next series, more longitudinal studies showed the relationship between the built environment and chronic disease. In addition, air pollution was the fourth largest risk factor for global mortality. Besides, they showed that the aging of the global population leads to cognitive health as an emerging priority issue hand in hand with urban and transport features linked to dimension risk factors. Also, the urgency for integrated city planning to mitigate and adapt to climate change was evident.

Since the first series in 2016, COVID-19 happened, significantly impacting thoughts on how cities are built, she believes. It highlighted city vulnerabilities like crowded conditions, poor air circulation, and ambient air pollution. Also, the migration to suburbs and regions, amenity-rich areas with inequitable access, and rapid health-supportive transformations were emphasized.

Therefore, Professor Giles-Corti and her team focused on how to optimize compact 15-minute cities where most daily necessities can be accomplished by walking or cycling. They reformed their framework from 8 Ds into 11 Ds. For example, housing, biodiversity loss, air quality policies, good and integrated governance, and adding distribution were more emphasized after COVID-19.

A Call to Action

In the end, Professor Giles-Corti called to action to create healthy and sustainable cities to global agencies, national, regional, and local governments policymakers, and practitioners. She says that we need to benchmark and monitor progress in cities using policy and spatial indicators, transform urban governance horizontal and vertical integration, strengthen policy frameworks incorporating 11 Ds, and support LMICs disadvantaged communities.

Also, a call to action was made to civil society citizens and the research community. It was to create and use open data, encourage citizen science, create policy and practice relevant evidence codesign with academic policymakers and practitioners, and prioritize research funding multi-sector multi-outcome multi-country studies.

All the studies and reports are available on the "Global Observatory of Healthy And Sustainable Cities" website. ●

BILLIE GILES-CORTI

Professor, Dr., RMIT University, Australia, www.rmit.edu.au

- Leads the Healthy Liveable Cities Lab in the Centre for Urban Research, RMIT.
- Studies the impacts of the built environment on health and wellbeing.
- Has published over 400 articles, book chapters and reports, and by citations, has been ranked in the top 1% of researchers in her field globally.
- Fulbright Scholar.
- Awarded an NHMRC Elizabeth Blackburn Fellowship as the top ranked female NHMRC public health fellow (2016).



GOVERNANCE TO BOOST CRISIS PREPAREDNESS - WHAT POLICY ACTIONS ARE NEEDED FOR RESILIENT CITIES AND HUMAN-FRIENDLY AI?

The Millennium Project (MP) is a global participatory think tank with 71 regional Nodes around the world. Helsinki Node, coordinated by the Finland Futures Research Centre, organised a special session on crisis preparedness during the Futures Conference 2022. The session started with an introduction to the theme, followed by a Keynote Speech by MP Executive Director **Jerome Glenn**, a commentary speech and a foresight exercise with all the session participants.

With the increase of global challenges and uncertainties, the resilience of urban systems is indispensable in the 21st century. Rapid urbanization and developments in technology and the built environment necessitate the strengthening of cities' capacities to bolster resilience against future crises among the urban population.

According to the RESCUE project, brief presentation and introductory to the session theme by Professor Emerita **Sirkka Heinonen**, an innovative and state of art anticipatory governance approach to urban systems thinking is crucial to enhance resilience. The RESCUE project was launched with the rationale of promoting crisis-resilient cities through future policies, legislation, and management practices involving real estate and sustainable crisis management. In the context of eco-resilient-health cities, there is a specific need for human-friendly AI on a global scale for the transformation of urban systems prepared for future crises. However, what cities need is not AI in a narrow sense, but an overarching approach. This viewpoint is founded on Artificial General Intelligence (AGI) and its application in resilient urban systems. In this sense, the Millennium Project (MP), which is a global participatory futures research think tank, brings

together a diverse range of stakeholders and futurists to enhance global foresight on AGI.

A City Learning and Making Logical Inferences

In his keynote Mr. **Jerome Glenn**, a futurist, and the Executive Director of the MP, emphasised that early research on anticipatory governance is pivotal in promoting innovative, future eco-smart-resilient cities. Moreover, transitioning from Artificial Narrow Intelligence (ANI) to Artificial General Intelligence (AGI) requires a systematic and procedural approach. For instance, facial recognition and autonomous vehicles are ubiquitous ANI technologies used in the present; however, given the processual setting, establishing pre-conditions for AGI and Artificial Super Intelligence is essential for long-term progressiveness.

The most remarkable illustration of the metaphorical relationship between the individuals' autonomous nervous system and resilient cities was exemplified by Jerome Glenn. In his illustration, AI, and other Next Technologies (NT) will operate much of the physical infrastructure of Eco-Smart-Resilient Cities, akin to the way the autonomous nervous system controls the human body. The architecture of

"Eco-Smart-Resilient Cities" are connected to dwellers by sensors linking the built-environment with AGI and the Internet of Things (IoT). Hence, determining the requisites for applying AGI in modern cities should be a present agenda. AGI is anticipated to solve unique challenges without pre-programming, like ANI does, and to use sensors and the Internet of Things (IoT) to learn and make inferences and reasoning like humans.

Despite the skepticism against establishing AI governance rules now, some international agreements and governance models, such as the International Standardization Organization (ISO) or the Institute of Electrical and Electronics Engineers (IEEE), are being discussed. Therefore, the MP is preparing worldwide research on global models to transit ANI to AGI.

Futures AGI Scenarios: Cities enhancing well-being and assisting individuals in living their best lives

Adjunct Professor of futures and innovation research, **Osmo Kuusi**, offered an intriguing view on the 2045 possibilities of AGI. "Affective AGI" and "Transformative Artificial intelligence (TAI)" were the most intriguing possible future scenarios. Alienation, atomization, and mental health grew increasingly serious in the Affective AGI scenario, which emphasizes that fast worldwide technical and economic progress fails to promote happiness. However, by the early 2040s, the era of "Affective AI" will be established, resulting in diverse treatments and enhanced well-being. Conversely, TAI is evolving into a significant tool that is expanding the human thinking horizon, while promoting collaboration and cooperation.

With the advent of global challenges, cities should adapt to change and achieve systemic transformations for sustainable development through innovative policies. Crisis management in the urban environment is critical for the resilience of cities and residents' well-being. Thus, from the present, governance of AI initiatives to foster crisis preparedness and prospective policy actions is sine qua non for the futures of resilient cities and human-friendly AI. ●

Read more about the work of the global Millennium Project:
www.millennium-project.org



LEARNING FROM THE PANDEMIC

In his keynote speech, Dr. **John Grove**, the Director of Quality Assurance of Norms and Standards at WHO reflected on systemic weaknesses exposed by the Covid-19 pandemic and what we can learn from it.

Do not "return to normal" but give greater priority to health and wellbeing in society.



new model that you think we should follow?" Dr. Grove replied that we should not go back to being unprepared because we did not anticipate such a big event as the pandemic and that we should develop some resilience on a personal level.

It also became clear during COVID-19 that misinformation is driving "infodemiology", an area of research where, for example, search query data is scanned and analysed for diseases. Dr. Grove spoke more about the tools (e.g., information technology and AI) to provide health information and understand how people take it in, in the context of the pandemic.

When asked by Professor **Markku Wilenius** (FFRC) about the key shortcomings during the pandemic, Dr. Grove responded by addressing the issue of resources being made available in the aftermath of an emergency instead of investing in prevention. He also acknowledged that WHO recommendations are inconsistent and stressed that in the future it will be important to speak with one voice to deliver the message more clearly. This addresses the problem that different actors such as WHO and policy-makers at the country and community levels have different guidelines.

Possibilities and opportunities in times of pandemic

The urgency of the situation allowed for rapid innovation in vaccine development. One factor in the success of this was the close cooperation between several countries and the deployment of the latest available technology e.g., communication, home testing, and diagnostics. Dr. Grove pointed to the implementation of the largest adult vaccination campaign in history.

Challenges posed by the pandemic

The pandemic has once again exposed inequalities, such as the uneven distribution of vaccines around the world, due to nationally focused crisis response approaches of some countries.

Dr. Grove concludes from this challenge that closer cooperation between countries and the private and public sectors is needed. "Environmental, social and economic systems are out of balance and working against health" he explained pleading on behalf of WHO "not to return to normal" but to give greater priority to health and wellbeing in society.

Researcher **Ana Jones** (FFRC) noted that in some ways we seem to be going back to normal, which prompted her to ask Grove: "Based on what we have gone through, what do you think we should not go back to or what is the

Learning from the Pandemic

During the COVID-19 pandemic, promising technologies were used in the health sector, such as cough analysers, supported by artificial intelligence, and may be used for other diseases in the future. In addition, WHO recognised the need for science-based policy, which requires multidisciplinary teams, as the policy is guided by multiple interests that need to be considered alongside science. WHO sees its role in this as providing advice, based on the 'Living Approach', which uses foresight by constantly adapting recommendations to current data so that they keep up with the pace of change.

Irene Eguinoa (National Renewable Energy Centre, Spain) wondered if Dr. Grove sees an evolution in policy to increase preparedness for new pandemics and if he perceives any changes. John Grove mused about the influence of health and its treatment by politics on future elections. A positive side effect of the pandemic was described here as health finding its way back to the political agenda. This notion could be further explored at next year's Futures Conference on democracies. ●



JOHN GROVE

Dr., Director, Quality Assurance of Norms and Standards, World Health Organization WHO, Switzerland, www.who.int

- Establishes and leads functions and assurance services for all WHO global norms and standards products, and oversees the WHO Press, and WHO Global Library and Digital Information Services.
- Director of the Department of Information, Evidence and Research (IER), WHO (2017–2019)
- Before joining WHO he was Deputy Director for Evidence and Policy in the MNCH team at the Bill and Melinda Gates Foundation (BMGF) and responsible for the investment portfolio on evidence and research and also worked within the organization to set strategy and guide related health analytics, in addition to being a representative on evidence and policy with the foundation's external partners, including the UN system. He also served on the global health strategy team in the Office of the President and worked across HIV, TB, pneumonia, diarrhea, and immunization teams on strategy development and evaluation.



FINLAND FUTURES ACADEMY'S SUMMER SCHOOL 2022: DATA & FUTURES STUDIES

Finland Futures Academy (FFA) organises a yearly Summer School which combines pre-conference programme like lectures, study materials and exercises with participation to the conference organised by the FFRC and the FFA. This year the theme of the Summer School was 'Data and Futures Studies' and it attracted approximately 100 students. The participants were mainly from Finland, but the Summer School was enriched by participants from as far as Greece.

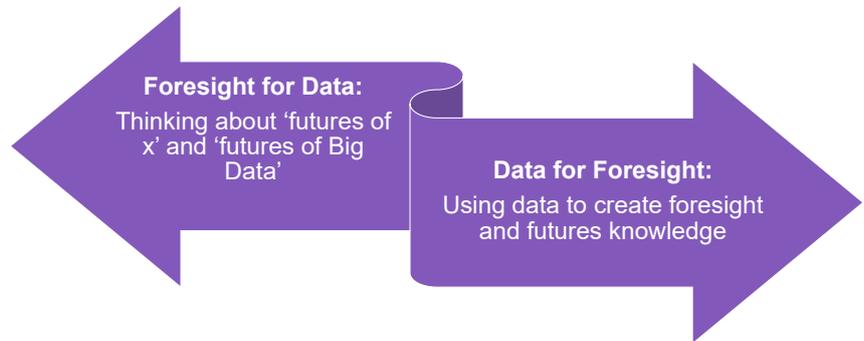
The Summer School started with online lectures that were organised once a week in May and early June and thereafter students had the possibility to choose whether they attended the conference on site or online.

Various angles to gather, use and interpretate data in futures studies

The lectures covered a wide range of themes. Professor **Toni Ahlqvist's** (FFRC) presentation about what makes futures knowledge unique, created a good starting point for the whole Summer School. Professor Ahlqvist gave a compact overview of the field of futures research and its concepts and discussed possible division of futures knowledge into foresight, forecasting and anticipation as well.

Professor **Heikki Liimatainen** and Doctoral Researcher **Riku Viri** (Tampere University) dealt with quantitative data as a source for modeling and scenarios. Their examples were from the field of traffic and carbon dioxide emissions research.

Project Researcher **Johanna Lamberg** (FFRC) in turn introduced the use of qualitative data in futures studies and Project Specialist **Essi Silvonen** (FFRC) opened up possibilities to use a method called mental time travel for data gathering and guided small groups to implement a short mental time travel experiment. The experience raised discussion among participants about the character of the data it produces and the feelings it evoked.



PhD **Mika-Petri Laakkonen** gave the students insights of what predictive algorithms and decision-making have in common with examples from the field of elevator technology. He also discussed ethical aspects and stressed the need to get a deeper understanding about the hidden layers of artificial intelligence as they have an increasing impact on our daily lives.

The last session was focused on big data and artificial intelligence in the context of foresight practices. Research Director **Jari Kaivo-oja** (FFRC) presented different qualities of big data research and noted that both qualitative and quantitative methodology can be used when doing big data research.

Project Researcher **Mikkel Stein Knudsen** (FFRC) raised the issue of biases in the context of algorithms and how to deal with it. His examples showed that algorithms can be either less or more biased than data created by

humans and Knudsen urged futures researchers to keep this in mind when gathering and analysing all kinds of data.

The Future Distillery concept was introduced by Project Researcher **Amos Taylor** (FFRC) as a practical example of making use of different types of data in the context of foresight processes.

After the tailored lectures, students continued their journey about data & futures studies by listening to conference presentations and participating in different workshops. Many students later commented on in their learning diaries that the Summer School was challenging as it presented so many viewpoints about data in the context of futures studies. At the same time, it was the versatile contents of the Summer School together with conference programme that was afterwards felt rewarding and many insightful learning experiences and new ideas were expressed in the diaries. ●

GLIMPSES OF THE SPECIAL SESSIONS ORGANISED

Special Session: "Beyond Knowledge: How Technology Is Driving an Age of Consciousness" organised virtually with Dr. **William E. Halal** (George Washington University, The TechCast Project, USA).



Special Session: "Imagining After Capitalism" organised in a hybrid format with Associate Professor, Dr. **Andy Hines** (University of Houston, USA).



<https://youtu.be/IGiWX7rKeCc>



<https://youtu.be/F3hQwrrA9gQ>

Welcome to

FUTURES CONFERENCE 2023: EMPOWERING FUTURES

14–16 June 2023 ■ Turku, Finland ■ Online

The forthcoming Futures Conference focuses on the futures of democracy, trust, power and responsibility. These topical issues will be tackled in an interdisciplinary way, putting emphasis on the perspectives of futures research as well as social, political, ecological and economic development. The theme stems from the ongoing security and economic policy situation as well as from the environmental threats, which create instability all over the world. The conference will elaborate general sustainability and resilience challenges in current turbulent situation of the world politics.

The forthcoming event will focus on questions such as:

- What kind of impacts climate change, green transition or security threats and wars could have on the democracy?
- How current and potential democracy gaps will be fulfilled?
- How do we empower futures, why, and whose futures?
- How to create sustainable and responsible innovation, service and industrial ecosystems in Finland, Europe and in the rest of the world?
- What does responsibility mean for developing businesses, platforms and business models?
- What is the contribution of futures research in identifying risks and building sustainable futures?

Call for Papers and Posters

The 'Empowering Futures' international conference will create a cross-disciplinary science platform where participants can meet, share, and discuss new ideas concerning futures, democracy, trust and responsibility.

The conference program will consist of keynote lectures, parallel sessions, participatory workshops and a chaired poster session. The conference 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.

Call for Papers will be available in October and abstract submission starts in November 2022.

Important dates to remember

Call for papers available:
October 2022

Abstract submission starts:
November 2022

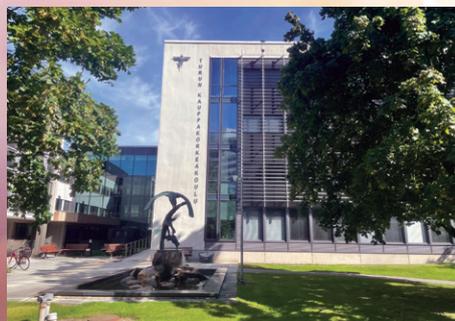
Deadline for the abstracts:
31 January 2023

Notification of acceptance:
28 February 2023

Venue for the event

The conference will be organised at the Turku School of Economics (TSE). TSE provides research and higher education in the field of business science.

We encourage in-person attendance of the conference but are also excited to accommodate virtual participation for both authors and attendees who cannot travel to Turku, Finland.



Conference organisers

'Empowering Futures' is the 23rd international Futures Conference of the Finland Futures Research Centre and Finland Futures Academy of the University of Turku.

These annual conferences are an invaluable opportunity for meeting, exchanging and debating current topics related in futures studies and foresight. With approximately 200–350 individual participants attending from all over the world, researchers, organisational delegates, business people and students convene to the event in the spirit of futures-oriented information, research, analysis and collaboration. ●

Read more about the previous Futures Conferences at futuresconference.fi



FINLAND FUTURES
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Finland Futures Academy



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futuresconference2023.com
[#futuresconference2023](https://twitter.com/futuresconference2023)

FFRC STAFF'S LATEST PUBLICATIONS

Ahvenharju, Sanna (2022) *Futures Consciousness as a Human Anticipatory Capacity – Definition and Measurement*. Doctoral dissertation, University of Turku, Turku School of Economics, Annales E 90, <https://urn.fi/URN:ISBN:978-951-29-8892-1>

Boucher, Martin & Karjalainen, Joni (2022) *Northern Urban Energy Futures in Saskatoon, Luleå, and Anchorage*. In Friedrich, D. – Hirnsberger, M. & Bauer, S. (eds.) *More than 'Nature': Research on Infrastructure and Settlements in the North*. LIT Verlag: Münster. 239–262.

Harikkala-Laihinen, Riikka – Hurmerinta, Leila – Tapio, Petri – Vasankari, Tommi & Sandberg, Birgitta (2022) *Why Would You Run around Chasing a Ball? Embodied and Temporal Emotions during Leisure Time Physical Activity*. *Leisure Sciences*, <https://doi.org/10.1080/01490400.2022.2099491>

Heikkinen, Vesa & Kaivo-oja, Jari (2022) *Challenges of the tourism, hospitality and experience cluster in foresight analyses and strategies before the COVID-19 crisis*. Haaga-Helia publications 8/2022, <https://ty.fi/hh8-22>

Heinonen, Sirkka & Karjalainen, Joni (2022) *Escenarios transformadores y conciencia de crisis como semillas fuertes para cultivar la resiliencia del futuro*. In Vitale, Medina & Ragno (eds.) *Prospectiva y estudios de futuro para el desarrollo*, 32–42.

Heinonen, Sirkka – Karjalainen, Joni & Taylor, Amos (2022) *Landscapes of Our Uncertain Futures. Towards mapping and understanding crisis-related concepts and definitions*. FFRC eBooks 7/2022, Finland Futures Research Centre, University of Turku.

Kaivo-oja, Jari – Knudsen, Mikkel Stein & Lauræus, Theresa (2022) *Future Avenues of Digital Transformation: Next Steps?* In Väyrynen, Helander & Jalonen (eds) *Public Innovation and Digital Transformation*. Routledge.

Kaivo-oja, Jari & Stenvall, Jari (2022) *A Critical Reassessment: The European Cloud University Platform and New Challenges of the Quartet*

Helix Collaboration in the European University System. *European Integration Studies*. No. 16.

Karjalainen, Joni – Heinonen, Sirkka & Taylor, Amos (2022) *Mysterious faces of hybridisation: an anticipatory approach for crisis literacy*. *European Journal of Futures Research* 10, 21 (2022). <https://doi.org/10.1186/s40309-022-00207-5>

Karjalainen, Joni – Mwagiru, Njeri – Salminen, Hazel & Heinonen, Sirkka (2022) *Integrating crisis learning into futures literacy – exploring the “new normal” and imagining post-pandemic futures*. *On the Horizon*, Vol. 30 (2).

Kuusi, Osmo & Heinonen, Sirkka (2022) *Scenarios from Artificial Narrow Intelligence (ANI) to Artificial General Intelligence (AGI) – Reviewing the results of the international study Work/Technology 2050. Scenarios and Action*. *World Futures Review*, <https://doi.org/10.1177/19467567221101637>

Linturi, Risto – Höyssä, Maria – Kuusi, Osmo & Vähämäki, Ville (2022) *Radical Technology Inquirer: a methodology for holistic, transparent and participatory technology foresight*. *European Journal of Futures Research*, 10, 18 (2022), <https://doi.org/10.1186/s40309-022-00206-6>

Luoma, Päivi – Penttinen, Esko – Tapio, Petri & Toppinen, Anne (2022) *Future images of data in circular economy for textiles*. *Technological Forecasting & Social Change* 182:121859, <https://doi.org/10.1016/j.techfore.2022.121859>

Luukkanen, Jyrki – Saunders Vázquez, Anaely – Santos Fuentesfria, Ariel – Majanne, Yrjö – Filgueiras Sainz de Rozas, Miriam Lourdes & Laitinen, Jasmin (eds) (2022) *Cuban Energy System Development – Technological Challenges and Possibilities*. FFRC eBooks 2/2022, 252 p, <https://urn.fi/URN:ISBN:978-952-249-568-6>

Luukkanen, Jyrki – Saunders Vázquez, Anaely – Laitinen, Jasmin & Auffermann, Burkhard (eds) (2022) *Cuban Energy Futures. The Transition towards a Renewable Energy System – Political, Economic, Social and Environmental Factors*. FFRC eBooks 3/2022, 332 p, <https://urn.fi/URN:ISBN:978-952-249-569-3>

Ojala, Kristiina – Kantola, Mauri – Höglom,

Esa – Frantti, Anneli & Ollila, Johanna (2022) *Ilmiöavaruuksista skenaarioihin – Kuinka alueellisia osaamis- ja koulutustarpeita ennakoidaan verkostoyhteistyönä? Ammattikasvatuksen Aikakauskirja*, 24(2), 60–70, <https://doi.org/10.54329/akakk.120732>

Ruotsalainen, Juho & Minkkinen, Matti (2022) *Peer-to-Peer Journalism Under Cognitive Capitalism*. In Manninen, V. J. E. – Niemi, M. K. & Ridge-Newman, A. (eds) *Futures of Journalism: Technology-stimulated Evolution in the Audience-News Media Relationship*. Springer, https://doi.org/10.1007/978-3-030-95073-6_12

Santaoja, Minna (2022) *Social media in learning on nature: Case Finnish amateur mycologists*. *On the Horizon*, Vol. 30 (2).

Saunders Vázquez, Anaely – Luukkanen, Jyrki – Laitinen, Jasmin & Auffermann, Burkhard (eds) (2022) *Futuro Energético en Cuba. La transición hacia un Sistema Renovable de Energía – Factores Políticos, Económicos, Sociales y Medioambientales*. FFRC eBooks 4/2022, <https://urn.fi/URN:ISBN:978-952-249-572-3>

Saunders Vázquez, Anaely – Luukkanen, Jyrki – Santos Fuentesfria, Ariel – Majanne, Yrjö – Filgueiras Sainz de Rozas, Miriam Lourdes & Laitinen, Jasmin (eds) (2022) *Desarrollo del Sistema Energético Cubano – Desafíos y Posibilidades Tecnológicas*. FFRC eBooks 5/2022, <https://urn.fi/URN:ISBN:978-952-249-574-7>

Vehmas, Jarmo – Rentto, Aleksis – Luukkanen, Jyrki – Auffermann, Burkhard & Kaivo-oja, Jari (2022) *The Finnish solution to final disposal of spent nuclear fuel*. In Arentsen, Snijders & van Est (eds) *The Future of Radioactive Waste – Governance Lessons from Europe*. Springer.

Virmajoki, Veli (2022) *Limits of conceivability in the study of the future. Lessons from philosophy of science*. *Futures*, Vol. 142, 102993, <https://doi.org/10.1016/j.futures.2022.102993>

FUTURES CONFERENCE 2021 peer-reviewed papers are published

On the Horizon, Special issue

Thayer, Tryggvi (ed.) (2022) *The Future of Learning: Rethinking Learning in Societal Transformations*. *On the Horizon*, Vol. 30 (2), www.emerald.com/insight/publication/issn/1074-8121/vol/30/iss/2

European Journal of Futures Research, Special issue

Mäki, Maija & Lauttamäki, Ville (eds) (2022) *Futures of Learning and Emergent Issues in Education*. *European Journal of Futures Research*, Vol. 10, www.springeropen.com/collections/futlearn

ARE YOU THE NEXT EXPERT OF THE FUTURES?

The Master's Degree Programme in Futures Studies is designed to educate foresight experts who help organisations to harness future opportunities and avoid unnecessary risks. The programme trains students to become professionals who are competent to choose from various methods when facing a particular development challenge.

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 in January 2023.

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

Finland Futures Research Centre is a department at the Turku School of Economics, University of Turku. The FFRC specialises in futures research and foresight. It refines visionary knowledge regarding alternative futures and the challenges and possibilities included in them. The FFRC has offices in Turku, Helsinki and Tampere, and employs around 50 experts.

Futuuri is the FFRC's newsletter, published four times a year. Except for this special conference issue, Futuuri is usually published in Finnish.

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