



23rd Futures Conference

EMPOWERING FUTURES

– Long-Term Governance, Democracy and Futures Research

BOOK OF ABSTRACTS

14–16 June 2023
Turku, Finland & Online
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Edited by
Alisa Belmas

CONFERENCE PROGRAMME

WEDNESDAY 14 JUNE 2023 | Onsite

8:30	Registration and coffee
9:30	Opening of the Conference Director <i>Juha Kaskinen</i> , Finland Futures Research Centre, University of Turku
	Introduction to Conference Themes Professor <i>Toni Ahlqvist</i> , Finland Futures Research Centre, University of Turku
10:00	Democratic Governance and the Future: Tensions and Possibilities Professor <i>Maija Setälä</i> , University of Turku, Finland
11:00	Break
11:15	Session 1 (parallel tracks)
12:30	Lunch
13:30	Session 2 (parallel tracks)
15:00	Coffee break
15:30	Session 3 (parallel tracks)
17:00	Closing of the Day 1
18:30	Conference Dinner

THURSDAY 15 JUNE 2023 | Onsite

8:30	Morning coffee
9:00	Session 4 (parallel tracks)
10:30	Break
10:45	Session 5 (parallel tracks)
12:15	Lunch
13:00	Session 6 (posters)
13:40	Break
13:45	Session 7 (parallel tracks)
15:15	Coffee break
15:45	Sustainability and Futures. Moving Beyond “The Natural” and “The Artificial” Dr. <i>Erik F. Øverland</i> , President of World Futures Studies Federation (WFSF), Germany
16:45	Break
17:00	The Transtetarian Revolution: The Power of Ageless Futures CEO <i>Rosa Alegria</i> , Perspektiva, Brazil
18:00	Closing of the Day 2

FRIDAY 16 JUNE 2023 | Virtual sessions

9:30	Welcome to Virtual Day of the Futures Conference 2023 Director <i>Juha Kaskinen</i> , Finland Futures Research Centre, University of Turku
9:45	Session 8 (parallel tracks)
11:00	Break
11:15	Session 9 (parallel tracks)
12:30	Lunch
13:15	Session 10 (parallel tracks)
14:45	Break
15:00	The Virtual is Real, but How Do We Make it Right Director <i>Elizabeth Strickler</i> , Georgia State University, United States
16:00	Discussion: Empowering Futures
16:30	Closing of the Conference

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SESSION PROGRAMME

WEDNESDAY 14 JUNE 2023 | Onsite

Track Session	Track 1 Ls 18	Track 2 Ls 19	Track 3 LähiTapiola Ls 16	Track 4 Ls 07	Track 5 Ls 09	Track 6 Ls 01
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13:30–15:00 Session 2	Futures of citizen engagement in communication and freedom of expression	Futures orientation and participatory approaches in planning of the built environment	Long-term governance and actions in the present	Collaborative and participatory foresight fostering institutional change and business	Workshop Participatory Strategic Foresight: a Service Design approach	Workshop Performative Postnormal Times
15:30–17:00 Session 3	Foresight and futures research for empowering people	Workshop Smart Place Branding in the Value Production of the Enterprise 4.0	Futures education: Insights to futures literacy and thinking	Sustainability, social change and future generations	Workshop How to Support Bottom Up Futures Thinking Initiatives for Transformation	

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- [Session 2](#)
- [Session 3](#)

SESSION PROGRAMME

THURSDAY 15 JUNE 2023 | Onsite

Track Session	Track 1 Ls 18	Track 2 Ls 19	Track 3 LähiTapiola Ls 16	Track 4 Ls 07	Track 5 Ls 09	Track 6 Ls 01
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10:45– 12:15 Session 5	Futures education: Adult education and leadership coaching	Foresight and futures research for (climate) just transition	Methodological development of futures studies: Scenarios	Methodological development of futures studies: Futures thinking	Workshop Time to think: Experiment Generative Futures-Thinking	Special MP Session Flourishing Urban Futures to Overcome Polycrisis – Roadmap for Resilience 2050
13:00– 13:40 Session 6	Poster Session Ls 07					
13:45– 15:15 Session 7			Panel Session Collaborating for the future: Discussing the role, aspects, and emerging applications of transformative learning in Finnish adult education	Socio technical trends and transition	Knowledge Roundtable Developing Democracy Futures	Workshop Embodied futures

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SESSION PROGRAMME

FRIDAY 16 JUNE 2023 | Virtual sessions

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11:15–12:30 Session 9	Methodological development of strategic foresight	Long-term governance and actions in the present	Futures research and sustainability transition	Futures research and strategic foresight	Special Session Futures Literacy for the sustainability of present and future generations: key questions, means, contributions
13:15–14:45 Session 10		Sustainability and future generations	Youth and creative empowerment for social change	Workshop AI & Future of Organizational Governance	Special Session The Next 8 Billion – An intergenerational dialogue on the future of multilateralism and the multi-lateralism of the future

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KEYNOTE SPEECHES | Onsite & Virtual

Democratic Governance and the Futures: Tensions and Possibilities

Time: Wednesday 14 June at 10:00–11:00
 Room: Osuuskauppa-sali

Setälä, Maija

University of Turku, Finland

According to the so-called democratic myopia thesis, representative democracies are prone to short-termism. Indeed, democratic principles such as pluralism, popular self-government, and reversibility of policies seem to be hard to reconcile with elements of future-regarding government such as expertise, consideration of future interests, and commitment to future-regarding collective action. There are already different institutional arrangements mitigating short-termism that limit, steer and check democratic processes. While acknowledging the relevance of the democratic myopia thesis, I will argue that democratic will-formation based on inclusive, democratic deliberation is actually necessary for future-regarding governance. Democratic deliberation reduces the risks of misrepresentations of future interests and enhances commitment to future-regarding collective action. Yet, the question remains to what extent and under what conditions the current representative systems can facilitate such inclusive and future-regarding deliberation.

Sustainability and futures. Moving beyond “The Natural” and “The Artificial”

Time: Thursday 15 June at 15:45–16:45
 Room: Osuuskauppa-sali

Dr. Øverland, Erik F.

World Futures Studies Federation (WFSF), Germany

Our perspectives on what is considered "artificial" and "natural" are currently changing rapidly due to digitalization, artificial intelligence, quantum computing, and other technological developments. The relationship between the natural and artificial is complex and multifaceted. Traditionally, "artificial" has referred to something created by human beings, while "natural" refers to something that exists without human intervention. What was once considered to be natural and independent of human influence can no longer be viewed in the same way due to these developments. The lines between what is natural and artificial have become blurred, which has significant implications for our perceptions and worldviews, particularly in terms of long-term reasoning as futurists. For example, ecosystems can be viewed as natural systems, but human activities such as deforestation, pollution, and climate change can disrupt these systems and create artificial ones. Similarly, genetically modified organisms (GMOs) are created by human intervention, but they still have biological origins and interact with natural ecosystems.

However, if even nature without human intervention can be seen as a construct by human beings, futurists must reconsider the fundamental assumptions of this distinction. In my talk and based on my recent article in Futures ("Sustainability and Futures: Moving Beyond 'The Natural' and 'The Artificial'" Øverland, 2023), I will explore this distinction further while offering criticism of the view of nature as a given, independent reality separates from human intervention. I will use the terms “Sustainability” and “Anthropocene” to illustrate the points made.

The Transetarian Revolution: The Power of Ageless Futures

Time: Thursday 15 June at 17:00–18:00
Room: Osuuskauppa-sali

Alegria, Rosa

Perspektiva, Brazil

The transetarian revolution is a phenomena of the transitional times. A revolution that emerges from the construction of age identities that no longer fit into the age groups categorized by demographic studies.

Transetarian is a neologism that translates the crossing of ages. Etymologically, the prefix *trans-* (from Latin) means “beyond”; the word *etarian* derives from the Latin “aetas, atis”, which means age.

This presentation is about the power of creating desirable futures through intergenerational relationships that go beyond age, without barriers that classify and separate them.

According to a study conducted in 2018, integrating desk-research, bibliographic research and focus groups, there are three developments shaping the growing potential of intergenerational futures in the direction of social transformation: increasing longevity, digital revolution and post-modern subjectivity. Findings from this study indicate that generational classification should be questioned in social and scientific terms.

This study has indicated that there are more convergences than divergences in the relationship with the future between all generations. This is a great opportunity to create projects that through generational integration can satisfy broad needs and mitigate age conflicts.

Faced with this new reality, futures thinking becomes a powerful instrument for creating social transformation and to heal the planet through intergenerational relationships orchestrated by methods that reconcile interests, desires and capabilities.

The Virtual is Real, but How Do We Make it Right

Time: Friday 16 June at 15:00–16:00
Room: LähiTapiola-sali

Strickler, Elizabeth

Georgia State University, United States

In this presentation, I will explore the Metaverse, a virtual shared space with transformative potential, and discuss the essential building blocks needed for successful virtual communities. Drawing from a class I taught, where a diverse group of students built within the Metaverse, I will share our findings on the importance of learning a new language for effective communication and collaboration with humans and machines, a digital currency system for exchanging value and ensuring a functioning virtual economy, and developing a shared culture and meaning to foster belonging and purpose. Just as language, money, and culture serve as the foundations of human societies, they are also critical in the virtual world. By understanding the parallels between the building blocks of human societies and virtual communities, we can work towards creating an inclusive and meaningful Metaverse that has the potential to revolutionize the way we live, learn, and connect with one another.

WEDNESDAY 14 JUNE 2023 | Onsite

SESSION 1 at 11:15–12:30

AI exploration: futures perspective

Time: Wednesday 14 June at 11:15–12:30
 Room: Ls 18
 Chair: Osmo Kuusi

Toward Redesigning Democracy for the Long-Term Governance: The Rise of Artificial Intelligence and the Uncertain Future

Lee, Yuna

Yale University, United States, and University College London, United Kingdom

Amid the deepening uncertainty in the future, Artificial intelligence (AI) is an inspiring technology that is expected to be the most powerful tool of a generation that benefits mankind (Schmidt et al., 2021). AI can be defined as simply a computer system with a function of intelligence or an artificial implementation of human intelligence in a machine. Scientists have already made remarkable advances through AI technology that can improve the quality of life in fields such as medicine, biology, and astronomy, however, still there remains much to learn about the potentials and limitations of AI technology. The purpose of this paper is therefore to present a broad review of the research on AI policy and a global governance system. Through a systematic review of the literature and focus groups, this study identifies seven core research streams as: 1) lethal autonomous weapons and the arms race, 2) disinformation and democracy, 3) AI ethics and safety, 4) AI governance, 5) quantum computing, 6) space and earth applications, and 7) competition and conflict in the US & China relations. This study analyses each research stream for the key insights and limitations and identifies vast implications to the current state of global affairs, as well as legal systems around the world, yet AI-based algorithms present new and complex legal issues of accountability, liability, predictability, and such. Accordingly, this study observes different legal systems around the world, concentrating on the case in the US, EU, and China. Overall, this study aims to bridge the different academic disciplines across the fields of law, political science, computer and data science, history, physics, and ethics, and to examine diverse solutions suggested by government officials, scholars, and foresight practitioners for responding to emerging threats and opportunities. It is not only about understanding how to prepare for potential risks, but also about building secure long-term governance for the AGI system by moving beyond a dependency on the illusion of AI.

Keywords: artificial intelligence, global governance, global AI governance, AI policy, AI ethics

Scenario Planning and ChatGPT

Rowland, Nicholas J.^a & Spaniol, Matthew J.^b

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^b Roskilde University, Denmark

At this point in time, artificially intelligent tools (e.g., chatbots) can now generate numerous scenarios on seemingly any topic at essentially zero cost to the user. Still, the authors insist that the utility of those scenarios is largely predicated on the user's ability to coax the appropriate "raw material" from the artificially intelligent bot, which implicates, the authors contend, that such bots can usefully provide base material for the development of scenarios but are unlikely to fully eclipse scenarists in the production of scenarios. Additionally, the authors recommend that the futures and foresight prac-academic community pay especially close attention to artificially intelligent tools for novel insights with regard to the differences in human cognition and, in this case, the logic of large language model outputs. As thought provoking discussion topics: chatbots can answer van der Heijden's "crystal ball" questions under the assumed identity of another (e.g., a

CEO of a major organization in a specific business sector); beyond creating scenarios, chatbots could create labels for the quadrants, potential newspaper headlines, representative metaphors, etc., thus, adding the “color” or “texture” of scenario development; we have asked chatbots to test scenarios for internal consistency and even how an organization might act to take advantage of a given scenario. Bottomline: while chatbot-generated scenarios seem incomplete, chatbot-assisted scenario development seems possible, if not promising, based on the parameters discussed here within.

Keywords: AI, ChatGPT, scenarios

Spectrum of AI Futures Imaginaries by the AI developers in Finland and Singapore: why the rapid AI progress was not seen?

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^b Finland Futures Research Centre, University of Turku, Finland

AI teases our imagination: people have created various dystopic and utopic imaginaries of the era of AI. The dystopic imaginaries of AI focus often on the conflict between humans and machines, whereas the utopic imaginaries seem to believe in co-existence of AI and humans. Although the key group to create and realize AI-related futures imaginaries are the technology developers, the focus of empirical research concentrates on collective rather than individually interpreted imaginaries. There is a need for empirical research of individual developers’ futures imaginaries, as well as a need to fine-tune the related vocabulary to support individual and non-linear perspective. We present an empirical interview study of 35 developers of AI and robots based in Finland and Singapore. We asked, what kind of best and worst futures imaginaries the developers of AI and robots hold; and how do the developers imagine likely futures to emerge? As a result, we present three continuums: (1) human-AI co-existence and a meaningful life – AI controls and destroys humans; (2) co-creating innovations and sustainable life with AI in a democratic society – Increasing inequality, fear of dependence over technology; and (3) sustainable economy and dispersed power – economy of efficiency and corporate-centered power. Along these continuums, the developers consider different variations of likely futures. Our analysis further reveals decisive questions behind the continuums regarding the agent in control, relations in developer communities and society, and justified concentration of power.

Keywords: AI, futures imaginaries, technology developers, continuums, decisive questions

Future of Voter Decision-Making: Outsourcing Decision-Making to AI or Enhancing Human Capabilities

Willman-Iivarinen, Hanna

Miratio, Finland

In the near future, we shall vote about very different themes than today. For example, we need to make some guidelines for biohacking and the nondiscriminatory usage of algorithms. The topics are not the only things that are changing. As voters, we encounter with candidates more and more online. However, this is artificial since everybody tries to put their best foot forward. What does it mean that cyberselves meet instead of real people? Candidates may outsource their online discussions to chatbots. Is that a problem or not? Many people outsource their decision-making to VAA applications. Wouldn’t it be more practical just letting an avatar vote instead of outsourcing the decision to clumsy VAA applications? Instead of outsourcing, we might also enhance humans digitally with brain implants, etc. This paper examines these developments from the perspective of voter autonomy, agency, and the execution of democracy. The method used in this study is scenario thinking, and the model of decision-making used in this study is described in Willman-Iivarinen dissertation (“Consumer media choice – Towards a comprehensive model,” 2020).

Keywords: voter agency, human enhancement, democracy

Foresight and futures research for sustainable transitions

Time: Wednesday 14 June at 11:15–12:30
 Room: Ls 19
 Chair: Ville Lauttamäki

Towards an Integration of Futures and Sustainable Transitions – a Practical Application

Persson, Björn – Forsberg, Petter & Bengtsson, Daniel

RISE Research Institutes of Sweden, Sweden

The world is currently on a trajectory to overshoot the 1.5 degree target set by the Paris agreement, the effects of climate change are becoming increasingly clear as extreme weather events continue to cause severe damage. There is a pressing need to fundamentally transform our societies to more just and sustainable futures. This paper aims to develop methods for conducting prospective transition of societal systems by exploring the theoretical and practical research interlinkages between sustainability transitions and futures research, specifically the Multi Level Perspective (MLP), and Futures Studies (FS). Studies on sustainability transitions and futures research have much in common. The scientific inquiry of both fields is directed at gaining better understanding of socio-ecological systems, the long-term societal trends shaping them, and guide their transition to a desirable end-state. Despite their overlap, few scholars have examined their commonalities and how they can be integrated in a practical manner. We argue that the MLP can benefit from FS by gaining greater directionality and pluralism of futures in the transition process, while the addition of the MLP in FS introduces a structure in understanding socio-technical regimes and systems level transitions. We implemented an integrated MLP-FS framework in a research program working to transition the Swedish food system. In a workshop various actor from the food system conducted prospective transitions towards four normative scenarios describing sustainable food systems. Using backcasting and pre-mortem related to regime factors from the MLP, participants built common understanding of areas in need of change for the system to undergo a sustainable transition. Results indicate that the MLP and FS can be integrated and implemented on a practical research level, and help illustrate what a sustainable transition entails. We see this as a promising step in the academic inquiry into the intersection between sustainability transitions and futures research.

Keywords: sustainability transitions, normative futures, backcasting

Envisioning the Future Role of Offshore Wind in Finland's Energy Mix

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^b Demos Helsinki, Finland

Interest in developing offshore wind is rapidly increasing. The EU has announced ambitious plans to significantly increase the capacity of offshore wind over the next decade. In Finland, offshore wind is still a relatively underutilised source of clean energy, but interest is growing. Finland has announced a roadmap to becoming a carbon neutral nation by 2035, and offshore wind is considered an important tool in achieving this goal. There is a need to understand the role that offshore wind could play in Finland's broader energy mix and the potential conflicts that may arise during its development.

We will hold two expert stakeholder workshops to co-create and develop a shared vision and understand the future role of offshore wind. By doing so, we can identify the steps, actions, investments, and policies needed to reach this desired future state. Furthermore, attempting to develop a shared vision will expose the conflicts and challenges that may arise in developing offshore wind. The aim is to develop one unified vision but if these conflicts prove too challenging to overcome, alternative visions on the role of offshore wind may emerge.

The results from the two expert workshops will be compiled and a national public survey will be used to elicit public opinion of the future role of offshore wind. The public is a key stakeholder in offshore wind development. Consequently, it is important to understand the opinions of those impacted by offshore wind and compare if the viewpoints of experts and the public align. This process will be undertaken during spring 2023 and is

currently in development. This research will support strategic planning for the energy sector, specifically offshore wind, and aid in developing the Finnish marine space in a sustainable manner.

Keywords: offshore wind, participatory planning, visioning, stakeholder engagement, sustainability

Application of Foresight Tools in Research of a Low-Impact Mining Ecosystem

Lopes, Luis – Miklovicz, Tamas & Bodo, Balazs

La Palma Research Centre SL, Canary Islands, Spain

ROBOMINERS is an EU-funded project (GA n° 820971) with a joint effort to develop an innovative approach that combines the creation of a new mining ecosystem with novel ideas from other sectors, in particular with the inclusion of disruptive concepts from robotics. The main goal is to secure the EU access to mineral raw materials in the long-term.

Despite having a detailed planning for the years 2019-2023, there is a focus on mapping future research and development of the technology line. Through participatory and engaging foresight tools, with contribution from internal and external experts, a plan for future implementation towards commercial application is in creation. In particular, the methodology is using:

- 1) Horizon Scanning: mobilises expertise from within the robotic and mining expert community
- 2) Focus groups: leverages cluster capacities to develop Delphi statements
- 3) Delphi Surveys: define a wide array of convergent technologies that can support the implementation of the proposed ROBOMINERS schemes by 2030 and 2050
- 4) Visioning: starts up a technology visioning process for 2030 and 2050
- 5) Preparation for pilots: supports the development of technology and economic feasibility plans for potential sites
- 6) Roadmapping: provides a timeline and direct support to the implementation pilots and commercial application

While the project itself develops the technology line towards a Technology Readiness Level (TRL) of 3-4 (technology validated in lab), the future looking efforts aim at suggesting improvements and future research areas to achieve TRL 6-7 (system prototype demonstration in operational environment) and TRL 8-9 (actual system proven in operational environment) by 2030 and 2050, respectively. It is, therefore, important to go through forward-looking thinking process via series of foresight tools and plan ahead for the research developments that will allow the system to be ready for real operation.

Main findings through the exercises include future research challenges concerning scalability, resilience, re-configurability, self-repair, collective behaviour, operation in harsh environments, selective mining, production methods as well as for the necessary converging technologies on an overall mining ecosystem level.

This paper describes the application of the several foresight methodologies applied for a disruptive technology that can contribute to the mineral raw materials supply needs of the EU.

Keywords: horizon scanning, delphi survey, visioning, roadmapping, mining, robotics

Special Session: Futures for new normative policies: Backcasting, pluralism and deliberative democracy

Time: Wednesday 14 June at 11:15–12:30
Room: LähiTapiola-sali

The session consists of an introduction by the chair, a paper titled “Deliberative, policy relevant scenario process: realistic goal or mission impossible?” by Tapio et al., and a moderated, partly structured discussion for all participants of the session.

Futures for new normative policies: Backcasting, pluralism and deliberative democracy

Aleksi Neuvonen

Demos Helsinki, Finland

At present, science-based, normative long-term goals on mitigating climate change and biodiversity loss form a strategic horizon for contemporary societies and their futures. For instance, dozens of nation states, hundreds of cities and numerous organisations throughout the world have set time-bound targets on reaching climate neutrality over the next 10-30 years as a response to the climate crisis. This is a new phenomenon of governance, politics and public discourse that defines this era. These normative goals change the way we think about the future: We now have somewhat precise definitions of the desired futures. Therefore, we also need a transformational way to plan for the future. Despite the normative goals, we assume that we can hold on to the ideals of a liberal society regarding pluralism and diversity of lifestyles. We can at least imagine that the transition can happen in many different ways and that the pluralism and diversity of society prevails in different alternative realizations. There is still a tension between normative goals and diversity, which affects the orientation, management and politics of organizations. To dismantle it, new types of tools and processes are needed to support decision-making, planning and public discussion. Therefore, a need for methods and approaches that can orchestrate political discourse, decision making and planning on transformative futures grows. By having constructive discussions that embrace different perspectives and create alternative futures, we can expand problem definitions and break away from the limitations of the present. This special session focuses on backcasting scenarios and practices of deliberative methods as such attempts. Backcasting scenario approach, i.e. working backwards from an envisioned future image to the present day, is a tool with the potential of re-focusing on the future, expanding the domain of solutions that could accelerate system-level transitions. Also variants of deliberative democracy can be interpreted both as a problem-solving theory and as a form of normative discourses, either as a way for clarifying interests and evaluating claims for better decision-making or as an open-ended process for cultivating democratic norms (Wironen et al., 2019).

Keywords: deliberative democracy, backcasting, scenarios, pluralism, transition policies

Deliberative, Policy Relevant Scenario Process: Realistic Goal or Mission Impossible?

Tapio, Petri^a – Lauttamäki, Ville^a – Lyytimäki, Jari^b – Parkkinen, Marjukka^a – Rikkonen, Pasi^c – Rooyen, Pavlina van^d – Varho, Vilja^c & Vikström, Suvi^b

^a Finland Futures Research Centre, University of Turku, Finland

^b Finnish Environment Institute (SYKE), Finland

^c Natural Resources Research Institute (Luke), Finland

^d University of Strathclyde, Scotland, United Kingdom

The purpose of this review is to provide an analysis of the potential roles of scenarios in public policy making from the deliberative democracy point of view. We approach the topic first from the ‘scenario production’ side by outlining alternative forms of agreement and disagreement in various scenario works. Agreement and disagreement can be focused on the preferability, probability or plausibility of an individual scenario, a scenario set, or the system dynamics studied in a scenario work. Five forms will be identified, in a continuum from strong to weak agreement, reflecting epistemological continuum from Comtean positivism to relativism: a) Deterministic modelling, b) Strategic planning, c) If...then modelling, d) Pluralistic backcasting and e) Post-

truth agonism. We conclude that if...then modelling and pluralistic backcasting offer suitable methodologies for generating a meta-consensus of scenario sets, thus serving as operationalisation of deliberative democracy, but they differ in terms of their assumptions of a single or multiple possible system dynamics of the studied system. The second part of the paper discusses the 'scenario consumption' side and digs deeper to the forms of usage of scenarios in a policy process. Here we suggest that scenarios can be used either as direct policy alternatives, flexible basis for strategic discussion or as a tool of enlightenment, that is food for thought. Each of these levels may contain the use, non-use and misuse of scenarios, again divided to intentional and unintentional forms. This typology creates as many as eighteen alternative forms of usage of scenarios. We conclude that to best serve as a deliberative policy process, scenarios should be used intentionally, and take into account wider societal developments, move towards strategic topic-specific issues and be aware of more concrete policy implementation. However, scenario analysts and policy makers should be aware of the other fifteen forms to avoid unnecessary pitfalls or morally questionable usage of scenarios. The third part of the paper brings the production and consumption side of scenarios together on a more concrete level. Based on our studies on using scenarios in national climate and energy strategy in Finland we ponder further what kind of indicators of deliberative scenario works are available and how scenario works could be developed to reach a meta-consensus on relevant scenario sets.

Keywords: scenario, foresight, deliberative democracy, climate policy, energy

Participatory approaches in futures research

Time: Wednesday 14 June at 11:15–12:30
 Room: Ls 07
 Chair: Sari Söderlund

Future Predators

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Our views of the future, quite understandably, move in human-centred themes and time perspectives. Therefore, various analyses tend to focus on short-term problematics and analysis. Moreover, short-term reviews often attach primarily to the ideas of utilisation, which feeds entirely one-sided comprehension of preying, predator and prey and its different techniques of gaining, coping and progress.

This research focuses on thinking about preying/hunting and those that hunt, predators, from posthumanist perspectives. Moreover, we want to examine the theme from broader comprehension of time, such as through the concept of deep time. Our standpoint opens through art, but we reach towards other disciplines to comprehend the manifold nature of predators and prey. In particular, we focus on the relationship between predators/preying and different systems, such as economy, art, nature-cultures and technology; How does predator-ship entangle and entwine into these?

We freely and critically apply Inayatullah's CLA-analysis, in which we analyse possible meanings of predator-ship through the layers of litany, system, worldview and myths. Through the CLA-analysis, we aim to integrate experiential, interpretive, critical and action-related ways of knowing into alternative assemblages through which human-centeredness and time can be questioned.

We investigate the theme through differently locating case studies and with the help of these cases. On the one hand, we examine the visual representation of predators, such as various forms of preying hidden in pyramid schemes. On the other hand, we map out the diverse locations of preying, such as museum exhibitions and museum gift shops and the different spatial and social choreographies associated with them. The analogies and metaphors that arise from the narrations of the presented nature-cultures guide the analysis from one perspective to another.

Our article aims to deliver a conceptual and practical understanding on strategies of predator-ship in the discourses of art, education, economy and society. This investigation offers us further questions and focus for our future predator-ship approaches.

Keywords: predators, CLA-analysis, posthumanism, new materialism, art world, more-than-human world

Engaging People in Futures Thinking through Arts-Based Practices: Testing Arts-Based Approaches in the FAST45 Project

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As a multidisciplinary field, futures research borrows approaches from different disciplines. However, it often ignores the potential of the arts on a large scale, even though the arts embrace creativity and often depict and narrate imagined futures.

Arts School Futures Lab is a futures workshop approach developed for higher arts education institutions in the FAST45 project. Funded by Erasmus +, the project strives to imagine, map, and shape the European higher arts education landscape with futures thinking and futures studies. It collects knowledge, creates and tests new methodologies, and implements them to help higher arts education institutions raise their futures consciousness and develop higher arts education in Europe.

This paper examines the opportunities and limitations of selected arts-based approaches in futures workshops. The approaches were tried extensively in Arts School Futures Labs (15 test labs and 12 actual labs) in seven European countries. The use of arts-based practices in the labs will be presented, and their usability will be critically examined. Finally, recommendations for the use of arts-based practices in futures workshop contexts will be given.

Keywords: arts-based practice, futures workshop, Arts School Futures Lab, futures thinking, testing

Strategic Communication and Information Complexity in Foresight: How to Align Foresight Results with Long-Term Strategic Goals of an Organization or Agenda

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One of the main targets of strategic foresight is to develop alternative scenarios, roadmaps and narratives for future developments. Building illustrative pictures of the future helps to better understand, prepare for and adapt to necessary changes such as technological breakthroughs, social movements or climate-related issues. The communication of foresight results is often seen as a crucial last step in order to change and transform an organization or agenda. As such, strategic foresight has become an important methodology and toolset for enterprises, NGOs, research organizations and policy makers alike.

However, in an increasingly complex and dynamic world the proper communication of foresight results and the proper communication of the actions needed for transformation towards alternative futures become more difficult – due to information overload and the high number of communication channels available. In order to achieve long-lasting attention of the desired audience, a thorough communication strategy is needed from the beginning. It becomes, therefore, more important to use strategic communication approaches when a foresight project is planned and coordinated among its stakeholders and audience.

Following Ansgar Zerfaß' definition, strategic communication is such communication that is substantially and significantly relevant to the survival and sustainable success of organizations. Strategic communication is closely aligned to an organizations' strategy or agenda and needs specific strategic objectives, careful planning and the measurement of objectives. It defines and concerts communication measures that support the long-term competitiveness, and the long-term ability to compete for attention accordingly. In line with research on dynamic capabilities of an organization – that are the capabilities to sense, seize and reconfigure resources needed for necessary changes and transformation – strategic communication is seen as an important prerequisite to reconfigure the organization, it's strategic path, and align stakeholders and the necessary resources for change.

Foresight projects and papers, however, often do not address the importance of strategic communication. Foresight projects often lack a strategic communication plan and often stop communicating when scenarios or future narratives are ultimately set. This paper addresses these issues and presents a framework how to

integrate strategic communication into foresight projects. As a consequence, foresight and future related foresight projects can be better aligned with an organizations' strategy or agenda on a long-term scale and unfold more impact.

Keywords: strategic foresight, strategic communication, information complexity, narratives, scenarios, dynamic capabilities

Methodological development of futures studies: Policy and governance

Time: Wednesday 14 June at 11:15–12:30
 Room: Ls 09
 Chair: Sanna Ahvenharju

Empowering Futures Through Responsive Foresight

Giesecke, Susanne & Wasserbacher, Dana

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Ever since EFFLA's (European Forum on Forward Looking Activities) call for a better embedding of foresight in the policy making cycle, in particular the early sense-making phase, a more widespread and more systematic use of forward-looking intelligence to support the preparation of policy decisions at the EU and in some countries at the state level have been developed. For example, Foresight has been used in the preparation and implementation of Horizon 2020 work programmes and strategic programmes, the development of the third strategic programme of Horizon 2020, for instance, was informed by a dedicated strategic foresight study. The inclusion of foresight in the Better Regulation Toolbox (which complements the Better Regulation Guidelines) provides further evidence of the growing significance of foresight in the context of policy making, from informing policy and facilitating policy implementation to embedding participation in policy-making and supporting policy definition. Overall, we argue that foresight has become increasingly embedded in the policy process over the past years and now represents an important building block in the family of policy support tools used by the European institutions and national and regional level in many countries.

Most of these recent foresight-related activities are geared towards underpinning the preparation and implementation of longer-term initiatives and strategic programming of R&I ("strategic foresight"). Complementary to this, however, there is a growing need for providing forward-looking analysis and decision options in response to unexpected developments, emerging risks and crisis situations.

Experiences of the past decades have underlined the importance of being able to provide possible answers to such unexpected developments, as evidenced by the slow responses to recent crises such as the COVID-19 health crisis, the Western failure in Afghanistan, the migration crisis, and earlier in this century the Arab Spring, the financial crisis, the outbreak of the Ebola virus. In such a context, foresight is increasingly recognized as a powerful approach to anticipate the unexpected by questioning deeply ingrained, mainstream beliefs. As a consequence, our new approach is to endow Foresight with rapid response mechanisms and the necessary intelligence to respond quickly to such unexpected developments. The new tool aims at fulfilling functions that are complementary to strategic foresight, such as

To raise and anticipate awareness of disruptive events and technologies and their relevance to the broader socio-economic dynamics of our societies;

To stimulate individuals, networks and organisations to explore novel terrain and trigger "out-of-the-box" vision-building and novel strategic thinking;

To support preparedness and adaptability of longer-term policy initiatives from a forward-looking perspective.

The new approach draws especially on the complex of 'Foresight on Demand' projects, commissioned by DG Research, EC, to a consortium of foresight practitioners between 2019 and 2023. The projects were designed for application in many policy areas, including the traditional R&I field but also in more societal areas such as education, health, migration, housing, smart aging, and in areas with a strong technical focus such as energy, mobility, IT, AI, etc.

Given the rapid pace of recent developments, the traditional time span of a strategic foresight project in R&I far too long to react to disruptions and unexpected events and to generate policy advice. Thus our responsive Foresight Approach is to reduce this time frame to six months through a balance between standardisation of processes on the one hand and methodological flexibility on the other. Moreover, a good understanding of and close interaction with the policy context in which a specific project is embedded are critical to achieving the expected impacts. In recent projects the responsive foresight team has already developed modules that can be combined to make the foresight approach more responsive.

Keywords: responsive foresight, foresight on demand, European Commission, foresight modules, empowerment, stakeholders

Worldwide Median and Average Governance Trends of the Member Countries of the European Union: Median, Average and Gap Trends Analysis for the EU Country Level Benchmarking Analyses

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Finland Futures Research Centre, University of Turku, Finland

The Worldwide Governance Indicators include six key dimensions of governance (1) Voice & Accountability, (2) Political Stability and Lack of Violence, (3) Government Effectiveness, (4) Regulatory Quality, (5) Rule of Law, and (6) Control of Corruption between 1996 and present. Worldwide Governance Indicators measure the quality of governance in over 200 countries, based on close to 40 data sources produced by over 30 organizations worldwide, and are updated annually since 2002. The EU study is based on this comprehensive database collected for the European Union Member countries.

The study focuses on the statistical median and average numbers of EU countries' historical development. The key result of the study is to present six median/average trend analyses for Voice and Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regularity Quality, Rule of Law, and Control of Corruption. The aim of this empirical trend study is to deliver median/average trend curves for the country-level benchmarking analyses of the European Union. These results are useful for the European Parliament and national parliaments of the European Union. The study also identifies the champions of national-level governance.

Special attention is paid to the policy-relevant question of how median and average trend curves are developing in the EU region: Are median or average trends going up, or down, or are they stable? The median and average trend curve results provide an empirical foundation for national EU gap analyses of the quality of governance in the European Union in these critical six fields of governance. In this empirical EU median trend study, the authors report also gap and standard deviation trend analyses of all EU member countries in six relevant fields of governance.

A similar kind of median and average trend methodology can be applied in the field of global governance analyses. New methodological trend analysis innovation of global governance analysis will be discussed in this paper. Critical empirical assessments of governance and democracy can be applied in many levels of political, economic and social planning and development. These analyses can create also knowledge-based early warnings of socio-political crises in the European Union.

Keywords: voice & accountability, political stability and lack of violence, government effectiveness, regulatory quality, rule of law, control of corruption

Future Oriented Governance of Health and Social System Resilience

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How strategy process and scenarios on future development may support long term governance of social and healthcare systems? I will answer the question by exploring future orientation of theories on system resilience (e.g. Biddle, Wahedi & Bozorgmehr 2020; Hillmann 2020; Rodríguez-Sánchez et al. 2021; Sagan et al. 2021)

and compare them to theories on strategic management (e.g. Lynch 2018). I will reflect theories on two empirical cases: 1. Governance of health systems during COVID-19 (Malin 2022) and 2. Social and welfare reform in Finland (Malin 2021). The presentation ends with concrete recommendations for the research on long-term governance on system resilience perspective (see Pyone, Smith & van den Broek 2017). I will discuss on the continuity of services as a boundary concept between strategy-based future orientation and system resilience. Implications for Management Practices in Higher Education Institutions are discussed as well.

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Keywords: metagovernance, system resilience, anticipation, future scenarios, management

Workshop: How to Identify Future Imaginaries with Research through Design

Time: Wednesday 14 June at 11:15–12:30
Room: Ls 01

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Hochschule für Gestaltung Schwäbisch Gmünd, Germany

In this workshop participants learn how to apply a method to identify Future Imaginaries in their organization. This is done using the four defined principles and variable parameters that set the framework for the context to be researched.

Future Imaginaries are unreflected expectations of the future of a group of people. They are immensely dominant in the future discourse, as they are no longer questioned by the group. Therefore Future Imaginaries guide the actions and thoughts of individuals and collectives with regard to the future.

This phenomenon becomes especially relevant in organizational context. If Future Imaginaries are too homogenous, organizations become blind and are likely to oversee trends. On the other hand, if they're too different, organizations become unable to operate quickly.

But how do you identify these diffuse, non-existing Future Imaginaries? As part of the subconscious worldview, they can be accessed and brought to the surface indirectly through different media. One possible answer lies in the combination of Research through Design and Futures Studies due to its unique ability to study through interventions how future worlds could look like. More specifically, an indirect qualitative research tool is used to provocatively gather insights into the expectations of the futures.

The process follows four underlying principles:

1. From Present to Futures: As the future doesn't exist, only the present images of the future come into question to study. (Dator 2019, 3-4)
2. From Subconscious to Reflection: The method aims to bring the subconscious individual future expectations to the surface by starting a reflective process within the participants.
3. From Individual to Collective: Future Imaginaries are images of the future in individual minds, consequently the research tool gathers qualitative individual data, which is then clustered and compared in collective patterns.
4. From Field to Showroom: The process starts by sending the tool into the field of research. Then the returns are analyzed, interpreted and used as a basis for imagination, resulting in reports, scenarios and artifacts, for the 'Showroom'. A workshop initiates a discourse on similarities, resistances and alternative futures in the research group, strategies for today are derived.

This research has been carried out within corporate organizations, beyond that the methodology can be applied to any context, for example governmental or political institutions. Its goal is to empower people for long term futures thinking and enable them to design alternative futures.

Keywords: Future Imaginaries, design research, design futuring, organization

SESSION 2 at 13:30–15:00

Futures of citizen engagement in communication and freedom of expression

Time: Wednesday 14 June at 13:30–15:00
 Room: Ls 18
 Chair: Sirkka Heinonen

Comments on Online News Articles: Commentators Both as Prosumers and Censors

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In the spring of 2024, the EU Digital Services Act will affect the moderation of user-generated content. The act obliges online platforms to provide their users with the right to complain and redress, which aims at safeguarding online free expression. However, these rules will not cover user-generated comments posted on news portals. This means that in the nearest future commentators will find themselves in a weaker position in comparison to users of online platforms. This is worrisome because, as established by previous research, comments on news articles present the most common way of audience participation across Western democracies and greatly contribute to public discourse. The lack of protection is even more worrisome taking into account the decision issued by the European Court of Human Rights (ECtHR) in the case of *Delfi AS v. Estonia* [2015]. The court found an Internet news portal liable for unlawful comments, which led to a new moderation standard: reviewing all comments just after posting to delete unlawful ones. After *Delfi*, the future of comments is left at the mercy of portal moderators, who due to undervaluing third-party speech, tend to delete even lawful comments.

The paper looks closer at commenting on news articles and builds a new theoretical framing for a news production model by borrowing from Benkler's theory of the wealth of networks and Zittrain's theory of Internet generativity. Furthermore, the paper revisits the theory of collateral censorship, developed among others by Meyerson, Kreimer, and Balkin, in order to emphasize the negative implications of turning the model into a walled garden to satisfy the *Delfi* standard. Additionally, the revision of the collateral censorship theory concludes that not only moderators but also commentators can act as collateral censors of their peers. Yet, collateral censorship by peer moderators can be justified in contrast to censorship by moderators.

The paper argues that the deteriorated levels of protecting commentators' freedom of expression can be restored by acknowledging them as prosumers, who participate in downstream information production but, in contrast to the portal publisher, do not control their inputs. Empowering commentators as prosumers should allow them to protect lawful comments and empowering as collateral censors to mitigate the negative effect of post-*Delfi* moderation.

Keywords: freedom of expression, internet, censorship, moderation, comments

Breaking Down Communication Barriers on the Way to a More Inclusive Democratic Future

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Current practices for citizens to engage in the democratic process are not always in line with perspectives on inclusion and equity. Individuals with health-related or communication differences face exclusion from the process due to challenges imposed by a strict approach to time management, restricted in-person access, and lack of audio-visual accessibility in spaces where public gathering forums, such as town hall meetings in local communities, are held. This is in direct contrast with the essence of these forums: to give people access to and

influence in their democracy, thus empowering them as individuals and collective groups. It is thus important to consider the physical environment, medium and manner of communication used to engage its members.

Fostering change and finding solutions to a process set in its habits necessitates a creative approach incorporating mainstream applications, reducing stigma, and fostering inclusion and equity of vulnerable parts of the population. Using challenge-based research and learning, we tackled the wicked challenge of stigmatization and lack of social access to democratic venues for individuals with communicative and other barriers. We share the outcomes of our Hackathon and Co-Creation events organized to address these issues, bringing together students and faculty from across academic disciplines (e.g., Communication Sciences and Disorders, political science, philosophy, cognitive neuroscience, special education) and external stakeholders (such as prominent local political figures, individuals with communication barriers etc.), to 1) raise awareness of possibly stigmatizing and exclusionary practices; 2) identify cost-efficient and universally beneficial solutions; 3) develop an implementation plan, which proposes a more accessible, inclusive and less stigmatizing atmosphere, time culture and future for democracy.

By drawing on a hackathon and co-creation event in our process of challenge-based learning and research, we selected methods which are themselves in line with the subject, namely increasing participation as part of a sustainable academic future.

Keywords: inclusion, communication barriers, health-related differences, disabilities, equity, local government, social

Examining the Viability and Efficacy of Countermeasures for Misogynistic Online Content Through Delphi-Based Scenarios

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Undoubtedly, cyberspace is a safe haven for free communication and expression; however, it is frequently abused to disseminate offensive content and hate speech. Amnesty International Italia conducted qualitative and quantitative assessments on abusive internet content in 2019 and discovered that women are one of the most targeted groups. The European Commission's Gender Equality Strategy 2020-2025 recognizes how "online violence targeting women has become pervasive with specific, brutal consequences [...]. It is a barrier to women's participation in public life. "Bullying, harassment, and abuse on social media have far-reaching effects on women's and girls' daily lives. Hate speech directed at women is inextricably linked to misogyny, which can be defined as a cultural attitude of hatred toward females that is motivated by their gender. In our research, we aim to investigate long-term strategies that can be taken to contain the dissemination of online misogynistic speech. The current solution adopted by several organizations and companies to tackle online hate speech involves blocking or suspending the account or the particular hateful post. However, in the debate over free speech vs. hate speech, content deletion or user suspension may both be charged with censorship and overblocking and can only have short-term efficacy; one alternate strategy is to oppose hate content with counter-narratives. However, the definition of possible counteractions and their feasibility and effectiveness depend on how our society evolves in the future. Given that it is not possible to predict the future in the medium and long term, it is useful to explore future scenarios that, in the logic of anticipation, can offer a compass for the actions to be taken in the present. It is critical to generate a variety of future scenarios in order to create alternative images for calibrating possible strategies. To address this task, we consider a Delphi-based scenario approach. In particular, a systematic review of approaches and methods for countering the diffusion of hate speech, in general, and misogyny, in particular, is the starting point for the selection of both a list of possible counteractions and the panel of experts. A Delphi questionnaire is exploited to evaluate three aspects of each counteraction, namely feasibility, effectiveness, and the future year of maximum impact. The results of this Delphi procedure will allow for the exploration of several explorative futures.

Keywords: hate speech, misogyny, counteractions, delphi, scenarios

A Post-Structuralist Approach to the Causes of Online Disinformation – the Function of Specious Political Narratives in the Digital Age

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Our modern academic understanding of the “fake news” and online disinformation phenomena has been shaped by the events of the 2016 Brexit-referendum and the US presidential elections that same year. These events, framed as hostile acts by external actors and supported by local marginal dissidents and populist demagogues omits why citizens of democracies seemingly seek to undermine safe and fair elections or, spread conspiracy theories to slander politicians, opposing out-groups or other public figures. The main body of academic literature on the subject of disinformation still frames the likelihood of citizens that believe these false narratives as people who are ill-trained in digital media consumption, populists opportunistically co-conspiring with foreign malicious actors or fringe groups in the political extremes. This paper however argues that certain political events and evolutions and, the diminishing of options for meaningful change in democracies contributed to parts of the population being so discontent and “antagonised” that they are prone to believing outlandish stories about the elites in power and political institutions. This paper analyses recent political events, evolutions in political discontent and uses a post-structuralist framework to study online disinformation as a form of political action against the neoliberal status-quo.

Keywords: post-structuralism, critical studies, disinformation, democracy, populism

Futures orientation and participatory approaches in planning of the built environment

Time: Wednesday 14 June at 13:30–15:00
Room: Ls 19
Chair: Sari Puustinen

Imagining Adverse Futures in The Built Environment: Building Preparedness Through Possibilistic Impact Assessment

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Along the continuous urbanization, built environment has been noted to grow its importance in future crisis management. However, the complexity of built environments and their arenas (e.g., cities) and uncertainty that future holds make it difficult to develop detailed understanding of possible vulnerabilities when the next crisis nor its possible impacts cannot be known beforehand. Our aim in this paper is to build more holistic and futures-oriented understanding on how possible future crisis phenomena can impact the built environment. Hence, we explore what kind of future phenomena can actualize into crises and synthesize their impactfulness through space and land use perspective. This qualitative futures-studies-based study utilizes a high number of multidisciplinary expert perspectives to imagine possible adverse future trajectories and events and draws holistic synthesis of them in the built environment context. The results contribute to the fields of built environment and urban crisis and futures studies through combining the elements from both to form imaginative and possibilistic view instead of using the prevalent probabilistic approach in risk and crisis management.

Keywords: crisis, crisis preparedness, risk management, futures studies, built environment, urban

Equity-driven Climate Planning in the City: A Case Study of Neighborhood-level Climate Resiliency Planning in Cincinnati, USA

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As a significant and growing global injustice, the consequences of climate change are already falling disproportionately on those who are most marginalized in societies around the globe. For example, people in the U.S. who live in historically red-lined areas—predominantly Black neighborhoods whose residents have been systematically denied access to financial services—are exposed to temperatures up to 12°F (7°C) hotter than in other neighborhoods in the same city, a result of fewer green areas and the urban heat island effect. Extreme heat has caused more fatalities in recent decades than any other category of extreme weather in the U.S.—a problem exacerbated by climate change and whose burdens fall disproportionately on Communities of Color. This is just one of the myriad ways that, in Cincinnati and cities around the world, racial and environmental injustices are intensified under a changing climate, fueling demands for climate justice. Unfortunately, to date, even the most aggressive climate action plans within U.S. cities have largely been top-down, technocratic, and city-wide in nature, overlooking historical legacies of racial discrimination and the economic and health disparities that drive inequitable climate impacts. This presentation describes an interdisciplinary, community-engaged research-action project that sought to examine what a bottom-up, equity-driven, neighborhood-level climate change adaptation planning process might look like—one that centers the voices and actions of community members in critically-affected Cincinnati neighborhoods. After describing the multi-stakeholder partnership model of Climate Safe Neighborhoods, we will present interview findings exploring the project's personal to community-level impacts as well as lessons learned through efforts to ensure that the perspectives, needs, and goals of residents in Cincinnati's most climate-vulnerable neighborhoods are front and center as revisions are made to the Cincinnati Green Plan, a document that will guide Cincinnati's climate policy in the critical years to come.

Keywords: climate change, climate justice, community engagement, equity, resiliency planning

Foresight System as a Spatial Planning Support Tool. The Case of Finland's National Foresight System for Regional and Urban Structure Development

Johnson, Emily Marie & Airikkala, Mikko

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Spatial and transportation planning decisions have complex and wide-ranging effects on urban, regional, and national development decades into the future. Planning must consider not only current needs but also probable and possible developments and trends that the future might hold. Foresight offers tools for addressing these challenges and increasing planning systems' flexibility and adaptive capacity. Foresight is already being used in several planning contexts, but most often as a one-off exercise, without deep integration into planning processes, leading to sub-optimal effectiveness of foresight work. Use of foresight systems could address this deficiency.

A foresight system can be understood as an interlinked set of actors, practices, and processes where coordination achieves the alignment of interests and the production of future-oriented insights, decisions, and actions. The interlinked and coordinated nature of the system makes it greater than the sum of its parts; among other benefits it produces new and converging views, renews participant mental models, and maintains discussion on the issues covered by the system. Developing foresight systems in planning organizations could increase institutional foresight capacity and the impact of foresight work.

Foresight systems is a relatively new research field; understanding of how foresight systems are developed and implemented is still maturing. Furthermore, research on planning-related applications appears to be altogether absent. Accordingly, this study examines the use of foresight systems in strategic spatial planning through the case of the Finnish national foresight system on regional and urban structure, which is currently being developed by the Finnish Ministry of Environment. Methods and data to be utilized include participatory

observation of the system development process, document analysis of related documents, workshop output, and stakeholder interviews. The study increases understanding of how foresight systems can be utilized as an organizationally embedded planning tool that supports other planning activities.

Keywords: foresight systems, national foresight, spatial planning, regional development, case study, Finland

Futures-driven participatory approach for design of urban equitable places

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The aim of participatory approaches in urban design is to democratise the planning process, create transparency and provide access for professionals to local knowledge of urban communities. However, the current planning paradigm fails to incorporate local knowledge and adhere to spatial equity principles, as well as it does not aim to expand the imagination of participants during participatory processes. At the same time, urban practitioners still operate in a dominant human-centered paradigm not recognizing various non-human stakeholders in participatory processes. Thus, there is a need for more participatory alternatives, as new innovative, artistic, and experiential approaches could have a great influence on citizens' sense of belonging, imagination and commitment to action. This paper explores the new community-based method 'JUSThood' that empowers inhabitants to envision their neighbourhoods to become spatially equitable for humans and non-humans. Based on a design-driven approach, the new method is positioned at the intersection of three topics – masterplanning, spatial equity and participatory design futures. The design-driven approach brings a bottom-up perspective to masterplanning process in a creative way, where inclusive design is based on an inclusive process. The paper describes the development of the methodology and the pilot study in three neighbourhoods in Katowice, Poland. The participatory process with citizens, as part of the whole methodology, consists of creating, immersing, and developing ideas in various scenarios and putting them on the neighborhood maps with the help of three sets of cards – (i) What If questions cards, (ii) Persona cards, (iii) Urban Design cards. It concludes that the new methodology (1) can offer profound and diverse insights of local inhabitants to inform the work of professionals, (2) help inhabitants to expand their imagination and uncover their desires about neighbourhoods, (3) raise awareness about different human and non-human users and develop empathy for them, (4) and become conscious about the spatial surroundings beyond their private home units to generate agency and ownership of urban neighborhoods.

Keywords: spatial equity, urban design, design foresight, participatory futures, participatory design, master plan

Disrupting Techno-futures – a Critical Perspective on the Capabilities for Reframing

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Understanding 'future' in plural as futures not yet determined, is a central position in Futures Studies. Following Anticipation Studies, the capability of Futures Literacy strengthens the role of alternatives: Thus, to "use the future" it is crucial to re-integrate multiple perceptions, to stress alternative futures and to become aware of anticipatory assumptions. The aim is to cope with uncertainty by anticipating plural pathways to reimagine futures and shape the present accordingly.

Considering the discussions in the realm of Critical Futures Studies (CFS), it becomes apparent that alternative futures do not necessarily encompass a wide space of future imagination. In this regard, futures are prefigured and framed according to how the present is perceived by the people who shape them. Thus, even when the

future is conceptualised in the plural, i.e. with scenarios, the alternatives are often variations within the same ‘framing’.

Within the Futures Literacy Framework (FLF), the idea of reframing – to open one’s imagination beyond what predominantly is deemed today as probable or desirable future images – plays a pivotal role. However, it remains uncharted how to effectively reframe anticipatory assumptions, to facilitate a wider space of different futures and thereby rethink present actions.

This suggests that the scope in which open futures become possible remains a black box and the pathways to address our shared challenges remain narrow. Since technological sectors such as aviation are working to reduce their impact on the environment, their need for complex and multiple solutions can benefit from an expansion and democratisation of future imagination.

This research paper examines the respective difficulties of creating alternatives rather than variations especially of technologically predefined pathways. It focuses on the opportunities of disrupting to reframe and enable variations, allowing to play with diverse perspectives within participatory approaches. Taking up discussions from CFS and the FLF on disruption by deconstructing and reframing futures, what does it take to democratise the future and remedy today’s imaginary crisis? It first explores the intersection of the perspectives’ of both theoretical approaches, before adding the hurdles of a project in the aviation sector that works with alternative scenarios to inspire innovation for a sustainable energy-efficient air transport system.

The paper provides, on both a theoretical and methodological level, ideas to use reframing and re-imagination of other futures to democratise and empower different voices in the work of futures research and foresight

Keywords: futures literacy, critical futures studies, sustainable aviation, reframe, democratising, participation

Long-term governance and actions in the present

Time: Wednesday 14 June at 13:30–15:00
Room: LähiTapiola-sali
Chair: Toni Ahlqvist

On Principles for Responsible Futures

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^a University of Lincoln, United Kingdom

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This paper considers the nature of responsibility inherent in “long term governance, democracy and futures research”. Initially that in considering “empowering futures”, is an assumption that concern for the ‘long term’ through the values relating to notions of governance, democracy and research, is to be responsible in some way. However, we know that observed practices of democratic governance appear irresponsible at times. We also know that futures research, while being ethical in its own processes, can be disconnected to responsible practices.

The authors are currently engaged in a process of research on the topic of responsible futures. Among other things, we identify that it may be possible to articulate principles that can be applied to futures research – and perhaps to future-making – which at the very least bring a degree of transparency to the scope of responsibility in these practices. Our starting point is that social values are not fixed, are not immutable and therefore a tension arises in assuming responsibility for a temporality that is beyond the temporality of responsible action. However, not to consider one’s (or an organisation’s or institution’s) responsibilities in relation to the future seems well irresponsible. One reason for this is because consequences of actions arising from knowledge can plausibly be imagined.

The paper outlines some challenges of responsible futures and identifies categories of problematic that give rise to tensions in relation to responsibility. For example, that the future is emergent and always becoming, and hence any notion of plausibility is limited. We also consider that future -making and indeed futures research has inherent biases and conflicts, not least in whose future(s) are at stake; and related to this where boundaries are produced through inclusion and exclusion. We also critique the idea of futures as emancipatory and ask where the agency needed to be future-creating is bound by the consequential responsibilities for the

outcomes of that agency. We suggest that in addressing extant tensions arising from context, the futurist might employ some principles. The paper explores some examples and possibilities.

Keywords: responsibility, futures, anticipation, principles for responsible futures

Do Great Experiments Come from Futures' Thinking? Experimenting as Part of Anticipatory Governance Ecosystems

Vallistu, Johanna – Raudla, Ringa – Sarapuu, Külli & Harbuzova, Nastassia

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The recent years with complex crises on the fields of health, security, democracy etc have increased a sense of uncertainty towards future in policy making. A widespread understanding is that wicked policy problems need a systemic approach not only in terms of topics covered but the whole governance system should adjust (Hartley, Kuecker, and Woo 2019). Thus, instead of single foresight units in government, the focus is shifting towards anticipatory (innovation) governance as a dynamic capability (Scoblic, 2020) within the wider futures' thinking ecosystem of the government.

Experimenting is seen as one approach to increasing future-readiness and testing novel solutions potentially fit for a complex world (Ansell and Bartenberger 2016; Bravo-Biosca 2020). While in theory the solutions tested in experiments work towards better future policies in one way or another, it could be questioned to which extent are they tied to long-term aims, needs or uncertainties identified in futures' thinking approaches and whether the lack or existence of such anticipatory systems thereof influences the nature of experiments undertaken. One hypothesis would be that large-scale and influential experiments are easier to undertake when such a supporting futures' thinking mindset is prevalent. On the other hand, one may argue that involving other stakeholders (such as politicians) would make the process of experimenting more vulnerable and cumbersome.

The paper first creates an analytical framework for considering experiments as part of anticipatory innovation governance using factors and actors analysis. It then compares three bureaucracies and the experiments undertaken in their fiscal and financial domain: Latvia, Estonia and Finland, to explore the dynamics between anticipatory governance and experiments. Finland has been notable for its activities in both foresight as well as experiments. At the same time, experiments are undertaken in Latvia and Estonia, but the foresight activities and futures' thinking in either countries are not widespread. We interview public officials in all three countries to understand how futures' thinking is integrated in the design and process of experiments and how the wider futures' culture (or lack of it) influences the scale and nature of experiments.

Keywords: anticipatory governance, policy experimenting, foresight, futures, government, public policy

Incomplete Institutionalization of Foresight in Government: Causes and Consequences for the Foresight-Policy Nexus

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^c University Kassel, Germany

The foresight-policy nexus is marked by mismatches. Despite increasing political interest to counter political myopia by means of governmental foresight, research suggests that institutional frictions and epistemic mismatches between foresight and policy-making result in lacking impact. This article contributes to understand the institutional dimensions underlying the foresight-policy nexus. To achieve this, we draw on findings from public administration scholarship. The concept of institutionalization is used to analyze governmental foresight, thus warranting a conceptualization of often ill-defined "frictions" and "mismatches". Through an in-depth case study on the institutionalization of foresight within the German Federal Government, we demonstrate that scrutinizing the multiple dimensions of institutionalization helps not only to understand where and when mismatches occur, but ultimately provides new insights into some of the causes of lacking impact. The article does not aspire to provide an easy fix. Instead, we want to sensitize foresight

practitioners, reduce both disappointment and overstating regarding the role of foresight in policy-making by providing a nuanced understanding of the uneasy position of foresight in government.

Keywords: foresight, anticipatory governance, public administration, institutionalization, evidence-based policy-making

Hopes over Fears: Can Democratic Deliberation Increase Positive Emotions Concerning the Future?

Leino, Mikko & Kulha, Katariina

University of Turku, Finland

Deliberative mini-publics have often been considered to be a potential way to promote anticipation and future-oriented decision-making. Still, thinking about the future can be hard as it can evoke negative emotions such as stress and anxiety. Here, we argue that a more positive outlook towards the future can benefit long-term decision-making, for example, by making people think about the future more often, by reducing temporal discounting and enhancing engagement in tackling future problems, as well as lessening the lure of short-term oriented populist options. We explore whether and to what extent deliberative mini-publics can facilitate thinking about the future by moderating negative emotions and encouraging positive emotions. We analyze an online mini-public held in the region of Satakunta, Finland, organized to involve the public in the drafting process of a regional plan extending until the year 2050. In addition to the standard practices related to mini-publics, the Citizens' Assembly included an imaginary time travel exercise, Future Design, carried out with half of the participants. Our analysis makes use of both survey and qualitative data. We find that democratic deliberation can promote positive emotions, like hopefulness and compassion, and lessen negative emotions, such as fear and confusion, related to the future. There were, however, differences in how emotions developed in the various small groups. Interviews with participants shed further light onto how participants felt during the event and how their sentiments concerning the future changed. At the end, we discuss what our results mean for deliberative mini-publics and their potency in improving foresight of distant future.

Keywords: anticipation, long-term decision-making, emotions, deliberation, mini-public, Future Design.

Collaborative and participatory foresight fostering institutional change and business

Time: Wednesday 14 June at 13:30–15:00
Room: Ls 07
Chair: Katariina Heikkilä

Creating Collective Institutional Agency through Imaginaries

Karhu, Anna & Haaja, Eini

University of Turku, Finland

Different types of actors (social, policy, and business) face the varied global-level challenges from digitalization, climate change to multipolarization of economic power that question the prevailing institutional order and structures at multiple levels from organizations to national, regional and even global structures (Gras et al., 2020). At the intersection of policymaking, business, and societal transformations, it can be particularly challenging to find common ground for the formation of collective vision and shared beliefs on opportunities. How and where can the “space” for sharing ideas openly between businesses, policymakers and societal actors emerge?

Applying the concept of social imaginaries that refer to how people collectively see, sense, think and dream about the world, this paper builds a framework suggesting collective international opportunity recognition as a mechanism for agency in complex evolutionary institutional change. Social imaginaries are a resource for both understanding the prevailing institutional order as well as for creating representations of possible futures. Thus, providing shared ground for agency. To further our understanding on how this takes place, our framework brings forwards identification of the contextual elements that provide “space” for different types of

agentic roles. Thus, widening the discussion on the heroic agent as a rational decision maker that prevails number of business and organizational studies.

Our empirical study explores the policy – business – social interaction in context of environmental sustainability advancement and green transition. In practice, we are in process of gathering empirical data from the imaginaries and opportunity beliefs in terms of sustainability advancement as the basis for collective agency within selected policymakers, businesses and societal actors through futures workshops.

Eventually, we explore this complex framework in the context of urgently pressuring climate crisis that demands complex understanding as well as democratic, collective actions, while the geopolitically turbulent times set different kinds of challenges to different actors in this endeavor. By exploring the complexities of collective agency from the futures perspective, we aim to provide new insight into futures studies. Simultaneously, by enlightening these multi-level dynamics, our aim is to contribute to the emerging field of international business policy research.

Keywords: imaginaries, opportunity belief, collective agency, sustainability

Transition Arena for Sustainable Food Packaging

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Natural Resources Institute Finland (Luke), Finland

There is a strong need for changes in food packaging system, arising especially from various environmental concerns. The accumulation of plastic waste in nature has led to changes in EU legislation (e.g., single-use-plastics directive) and efforts to move away from plastic packaging. In addition, various chemicals in plastic products, the need for circular economy solutions and the increasing use of packaging are also receiving attention. At the same time, packaging plays an important role in food production, sales, and marketing.

We argue that these challenges are systemic and cannot be solved incrementally or by few actors. Instead, a systemic view, co-operation and co-creation involving key actors from different parts of the system and value chains are needed. Package-Heroes project aims to facilitate sustainability transitions of Finnish packaging system and arranges a transition arena process (12/2022-4/2023). Transition arena is a method to co-create future paths towards visions and goals developed by participants and the process has a series of intensive stakeholder workshops. The method has previously been developed and utilized e.g., for energy transitions (Hyysalo et al. 2019), and to the authors' knowledge, has not been used in food packaging context.

We discuss and reflect experiences using the transition arena method; critical steps and challenges faced before and during the transition arena workshops. We discuss, for example, how to frame the challenges the participants shall deal with, selection of participants, and what kinds of surprises emerged during the workshops, and we conclude with some practical recommendations. From the perspective of our case, we touch upon power and agency questions, topics that transition theory has been criticized about.

References

Hyysalo, S. et al. 2019: Developing Policy Pathways: Redesigning Transition Arenas for Mid-Range Planning. Sustainability, 11, 603.

Keywords: transition arena, food packaging, stakeholder participation, sustainability transition

Successfully Using Futures Methods to Cascade Corporate Strategy and Sustainability Goals to Operations Level – Valmet Automotive EV Power Project Story

Rissanen, Kati

Valmet Automotive EV Power, Finland

This paper tells a story of a project, and what we learned from it. The story is of a practical implementation of futures methods in private sector, creating operative solutions. I was presented with a question: “Can you cascade sustainable strategy through futures methods?” This is what happened.

Most often, foresight supports corporate strategy formation. In Valmet Automotive however, additionally we utilized futures methods (such as PESTE, megatrend analysis, futures workshop, backcasting) to cascade corporate strategy to factory and operations level, to create unique strategies for operative departments. In addition to strategy, sustainability goals cascaded with series of department futures workshops. The result was real action to make a roadmap towards sustainable future in Valmet Automotive operations in Salo Factory.

The workshops we organized during winter 2022-2023. And the follow-ups are scheduled for spring 2023. Thus, the results of this project will be fresh from the oven for this session.

Keywords: strategy cascading, strategy formation, sustainability, backcasting, futures workshop, environment scanning

Futures Literacy in Collaborative Foresight Networks: Advancing Sustainable Shipbuilding

Jokinen, Leena – Balcom-Raleigh, Nicolas A. & Heikkilä, Katariina

Finland Futures Research Centre, University of Turku, Finland

In this presentation we shall discuss how recent developments in futures studies indicate that a capability called futures literacy (FL) may be a key element driving the comprehensive foresight collaborations. FL is manifested in acts of individuals or groups who actively switch their modes and purposes for imagining futures and the innovation-related outcomes produced from doing so. However, little is known about FL's exact functions in business networks and processes. Businesses are facing increasing pressure from society and regulators to become more sustainable and do their part to address the climate crisis. These businesses will require continual sustainability innovation formulation and implementation processes to meet these demands.

Collaborative foresight (CF) has high potential for helping business sectors produce a continuous stream of sustainability options to select and deploy in finished products. This presentation examines this issue in the context of a luxury-cruise shipbuilding network in Finland. It analyses research data from the foresight workstreams of a multi-partner consortium active across three sequential projects between 2016 and 2022. We shall describe the interventionist research approach and discuss the findings on how FL modes are present in different interventions. Based on our analysis, we found that FL can play key functions in CF, such as supporting actors in creating novel ideas, identifying new opportunities for innovation, and identifying alternative priorities built from new realizations and insights—a finding in line with existing claims by FL scholars and educators. This presentation contributes to ongoing discussions about the significance of CF in addressing the most pressing environmental issues of our time as an evidence basis for the relevance of taking a capabilities approach (i.e., introducing and developing FL) for business networks engaged in sustainability innovation.

Keywords: futures literacy, collaborative foresight, sustainability innovation, shipbuilding

Workshop: Participatory Strategic Foresight: a Service Design approach

Time: Wednesday 15 June at 13:30–15:00
Room: Ls 09

Califa, Jimena & Repetto, Alejandro
EXT, Finland

This workshop aims to explore diverse dynamics and activities to democratise the process of strategic foresight to enhance the impact of the practice.

Currently, strategic foresight is a niche practice in public and private organisations. This closed approach leads to several drawback in the quality of its impact, such as:

- biases in the foresight process, making it hard to find a wide new span of threats and opportunities;
- vision of the organisation limited by the beliefs and strategic assumptions of its leaders;
- difficulties in communicating the results – strategies and tactics – to lower levels, because they are not involved in the generation of scenarios and objectives.

The combination of these problems, in most cases, restrains strategic foresight from reaching its full potential, affecting the sustainability of the organisations' strategies.

Democratising the practice is a must in complex environments. Strategic foresight outputs are enhanced exponentially as the process includes new voices, skills, and points of views. Anytime people are exposed to an accessible foresight method, they feel empowered and change their mindset on the way they make decisions in the present. They begin to see the future as a space of opportunity instead of threats and darkness. Nevertheless, involving people with different profiles and interests is not straightforward.

We propose to shape an accessible foresight process through a user-centric design approach, merging well-known expert tools with gamification and participatory resources.

The workshop will examine the importance of diversity, equity, and inclusion in the future field and discuss ways to overcome barriers to participation. During the workshop, participants will discuss and experiment with how to build diverse teams, how to access complete information across the organisation, and how to deal with the tension between the secrecy of the strategic decisions and the democratisation of the process.

Throughout the workshop, participants will engage in interactive exercises and group discussions to deepen their understanding of the key concepts and best practices presented. Participants will also have the opportunity to learn about and share examples of successful initiatives that have used these methods to create more inclusive futures.

The workshop will conclude with a summary of key takeaways and an action plan for participants to continue their own inclusive futures work.

Keywords: participatory foresight, futures thinking, inclusive approach, good practices, participatory methods, service design

Workshop: Performative Postnormal Times (part 1)

Time: Wednesday 14 June at 13:30–15:00
 Room: Ls 01

Jones, Christopher^a – Schultz, Wendy^b – Leemput, Maya van^c & Mayo, Liam^d

^a Centre for Postnormal Policy and Futures Studies, United States

^b Centre for Postnormal Policy and Futures Studies, United Kingdom

^c Centre for Postnormal Policy and Futures Studies, Belgium

^d Centre for Postnormal Policy and Futures Studies, Australia

Since Sardar welcomed us to Postnormal Times (PNT; 2010), the concepts have been refined (Jones, Serra del Pino, & Mayo) and accounts of postnormal phenomena have multiplied (Van Leemput, Jones, & Hyokki; Schultz). This has generated increasingly sophisticated descriptions of the contours and the recesses of the vast postnormal conceptual space. Patently, postnormal change is hostile to straight-line, goal-fixated problem solving. The postnormal solution space is therefore a space of action, an open space. It holds no answers. It is where lenses are carved for focusing our attention, where tools and approaches are crafted for generating new questions. It offers tools for orientation and navigation in a context where no resolution is expected. We will curate an interactive, participatory, and experiential session that will explore postnormal times by examining postnormal theory – e.g., chaos, complexity, contradictions – and its application in a planning simulation as they emerge in relation to specific choices and decisions of participants, and by the introduction of disruptive events (i.e., drought, floods). The activity will begin with a community planning exercise focused on supply/use of water through 2045 in an arid region. Each participant will be assigned a character/stakeholder (i.e., industrialist, park manager, mayor, resident, co-op board member, retail manager, farmer, utility director, indigenous leader, wildlife advocate). Workshop facilitators will introduce black swans and other PNT phenomena to simulate postnormal possibilities. Participants will be debriefed with a “scavenger hunt” to articulate the elements of PNT analysis and consider the futures implications of their group’s scenario. The session will provide a unique opportunity for participants to probe the relationships and interactions between the core concepts and characteristics of PNT. This creative, generative approach enacts the openness of the postnormal solutions space and also develops the abstract ideas from our theory as agents of change and demonstrates their place in the foresight toolkit.

Keywords: postnormal times, futures studies, complexity, disruptive change, long-term planning, foresight

SESSION 3 at 15:30–17:00

Foresight and futures research for empowering people

Time: Wednesday 14 June at 15:30–17:00
 Room: Ls 18
 Chair: Maria Höyssä

Coaching as an Enabler for Creating a Better Future

Egby, Farah

Exscientia, United Kingdom

Complexity is a burden that we must work with, rather than against, in order to create a better future.

Collaboration is key: setting many minds to work at a problem bears greater fruit than isolated competitiveness. This is hard to achieve in the face of problems with coordination and motivation, plus the added pressure of competition with other people, teams and organisation.

A coaching mindset can help bring out the best in teams by working with their strengths while observing antipatterns and working together in a partnered way to solve them. Of course, circumstances are not static and coaching to generate and adaptable mindset allows individuals and teams work with, rather than battle, challenges as they occur.

Shifting from traditional leadership styles to one based on enabling people to find their own solutions is a shift to a coaching mindset. It also prepares the ground for future leaders by giving them space to grow and find their own unique paths.

This workshop will explore what it means to make a shift to a coaching mindset as a leader. The basis for leadership practices will be based on:

- Agile principles [1]
- Lean management [2]
- Scrum [3] and Kanban [4] project frameworks
- The Team Onion [5]

References

[1] <https://www.agilealliance.org/agile-essentials/>

[2] <https://www.mckinsey.com/capabilities/operations/our-insights/lean-management-or-agile-the-right-answer-may-be-both>

[3] <https://www.scrum.org/>

[4] <https://kanban.university/resources/>

[5] <https://teamonion.works/>

Keywords: coaching, agile, lean, kanban, leadership

Hiraya Manawari: Exploring the Preparedness of Philippine Higher Education Institutions on Futures Research

Penaranda, Joedel & Mendoza, Marianne Agnes T., Dr.

Biliran Province State University, Philippines

This study investigates the readiness of Philippine higher education institutions (HEIs) to conduct future research. To achieve this objective, the research employs a three-pronged approach, which involves a literature review, a survey of HEIs, and interviews with key stakeholders. The study examines the current state of futures research in Philippine HEIs, including the availability of resources, the level of expertise and knowledge, and the degree of interest and engagement in futures research among faculty and students.

Furthermore, the research identifies the gaps and challenges in the preparedness of Philippine HEIs for futures research and recommends solutions to address these gaps and promote the integration of futures research in higher education in the Philippines. The insights gained from this study will be invaluable to practitioners and

researchers interested in the potential of futures research in addressing the challenges and opportunities facing higher education in the Philippines.

The study has important implications for Philippine HEIs, as it sheds light on the current state of their preparedness for futures research, an area that has received little attention in the past. The findings will also contribute to the literature on futures research, particularly in the context of developing countries (Cruz & Kahn-Parreno, 2022). This research highlights the need for higher education institutions to prioritize futures research and enhance their capabilities in this area to better prepare their students for the changing landscape of work and industry.

Overall, this study is significant because it provides a comprehensive assessment of the readiness of Philippine HEIs for futures research, which is essential in determining their ability to adapt to the rapidly changing environment. The study's recommendations will be valuable to policymakers, HEI leaders, and researchers, and it is hoped that they will serve as a catalyst for promoting futures research in the Philippine higher education sector.

Keywords: futures research, Philippines, futures methodology, higher education

Empowering Scientists to Build a Safer World

Carney, John^a – Brandon, Nicole^b – Devarenne, Nicole^b – Slocombe, Will^c – Springer, Simeon^a & Maltby, Jim^a

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^c University of Liverpool, United Kingdom

Few things are more powerful in terms of their impact on a population than military might. Current events demonstrate the unpredictable and damaging effects that can emerge from conflict, and the role that defence capability can play in its outcome.

However, today's incremental developments in defence capability will not be sufficient to counter the anticipated complex and varied threats of tomorrow. To develop novel and 'generation after next' capabilities, a leap in imagination as well as in emergent technology solutions will be needed. That said, experienced Government Scientists working in a relatively conservative and necessarily accountable environment, with limited budgets and tight timescales, are not always given the formal or implicit mandate to 'think the unthinkable'.

In response to these two pressures, the TWIST (sTory WritIng for Science fuTures) pilot project was proposed and instigated in 2022. TWIST's aim is to develop and utilize the imaginative aptitudes of Dstl's own scientific community, by teaching and mentoring them as creative writers. A key outcome was to draw out the potential of novel and speculative areas of science, which had been identified through an internal horizon scanning process.

The project was jointly led by a small group of Government scientists and Academics from the Arts and Humanities and has turned out to be a successful working partnership. The pilot scheme (c.15 participants) has expanded in its second iteration to c.50 participants, with new engagement from across UK Government.

The authors would welcome the opportunity to share the participatory approaches to futures research used in TWIST, share examples of the stories produced, and describe the impact that the project has on the development of a more permissive and creatively-conscious internal culture – working actively and imaginatively towards the creation of 'generation after next' capability.

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Keywords: futures methods, creative writing, empowerment

Case Finland – Empowering Futures Research in the Last Millennium

Laurén, Leena-Maija

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The first key idea of this presentation is to reflect back to the last Millennium and re-read on the history of Futures Studies and forward-looking efforts in Finland since 1972. Several paths can be found to lead to the institutions later established in Finland.

The author will discuss phenomena such as the developments and constructions in the scientific arenas and their liaisons with the surrounding community which gradually contributed to the establishment of the Futures Research in Finland.

The sequence of multidisciplinary academic seminars in Turku gradually expanded to become an institution: The Society for Futures Studies registered association (FSFS) was founded in 1980 by the 14 national universities.

The second key idea of this paper is to show the global movements entering Finland and influencing some emerging issues leading to the several forward-looking macro level efforts in the case country.

The report on the Ministry of Education initiated special commission composed of nationally respected academic experts and led by professor Allardt created the first prominent country survey on the futures oriented research, institutions and efforts in the late 1980s in Finland.

During the economically and politically turbulent times in the early 1990s the outcomes to solve the multi-disciplinary and wicked problems were new solutions such as Futures-oriented Institutions:

(i) the Finland Futures Research Centre FFRC was established in Turku in 1992 as a joint entity for the three universities in the city, and (ii) an ad-hoc Committee for the Future at the Finnish Parliament was founded in 1993. The standing Committee for the Future was part of the constitutional reform in 2000.

During the last years of the Millennium these above mentioned institutional entities in Finland formed their organisational strategies, targets for results as well as their methods and ways of working to explore the unknown unknowns.

Simultaneously the Futures research thinking was linking the academia with its surrounding communities. Examples of the first studies and research projects by the FSFS, the FFRC and those by the Committee of the Future are presented.

Keywords: futures research, academia, establishing institutions, Finland

Workshop: How to Support Bottom Up Futures Thinking Initiatives for Transformation?

Time: Wednesday 14 June at 15:30–17:00

Room: Ls 19

Ylikoski, Terhi – Poussa, Liisa & Rekola, Sanna

Finnish Innovation Fund Sitra, Finland

In recent years there has been increased interest in democratizing futures and in empowering people to think and create futures. Participation has of course always been an essential part of foresight and futures thinking in general. However, the current postnormal times necessitates a broader view of participation and inclusion and its connection to action and decision-making. Because we are in a time of transformation and surprises, there is a need to both support thinking about radically different futures and create new possibilities for joint action towards better futures – with a plural understanding of what better means.

In this workshop we focus on how to support bottom-up initiatives aiming to respond to these needs. How to sow the seeds and enhance existing initiatives of transformative futures thinking? We will first go through recent examples, such as the Future Makers and Sitra Lab projects by the Finnish innovation fund Sitra for inspiration. The main part of the workshop will be on joint sensemaking on how to choose initiatives, how to

support them and how to scale the lessons learned. The workshop will feed into the planning of a partnership program on transformative futures by Sitra.

Keywords: transformative futures, participation, empowerment, power over futures

Futures education: Insights to futures literacy and thinking

Time: Wednesday 14 June at 15:30–17:00
Room: LähiTapiola-sali
Chair: Juha Kaskinen

Tracing the DNA of the Futures Literacy Concept: Bibliometric Insight on its Evolution, Potentials, and Future Research Avenues

Voegele, Julia – Pattermann, Juliana – Bierwisch, Antje & Som, Oliver

MCI The Entrepreneurial School, Austria

UNESCO has declared Futures Literacy (FL) – the skill of “using the future” – as one of the most important capabilities of the 21st century. An increasing number of academics and practitioners advocate the development of this crucial skill set of dealing with novelty, complexity, and imagination if we want to ensure a successful future for ourselves and our world. However, FL is not very widespread in research and practice. Is it just another buzzword, or do we have to clarify our understanding of FL to help unleash its full potential? In the academic context, FL is argued to be a fluid concept, characterized by a lack of conceptual clarity and varying definitions. As the concepts surrounding FL have been developed for different purposes, a systematic understanding of the landscape within the field of futures research is missing. By performing a bibliometric analysis, this research aims to map the landscape of FL in terms of its conceptual roots, main literature streams, research networks, and potentially benefiting scientific fields. Using keywords, such as futures literacy and futures consciousness combined with thematically related terms, we compiled the bibliometric data of approximately 5,000 journal articles, published between 1958 and 2023, from Web of Science and SCOPUS. To explore the structure and dynamics of the scientific field, we analysed science mapping, clustering, and network metrics as well as selected performance analysis metrics. The conceptual, intellectual, and social structures reveal a highly fragmented research field, characterized by distinct networks of authors and institutions and a lack of interdisciplinary research. While FL is already strongly anchored in some fields, such as education, other contexts that offer shared theoretical assumptions, such as innovation or entrepreneurship, showcase a lack of recognition of the concept’s relevance. We contribute to the conceptual discussion of FL by revealing its origins, including its underlying premises and assumptions, with the purpose of sharpening the concept. Our findings help to structure the scientific debate by identifying different contexts that may benefit from engaging further with FL. Finally, our findings serve as a basis to develop a future research agenda addressing the white spots of previous studies and FL’s value for shaping better futures.

Keywords: futures research, futures literacy, bibliometric analysis

Unfolding the Emerging Area: a Combined Content and Bibliometric Analysis on Future Studies in Education

Kasperuniene, Judita & Mazeikiene, Natalija

Vytautas Magnus University, Lithuania

Future literacy is important because it enables students to understand and prepare for rapidly changing technological and societal developments. Acquiring future literacy has broad-ranging implications for individual and societal success in the future. In our mixed methods research, we analyzed a newly emerging area of research – future studies in education by exploring the intellectual structure of the research field in scientific literature and revealing emerging trends. We combined bibliometric analysis with qualitative content analysis to discover characteristics of scientific publications and to gain insights into the progress of most researched topics, most cited authors, and countries they came from, the relationships between keywords recurring in publications, and other important parameters. 274 publications from the WoS database published from 2001 to 2022 were collected. By analyzing the interrelationships between the keywords, we have found a

rapid increase in interest in teaching future literacy since 2016. From 2019 onwards, we have noticed many new themes related to innovative technologies (artificial intelligence in education, adaptive learning systems, and others) and modern teaching methods (creativity education, research on various educational behaviors, learner self-efficacy, etc.). In publications from 2019 and later, the country contexts stand out (Chinese context, Arabic context, etc.). In the post-covid research (2021-2022), there was an increase in interest in climate change studies, theoretical and empirical research on transformative learning, teacher-learner adaptation to continuously changing conditions, educational foresight, resilience, and future scenarios. The bibliometric analysis led to the identification of the ten most cited publications, which were further analyzed using content analysis. The results of the content analysis revealed the main categories and subcategories of the most cited publications which shows what scientists are currently interested in and to explore the diversity of research on the chosen topic, understand the landscape of future literacy in different educational contexts, and identify under-researched areas.

Keywords: future literacy, future studies in education, bibliometric analysis, content analysis

Learning (Foresight) by Developing: How Dator Shakes Hands with Rohrbeck and Kum

Hario, Pasi

Laurea University of Applied Sciences, Finland

This session introduces a mixed-method foresight model which is developed, taught, and applied at Laurea University of Applied Sciences (Laurea). The model combines Laurea's Learning by Developing (LbD) pedagogic approach with collaborative foresight practices. The session describes, how a course module has been developed as an iterative process during five years based on student feedback and teacher's own observation. The main message of the session is to open-mindedly test and introduce new practices to teach and apply foresight.

Futures Studies and Foresight are taught in many universities of applied sciences (UAS). Generally, the UASs teach the students how to apply foresight. The theories of Futures Studies as a science are not in the center. The UAS tend to stress the practice more as they are obliged to provide the students hands-on skills to apply in current and future working life.

Laurea advocates Learning by Developing (LbD) as a pedagogical approach that combines applied research and collaborative developing. Following the LbD, the students gain understanding by applying the taught methods and tools in real-life case studies in social interaction with other students and the client or end-user. Hence, the learning experience is based on collectively creating and sharing new knowledge based on true working life challenges.

Futures Studies is evolving multi-disciplinary science which rigorously tests and combines new methodology. At Laurea, a new mixed-method foresight model has been developed during the past five years. The Master's level students have been introduced to Futures Studies as a discipline and then assigned to apply their prior working life experience and the methods and tools of a foresight process in multi-disciplinary heterogeneous teams. The clients have been private enterprises, startups, organisations and research projects.

The methodological framework of the model follows the 3P -foresight process of Rohrbeck and Kum (2018). The data gathering of the model's Perceive -phase is based on Open-Source Intelligence gathering practices. During the Sensemaking -phase, matrixes such as PESTE, Impact-Probability and Bull's Eye are applied. The Futuring -phase makes use of Jim Dator's (2009) Futures Archetypes to create alternative Futures Images. During the final Probe -phase, business model canvases, moodboards and storyboards, typical Service Design tools, are used to refine the Futures Images.

Keywords: higher education, foresight, mixed-method, pedagogy

Futures Literacy as a Participatory Practice for the Sustainability of Present and Future Generations: Methodological Issues

Yakubovskaya, Tatiana

Finnish Society for Futures Studies, Finland

The focus of the presentation is on the methodological issues of the concept of “participatory practice” in the field of future-oriented education and futures literacy programs aimed at the local and global sustainability of present and future generations.

The main hypothesis is that a special type of modern education practice such as a future-oriented participatory practice is based on the integration of ecosystem and participatory approaches within the methodological frameworks of Futures Studies.

Key aspects of the integration of ecosystem and participatory approaches have been considered based on the comparative analytical materials and outcomes of cases of the future-oriented participatory practice “Open Foresight Laboratory” (for several target groups including college and high school students, practitioners, experts from different regions and countries during 2012-2021).

One of the major purposes is to study the methodological specificity of a comparative case analysis in the field of future-oriented education including relevant methodological means from Futures Studies for complex, systematic, and multidisciplinary contexts of a comparative case analysis of futures-oriented activities in global and regional perspectives.

The methodological issues and models of a comparative case analysis of future-oriented educational practices within the frameworks of the ecosystem approach have previously been developed and discussed at the Futures conferences. The ecosystem approach to the comparative study of future-oriented education highlights the complexity and super-complexity of interrelationship problems in terms of how different regional attitudes, visions, scenarios, strategic programs, and roadmaps are integrated both in local and global contexts.

Consequently, the ecosystem approach needs the methodological means of the participatory approach to study how the territorial environment, social, cultural, and economic “nature” of a region affect a collective and personal agency in constructing both different and joint versions of the future. Moreover, it leads to the methodological issues of integration with a participatory approach, so this is a decisive step in the methodological development of both the comparative analysis of future-oriented education and Futures Studies in general. The ecosystem framework relates to the systems thinking and ideas of super-complexity and emphasizes the particularities of regional ecosystems and fundamental contradictions between local and global ecosystems, global and local versions of the future, etc. The participatory approach is tightly connected with the issues of practices for the collective knowledge creation process including the broad range of issues regarding the integration of Individual, Collective, and Artificial Intelligence within future-oriented participatory practices.

Therefore, one of the basic methodological problems of a comparative analysis is to find out the productive effects of the integration of ecosystem and participatory approaches in the field of future-oriented education for further developing the concepts and didactics of future-oriented participatory practice.

Keywords: participatory practice, future-oriented participatory practice, futures-oriented education, comparative case study, ecosystem approach, participatory approach

3A Instructional Model as a Futures Thinking Teaching Approach

Jaca, Cristie Ann

Cebu Technological University, Philippines

When the future is uncertain, how can teaching be transformed into something practical or otherwise engaged? This paper describes the 3A hybrid Online Instructional Model using the Ask, Allow, and Assess Instructional Plan that incorporates the future thinking paradigm in teaching. This study is anchored on the Constructivist Learning theory promoting active learning to lessen the challenges experienced by both teachers and students during online classes. There were thirty fourth-year Bachelor of Secondary Education major in English

students that serve as participants in this study who transitioned from face-to-face classes to online classes. This scenario requires the creativity and flexibility of the teacher to effectively facilitate the teaching-learning process, especially the use of varied learning modalities during online classes. The teacher-researcher created this 3A Hybrid-Online Teaching Model to promote flexible learning among state university students who have experienced technology-related limitations. 3A represents the 3 phases of online instructional delivery namely: Ask, Allow, and Assess. This 3 phase online teaching model is meant to maximize student learning and to affirm the teacher-researcher's advocacy that learning need not be lengthy nor complicated considering the currently limited attention span among students. Based on the findings of the study, students expressed positive feedback on the use of the 3A Instructional Model as it made them appreciate the short but meaningful input of the teacher, the self-instructional activities they do in class, and the independence they enjoy in answering formative assessments. Teaching was simplified and there was less demand on the part of the teacher and on the use of time and resources.

Keywords: Covid-19 pandemic, futures thinking, online teaching, 3A Instructional model

Sustainability, social change and future generations

Time: Wednesday 14 June at 15:30–17:00
 Room: Ls 07
 Chair: Minna Halonen

Crafting the Future: Political Imaginaries of Young Climate Activists in Portugal

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^c York St John University, United Kingdom

Based on an ongoing research project on young people's narratives and political imaginaries about climate change and just transformations, this paper discusses how climate futures are imagined both in collective discourses and on-the-ground practices. These levels of analysis are grasped by a two-fold methodological design, encompassing focus group discussions and a multi-sited ethnography with young climate activists in Portugal. Focusing on young activists belonging to the Student Climate Strike in Porto and Lisbon, a worldwide movement inspired by Fridays for Future, instigated by Greta Thunberg, we will present results from the analysis of the discourses and collective actions of these young people. Climate change is one of humanity's greatest challenges, and young people are often at the forefront of climate justice movements, demanding that governments and corporations take immediate action to address the crisis and hold those who have contributed to it accountable (Perkins, 2020). The conceptualization of the current youth's generation as chained to a negative temporality in which the present time is colonized by the risks of dystopian futures (Holmberg & Alvinus, 2021), lays the grounds for the importance of an exploration of which alternative futures are imaged and crafted by the most politically involved groups. In the last years, the mobilisations around climate change have shown the young people's willingness to be actively involved in the climate change debates and in the co-creation of more sustainable, just and empowered futures. This study contributes to a nitty-gritty understanding of young people's climate imaginaries by linking their political utopias to their agentic power. This presentation crosses the young activists' perceptions (about their experiences, expectations, worries, power, social involvement) with the participant observations of their internal activities (the links with other activist groups, the power negotiations within collective action, the activist their trajectories through diverse contexts). We explore, then, how youth activists voice their concerns and which strategies they put in motion to have their voices heard and to achieve their desires of change.

Keywords: young climate activists, youth empowerment, political imaginaries, creative actions for social change, ethnographic study

Framing Uncertainty: How to Utilise Future Generations, Imaginaries and Spillovers in the Foresight Process?

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This paper contrasts three different modes of exploring, conceptualising and modelling future uncertainty. There is a need to consider impacts upon impacts, indirect implications, unintended consequences and even existential risks. The first concept is 'Futures Generations' that has been recently researched in the FORGE project and elaborated on in the Finnish Governments' latest Futures Report. The second is 'Imaginaries' that has become useful to consider transformative policy implications, assumptions and trajectories (Jansoff; Guirca et al). And the third overlapping perspective is Spillovers, which consider the indirect or external implications of actions, innovations, events etc. Future Spillovers highlight specifically issues outside the scope of initial speculation, but can be modelled and even utilised to notice emergence and change. There are different interpretations of concepts within neomours disciplines that could offer insights for the futures field. Specifically the approach looks what is useful for facilitating a participatory foresight process? How well are these concepts already utilised in Futures Studies? What concrete approaches can be adopted? This paper builds on the transdisciplinary work of several projects at the Finland Futures Research Centre (WISE, RESCUE, BioEcoJust, FORGE).

Keywords: imaginaries, future generations, spillovers, uncertainty, futures

Climate-Wise Farming through Anticipation

Armanto, Riikka

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As the causes and drivers of the climate change in agriculture have been widely addressed, many efforts are made on farm-level, research, and policy to enable sustainable transitions. However, the reality of agricultural systems effectively mitigating and adapting to climate change is yet in its becoming, both in Finland and globally. The entry point for this paper is to look beyond often studied explanatory attributes of the farmer and the farm for describing why climate change mitigation and adaptation strategies are or are not engaged to. Climate-wise farming is context-specific, always dependent on spatiality and temporality of the farm. In addition, climate-wise processes are, and need to be, inherently anticipatory in nature. How are the futures used in their emergence, then? My objective is to examine how climate-wise farming is being produced through anticipation. To embrace the farms' dynamic socio-ecological nature and various human and non-human interactions and relations, I will take process-relational perspective for the analysis of anticipation. The study is driven by the curiosity to explore with research material what can diffractive reading of process-relational perspective and anticipation bring about. Research material is consisted of two rounds of thematic interviews with seven Finnish farmers, who have all implemented or planned to implement climate-wise practices. The presumption is, that for the well-being of the farmer and the climate, it is essential to elaborate the mutual human and non-human endeavors and deep entanglements of how climate-wise farming unfolds.

Keywords: climate-wise farming, anticipation, process-relational, post-humanism, agency

Futures thinking, Education and Sustainability: Empowering Futures Studies in the Arab World

Alaraby, Muhammad

Future for Advanced Research and Studies, United Arab Emirates

Despite being ravaged by prolonged civil wars, domestic unrests and developmental crises, the Arab world has witnessed a boom in futures studies. Over the last decade, several institutions and research projects have been concerned with exploring the future possibilities of the Arab countries and their issues, and courses of conflict and peace in particular. Furthermore, several Arab governments have uncovered future development projects to outline the aspirations and plans for their countries.

Nevertheless, futures thinking in the Arab world is still far from rooted and empowered. A lot of obstacles and challenges remain, and need to be addressed especially as long as policies are concerned.

This paper suggests that futures' empowerment in the Arab world should go through two interlinked ways; embedding futures thinking into education and research and emphasizing sustainability into development strategies. Both ways can be put as a bottom-up and up bottom-up approaches. As for futures education, besides highlighting emerging and pressing issues such as climate change and disruptive technologies to a new generation of researchers and scholars, it can introduce various futures thinking methods into the curriculum and research projects. On the long term, such methods may revolutionize the way of thinking into the society and the world; as they evolve to more post-formal, interdisciplinary, collaborative and participatory ways. Indeed, the Arab world universities is in sheer need for a futuristic turn to redefine its social and political role in their respective societies.

Sustainability is highly emphasized in the recent development strategies issued by the Arab governments. Yet, it needs to be translated into sets of policies and redefined to encompass not only environmental and climate issues but also that of technology impact, social justice and competitiveness and cultural vitality. Actualizing future sustainable strategies necessitates anticipatory endeavors for building more robust and resilient policies. For that part, futures education and research can be of great help.

In this paper, I will shed lights on the current situation of futures studies in the Arab world, tracing the evolution of the field in the last decades and the limitations that may hinder its future development and How education and sustainability can contribute to its empowerment.

Keywords: futures studies, Arab world, sustainability, development

Workshop: Smart Place Branding in the Value Production of the Enterprise 4.0

Time: Wednesday 14 June at 15:30–17:00
Room: Ls 09

Lemmetyinen, Arja^a – Aalto, Johanna^b – Kaivo-oja, Jari^c – Nieminen, Lenita^a & Pohjola, Tuomas^a

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The aim of the workshop is to elaborate the future of Smart Place Branding. A challenging question is: How do innovation ecosystems of the THE cluster enhance value creation and value delivery?

Smart Place Branding in the Value Production of the Enterprise 4.0: Destination and place branding, as any branding is always a value production process. Brand concepts and recommendations for sustainable creative tourism are widely discussed in the European Union and tourism, hospitality and experience (THE) industries. Digital transformation, green transition and inclusive processes are key issues of the THE cluster and networked innovation ecosystems. Today we understand the place branding as a dynamic co-creation process by a variety of networks and ecosystems, which involves several stakeholders as co-creators. The brand co-creation hints towards an iterative, social, and process-based view of brand and brand value materialized through value creation process, value-in-use and customer experiences (Casidy, Helmi, & Bridson, 2019).

Metaverse Roadmap and the THE: A touristic experience of a place, touristic sites or a city is being enhanced and augmented using Augmented Reality (AR) and Virtual Reality (VR) technology. At the same time, Artificial Intelligence (AI), powered by Machine Learning (ML) and Deep Learning (DL) frameworks, and Blockchain technology enable to make use of the rapidly increasing amounts of data acquired from the environment surrounding us and bring the relevant information to the use of Smart Tourism. Metaverse roadmap will be a challenging issue for the THE cluster.

Data Economy and Management Focus on Smart Specialisation Strategies of Creative Tourism, Hospitality and Experience Activities: Identifying and explicating the essential concepts and operationalization challenges of smart tourism management in the framework of smart specialization is a relevant strategy especially in the EU. This examination will focus on indicators, metrics and indices. (Haukioja & al. 2018; Kaivo-oja & al. 2017) analysing the economic effects of creative tourism (income, employment and local taxes), (2) analysing key

indicators of Smart Specialisation Strategy (S3) in relation to creative tourism activities and spatial service economy in cities and rural areas, (3) analysing economic meaning and impacts of creative tourism, hospitality and experience cluster at national and regional levels. These three activities require EU- level data sets of creative tourism and extensive S3 data sets.

Keywords: Smart Place Branding, THE cluster, innovation ecosystems, Metaverse roadmap, S3

Workshop (part 2): Performative Postnormal Times

Time: Wednesday 14 June at 15:30–17:00
Room: tbc

Jones, Christopher^a – Schultz, Wendy^b – Leemput, Maya van^c & Mayo, Liam^d

^a Centre for Postnormal Policy and Futures Studies, United States

^b Centre for Postnormal Policy and Futures Studies, United Kingdom

^c Centre for Postnormal Policy and Futures Studies, Belgium

^d Centre for Postnormal Policy and Futures Studies, Australia

Since Sardar welcomed us to Postnormal Times (PNT; 2010), the concepts have been refined (Jones, Serra del Pino, & Mayo) and accounts of postnormal phenomena have multiplied (Van Leemput, Jones, & Hyokki; Schultz). This has generated increasingly sophisticated descriptions of the contours and the recesses of the vast postnormal conceptual space. Patently, postnormal change is hostile to straight-line, goal-fixated problem solving. The postnormal solution space is therefore a space of action, an open space. It holds no answers. It is where lenses are carved for focusing our attention, where tools and approaches are crafted for generating new questions. It offers tools for orientation and navigation in a context where no resolution is expected. We will curate an interactive, participatory, and experiential session that will explore postnormal times by examining postnormal theory – e.g., chaos, complexity, contradictions – and its application in a planning simulation as they emerge in relation to specific choices and decisions of participants, and by the introduction of disruptive events (i.e., drought, floods). The activity will begin with a community planning exercise focused on supply/use of water through 2045 in an arid region. Each participant will be assigned a character/stakeholder (i.e., industrialist, park manager, mayor, resident, co-op board member, retail manager, farmer, utility director, indigenous leader, wildlife advocate). Workshop facilitators will introduce black swans and other PNT phenomena to simulate postnormal possibilities. Participants will be debriefed with a “scavenger hunt” to articulate the elements of PNT analysis and consider the futures implications of their group’s scenario. The session will provide a unique opportunity for participants to probe the relationships and interactions between the core concepts and characteristics of PNT. This creative, generative approach enacts the openness of the postnormal solutions space and also develops the abstract ideas from our theory as agents of change and demonstrates their place in the foresight toolkit.

Keywords: postnormal times, futures studies, complexity, disruptive change, long-term planning, foresight

THURSDAY 15 JUNE 2023 | Onsite**SESSION 4 at 9:00–10:30****Participatory approaches in futures research**

Time: Thursday 15 June at 9:00-10:30
 Room: Ls 18
 Chair: Petri Tapio

Advancing Environmental Futures with an Innovative Participatory Scenario Framework**Weh, Ludwig**

Fraunhofer Center for International Management and Knowledge Economy, Germany

Both nature and the future have been subject to extensive human intervention in theory and practice, as in cultural appropriation, research, political management, use for profit, economic exploitation, colonialization, interpretation, de- and reconstruction, imagination etc. Combining both nature and the future as feminized entities, environmental futures, nature futures or ecology futures are gaining importance in the face of global ecosystems in peril and decline. In that, human agency appears as problematic driver of global environmental changes in the Anthropocene and is reflected e. g. in posthuman or more-than-human approaches to environmental futures.

Building on prior arguments, this paper delineates the transition from a dominant (egotistical) to an integrative (ecotistical) systems perspective fostering ecojustice within environmental futures (Martusewicz et al. 2014). Relational approaches have outlined the consequential shift from a reactive scheme focusing on vulnerabilities and oppression towards a proactive scheme fostering mindfulness and care (van Dooren 2014, Puig de la Bellacasa 2017). Spanning epistemology, methodology, result application and impact reflection of related research processes, this shift may render transdisciplinary research in environmental futures more diverse, contextual, tangible and embodied in their ways of knowledge production.

The paper presents a conceptual framework for redesigning ecosystem scenario approaches towards integrative, relational and reflexive research practice, and discusses its epistemic and methodical details. In line with common transition models (Geels 2002), such innovative approaches may yield good practice examples or ‘Seeds of Good Anthropocenes’ (Bennett 2016) generating local ‘niche’ knowledge in participatory, co-creative and action-oriented settings. Better suited for critical assessment of their efficacy, innovating scenario processes may support decolonization and democratization in the production and application of images of environmental futures.

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Keywords: environmental futures, scenario epistemology, method innovation, relational research, participatory scenario

Using Representative Surveys to Democratize Scenario Building

Keller, K. Christoph & Ehrentraut, Dr. Oliver

Prognos AG, Germany

We present an approach and two case-studies for democratising scenario-building by integration with survey-methodologies. The second case-study further presents a transdisciplinary approach, connecting quantitative modelling (econometrics) with the more qualitative approaches common to futures studies.

Scenarios play a large role in Futures Studies. As of today, scenarios are mainly created by a literature and expert-based approach which primarily relies on written accounts and the academic context. Two specific types of surveys, Delphi and Real-Time-Delphi, are routinely used in futures studies. The integration of Delphi and Scenarios has a long tradition in Japan (going back to 1977 according to Kameoka and Suzuki 2002) and was adopted in Europe in the early 2000s (Rikkonen 2005; von der Gracht 2008).

We propose that representative surveys create a more democratic and inclusive approach towards scenario-building. The case-studies demonstrate a) how survey-based scenario-building has revealed the bias of experts and b) how a representative survey challenged the notion of a rift between the Baby-Boomers and Gen-Z in German society. The latter notion is widely held and would otherwise have become a basic assumption of a major study. In both case-studies, representative surveys elicited more and less preferable futures and likelihood-assessments by the surveyed population-groups, enhancing the overall quality image of the future.

The second case-study also demonstrates how scenario-building can inform macroeconomic modelling. The transdisciplinary approach presented allows for the integration of value-judgements into macroeconomics. It shows a way for integrating quantitative macroeconomic models into the impact-analysis from qualitative scenarios.

Keywords: scenario-building, modelling, survey, transdisciplinary research, participation

Brussels Mobility in 2050: Exploring Alternative Futures through Scenario Planning

Tori, Sara – te Bovelde, Geert & Keseru, Imre

Vrije Universiteit Brussel, Belgium

Mobility plays a fundamental role in shaping the spatial structure of society, and it is deeply embedded in people's everyday life. For its profound impact on the environment, society, public budget, and the long-term character of investments, mobility policy needs to be embedded in a well-grounded view of the future. Transportation systems are currently vulnerable to external shocks, as the recent COVID-19 has shown, disrupting transport systems worldwide.

One of the difficulties in building the resilience of transportation systems is the large variety of influential factors. As transitioning towards a sustainable urban mobility system requires a long-term orientation, scenarios can be employed to consider long-term policy goals while exploring short-term decision options.

In this paper, we explore alternative futures for mobility in Brussels by 2050 applying a mixed-method approach that combines a systems dynamic-approach (cross-impact balance analysis) with participatory creative workshops (using for example personas). Through our methodology, we develop four scenarios for the future of urban mobility in Brussels.

We find that the result of our scenario building exercise results in consistent and contrasting scenarios, and that personas add a dynamic element to the storyline. However, we find that it was difficult for stakeholders to think more outside-the-box, resulting in scenarios that are not as "wild" as what we had intended. An even more creative and outside-the-box approach could therefore potentially lead to more unconventional scenarios.

Keywords: cross-impact balance analysis, scenario workshops, mixed-method approach

Spatially-explicit Futures Scenarios for the Rio Negro Basin (Brazilian Amazonia) in 2040

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Scenarios are representations of possible futures in the form of a narrative. They can be desirable or undesirable, probable or unlikely. These narratives about possible futures have the power to guide decision-making processes, revealing perceived threats, available opportunities, hopes and fears. Various types of scenarios can be developed, for different purposes. This research investigates how scenarios can be used in long-term planning in a context where vulnerable populations face governance instability. Spatially-explicit scenarios for Amazonia in 2040 will be produced in a co-creation process with stakeholders with the aim of engaging and aiding local leaders of conservation units in long-term thinking.

The scenarios are created in a novel framework that combines *Futures Literacy Laboratory (FLL)*, with *Participatory Geographical Information System (PGIS)*. By adopting a critical approach on futures research, I engage with stakeholders to imagine multiple futures, and to investigate the implications for these scenarios.

Soon after this conference, I will be embarking to my fieldwork, where Scenario workshops will be held in Manaus and Novo Airão, Amazonas, Brazil. Participants will be the academic community at the Federal University of Amazonas (UFAM), and leaders of the *Mosaic of Conservation Units of the Lower Rio Negro (MBRN)*. The scenarios to be produced will provide insights on potentially contrasting views of the future of the focal area. The MBRN is an organization of 12 conservation units one next to another, sharing not only common resources, but also facing relatively similar problems. The Mosaic has the intention of creating mechanisms for joint efforts for conservation action. As part of the workshop's agenda, participants will also ideate further developments and transform the scenarios into action plans.

In my presentation, I will share my experiences in piloting this methodology with my colleagues at the University of Turku. Testing the method beforehand was a powerful way to improve my techniques as a workshop MC and as a facilitator trainer. It helped me with quality assurance, finding errors, detecting gaps and potential dangers, and also worked as a validation of the process. I hope to hear feedback from the audience to develop methodology even further before the fieldwork.

Keywords: scenarios, participatory approaches, workshop, FLL, PGIS, Amazonia

Post-Pandemic Recovery in Central and Eastern Europe on Sustainable Innovation Pathways until 2030

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The study presents the results and conclusions of an integral foresight project elaborated by the research consortium from the V4 countries. The integral foresight is a complex approach and examines the region in the European context since it aims to explore the positive and negative effects of technological, social, geopolitical, environmental, economic, climate change, etc. trends on this region, and also the related innovation possibilities by involving various groups of stakeholders and European foresight experts. Based on the literature review and the Delphi survey, several key trends were outlined which may primarily define the post-pandemic recovery process in Eastern Europe, but potential enablers and blockers were identified as well during the experts' workshop which might help in shaping the future. This participatory foresight is practice oriented because the sustainable innovation pathways for the V4 region are systematized along 3 scenarios of the European Union by emphasizing the importance of technological, social, and political innovations regarding national policymaking activities.

Keywords: foresight, Visegrad countries, sustainability, innovation, trends

Futures thinking for democratic renewal

Time: Thursday 15 June at 9:00-10.30
 Room: Ls 19
 Chair: Mikkel Stein Knudsen

Restoring Democratic Stability: a Backcasting Wheel Approach

Szostak, Rick

University of Alberta, Canada

It is widely appreciated in the emerging literature on “democratic backsliding” or “authoritarianism in democracy” (elected leaders have weakened the institutional and cultural supports for democracy in dozens of countries) that there are multiple forces at work, including:

- increased economic inequality,
- decreased economic security,
- social tensions based on race, ethnicity, religion, rural versus urban or other cleavages,
- cultural attitudes of decreased respect for those we disagree with, decreased confidence in experts or media or politicians,
- new social media technology, and more.

The core argument of this paper is that we can only effectively combat authoritarian tendencies over the long run if we address each of the underlying causes. Since these causes reinforce each other, we will find that success in combatting any one of them will aid us in combatting others. Yet most of the (impressive) research in the field looks at a minority of the phenomena involved. We should not be surprised that robust evidence for any particular hypothesis has been hard to come by (Waldner and Lust Annual Review of Political Science 21; 2018).

Bengston et al. (World Futures Review 12:3, 2020) recommend the use of a “backcasting wheel.” [effectively an inverted futures wheel] We place our goal in the middle of the wheel, and identify a set of changes that would move us toward the goal. We identify how these might interact. Then we identify another circle of changes that might set in motion the changes in our first circle. The backcasting wheel thus allows us to identify a set of changes that we can encourage now that will over the next decades take us toward our goal.

In our first circle, we will outline a set of strategies that address each of the causes of authoritarianism. We will then show how these interact. Since the challenge of authoritarianism is huge, it should not be surprising that the antidotes involve major changes in our economy, politics, cultural beliefs, and social relations. Yet each of these changes can potentially be widely appreciated. Nevertheless the path to change is never easy, and in our second (and third) circle we can address how to move toward each of these desired changes. Recall that the causes of instability interact and reinforce each other. We are guided, then, to look for strategies that will work on multiple causes.

Keywords: democratic backsliding, backcasting wheel, systems analysis, interdisciplinarity

Parliamentary Committees of the Future as Tools for Working Democracy

Kuusi, Osmo

What Futures Inc, University of Turku, Finland

The First World Summit of Parliamentary Committees of the Future was in Helsinki on 12 – 13 October 2022. The Committee for the Future of the Finnish Parliament organized the Summit as a forerunner of these Committees whose responsibilities relate to reviewing of long-term future global developments in the context of national parliaments. Based on what is learned in Finland, a Committee of the Future can be a good tool for working democracy as a promoter of trust between key persons of competing parties.

The presentation will stress two challenges the meeting of which are especially important for successful work of a Committee of the Future: 1) How to motivate Members of the Parliament MPs to active participation in

the work of the Committee? and 2) How to promote fruitful long term future focused cooperation between those in power and opposition? How to avoid the jealousy of parties in the Government or others in power?

According to the presentation especially during the period 1999-2011, in the Committee for the Future the most important source of motivation of MPs was that the Committee focused its activities on themes that were suggested by single members of the Committee. This opportunity was especially important for young politicians that later have been in leading political positions like ministries. Concerning the meeting of the second challenge, the dialogue of the Committee with the Government concerning Government Reports on the Future was especially crucial.

Keywords: democracy, parliament, Committee of the Future, trust, opposition

Individual Future Orientation, Political Participation, and Party Choice Preferences

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The ability to think about long-term futures is said to be one of the characteristics that distinguish human beings from other species. However, as decades of research in academic fields such as psychology and economics have shown, humans value the future in heterogeneous ways. Individuals have different temporal orientations, some individuals show a greater propensity to delay gratification (e.g. not eat the first marshmallow), while differences in delay discounting preferences may help explain differences between immediate spending or saving for later, to name just a few related and much-discussed research strands.

Within futures research, improved understanding of the role of individual futures consciousness (e.g. Ahvenharju et al., 2018; Ahvenharju, 2022), and the development of methodological tools to assess this, is among the most important developments in recent years.

Individual future orientation also has important implications for democratic participation, although surprisingly few studies have considered this topic previously. With a cross-sectional study conducted in Finland (N=1,673) we are therefore able to provide several novel contributions that has not previously been shown in the academic literature.

We here apply the Considerations of Future Consequences (CFC) framework as a measure of individuals' future orientation and distinguishes between their considerations of future consequences (CFC-Future) and considerations of immediate consequences (CFC-Immediate). The results show that CFC-Future has a positive association with political participation (both institutionalized and non-institutionalized participation), while CFC-Immediate has a negative association with participation. In other words, people who value future consequences higher are more likely to undertake acts of democratic participation. Intriguingly, we also find that there are statistically significant differences in the CFC-values between the voter bases of different political parties. This suggest that future orientation could be one element that distinguishes voters of different parties in a multiparty democracy from each other.

Keywords: future orientation, political participation, party choice

Special Session: Government Foresight: Creating Future Oriented Structures of Decision Making

Time: Thursday 15 June at 9:00-10:30
Room: LähiTapiola-sali

Tapanainen-Thiess, Jaana – Piironen, Ossi & Kuuluvainen, Venla
Prime Minister's Office, Finland

The COVID-19 pandemic and the fundamental change in the security environment highlighted the importance of the central government's agility and ability in dealing with uncertainties and the need for more anticipatory decision-making. Foresight is a vital part of the knowledge-based approach of strategic decision-making in Government and it needs to be continued and strengthened. Since 30 years the Government Report on the Future forms the basis for the dialogue on the future in the Government and Parliament and identifies issues that will be important for policy-making and require special attention in the future. The complexity of the operating environment required the Government to take a more comprehensive approach to foresight work than before. We have moved from one theme to a 360-degree overall picture of the operating environment; from continuity thinking to dealing with uncertainty and complexity; from outsourcing foresight to doing it ourselves. This has increased the foresight capacity of the state administration, but also required a greater investment of resources than before.

The latest Government Report on the Future, given to the Parliament in January 2023, was the first time the report was prepared in cross-governmental collaboration by government officials from all ministries. In the scenario work we identified societal, technological, economic, environmental, and political changes affecting the future of Finland, explored the uncertainties associated with these changes and created possible alternative paths of development for the critical uncertainties to the future, both in Finland and in the international operating environment. The report describes four scenarios. In a world of cooperation the Paris Agreement has been successfully and fairly implemented around the world, and the Sustainable Development Goals have largely been achieved. In a crumbling world the climate is heading towards +5°C warming and global security has dramatically weakened. In a world of intensified competition societies and individuals are divided into winners and losers. In an Eastern world China has become the economic and political leader. Scenario paths leading up to 2040 illustrate how these scenarios could develop.

This new way of preparing the Government Report of the Future has created a new model for Government's foresight and futures work and deepened cross-governmental cooperation and collaboration. The reporting work forms the foundation for joint and continuous foresight and monitoring of the operating environment in ministries. This supports the formation of a shared situational picture within the Government. The Report will be used in building the Finland of the next generations and in strengthening Finland's preparedness for the future. Government Report on the Future feeds for example into strategy work and policy planning, law drafting and decision making processes, to supporting risk management and situational analysis, and identifying research and development needs. As part of the report, 50 citizen dialogues on the future of Finland have been organized with the TimeOut Foundation. The dialogues served as input for the Government Report on the Future.

The audit report of the National Audit Office showed that the renewed Government Report on the Future process has strengthened the Government's foresight capabilities, has unified government-level practices and initiated the internal development work of the ministries in foresight, has developed cooperation between ministries, has increased the individual level learning of the people involved, and is a good example of the development of foresight capabilities by learning by doing.

The Committee for the Future proposes that the Finnish foresight ecosystem actors create together an additional fifth scenario, like imagining a turbulent society or creating a bold positive vision. In the special session we will take the first steps towards the fifth scenario. We will discuss wild cards / disruptions from STEEP categories suggested by the Finnish Parliamentary Committee for the Future. We will identify and discuss impacts of these wild cards. We will also identify who are the winners and who will suffer? This will help us to think about what could happen if these wild cards occur.

Futures research: Envisioning the social futures

Time: Thursday 15 June at 9:00-10.30
 Room: Ls 07
 Chair: Aleksí Neuvonen

Utopia and Anticipation: Complementary Instruments for Envisioning the Social Futures

Pernaa, Hanna-Kaisa & Karhu, Mikko

University of Vaasa, Finland

Utopia became a famous concept from the 16th century book of Thomas More from which it received a dual meaning as “no place” and “good place”. Utopia has been subject of interest of several social sciences including the future studies. It has been given several meanings of which the “ideal, but unreachable place” is the most well-known. In this meaning utopia has been compared with a master plan based on an assumption that an ideal state of society, city, organization, or any target of planning can be envisioned and achieved.

Envisioning the future through Robert Rosen's theory of anticipation draws attention to the function of the system in order to achieve its desired state. Anticipation is considered as a novel approach to visioning futures, the present state, and the past. When considering utopian thinking and anticipation in parallel, their fundamental difference relates to the accessibility of the desired future, and how it is linked to the actions in the present state. Anticipation does not support the assumption of a permanent, ideal future state of any social structure unlike utopia in the sense of a master plan. Anticipation refers to functioning always manifested in the system as a cognitive process.

Theories reconsidering the purpose of utopia give an opportunity to explore the connection of utopia and the anticipation in a mutually beneficial way. Theories about the functionality of utopia suggest that utopia does not have to be a perfect outcome or outcome at all. Instead, it can be a *modus operandi* in an anticipatory process, utilizing imagination by knowingly disengaging from the present's restrictions to our attitudes, expectations, hierarchies, and capabilities.

We suggest that when used consciously and purposefully, the combination of utopian thinking and anticipation adds the elements of creativity and human emotion to the consideration of the social future. As a result of a deliberate detachment from reality and with the use of imagination, it is possible to discover and understand – often undercurrent – values and ideologies that are involved in reflecting on the social futures.

We also suggest that by exploring the future in a way that combine utopian thinking with anticipation, it is possible to naturally broaden the scope of participation in the reflection of a desired future. A temporary leap from reality by “social dreaming” can inspire creativity and encourage a variety of participants to open discussion about the emotions and values behind the desired future.

Keywords: utopia, anticipation, social futures, participatory imagination

Creating Spaces to Imagine Utopian and Dystopian Futures: the Role of Backcasting and Foresight as Bridges Between Near and Distant Futures

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^b University of Technology Sydney, Australia

This paper explores temporal translation between near and distant futures by analysing how organisational actors construct distant future imaginaries, and connect these to performative action. Future imaginaries are assessments based on trends and assumptions on how the future will unfold. Through future-making, imagined futures can become performative when they dictate the actions in the present. Prior studies of organisational future-making have mainly focused on the conceptualisations of near futures (i.e., futures that can be derived from the present, short-term futures thinking, probabilities), with limited exploration of distant futures (i.e., beyond the scope of current temporal structures, long-term futures thinking, possibilities).

This paper responds to these gaps by examining how organisational actors are professionalizing future-making to empower futures and the ways imagined distant futures can shape performative action. We conducted interviews with 40 impact investors to understand how they engage with futures when making impact investment decisions. Impact investing refers to practices of mobilising capital to proactively, deliberately, and measurably generate positive impact, alongside financial returns. Impact investing provides a fascinating context to consider the performative effects of imagined distant futures, as we can evaluate how investors put their futures-thinking into action. Investing, in general, is very future-oriented, as investors are giving up something in the present, with the hopes of gaining more in the future, yet impact investors include the added complexity of trying to build sustainable futures.

Our paper contributes to the understanding of temporality and future-making in organisations by illustrating how actors create spaces for hyperprojectivity to imagine the distant future. We show how distant futures can accelerate action in the present. We unpack the role of foresight and backcasting as reflective processes to translate between current temporal structures and the distant future. We also highlight the role of utopian and dystopian thought in generating distant future imaginaries.

Keywords: distant future, temporal translation, foresight, backcasting, utopias, dystopias

Power over Futures – What Does It Mean?

Dufva, Mikko & Lähdemäki-Pekkinen, Jenna

Finnish Innovation Fund Sitra, Finland

The question of power is at the heart of initiatives to decolonize futures, democratize or popularize futures thinking, and on empowering futures in general. Who has power over futures? How does this power manifest itself? How to approach the question of power in futures thinking?

These questions are even more urgent in postnormal times of complexity, contradiction, and chaos. The manufactured normalcy bubble can be seen as an instrument of power aimed at sustaining the status quo, even though the world around is changing. Contradictions raise the need for understanding different viewpoints and discussing new ones – and understanding the power structures that guide this discussion. Decisions we make today affect how futures are shaped. It is not inconsequential what and how we think about futures.

In this presentation we will go through a working definition of power over futures and use it as a strategic object to bring together different aspects of this power. We will consider the rich tradition from critical futures studies, especially on deconstructing and reconstructing images of futures. Another viewpoint is the discussion on broadening participation and increasing inclusion in foresight, as well as the calls for connecting foresight and decision making. Anticipation studies and futures literacy offer a viewpoint on the capabilities needed to have power over futures. Together these and other viewpoints paint a rich picture of what power over futures means and how to broaden it.

The presentation is based on a report-in-the-making by the Finnish Innovation Fund Sitra.

Keywords: transformative futures, critical futures studies, inclusion, power over futures

Co-creation of Sustainability Transformation in Collaboration with the Cultural and Creative Practitioners in Non-Urban Areas

Siivonen, Katriina & Latvala-Harvilahti, Pauliina

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New ways are needed to strengthen cultural sustainability transformation and simultaneously support and advance non-urban areas and vulnerable sectors of Cultural and Creative Industries. Interlinking research and practice, this paper presents a participatory workshop method, Heritage Futures Workshop, based on the concept of Heritage Futures, as a tool for co-creating sustainable futures (Siivonen et al. 2022). Intangible cultural heritage (ICH) transformed into Heritage Futures, become a concept whose key characteristic is intentional co-creation of novel sustainable futures based on chosen and shared values (Siivonen 2022). The context of the paper is the new Horizon Europe project 'IN SITU: Place-based innovation of cultural and

creative industries (CCI) in non-urban areas' (2022-2026, University of Coimbra). West Coast Finland (Rauma and Eurajoki), with its strong number of artistic practitioners, is one of the six IN SITU Labs in Europe – hubs for case studies. In the Finnish Lab area, maritime environment and cultural heritage sites are key resources for individual belonging, social resilience, well-being and local economy. Heritage Futures Workshops aims to strengthen the future agency of CCI practitioners and provide tools for co-creating Heritage Futures, in other words anticipatory (Poli 2017) skills and knowledge with connected emotions, and empathy towards both human and more-than-human world. As a consequence, it pursues deliberative cultural transformation towards more sustainable societies. Heritage Futures Workshops are developed to be used to intentionally co-direct cultural change, which is necessary in order to accelerate sustainability transformation. Our presentation will also reflect on the role of researchers in local development work from ethical perspective, and the challenges of supporting the creative sector's future agency.

Keywords: Heritage Futures, Heritage Futures workshops, cultural sustainability transformation, cultural and creative industries, non-urban area

Interfacing with Collective Futures: Using Anticipation to Prototype Experiential Futures

Sanchez, Camilo

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Democratising future visions is an endeavour in which Human-Computer Interaction (HCI) prototypes can provide support. HCI prototypes can be used to materialise everyday aspects of possible futures into everyday interactions with technology to better engage socially diverse groups of stakeholders.

Traditional foresight has created an unbalanced situation by concentrating futures narratives on the input provided by experts. A greater problem arises when this imbalance reinforces agendas pursued by power structures and promotes the values of a privileged society.

To tackle this problem, Sam Kinsley suggests using anticipation to examine how problematic visions of the future are constructed. Anticipation serves to navigate uncertainty across possible futures and analyse unintended consequences of science and technology innovation. Through scenario development, technology assessment and prototypes, among other practices, anticipation constructs the future in the present. This exploration of uncertain futures helps balance expectations against the driving forces of society and make better-informed decisions about possible futures. Nevertheless, it is worth questioning whose expectations are noted and who are the beneficiaries of future-oriented decision-making.

In resonance with Kinsley's proposal, the emerging field of experiential futures tries to address the imbalance of generating future visions by engaging citizens to participate in the futuring process. To achieve a more inclusive futures-making process, experiential futures invites a diverse and democratically representative group to create and engage with everyday life aspects of the future.

By determining the possibilities in which experiential futures and HCI can co-produce collective futures, this paper proposes a set of considerations that could support a more democratic approach to future making. While the most direct implication of this approach is to empower citizens in critical futuring, this study aims to contribute to a corpus of research that calls to consider HCI as one more field for futures studies to add to its interdisciplinary umbrella.

Keywords: HCI, experiential futures, anticipation, citizen engagement

Long-term governance in an era of climate change

Time: Thursday 15 June at 9:00-10:30
 Room: Ls 09
 Chair: Markku Wilenius

The Function of Distrust in Climate Governance

Mendy, Laila

Uppsala University, Sweden

The literature on climate governance has broadly and deeply accounted for the universal value of trust in these arrangements. Case studies, theoretical explorations and statistical research has explored the conditions for, interesting accounts of, and functions of trust in climate governance. Trust, it is argued, is a fundamental aspect on commitment to the process, deliberating and consensus building, as well as anticipating for and producing fairer outcomes such as policy suggestions. Much of the literature acknowledges hesitancy, risk, and vulnerability and the ways to build trust to overcome otherwise distrustful participants. Yet, comparatively few studies look at the alternative: what are the natures of distrust in climate governance? and what are the functions of these attitudes and relationships?

In answering these questions, a mapping exercise accounts for the different dynamics and dimensionalities of climate distrust in Sweden. The aim is to comprehensively account for and model the different ways in which distrust manifests around the climate issue, acknowledging the distrust in both participants, such as stakeholders in collaborative governance arrangements, or citizens in deliberative mini-publics, as well as non-participants, such as the citizen or social movement in representative democracy. The objective is to explore how distrust is a mobilising mechanism and what this means for the climate governance to Net Zero 2045.

Keywords: distrust, Net zero, anticipation, climate change, governance, participation

Deliberative Stakeholder Scenarios in National Climate Policy Planning – the Use and Impact of Sectoral Low-Carbon Road Maps in Finland

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Scenarios and roadmaps have become core tools in the public policy planning and execution processes. They are especially used as the backbone of energy and climate policy planning. Politicians, public authorities and research groups have had a dominant role when forming scenarios and roadmaps, as they have to combine contemporary political goals and robust modelling into a politically feasible outcome. Role of stakeholders is often relegated to mere commentator and reviewer in these processes. However, 13 Finnish interest groups created their individual roadmaps to low-carbon futures as part of officially coordinated Sectoral low-carbon roadmaps project in 2019–2020. The roadmaps provide a unique opportunity to gain insights on the use and impact of more deliberative scenarios, constructed mostly outside of national policy processes.

We interviewed actors who participated the sectoral low-carbon roadmaps project, from the sides of participating interest groups and the coordinating ministries. Additionally, we reviewed the created roadmaps and official climate policy documents that were constructed thereafter. Materials were analysed via qualitative content analysis using inductive approach.

We explore 1) how could stakeholders influence national policy planning through low-carbon roadmaps; 2) how did the expectations and views on the process and its outcomes align between interest groups and public administration; 3) how could the deliberative aspect in national scenario building be improved in future planning based on this exercise. The analysis improves our understanding of how new actors could be brought to environmental policy foresight and planning.

Keywords: scenarios, climate policy, policy planning, stakeholder interviews

Comparative Analysis of Long-Term Governance Issues: Climate Change and Emerging Technology

Ojanen, Atte

Demos Helsinki and University of Turku, Finland

There is a growing recognition of the long-term policy problems that modern democracies face. Addressing these issues, ranging from climate change, infrastructure investments, preventive health care to governance of disruptive technology require policymakers to pay upfront costs for potential benefits in the future (Jacobs 2016). As such, they are prone to short-termist decisions and under-investment, leading many to conclude that democracies suffer from 'presentist bias' or 'myopia' (Thompson 2011; Boston 2016).

However, these issues are frequently grouped under the umbrella of the 'long-term issues', without adequate consideration of their distinct spatial, temporal, and ethical characteristics. To address this research gap, this paper compares the risks of climate change and emerging technology as long-term policy problems. Climate change and risks from emerging technology will be contrasted in terms of their scale, risk magnitude, linearity, immediacy, duration and reversibility and other factors to tease out their morally relevant differences, especially from the perspective of intergenerational justice (Caney 2018; Meyer 2021). This offers an insightful point of comparison for long-term governance. Climate change is a well-established intergenerational conflict over resource use, while technology governance is more focused on foresight and risk preparedness. However, emerging technology might also result in intergenerationally problematic lock-ins and path dependencies that harm future generations' self-determination similar to climate change.

A wide array of institutional and policy responses have been proposed to better include the interests' of future generations into policy-making (González-Ricoy & Gosseries 2016). Thus, the paper will explore how intergenerational conflict, distribution of cost and benefits, and temporality differ between technological and climate contexts, and what practical implications this has for their long-term governance. Based on this, it will examine the feasibility, effectiveness, and overall desirability of different intervention strategies and institutional solutions such as deliberative mini-publics (MacKenzie 2018) for addressing political short-termism and enhancing long-term governance.

Keywords: long-term governance, political short-termism, climate, technology

Why Do We Fail in the Sustainability Transformation and What Should Be Changed? The Case Biodiversity Loss in Finland

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Finland Futures Research Centre, University of Turku, Finland

Resolving global biodiversity crisis requires systemic sustainability transformation in different areas of society (IPBES 2019). Administrative (public sector) institutions and practices play an important role in bringing about this change. According to a recent systematic literature review, empirical studies on sustainability transformations are generally lacking while theoretical research related to the concept of transformation is abundant (Salomaa & Juhola 2020). In this paper we will focus on the administrative opportunities and obstacles for sustainability transformation in biodiversity-related agricultural and forest policies in Finland. Administrative institutions and practices here refer both to governance structures and features, and policy tools which include, for example, legislation, planning, economic and policy instruments, and information measures.

Based on the literature review, we first describe the characteristics of the sustainability transformation. After that, we present the identified administrative and societal obstacles to transformation. Our analysis is based on 10 expert interviews conducted from November to December 2022.

The identified issues standing in the way of a transformation can be seen to be linked to the features of the current system. Path dependency of sectoral policies, the roles of ministries in promoting the interests of their own sectors leading to the lack of coordination and cooperation and the subordinate role of environmental policies compared to other sectoral policies are examples of governance structures and practices that stand in the way of a transformation.

Concerning the futures perspective, other identified problems are the inability to make decisions in long term, the overall lack of resources in the administration and the weakness of the international community in creating a coordinated global response to battle biodiversity loss. Finally, the complex and hard-to-understand concept of biodiversity poses a particular challenge to administrative measures.

However, we have identified solution models for these issues and challenges. These include, for example, changes in the nature of environmental protection from restorative work to pre-emptive measures, increasing funding for both restoration and administration and novel economic, and policy instruments that further bring the costs of externalities in the prices of commodities. We also aim to develop practices for lengthening the time scales of policy making, supporting holistic and coordinated approaches in solving environmental crises and finally, finding new ways to use forests in a both economically and environmentally sustainable way.

Keywords: biodiversity loss, transformation, long-term governance

Workshop: Post-pandemic Futures of Work and Mobility

Time: Thursday 15 June at 9:00-10:30
Room: Ls 01

Pouru-Mikkola, Laura^a – Ahlqvist, Toni^a & Nummela, Niina^b

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The aging population and decreasing demographic development are making the attraction of global labour force one of the key questions of long-term survival for the Finnish society but also to the rest of European countries. The global race for talent has been ongoing for years but it has expanded from well-educated elites to blue-collar employees. At the same time, one of the consequences of the Covid-19 pandemic has been the drastic change in the mobility and location of work. Although in the future a growing number of meetings and negotiations will take place online, global mobility of individuals will continue. Voluntarily mobile individuals will search for meaningful and flexible work, which will provide them not only sufficient income but also the ability to strive for personal goals. This puts significant pressures on the content of work but also requires that it is independent of location or time (Cañibano, 2019). However, work flexibility does not depend only on individual choices or company requirements. Institutional barriers can hinder this development. Policy expectations accompanied with legislation to execute these goals set restrictions to the action of companies hiring cosmopolitans and to individuals in deciding over their mobility.

The futures of mobile work and migration, and especially understanding the varieties of feedbacks and repercussions these could have on local, regional and national policies and economies, make the questions of multi-local mobile work an important topic of future research (see e.g. Granter 2008). In this interdisciplinary special session, we discuss the transforming futures of work, that is, we assess how working life is expected to evolve after the global pandemic and in the long-term. The session is organised as a participatory workshop. The focus of the discussion is on the multiplicity of future possibilities in the mobile work, especially when analysing it from different perspectives, such as perspective of individuals, companies and policy actors.

The special session is part of the research project *Cosmopolitan life, identity and future of work* funded by the Academy of Finland and conducted by a consortium led by Professor Niina Nummela, Turku School of Economics, during 2022-2026.

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Keywords: future work, mobile work, mobility, migration, scenarios

SESSION 5 at 10:45–12:15

Futures education: Adult education and leadership coaching

Time: Thursday 15 June at 10:45–12:15
 Room: Ls 18
 Chair: Hanna-Kaisa Aalto

The Future of Leadership Through the Lens of Agile Coaching

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Laurea University of Applied Sciences, Finland

The world is changing at an accelerating pace, which requires companies to be innovative, agile and futures conscious. Futurists foresee even a broader leadership crisis. There is a need to tackle crisis including global challenges, be they economy, health, geopolitics, or organization related. Just transition of leadership entails development of agile practices utilizing human potential, creating opportunities for people to learn, grow, and develop to their full capacities and interests.

This paper proposes a theoretical framework how to support transformation of leadership practices to the next century. The transition path is proposed to be smoother with the help of a coaching community.

A real-time eDelphi panel of agile leadership experts discussed what characterizes the future of leadership and agile coaching in 2037. Based on the results, we introduce an agile organization of the future, where agility is defined as futures conscious thinking, culture, leadership, and coaching; always more about “being agile” than “doing agile”. Agile leadership, leaders’ ability to empathize and organizations’ ability to innovate are key to success in changing operating environments.

Furthermore, we report barriers and drivers of agility in today’s large international organizations and conclude with recommendations how to develop agility in any organization. Transition stage identification and steps to further development are supported with a framework for future agile coaching competences.

Keywords: delphi, futures literacy, agile, coaching, leadership

Empowering Future Leaders for Optimistic Future Thinking through Innovative Curriculum Design

Dutton, Jacqueline – Meehan, Olivia – Christie, Simon & Roberts, Annelise

University of Melbourne, Australia

Designing a future thinking curriculum for the higher education classroom offers a remarkable opportunity to empower future leaders by embedding frameworks and practices for optimistic pathways forward. This paper takes the flagship subject Arts Discovery, a compulsory subject for students entering the Bachelor of Arts degree at the University of Melbourne, as inspiration for further research into the process of scaffolding important future focussed learning modules for future leadership in the Asia-Pacific region. Working with a diverse cohort of up to 2500 students per year, including high-achieving international students from China, India, Indonesia, and the Pacific, the subject provides tools and fora for practising futures literacy (Lopez-Galviz & Spiers 2021) and utopian thinking (Levitas 2013). This presentation discusses the innovative curriculum, devised to impart critical research tools through a balance of engaging individual and team-based exercises, all of which are centred on New Futures, with key themes of Indigeneity, Sustainability, Diversity and Inclusion, Technology, and Real-World Impact. The subject design combines object-based learning (Kador and Chatterjee 2021), utopian thinking for pedagogies of hope (Webb 2019), internationalisation (Deardorff et al 2021), and creative strategies (Blessinger & Watts 2017; Rivera Santana & Akhurst 2021), asking students to consider a series of cultural objects as stimuli for team-based New Futures research projects with a holistic, interconnected, positive, socially oriented outlook. (NB – these areas of expertise correspond to those of the four contributors to this paper.) Preliminary research and experience suggest that embedding optimistic future thinking into formal learning early in the undergraduate experience may encourage ongoing positive attitudes

towards peer work, creative problem-solving techniques, futures literacy, and other vital transferable skills for empowering future leaders.

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Keywords: future thinking curriculum design, object-based learning, utopian pedagogies of hope, internationalisation, creativity in leadership

Transformative Adult Education Mash-Up Merging Anticipation, Learning, and AI

Ketonen-Oksi, Sanna & Pura, Minna

Laurea University of Applied Sciences, Finland

Given the alarming threat that the crossing of our planetary boundaries (Steffen et al. 2015) creates to the wellbeing and survival of all species, challenging the old and (re)imagining/experiencing alternative futures has become the interest of many researchers and practitioners across sectors. Profound transformation is needed on all areas of human activities, especially in terms of thinking, leadership, and structures (Sitra 2021). To embrace empathetic, ethical, and ecological thinking and belongingness (Finnish Ministry of Education 2021), we need to educate individuals take responsibility of themselves, their families, communities, society, and the world.

One of the arising trends in adult education relates to the uses of the theory of transformative learning. Whether referring to it with an emphasis on changing the adult learners' perspectives and worldviews through critically reflecting and reviewing their past ideas and understanding (Mezirow 1978, 1997), or underlying the impacts of the surrounding environment in the adult learners' psychosocial learning process (Boyd & Myers 1988), it offers the means through which the adult learners can redirect their agency (beliefs) toward the future. Transformation requires a collective effort. Technology may aid in anticipating, visualising and communicating alternative utopian futures and the required systemic change.

In our presentation, we discuss:

- 1) How to empower the uses of transformative learning in urban and regional development activities with adult learners representing different sectors, fields of expertise and demographic factors?
- 2) How to use nascent technologies (such as AI, holograms, emotion tracking) in education to support just transitions in 3-5 years and beyond?

With our expertise and prior experiences on leadership, strategic and transformative foresight, future of work, innovation ecosystems, and organisational futures orientation, we create future visions and/or scenarios for the application of new emerging technologies in education. These ideas are formed in collaboration e.g., with our students, colleagues, and corporate partners.

Keywords: transformative learning, transformative technologies, adult education, anticipation, futures consciousness, scenarios

Empowerment through Futures Agent Training

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The post-covid business environment has placed intense pressure on knowledge economy sector workers in Finland to both adapt to the poly-crises of the Anthropocene and devise new practices in line with shifting social values. Within futures studies, numerous recent additions to the literature on participatory futures practice suggest that addressing societal level transformations requires individual level development of personal cognitive and social capabilities (Miller 2018, Ahvenharju et al. 2018).

The Future Agent Training programme aimed to develop participants' knowledge and skills in three areas of competency: futures and foresight, complexity and resilience, and sustainable work and wellbeing. The training involved online webinars and workshops, and two learning communities: a) a virtual community that gathered in the webinars and an online learning platform and b) three local communities that met both online and face to face. The programme has been organised twice, with 65 participants altogether.

To better understand how participants relate to the learnings within the social learning spaces of the Future Agent Training, we will use the Wenger-Trayner and Wenger-Trayner's (2020) value creation through social learning framework to evaluate data gathered over two rounds of the training programme, between January 2022 and April 2023. The data will consist of 18 interviews, 50 survey responses, deliverables, and discussion forum posts on the online learning platform. The multi-layered value generated in social learning spaces is investigated through consideration of the link between capability development and empowerment; through which new ways of being and doing broaden the range of accessible possibilities and opportunities, thus empowering actors through enhanced agency.

Initial analysis of the data suggests that value was generated across multiple dimensions, that participants were able to apply new cognitive skills in practice to realise personal and organisational level experiments, and that initial indicators hint at a limited number of instances of profound transformations in personal perspective. Initial conclusions suggest that iterative learning cycles utilising social learning spaces can be effective at advancing anticipatory capabilities that enhance individuals' navigation of opportunities in a rapidly changing environment.

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Keywords: value creation through social learning, transformative learning, participatory futures, anticipatory capability development

Foresight and futures research for (climate) just transition

Time: Thursday 15 June at 10:45–12:15

Room: Ls 19

Chair: Hanna Heino

Striving for Climate Just Futures Today: Examining Youths' Perspectives on Climate Justice Activism in the United States

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In recent years, the youth climate justice movement has grown in size, visibility, and influence. Youth climate justice activists are demanding cultural, structural, and policy change to avert the changing climate's ecologically destabilizing and inherently inequitable effects. To date, most research examining the climate-relevant actions of youth and adults has focused on individual, micro-level behavior changes with aims of

mitigating climate change (e.g., via carbon footprint reductions) or adapting to its effects. Much less research has examined actions in pursuit of climate justice, a concept more often framed in macro-level terms and as a collective pursuit with aims of minimizing harms to societies' most vulnerable groups as well as promoting broad participation in democratic decision-making and action to promote human flourishing. To address key gaps in the literature related to youth activism in the climate justice domain, the present study used in-depth, semi-structured interviews with a photo elicitation component to explore the stories of 34 youth (ages 15-25) from across the United States about their involvement in climate justice activism. Specifically, reflexive thematic analysis was used to explore how youth first learned of climate change and climate justice, how youth navigated entry into climate justice activism, and their own multi-faceted conceptualizations of climate justice, societal transformation, and striving for climate just futures in the present. Findings emphasize a diversity of pathways into activism reported by the youth as well as a range of challenges (e.g., eco-anxiety) and opportunities (e.g., community-building) experienced by youth as they collaboratively envision and work towards more just, equitable, and sustainable futures. Key findings highlight the concept and practice of prefiguration, whereby youth aim to embody desired social conditions through their present-day actions to build a new world 'in the shell of the old.' Implications for youth-focused research, policy engagement, and educational approaches will be discussed.

Keywords: activism, climate justice, prefiguration, sustainability, youth

Sustainability through Postgrowth? – Sketching Images of Global Postgrowth Futures for High, Middle and Low-Income Countries

Haapanen, Liisa

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The idea of postgrowth challenges the position of green growth as a route to sustainable futures. In postgrowth, societies abandon the pursuit of continuous economic growth and replace it with goals of strong ecological sustainability and holistic well-being as well as intra- and inter-generational justice. Due to vast differences in socio-economic conditions between nations, it is clear that a "one-size-fits-all" approach to postgrowth is not fruitful. This paper contributes to our understanding on what the idea of postgrowth could mean in different regions of the world by providing several images of postgrowth futures for both high, middle and low-income countries for year 2060. The concepts of ecological, social and economic sustainability are (re)defined from postgrowth perspective with special attention on the concept of welfare productivity of GDP (i.e. how much well-being is derived from the products and services used in the economy). The images of future could be described as preliminary "quantitative sketches". They are constructed with the IPAT equation, which is a simple back-of-the-envelope method to roughly estimate how much population, standard of living and eco-efficiency contribute to negative environmental effects and their reduction. In addition, changes in welfare productivity of GDP and global inequality are described for each image. The seven images are called Depression, Zero growth, Zero growth and equity, High-tech postgrowth, Moderate-tech postgrowth, Empowering low-income countries and Equal postgrowth. Some of these images succeed in meeting several sustainability criteria while others fail. The findings of the study highlight the importance of setting a global reference level for living standards, and securing investments in eco-efficient technology during the transition to postgrowth economy. For high-income countries, a key element in successful postgrowth transition is enhancing the welfare productivity of GDP in order to secure well-being while reducing or stabilizing living standards. In low-income countries, sustainable postgrowth seems more challenging to realise since they have substantially lower initial levels of eco-efficiency and higher population growth estimates. Their main challenge is to avoid internal growth-dependency in the economy while increasing living standards, well-being and eco-efficiency. Middle-income countries require somewhat smaller changes than the other country groups, and identifying cases for benchmarking from this group is an interesting new research avenue. Bearing in mind the limitations of the study, the images of future serve only as an early draft for global postgrowth futures and further research on their feasibility is needed.

Keywords: postgrowth, IPAT, welfare productivity of GDP, sustainability, images of future

Strategic Foresight for Sustainability

Knudsen, Mikkel Stein – Ahlqvist, Toni – Taylor, Amos – Villman, Tero & Lauttamäki, Ville

Finland Futures Research Centre, University of Turku, Finland

Increasing green, digital and future (i.e. sustainability foresight) skills among students and professionals is a cornerstone in building sustainable futures. Strategic Foresight for Sustainability is a new European project (2022-2025) which aims to catalyse foresight in organisations and build those skills in the wider industrial community.

During the initial phase of the project, we have collected more than 100 expert interviews across Europe that highlight current organisational needs and capabilities, barriers and opportunities for organisational foresight, sustainability, and digitalisation, and perceived future skills required.

For this conference presentation, we synthesize the key findings from the large number of interviews. The findings document perceived barriers to sustainability within important European industry sectors related to agri-food, health, and mobility, and thereby provide up-to-date empirical contributions to sustainability research within those fields.

Furthermore, the interview-based insight underline foresight “metacompetences” assessed to be central in the future for organisational foresight development. This assessment of metacompetences have important implications also for the foresight community itself, as it suggests directions towards where to prioritise our efforts. By doing so allows the futures and foresight field to increase its impact for accelerating the sustainable transformation of industry and society.

Keywords: strategic foresight, sustainability, futures skills, innovation management

Methodological development of futures studies: Scenarios

Time: Thursday 15 June at 10:45–12:15

Room: LähiTapiola-sali

Chair: Veli Virmajoki

Unlocking the Power of Expert Judgments with the Delphi-based scenarios: a Robust Ranking and Fuzzy Clustering Approach

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^b Department of Statistical Sciences, University of Padua, Italy

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In the methodology corpus of futures studies, Expert judgments are widespread and the crucial point is the procedure by which they are aggregated and treated statistically. In the elicitation phase, a group of experts is preferable to a single expert, and it is known that Delphi-like approaches – based on anonymity, iterations, and controlled feedback – offer many advantages. However, from a statistical perspective, expert judgments are subjective data, regardless of how they are collected, and must be treated as carefully and scientifically as possible, to get valid and reliable results. For example, in the analysis of the results of a Delphi, a series of problems emerge concerning the use of the Euclidean distance or the choice of normalization and aggregation formulas. In the approach known as Delphi-based scenario, Delphi results are used to build the basis of the draft scenarios, and to this end, they must be properly aggregated and then classified.

We propose a new statistical method to analyze Expert's judgments within Delphi-based scenario, which produces robust rankings of the outputs, overcoming many drawbacks of the traditional methods. In the immediately following phase, when the Delphi items have to be classified to form the draft scenarios, we propose a fuzzy clustering approach, which is better suited to robust rankings than raw Delphi outputs. This method allows us to correctly normalize and aggregate the judgments of a panel of experts and, simultaneously, model diverse sources of uncertainty so that the result does not depend on the choice of specific formulas for normalization and aggregation.

By combining the Delphi method, the robust ranking, and the fuzzy clustering, we offer a new procedure for the elicitation, aggregation, and statistical treatment of subjective data employed in the construction of Delphi-based scenarios. The method is very flexible and can be applied in all Delphi applications and for the analysis of any kind of subjective judgments, therefore also outside the context of futures studies. We finally show the validity, potential, and reproducibility of the method by an application with regard to the future of Italian families.

Keywords: delphi-based scenario, statistics, Monte Carlo methods, robust ranking, fuzzy clustering, uncertainty analysis

Delphi-based Visual Scenarios: Envisioning Futures with Artificial Intelligence

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In the Futures Studies (FS) context, the development of future scenarios aims to envision and anticipate the long-term futures in order to empower efficient decisions in the present. For complex scenarios, many methods are currently used, however, one of the widely used approaches is the Delphi-based Scenarios (DBS). DBS is an efficient method, that allows for structured group communication, in order to gather experts' judgments through multiple iterative rounds and statistical aggregations. Nevertheless, since the future is not predictable, it cannot be imagined and elaborated by human beings with ease. Exploring futures can be a complex and challenging task, as it requires strong creativity and the ability to convey information in a way that is easily understood by experts and decision-makers. Traditional methods of presentation, such as simple text descriptions, may not effectively capture the attention of the audience and may be hindered by a lack of technical language or poor communication. Furthermore, as scenarios are collections of future situations, it can be difficult for the experts to fully envision and comprehend them. In this context, Artificial Intelligence (AI) continues to advance and various methods can be utilized to enhance DBS. One approach is to adopt Generative Adversarial Networks (GANs) to generate visual representations, such as detailed images, from experts' judgments. We propose a new approach known as Delphi-based Visual Scenarios (DBVS) which incorporates GANs with the aim to assist experts in refining and validating draft scenarios, as well as decision-makers in the planning and communication phase, by providing them with immediate visual representations of what the future may look like.

Keywords: delphi-based visual scenarios, future studies, artificial intelligence

The Wisdom of Collapse: Governing in Descent Futures or the Birth of New Beginnings

Jones, Christopher

Centre for Postnormal Policy and Futures Studies, United States

This paper is a defense of the Collapse alternative future. It explores the origins and reasons for this dominant image of the future, the types of possible societal collapse over the coming centuries, and the importance of embracing Collapse and Descent futures, as part of the foresight enterprise and in governing and planning at the local and international levels. It explores the concept of civilizational collapse from historians, anthropologists, and complexity studies scholars and analyzes the Collapse image of the future in the work of futurists, such as Polak, Vacca, Dator, and Slaughter. Also significant is the experience of Collapse by indigenous people for the last half millennium, the intellectual and artistic efforts of Dark Mountain, Just Collapse, dark ecology, and Dator's assertion of that governance failures may lead to possible Collapse. This paper focuses on Collapse as one of the Four Futures and therefore not a futures image to be ignored or passed over. The paper squarely confronts the pessimistic, negative, and eschatological dimensions of the Collapse image. Yet, Collapse is not a single monolithic, global event (e.g., World War III), although it could be, and not "doom and gloom", but a very real image of the future in people's heads and popular in science fiction literature and movies. The Collapse image of the future may behave, as a strange attractor according to Schultz, a complex

systems phenomenon that has power and gravitas. Collapse, both as an eventuality, and as an image, needs to be respected, not disparaged. The paper concludes with an exploration of the role of governance: in potentially preventing collapse; in adapting to massive systems decline or failure; and, in building resilience as we face “polycrisis”. Failing to do those, government can assist in the transition to a new civilizational paradigm and a truly transnormal civilization.

Keywords: futures images, Collapse, Four Futures, Descent futures, New Beginnings, governance

How Principal Component Analysis (PCA) Can Improve the Modelling and Usage of the Scenario Method

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This article presents a full typology of varying goals, directions of reasoning, competing schools and methodologies that are linked to the scenario method. This is done in order to contextualise our novel method called Principal Component Analysis (PCA) within the field. The method borrows its name from the applied statistical method conventionally used in dimension reduction, and we show that PCA is an exploratory-inductive scenario analysis method. Its objective is to create a set of internally consistent but maximally diverse scenarios, which ensures that the resulting scenarios are not only plausible and logical but also cover a maximally wide range of future possibilities. The results are achieved by identifying critical uncertainties, assessing their pairwise correlation scores and choosing the scenarios along principal components. The process is much easier to conduct in relation to other methods with the same objectives, and the results can also be presented in easily interpretable figures.

Keywords: scenarios, principal component analysis, correlation coefficient, forecasting, explorative-inductive, normative-deductive

Analysing the Varying Methodological Approaches for Constructing Food System Futures – Frameworks, Boundaries, Methods, and Limitations Based on Selected Studies

Rikkonen, Pasi – Aro, Kalle & Rimhanen, Karoliina

Natural Resources Institute Finland (Luke), Finland

Food systems face manifold pressures in both national and global domains. While the globalization has generated an increasing degree of interconnectedness in the food systems, the national and regional context of geography, weather conditions, political institutions and societal norms greatly affect the food system dynamics. Therefore, reviewing scenarios with various geographical frames allows for more in-depth analysis and comparisons. In this analysis we portray the dichotomies of scenario-building in selected food system studies. We focus on three spatial frames: 1) national context operationalized as the case of Finnish food system; 2) regional context operationalized as the case of Europe, and finally 3) global context. We collected a selection of food system scenario studies, which create, describe and evaluate alternative futures for food systems. We searched the Web of Science database and Google Scholar limiting the years of publication to 2014-2021. We were especially interested five questions: 1) how the foresight method was chosen and justified, 2) what were the identified limitations in the methods 3) does the method choose the research objects or vice versa (the research object a suitable method) 4) how are the final scenarios selected, and finally 5) on what principles have the options in the scenarios (distinctiveness, variation in scenarios) been selected, and at what stage in the scenario construction process? A dichotomy framework for scenario-building was used in analysing the varying methodological approaches.

Keywords: agriculture, food system, foresight, scenario methods

Methodological development of futures studies: Futures thinking

Time: Thursday 15 June at 10:45–12:15
 Room: Ls 07
 Chair: John A. Sweeney

Futures Consciousness Among General Population in Finland and UK

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^b University of Basel, Switzerland

The recently developed concept of Futures Consciousness (FC) and the respective psychometric measure the Futures Consciousness Scale have been for the first time studied with representative population samples, both in UK and in Finland. In this presentation we will discuss the main insights we gathered from these two samples and compare it with a third, non-representative, sample of students in continuing education.

The level of future awareness or future orientation has rarely been studied among wide population within futures research, mostly due to the lack of suitable survey tools. Although psychological research has covered aspects of future orientation or consideration of future consequences, the Futures Consciousness approach presents a broader concept encompassing both forward looking in time as well as personal agency, systemic thinking, openness and responsibility for others. However, the utility and relevance of psychometric data that can be gathered with the FC Scale is still an open question in futures research.

The novel five-dimensional model of futures consciousness integrates theoretical thinking from futures studies with related psychological literature and relevant research-based psychological constructs. The model consists of the following psychological dimensions, namely, a) Time Perspective, b) Agency Beliefs, c) Openness to Alternatives, d) Systems Perception, and e) Concern for Others. The futures consciousness psychometric scale is a recently developed instrument that utilises these five dimensions to measure the presence and impacts of futures consciousness in individuals.

Keywords: futures consciousness scale, future thinking, futures literacy, anticipation, comparative research

From Ethnography to Lateral Thinking: Empowering Young People for Future-Making

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^a Institute of Ethnology and Folklore Research, Croatia

^b Institute of Slovenian Ethnology (ZRC SAZU), Slovenia

Unlike many other European countries, Croatia and Slovenia have not paid much attention to the development of future thinking and have generally failed to achieve a functional standard of future literacy. This is especially evident when working with young people. While some engage in protests, social movements, or local politics for a better future and eloquently demand change, the majority remain passive, silent, or incoherent when asked about their aspirations. The feeling that they have reached their life's impasse (Berlant) has been exacerbated – at least in our countries – by natural disasters, pandemics, and the current war on the edge of the EU, as well as by ongoing, prolonged political and economic shocks and crises that have led to insecurity and distrust in democracy. To empower young people, especially the silent majority, for future-thinking and future-making and develop their "capacity to aspire" (Appadurai), we have experimented with an approach based on the ideas and tools of lateral thinking developed by Edward de Bono. We organised workshops with university students who had previously ethnographically studied urban phenomena in selected towns. To expand their capacity, imagination, and creativity in identifying, addressing, and solving urban problems, we engaged them in developing new ideas for cities beyond the current repetitive and limited narrations in public discourses. In particular, we employed lateral thinking tools to not only inspire their future-thinking but also to prompt their agency for future-making, supporting them in developing concrete ideas for more ecological, inclusive, just, vibrant, co-designed, and participatory urban public spaces. In response to the question of how the scientific community can contribute to empowering futures, the presentation will focus on how we combine

ethnography and lateral thinking tools to empower young people for future-making, assess the implications of such an approach for futures research, and reflect critically on its epistemological, practical and ethical issues.

Keywords: methodology, futures literacy, ethnography, lateral thinking, empowerment, young people

The Role of Data and Transformative Evaluation in Shaping Futures Work

Parkkonen, Pinja – Vataja, Katri & Thompson Coon, Rose

The Finnish Innovation Fund Sitra, Finland

Foresight and futures work aim at imagining, rethinking and setting conditions for just, inclusive and sustainable futures. How can we use data and evaluation for diversifying and shaping foresight and futures work? How can we use evaluation to amplify the voices of the powerless?

In this session, we discuss what role data can have in planning foresight activities and evaluating futures work. Sitra is a future-oriented think-connect-do-tank, aiming at broadening the futures discourse and building futures and foresight capabilities in Finland. Its transformational approach to impact evaluation combines accountability, learning and futures knowledge. In a complex and “post-normal” world, the transformational approach challenges conventional retrospective evaluation. For planning and evaluation purposes, Sitra collects a wide range of data from social, digital and editorial media as well as public survey data. This data is used for instance to analyse the public’s awareness and attitude towards futures and perceptions concerning megatrends and power to influence one’s own future. Media data is also used for analysing the development of public discourse on futures thinking.

We will give an overview on the key findings of these evaluative studies and reflect on how such studies can be further used to expand and diversify the futures discussion in Finland. We will also discuss the current data gaps in the futures discussion and share our lessons learnt regarding to what extent such data can be utilized for evaluating futures work.

Keywords: transformative futures, futures discourses, foresight evaluation, data bias, power, inclusion

Aperture: An Approach for Transformative Foresight

Sweeney, John A.

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In recent years, the discourse on framing futures and foresight has turned to examine the conceptual and real-world baggage of "strategic foresight" as an umbrella term. From Futures Literacy to the rise of various Futurisms, there has been a veritable explosion of framings. While the language used to signify the overall practices and processes of futures and foresight remains variable, there has been a movement to build a theoretical and practice-based foundation for Transformative Foresight, which highlights, if not centers, individual and collective learning within futures and foresight practice and process. In support of building a basis for Transformative Foresight, the APERTURE framework was developed to support more reflective praxis while also taking an explicit systems-based lens within scoping, scanning, and futuring stages of research/projects. This presentation introduces the APERTURE framework and contributes to the conceptual basis for Transformative Foresight.

Keywords: transformative foresight, methods, learning, systems

Future Ethics as part of Organizational Innovation Process

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The increased speed of technical developments bring along ethical considerations faster than the regulations can react to. There are several innovation processes that try to ensure the efficient use of organizational resources and secure impactful outcomes. Ethical considerations are often considered after the innovation process instead of being a part of it. Without ethical considerations unintended negative consequences on individuals and organizations may rise. The purpose of this abstract is to provide a five-step guidance on how to make ethics a part of the organizational innovation process:

ORGANIZATIONAL CULTURE: Ethical questions are often culture specific and change with time. Education on unconscious biases & ethical principles help the team to gain awareness and develop ethical competencies. Ethical awareness & responsibility can be started by considering the following questions: “What ethics mean for us, for the project, for the individuals?” and “Who is responsible for ensuring the ethical aspects of this innovation?”

DIVERSITY: Encouraging collaboration and cross-disciplinary teams will bring together diverse experience and perspectives to broaden the ethical discussion (PESTEL). This can be done by inviting customers or other stakeholders to take part in the ethical discussions and to ask the question: “What ethical principles of the external environment (PESTEL) should guide our innovation process?” and “What are the potential benefits and risks of this innovation for different stakeholders?”

IMAGINING: A part of sustainable innovation is to understand the future scenarios. Encouraging the team to consider different principles, values, and cultures, by asking: “What ethical questions may rise in the future on this specific innovation?”. In addition to „can we“, we should ask „should we“, i.e. threatcasting.

ANTICIPATORY ACTION: Having gained the ethical awareness and accepting responsibility, proactive measures can be taken to address the potential future challenges. This anticipatory action is based on an aligned plan forward on ethical, long-term implications for activities that will support sustainable futures. A clear plan will align with the organizations strategy and allow to plan for the right resourcing.

CONTINUOUS DIALOGUE & ADAPTION: Ethical discussion are not easy, and there is often not one right answer. Therefore, a continuous dialogue and adaptation is needed as the environment changes, ethical considerations change, and new technologies emerge.

Opening the ethical discussions as part of the innovation process creates the right environment to create the future with ethical, sustainable innovations, in which both the organization and the environment will benefit.

Keywords: ethics, innovation, foresight, organizational innovation

Workshop: Time to think: Experiment Generative Futures-Thinking

Time: Thursday 15 June at 10:45–12:15

Room: Ls 09

Mouazan, Servane

Conscious Innovation, United Kingdom

Futures-thinking is not a method. It's rather a shape-shifting mindset that requires authentic human connections and modes of interactions that generate the finest thinking for an uncertain and complex future. For this, we need time to think. This workshop will seek to demonstrate that a Thinking Environment is a pre-requisite to Empowering Futures studies. The Thinking Environment approach was created and developed by Nancy Kline over four decades. (www.timetothink.com/books/the-promise) It is based on the premise: “The quality of everything we do depends on the quality of the thinking we do first, and the quality of our thinking depends on the way we treat each other while we are thinking”.

Solid evidence gathered from participants in corporate, academic and civil society led Kline to surface 10 components of a Thinking Environment that generate the finest independent thinking and produce transformative impact. These components are: Attention, Equality, Ease, Appreciation, Encouragement, Feelings, Information, Difference, Incisive Questions, and Place.

In this 90-minute workshop, participants will learn and practice the basics of Time to Think with Servane Mouazan, ICF PCC, MA, Futurist, Strategist and Time To Think Coach, and explore how to apply them to transform the way they conduct discussions, brainstorming, or horizon scanning. This safe, imaginative, interactive and boundaried process will enable participants to think generatively and independently without judgment or interruption.

We will include the Time To Think Council, a group application that supports problem-solving and allows for the wisdom of several people to contribute to the thinking of one person, but without offering advice (which tends to stop people thinking for themselves). This will support people to “look back to look forward”, with ease, encouragement and the absence of competition. We’ll experience thinking pairs, dialogues, and open discussions, which are applications that contribute to removing untrue assumptions about the past and the present, and help people to start shaping actions that “bend” the future.

Through these collective applications that constitute a Thinking Environment, participants will take away at least 10 key behaviours that will amplify and empower their Futures Studies.

Keywords: leadership, thinking environment, wellbeing, imagination, listening skills, collaboration

Special MP Session: Flourishing Urban Futures to Overcome Polycrisis – Roadmap for Resilience 2050

Time: Thursday 15 June at 10:45–12:15
Room: Ls 01

Moderators: Heinonen, Sirkka^a – Taylor, Amos^a – Toivonen, Saija^b – Tähtinen, Lassi^b – Maree, Burgert^a – Sivonen, Risto^a – Viitamäki, Riku^a – Karayel, Tolga^a – Koivuniemi, Viivi^a – Lehtiö, Kati^a & Oinonen, Elisa^a

^a Finland Futures Research Centre, University of Turku, Finland

^b Aalto University, Finland

How and what to regulate to help cities prepare for crises and even polycrises in our age of digitalisation and fast developing AI?

Glenn, Jerome

The Millennium Project, United States

Questions and discussion

Futures Provocation for Flourishing Futures Policy

Heinonen, Sirkka

Finland Futures Research Centre, University of Turku, Finland

Interactive moderated elaboration in small groups, results to be commented by Jerome Glenn

This Special MP Session is organised as a Futures Clinique moderated by the RESCUE Project & Helsinki Node of the Millennium Project. Keynote by Jerome Glenn, CEO of The Millennium Project

Welcome to imagine, envision, empower and elaborate with us Flourishing Urban Futures!

Keynote is followed by discussions and co-creative working in small groups and cross-fertilisation of ideas.

This is a flipped approach to crisis management where our primary aim is to help overcome multiple crises – even creeping or cascading crises – by designing and building urban milieus that are resilient, sustainable, just and liveable. Pathways can be found by identifying concrete solutions.

We need more systematic futures thinking as 'urban futures literacy'. Moreover, the concept of futures resilience is claimed here as a necessary, more comprehensive and critical/crucial framework. It includes the elements of learning from crises, and of re-thinking of practices and systems that are no more appropriate in the changing world and cities. This means turning polycrises into 'polyopportunities', with the help of renewed futures empowerment, commitment and agency at various levels by all stakeholders.

Characteristics of flourishing urban futures are elaborated via questions: What if? – Then what policies & practices? – When?

Futures window of radical innovations for flourishing urban futures is shown as stimulation, illustrated through vignettes. And a narrative on urban futures and nature-based solutions will enable participants to immerse into our joint visioning for resilience. Recommendations of this fundamental mindshift towards anticipatory urban governance can then take place in the form of a resilience roadmap. How urban policies and practices should change to create flourishing and resilient cities?

Keywords: Millennium project, empowering futures, urban futures, resilience roadmap, futures clinic, RESCUE project

CHAired POSTER SESSION 6 at 13:00–13:40

Time: Thursday 15 June at 13:00–13:40
 Room: Ls 07
 Chair: Marianna B. Ferreira-Aulu & Mikkel Stein Knudsen

Mapping Emerging Behaviors in Scenario Analyzes Using Behavior Change Models

Persson, Björn & Granberg, Johan

RISE Research Institutes of Sweden, Sweden

Future studies have been criticized in the past over the inability in many trend and scenario analyzes to foresee changes in norms and behaviors. While being adept at projecting changes in technology, behavioral changes have eluded many futurists. Developing methods to find causal mechanisms behind changes in behavior, and applying them in future studies could strengthen the field and offer more in depth analyses over how the future might unfold. We suggest a novel method for this purpose, building on models from the scientific field of behavioral change studies. Several models exist that aim to find the right leverage points to influence, and change, specific behaviors in a desirable direction, where we have drawn inspiration from the COM-B framework developed by researchers at UCL. In short, the framework sets out to identify barriers to a specified behavior, and subsequently selects appropriate intervention tools to bring about the desired behavior, which can be through: guidelines & regulations, environmental/social planning, communication/marketing, legislation/regulation, service provision, financial measures. The link between behavioral barriers and intervention tools have been scientifically validated, and can thus provide a causal mechanism between individual behaviors and changes in the external environment. Using scenario analysis, we can reverse the process to identify how changes in the external environment will affect behavior. The implementation can be similar to the futures wheel, though here a scenario is placed in the inner circle and changes in categories taken from the COM-B's intervention tools are assessed. Based on changes in these categories, e.g. new regulation emerging in a certain scenario, we can work towards finding either changes to existing behaviors or the emergence of new ones across the various futures. The analysis can provide decision makers with a better understanding of how individual behaviors change in the future depending on how the future unfolds.

Keywords: scenarios, leverage points, emergent behaviors

Future of Energy Consumption by Digital Technology Development in 2030

Yim, Hyun

Korea Institute of S&T Evaluation and Planning (KISTEP), South Korea

As Korean government moves towards the goal of carbon neutrality by 2050, the supply of renewable energy such as solar and wind power is becoming more important. In the energy sector, digital transformation is expected to bridge the gap between energy production and consumption in conjunction with the deployment of renewable energy and provide the ability to integrate the entire energy system. However, Korea still maintains a centralized energy system based on nuclear power plants and fossil fuels, and linkage and conversion to distributed power grids are being made slowly. In this regard, using the scenario methodology, we studied the 'future of energy consumption by digital technology development in 2030' and identified countermeasures. After deriving various factors through STEEP analysis, four key factors, including energy source mix, energy network, energy trading market, and industrial structure change, were selected through evaluation. After identifying the spectrum of change for each key factor, the Bayesian model was used to identify three scenarios such as "KEPCO-centered energy efficiency era", "movement to an accelerating digital power society", "energy hyper-connected society". The countermeasures derived for each scenario are expected to be used as basic data for establishing long-term strategies for national energy policy.

Keywords: foresight, digital transformation, energy consumption, renewable energy, scenario

Regional Soil Management Pathways in Germany for 2050 – Methodological Considerations

Bayer, Lukas & Helming, Katharina

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German agricultural soils and their provision of directly related ecosystem services ((non-)cultivated plants for nutrition, energy, materials; maintenance of hydrological cycle, biodiversity, carbon sequestration, etc.) are increasingly exploited, are becoming more contested and might eventually deteriorate by various soil management practices and exogenous drivers. Identified soil management practices include increased use of pesticide and fertilizers as well as technological trends towards heavier agricultural machinery. Land use change drivers are considered increased demand for biomass production, structural changes in Germany's demography and the subsequent land-ownership consolidation, but also environmental threats to human well-being such as climate change induced changes in weather patterns. Soils are at the center of these various demands, as they are at the base for all land uses. Managing the various trade-offs between soil management, drivers of land-use change and maintaining ecosystem services provision, constitutes a complex problem with vast delays between causes of agricultural soil management and its effects on soil health. Therefore, regional pathways for soil management are developed as nested qualitative storylines until 2050 and their assumptions constitute guardrails for decision-making within a vertical hierarchy of pathways. The nested pathways consist of soil management pathways for Germany, the shared socio-economic pathways for European agriculture and food systems and align with the IPCC's shared socio-economic pathways. The methodology for down-scaling includes steps for developing nested scenarios and a system dynamics approach focusing on the underlying structures of the socio-economic system on agricultural soil management, allowing an integration of exogenous and endogenous drivers within nested system boundaries. Causal Loop Diagrams display the polarity between variables, feedback loops and the delays in the system. Presented are German national soil management pathways and the down-scaling approach for regional pathway creation, focusing on the vertical consistency.

Keywords: soil management, scenario, storyline development, soil management, agriculture, land use

Aging Societies in Tension of Sustainable Social Policy: Scenarios for Democracy

Koebe, Philipp

Konrad-Adenauer-Stiftung, Germany

BACKGROUND. Western societies are experiencing an aging population. On the one hand, the preferences of this society for more social security and more welfare state services are increasing. On the other hand, the shift in the majority of voting shares toward the elderly means that these preferences can also be enforced politically. In the democratic discourse, this creates a tension between the generations but also within the older generation. The range of income distribution during retirement is very broad, and many people could be affected by age-related poverty. In this expectation of the future, are policymakers caught between election promises for the elderly and a growing discussion of eliminating inequality in society as a whole?

METHODOLOGY. In a pre-workshop with policy students, we analyzed the problem, identified trends and drivers, and current developments in the context of gerontocracy. We conducted a Delphi study with political scientists in Germany. Projections were evaluated in two rounds. We derived four scenarios from these.

RESULTS. The decisive dimensions along which the evaluation proceeds are the degree of political polarization and the degree of social tension. The scenarios paint possible futures and provide us with information about development trends and intergenerational risks. For political decision-makers and civil society, they offer the opportunity to initiate a dialogue and to discuss upcoming problems in an open-ended way.

CONCLUSION. We have addressed the question of whether social cohesion in an aging society can become a problem for democracy due to an expansion of the welfare state and the presence of socioeconomic inequality. In four scenarios, we present possible futures as decision parameters. We will show the latest interim results at the conference.

Keywords: gerontocracy, democracy, welfare state, social security, scenarios, futures

Nothing is Certain but Death – Futures Mortality in Germany 2060

Zimmer, Anna

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While life expectancy in Germany, as in all of Europe, has risen rapidly over the last century, the increase has slowed down in recent years. Notwithstanding improvements in medical research and the general prosperity of the population. Parallel, another trend has emerged – lifestyle change. Nowadays, leisure time and working time is predominantly spent sitting in front of a screen. At the same time, contrary to opposing trends, the type of nourishment has changed towards a high-fat and high-sugar diet. Consequently, obesity, diabetes, and their accompanying diseases have led to more deaths. Simultaneously, the consequences of climate change are being felt in Germany through drought, heat, and floods. According to the WHO, heat caused by climate change led to 4,500 deaths in Germany in 2022 (WHO 2022). How will the highlighted lifestyle and climate change trends affect life expectancy development in the coming decades? How will the causes of death change as a result of these trends? What long-term governance is required of German health policy? Which preventive measures are needed? A policy, two-stage Delphi study is chosen as the research method to answer the questions posed. In the first round, the developments of causes of death, lifestyle, and risks for the public's health influenced by lifestyle and climate changes were discussed anonymously. The answers and the discussion gained will be analyzed and form the basis for scenarios on the health situation in Germany for the targeted time horizon of 2060. In the second round, the expert panel debated the policy implications associated with each scenario and the desirability and probability of every scenario.

The outcomes of the study are five scenarios on the public health situation in Germany in 2060 with their associated policy implications for long-term governance.

Keywords: mortality, public health, causes of death, life expectancy, lifestyle, climate change

SESSION 7 at 13:45–15:15

Panel Session: Collaborating for the future. Discussing the role, aspects, and emerging applications of transformative learning in Finnish adult education

Time: Thursday 15 June at 13.45-15.15
Room: LähiTapiola-sali

Moderators: Ketonen-Oksi, Sanna & Pura, Minna
Laurea University of Applied Sciences, Finland

Panelists: Joutsenvirta, Maria^a – Mononen, Asko^b & Wilenius, Markku^c

^a Aalto University School of Business and Lapland University of Applied Sciences, Finland

^b Laurea University of Applied Sciences, Finland

^c Finland Futures Research Centre, University of Turku, Finland.

In the coming years, the crossing of our planetary boundaries (Steffen et al. 2015) will increasingly threaten the wellbeing and survival of all species. At the same time, the collapse of general knowledge – further accelerated by the diminishing appeal of degree education – is seen as one of the TOP5 trends with profound impacts on the future of leadership (Futures Platform (2022) – i.e., to our abilities to address the emerging existential threat. An interesting question is: what kind of a combination of skills (e.g., planetary living skills, digital skills, entrepreneurship) will this require and how can /should these skills be taught?

in Finland, the new framework on continuous learning (Finnish Government 2022) calls for an improved nationwide foresight system to anticipate the emerging needs and directions in the field of adult education. Besides the contents being offered (e.g., new forms of collaboration with companies, scalable / blended learning) this will certainly create changes in the competition between the established institutions and new entrants in the education market.

From a practical point of view, one prominent approach to tackle this both eco-social and knowledge crisis is the theory of transformative learning. Whether seen as a process that results in changing perspectives with an emphasis on reason and logic (Mezirow 1978, 1997), or as a framework of reference for psychosocial learning where the surrounding environment has its influence on the process (Boyd & Myers 1988), it sees that the key to a fundamental change in adult learners' worldviews is linked to their ability to critically reflect and review their past ideas and understanding.

Hence, in this panel session, together with experts on futures literacy (M. Wilenius), transformative learning design (M. Joutsenvirta) and learning technologies (A. Mononen), we will discuss the role, aspects, and emerging applications of transformative learning in Finnish adult education.

Keywords: ecosocial crisis, transformative learning, futures literacy, transformative pathways, adult education, AI

Socio technical trends and transition

Time: Thursday 15 June at 13.45-15.15
 Room: Ls 07
 Chair: Toni Ahlqvist

Seven global megatrends impacting the way we live over the coming decades

Naughtin, Claire – Hajkowicz, Stefan – Schleiger, Emma – Bratanova, Alexandra – Cameron, Alicia – Zamin, Tara & Dutta, Ayush

Commonwealth Scientific and Industrial Research Organisation, Australia

In 2022, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) – the national science agency in Australia – released a once-in-a-decade research report titled, Our Future World. This research presents a set of global megatrends that are predicted to impact organisations in Australia and beyond over the coming decades. A megatrend is a trajectory of change that is likely to have a substantial and transformative impact on individuals, organisations and societies. Megatrends typically unfold over a period of years or decades and occur at the intersection of multiple interconnected trends that are narrower in scope. We used this methodology to map out the critical social, economic, technological, environmental and geopolitical forces at play in Australia and globally to help guide future policy and strategic decisions.

I will present the seven global megatrends identified in the 2022 Our Future World report and the history of applying the megatrend methodology in CSIRO to empower communities and organisations in navigating future uncertainties, risks and opportunities. These megatrends cover themes related to adapting to a changing climate; resource scarcity; managing the escalating demand for healthcare; geopolitical and trade tensions; the next wave of digitisation and automation; and the evolving social and ethical dimensions of community. These megatrends provide a novel ‘strategic wind tunnel’ for global organisations, researchers and communities looking to strengthen their resilience to future events and gain an early foothold on emerging opportunities.

Keywords: megatrends, strategic foresight, futures thinking, technological forecasting, government foresight

Spain. A Country for the Future. Strategies for a Socio Technical Transition

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^aIndieresearch, Spain

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Over the last two centuries technological innovation has played a fundamental role in economic development, wealth creation and social progress. Spain has not played and do not play today a leading role in the field. Since the advent of democracy in 1978, the country has undergone a remarkable economic and social transformation. However, it has not been enough to substantially reduce the income gap it maintains with the most advanced economies in the world. We wonder why and we briefly explore some historical clues.

More fundamentally, we question what changes would be necessary and whether this situation might even change in the future. Two documents presented by the Spanish government in 2021, “Spain 2050” and ‘Spain Entrepreneurial Nation,’ look forward to an entrepreneurial nation by 2030. They are based on rigorous state-of-the-art policy and economic analysis. However, we are facing a world systemic change of paradigm, a (Great?) socio technical transition, and successful models that worked in the previous system might not work in a new one. Furthermore, macroeconomic projections do not consider the strategic interaction among different players in a conflicting world. It is necessary to review some accepted premises and dive under the superficial “litany.”

Our objective is to understand the key driving forces driving change, and the most important factors and levers available to a meaningful player in the game. We use a country, Spain, as a test and showcase, but our objective is to outline a high level, holistic model inspired by scenario planning and game theory to study future adaptive strategies for a country, corporation or even a global organization in the evolving socio techno economic system of the next 25-50 years.

Keywords: socio technical transition, innovation, technology, geostrategy, scenario planning, game theory

Empowering Paradigmatic Futures

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^c Institute of Knowledge Management, Belgium

A number of (futures) scholars consider the meta-problem underlying many of the current complex societal problems to be paradigmatic in nature. These problems, often experienced as crisis, can not be addressed adequately by a mechanistic paradigm, most prevailing since the Industrial Revolution. While paradigmatic research is not alien to futures studies, a literature review points towards (at least) three important research directions to be addressed for paradigmatic futures to gain more solid theoretical underpinning. Firstly, by comparing diverging perspectives which have been put forth as alternatives to the mechanistic paradigm – alternatives including the complexity paradigm, Wilber's 'AQAL framework', Gidley's 'Evolution of Consciousness' and McGilchrist's neurobiological perspective -- a number of interrelations can be singled out to advance a consistent understanding of the constituting elements of such alternative worldviews. Secondly, this article uses a macro historical perspective on change as well as neurobiological findings to shed light on a paradigm shift towards a complexity worldview (as compared to the notion of a pendulum between a mechanical versus a holistic worldview throughout history). Thirdly, since the finality of paradigmatic futures work is to set forth new pathways into the future, we present a number of ways in which paradigmatic futures could inspire governmental futures work, as to illustrate its value within applied futures settings. Our research contributes to long-term civilizational futures by unifying existent perspectives on paradigmatic futures into theoretically sound guidelines with the potential to support a transition beyond the supremacy of the mechanical paradigm. By connecting paradigmatic futures to governmental futures, we show how this line of work could inspire further substantive and methodological innovation in applied futures settings, so as to bring forth more sustainable long-term futures.

Keywords: macrohistory, paradigmatic futures, governance, complexity

Knowledge Roundtable: Developing Democracy Futures

Time: Thursday 15 June at 13.45-15.15

Room: Ls 09

Ritter, Waltraut

The New Club of Paris, Germany

Recent democracy indices and reports such as the Economist Intelligence Unit (EIU) Democracy Index and the Global Democracy Report by the Stockholm-based IDEA institute illustrate the global decline of democratic governed countries. Both state that in 2022, the world's eight billion people are now mostly living under «not free» circumstances and in a wide variety of hybrid and authoritarian regimes. Not free means that thinking and developing sustainable futures is restricted, and social transformations to reduce societal volatility, risk, and uncertainty. IDEA states that democracy is under both literal and figurative assault around the world. The effects of the pandemic, the climate emergency, today's wars and a looming global recession, can only be dealt with through open and inclusive forms of participatory decision-making and democratic governance.

Why is democracy stagnating or even eroding? Why have more information, data, knowledge, and education not led to open, transparent and participatory political systems? Do we need a new social contract in our societies?

From a knowledge-based society perspective, electoral autocracies, illiberal democracies and other forms of hybrid political systems, restrict the flow of knowledge at all levels, in communities, cities, regions and nations. These restrictions don't allow ideas to grow and to be turned into actions. Non-democratic systems suffocate the very idea of future thinking.

The workshop aims to understand whether the aspiration of democratic ideals can be revived and how they can accelerate the transitions towards a sustainable future for everyone.

Keywords: knowledge-based society, democracy, information society, global governance, future of political systems

Embodied Futures Workshop

Time: Thursday 15 June at 13.45-15.15
Room: Ls 01

Uimonen, Antti

Freelance artist and futurist, The Netherlands

Regarding developing Futures Studies methodology, I have created a workshop concept to allow people to reflect on the present moment and imagine and speculate possible futures through movement improvisation practices. The workshop is developed as a continuum for my MA studies in Performance Practices at ArtEZ University of Arts, The Netherlands. It uses theoretical frames from the Ethnographic Experiential Futures methodology presented by Candy and Kornet (2019) and post-human movement improvisation practices developed and researched, for example, by Katie Duck, Joao Da Silva, and Kent de Spain.

The workshop presents a participatory approach to Futures Research to play with and explore relationships with human and non-human entities in real time. The workshop can evoke different narratives about the futures possibilities and become a medium for turning abstract futures into experiential scenarios. The possible scenarios are fluid and continuously changing based on the decisions the part-takers make in the space. In addition, the actions toward the futures have immediate consequences enabling the participants to reflect and experience the influences of their decisions through their bodies. In this expanded role, the workshop can be a gateway for experiencing, seeing, and feeling futures possibilities and influences of decision-making in the present moment. After the practical experimentation, there is a possibility for discussion and analysis of the experience. The concept is directed to anyone interested in speculating about the futures through bodies. There is no need to have prior experience in dancing or movement improvisation. Interest and curiosity towards bodily experimentation and futures speculation are enough.

References

Candy, S. and Kornet, K. (2019) "Turning Foresight Inside Out: An Introduction to Ethnographic Experiential Futures," *Journal of futures*, 23(3), pp. 3–22.

Keywords: movement, futures research, embodiment, improvisation, methodology

FRIDAY 16 JUNE 2023 | Virtual sessions

SESSION 8 at 9:45–11:00

Futures of futures thinking and methods

Time: Friday 16 June at 9:45-11:00
 Chair: Sari Puustinen

How Can Culture and Heritage Contribute to Empowering Futures?

Holtorf, Cornelius

Linnaeus University, Sweden

Many challenges that can be anticipated for human societies during the coming decades have a strong cultural component because they affect the way humans make sense of the world and behave as members of particular groups. These challenges include peace between human groups, digitalization/AI of daily lives, urbanization, migration/integration, necessary transitions to more sustainable forms of development, and the arrival of unanticipated crises such as a pandemic. In this situation, it is surprising not only that culture is seldom addressed in public debates about the future but also that the academic disciplines studying culture and cultures do not engage much with anticipation, resilience, foresight, and questions of long-term governance.

This paper attempts an answer to the question about the potential of culture and cultural heritage for empowering futures. I will be drawing on recent work conducted, and experiences gained, in the context of a UNESCO Chair on Heritage Futures placed in the context of the arts and humanities. The Chair does not only seek to enhance global capacity in long-term thinking in the cultural sector but also to increase benefits resulting from the potential of culture and heritage for empowering future generations. My discussion is contextualized in the desire of the world's Ministers of Culture (expressed at the UNESCO World Conference on Cultural Policies and Sustainable Development – MONDIACULT 2022) to firmly integrate culture as a specific goal in its own right in the development agenda beyond 2030.

Keywords: culture, cultures, heritage, post-2030 agenda, sustainable development, peace

Going Deeper into Images of the Future: Casual Layered Analysis Revisited.

Koch, Felipe

Université Paris-Est Créteil, France

Futures studies are a field that aims to understand and anticipate potential future developments and trends. However, the field has often been criticized for lacking a solid theoretical foundation. Following on from our presentation at last year's conference, we want to deepen our analysis of the "images of the future". In this communication, we propose to show, through the construction of a methodological tool, that the theory of the imaginary can provide valuable theoretical support for prospective studies.

The theory of the imaginary, developed by Gilbert Durand, is a framework for understanding the symbolic and cultural meanings that shape human thought and behavior. Durand's anthropological path theory posits that human experience is organized into distinct layers or paths, each corresponding to a different level of meaning and significance.

We propose to use Causal Layered Analysis (CLA), a method commonly used in prospective studies, as a way to explore potential synergies between the two fields. CLA involves examining multiple levels of causality to understand the complex interplay of factors that shape future possibilities. By applying imaginary theory to each layer of causal analysis, we can broaden our understanding of the images and meanings associated with each layer. Overall, our goal is to demonstrate the potential of imaginary theory to provide a deeper and

stronger theoretical foundation for future studies. By incorporating ideas from the theory of the imaginary, we can better understand the symbolic and cultural factors that shape our visions of the future and the decisions we make in the present.

Keywords: imaginary, CLA, methodology, futures studies, images of the future

From Future Futures to Present Futures: Generic Archetypes of Futures Thinking in 2050

Zackery, Ali & Abadian, Behin

University of Isfahan, Iran

There are some unignorable signs in changes and challenges of the modern world for recreating the futures thinking into the styles which are more suitable to shaping absorber or adapter futures for social complex system and modern global phenomena. This paper points to probing into the future possibilities of futures thinking methods and looking for new trends and signals for changes of futures thinking in 2050. This will be started by identifying the ingredients of the future of futures thinking methods and then the 2050 scenarios will be generated. The paper discusses the scenarios in four generic archetypes, grow, discipline, collapse, and transform. The scenarios talk about the new technological era, globalization and informatization, the ethical sides of human beings' social life, future of the futures studies field, participatory and collective actions, modern concept of individuality of humans, the multi-voicedness and multi-culturedness, localized spirituality and the new generation of futures shaping agencies. The future futures in grow archetype are boosted in the scientific part but the present futures in transform archetypes are bolded in artistic and designing sides and have the potential for renewing the dominant approaches of futures thinking instead of continuing the same line, for farewelling the non-hybrid and singular methods and being more action-oriented to shape absorber or adapter futures.

Keywords: futures of futures thinking, action gap, future futures, present futures, social action adaptation, complex systems

Foresight and futures research for just transitions

Time: Friday 16 June at 9:45 -11:00

Chair: Veli Virmajoki

Foresight in Order to Act Ethically

Dartiguepeyrou, Carine

Observatoire de values NGO, France

More and more organizations expect futurists to propose disruptive future scenarios. Foresight can meet this need to be “shaken up” by futures that one would not have imagined. The influence of collapsology, science fiction films and the success of anticipation novels have contributed in recent years to democratizing the view of the future, but more often to assimilating the future with a dark future. People project themselves into dystopian visions of the world, which are more science fiction or design fiction.

The digital development around large economic players, such as Alphabet or Meta, is ambivalent. Of course, they facilitate access to multiple digital services, but they also carry materialistic values (money justifies the means, Internet governance at the service of economic interests, investment in R&D for the primary benefit of technological development), transhumanism (human enhancement for the wealthiest) or totalitarianism (accessibility justifies the manipulation of data).

These values are imprinted on our minds, especially those of the youngest generations. They act on our imagination and this is what makes them dangerous from an ethical point of view. For Nick Bostrom, technological development is inexorable and the posthuman is the only solution (Bostrom 2014). Is this the only possible future for a connected humanity?

In what world do we live? What are the dominant representations and on which paradigms are they based? How can we act ethically?

We propose to present four 2040 world-scenarios which correspond to trajectories that are already present in our worldwide society. By declining these scenarios in time, we can reflect on the impact of these trajectories on our human activities. We will then engage the discussion on the hypothesis and consequences of these proposed trajectories. We believe that these four global archetypes are useful to help organizations reflect on their strategic positioning in terms of purpose, social responsibility and future. This exercise is particularly fertile because it allows us to place forward thinking at an ethical level.

Keywords: futures, future studies, ethics, complexity, empowerment, world-scenarios

Stage for Just Transition: India's Response to Responsible Future

Eranti, AshokKumar

Green Kinship (OPC) Pvt Ltd, India

The unprecedented changes in the recent years made global citizens sensitive and extra-sensitive about the future events and eventualities. The State of the Future Report version 19.0 of the Millennium Project authored by an International think tank provides a guide-post for the just transition of the global order. As a culmination of rich diversity of data bases and intellectual inputs the report identifies 15 global challenges to be addressed by the research fraternity and policy makers to facilitate global transition with just and utmost wisdom. India being an oriental society cherished these values from time immemorial, mythological period to the present day for an equitable and safe world for all. Against this backdrop, the present paper examines India's efforts towards a desirable transition with respects to "Sustainable Development and Climate Change" as reflected in its policies and practices. The focal issues addressed are: (i) what are the policy highlights and the related components of the concerned Ministry? (ii) What are the scenarios of prospects and constraints to be anticipated by 2030? And (iii) what characteristics are to be adopted by the Indian State to constitute an ideal and just scenario for climate transition? Despite being the fact that India is a developing country, several initiatives are in place. Eight national missions have been initiated such as Solar Mission, Green India, and Sustainable Agriculture and so on. The study employs two-axis method identifying two drivers viz., Environmental Governance and the Development priorities with concern for environment. The STEEP dimensions are used to develop the two extreme scenarios to operationalize the focal issues. The study infers that there are vicissitudes on the path in a turbulent period like the present. There are compulsions, domestic and international. In this interdependent and changing geo-political world order, India as a nation state confronts hurdles.

Keywords: oriental society, Millennium Project, transition, policy, missions, sustainable development

Postnormal Justice

Mayo, Liam

University of the Sunshine Coast, Australia

Societies globally are currently facing multiple sustainability crises (e.g., climate change, biodiversity loss, pollution, etc.). This is an acutely postnormal context, where facts are uncertain, values disputed, stakes are high, and problems are urgent (Functowitz and Ravetz 1993; Sardar 2010). The injustices here lie, not only in our inability to determine who are – or what is – owed justice, but how justice should be discharged now and into the future. That is to say that, as we transition toward sustainability, how do we conceptualise justice and that which is considered just.

This is not only about marginalised and vulnerable people and communities – though their needs and aspirations must be heard and prioritized if we hope to achieve a sustainable global future. This is about reflecting deeply on the implications of a world where humans take moral responsibility for the long-term consequences of present actions on other humans, non-human, and animals alike (Masini 2007; Vasquez 2006). What is required is a deep ecological approach to futures thinking, which advocates that society is not simply an agreement between individuals but an already existing totality for which we are all directly responsible (Morton 2010).

Postnormal times theory (Sardar 2010, 2015), as a theory of the future, not only helps us to make sense of the change that is occurring in the present but provides us an epistemological framework by which we may reconstruct and deploy an ontology that is more ecological, and as such, more just. This paper uses postnormal times theory and traces the literature surrounding environmental justice and ecological thought, seeking to ringfence a theoretical discourse in a way that is futures orientated.

Keywords: postnormal times, justice, ecological thought, theory

Participatory approaches in futures research

Time: Friday 16 June at 9:45-11:00
Chair: Erik F. Øverland

Imagine All the People: Equity and Inclusion in Participatory Visioning

de Wit, Fronika & Eistrup, Mathias

Portuguese Public Administration Competence Centre for Planning, Policy and Prospective (PlanAPP), Portugal

Futures thinking is progressively moving beyond perspectives of probable or possible futures, based on expert knowledge, toward preferred futures, based on anyone's imagination. Visioning, a component of futures thinking that looks into these desired futures, uses participatory processes to jointly reflect on alternative futures. The literature points to advantages of participatory visioning, such as generating innovative ideas, crafting a shared language, creating mutual trust, and building empathy for diverse perspectives.

Futures thinking scholars, however, often overlook power imbalances and injustices in participatory visioning. For that reason, Lab2050, a collaborative living lab on envisioning a sustainable Portugal in 2050, pays special attention to the interplay between participation, equity and inclusion. The experimental project carried out by PlanAPP- the Competence Centre for Planning, Policy and Foresight in Portugal's Public Administration, has meaningful participation and inclusion as its core values.

This paper describes the process of co-designing Lab2050. It aims to critically analyze enabling institutional settings and the politics of participation and provides recommendations for improved participatory visioning. Its methodology is two-fold. First, it reviews the literature on participatory visioning. Second, it qualitatively analyses the results of a methodological workshop organized by Lab2050 with 32 experts on citizenship and participation in Portugal.

Based on our results, we propose three distinctive features for more inclusive participatory visioning: 1. More than words: going beyond the use of words and include visions based on drawings, videos, theater, games, etc.; 2. Cherish the edges: instead of consensus-seeking, paying special attention to counter-hegemonic visions and more radical ideas; and 3. The Power of Place: instead of organizing workshops in conventional places conditioning participation toward more formal interventions, using unexpected but meaningful places (e.g. market, farm, factory, etc.).

Only then visioning will be about imagining 'all the people' and not only those that are used to participating.

Keywords: justice, futures thinking, inclusion, participation, visioning

World Futures Day 2022. A Global Futures Agenda.

Di Berardo, Mara^a – Di Zio, Simone^b – Fontanella, Lara^b & Glenn, Jerome^c

^aThe Millennium Project, Italy

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The World Futures Day (WFD) is an online open large-scale global participatory discussion among self-selected future oriented people from around the world on March 1. Each year, total strangers discuss ideas about possible worlds of tomorrow in a relaxed, open, and no-agenda conversation during the 24-hour event organized by the global participatory think tank The Millennium Project (MP) in collaboration with others. In 2023, the 10th edition will be run.

The WFD represents a new kind of futures method (Di Berardo 2022a): it is a unique process with the objective to have people freely exchange views on potential futures development, to improve futures thinking, and to help identify priorities for addressing the global challenges facing humanity in the field of futures studies. The analysis of the WFD data and information help set an agenda of discussion (Di Berardo 2022b) composed of innovative ideas and solutions to our major challenges and the field of futures studies.

The work will illustrate the main characteristics of the WFD method, ideated by Jerome Glenn 10 years ago. It will also report some of the main results of the analysis (1) carried out on the 2022 WFD data. On this occasion, the subjective textual and content analysis has been improved by applying automated techniques of text mining analysis (i.e. probabilistic topic models, e.g. Blei et al. 2003) and by running an experimental approach to textual contents with Geographic Information Systems (GIS, Martin, and Schuurman 2017).

Keywords: World Futures Day, textual and content analysis, futures agenda, participatory method, global

Poster: A Participatory Futures Thinking Process for Personal and Professional Development Drawing on Narrative Methods

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^aFaculty of Industrial Design Engineering, Delft University of Technology, The Netherlands

^bFORTH/PRAXI Network, Greece

Futures approaches, methods, and tools have the potential to meaningfully support the development of key competences and skills in the context of personal and professional development efforts, especially by means of participatory futures processes that can catalyze transformation. Nevertheless, participatory futures activities aimed specifically at the level of the individual are scarce. We have designed and developed a novel participatory process, alongside relevant facilitation guidelines, to be used as part of futures thinking workshops for personal and professional development activities. Our process has been designed to be self-contained and to be completed in 4-4.5 hours, with the overall goal of helping participants develop their conscious thinking about the future, and hopefully their futures literacy, by promoting the cultivation of both Anticipation-for-the-Future and Anticipation-for-Emergence in an alternating manner via consecutive interconnected activities. The overall process guides participants through a series of self-reflective activities with the following objectives: to help them realize their assumptions about their personal past, extended present, and possible future(s); to help them re-calibrate their perception of their personal past by reframing the way they make sense of the world through the use of the future; to help them consider their present anew; and to help them formulate an action plan for becoming their desirable future self. The core of our overall process is our reframing phase, which is informed by the recently published work of Fletcher & Benveniste (2022), in the sense that instead of divergent thinking techniques it uses three complimentary narrative methods, i.e. world-building, perspective-shifting, and action generation, in order to "help the mind imagine new environments", "help the mind imagine from different perspectives", and "help the mind imagine possible future actions". Early prototype versions of our process have already been piloted with small groups of participants, generating insights for further improvement.

Keywords: futures literacy, personal futures, professional futures, participatory workshop, narrative methods, unfamiliar future

Futures of education

Time: Friday 16 June at 9:45-11:00
Chair: Osku Haapasaari

Risks and Opportunities Would Affect Peru's Development in the Next Ten Years

Ataucusi Ataucusi, Yiem – Vilchez Astucuri, Jordy – Olarte Melchor, Gene – Stehli Torrecilla, Hans – Estrada Ramos, Milagros & Quinto Caypani, Sandra

National Center for Strategic Planning, Peru

The National Center for Strategic Planning (Ceplan) has determined the global and national risks and opportunities for Peru with the greatest impact on national development and the well-being of people during the period 2023 to 2033, with the aim of generating strategic information to anticipate and act against possible changes that could affect the well-being of the Peruvian population, as well as take advantage of possible favorable effects.

The Delphi tool was used to identify and prioritize these risks and opportunities since it allows the convergence of opinions and consensus among experts representing academia, public society, private society, civil society, and international organizations. As a result, 51 risks and 25 opportunities were identified and organized based on various themes (social, economic, environmental, technological, and geopolitical). Each of the risks and opportunities has been prioritized by experts in each of the subjects to assess their intensity, measured through their probability of occurrence and magnitude of impact. In this sense, the map of risks and opportunities was prepared that distributes each of these future events in a total of four quadrants and allows a graphical visualization of those risks or opportunities that could occur in the next 10 years.

In conclusion, it is observed that the risks of greatest concern are social and environmental, in addition to suggesting attention to those risks linked to political, demagogic, populist, and/or mercantilist powers due to their greater probability of occurrence and magnitude. While it is considered that there is a greater probability of occurrence and magnitude of those opportunities related to technology and innovation, for example, in sectors such as education and health.

Keywords: risks, opportunities, global, national, Peru, delphi

Continuation of Higher Education in Myanmar After the Coup 2021

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^a National University of the Union of Myanmar (NUUM), Myanmar

Please note, some names have been changed to protect people's identities.

Accelerating Myanmar Higher education process was halted as the Myanmar Military seized power from the elected government on February 1, 2021. Teachers and students have been participating in the Civil Disobedience Movement (CDM) to stop the mechanism of slave education delivered by the State Administration Council (SAC). This research aims to find out the barriers for the continuation of higher education for the CDM students and to investigate the current solutions being used by University Councils under the Ministry of Education (MOE), National Unity Government (NUG) to overcome those barriers. Qualitative method was mainly used for this study and purposive sampling was used to select participants for focus group discussions. 13 teachers, 6 students and 3 key informants from MOE participated in this study. The data were analyzed based on content analysis. The findings revealed the most prominent barriers being faced by the students to continue their higher education, the solutions for some barriers that are being used by University Interim Councils and MOE and the probable solutions to overcome the barriers for promoting access to higher education. This study also highlights that the support from stakeholders, setting clear guidelines and promulgating policies are of utmost importance to promote access to higher education for the students.

Keywords: Civil Disobedience Movement (CDM), higher education, barriers, University Interim Councils (UIC), Ministry of Education (MOE), National Unity Government (NUG)

Higher Education Participation of Disadvantaged Students in Private Kenyan Universities

Dimba, Magdalene

Strathmore University, Kenya

The paper aims at analyzing programs for the financially disadvantaged students in private Kenyan universities. Sustainable university education is at the apex of the formal system of education, and it is expected to respond to the demands of national development and the emerging socio-economic needs. This is with a view to finding solutions to problems facing society, addressing the needs of inclusivity for those from the lower socio-economic strata, and ensuring sustainability for the youth in the future of work. The paper explores the available programs in private universities, the extent the programs were effective, the challenges that face the programs and the mechanisms the disadvantaged university students and administrators put in place to cope with the challenges. Descriptive survey and naturalistic designs are used to analyze the programs. Questionnaires, in-depth interviews and focus-group discussions are used to collect information from students and university administrators. The information collected provides ways in which current social gaps can be addressed in support of the financially disadvantaged students. The Human Capital Theory and Rawl's Theory of Justice are used to justify developing the capacities of the disadvantaged students and especially those who are facing social and economic challenges. Ethical aspects and productivity efficiency that would result from investing in the disadvantaged and providing opportunity in the future are underscored. Issues of limited resources, the high number of applicants, identification of beneficiaries and sustainability are raised. Supporting young university students today has an influence on the type of workforce and inequalities we are bound to have in the future.

Keywords: sustainable university education, inclusivity, financially disadvantaged, private universities

Workshop: Narrative Failure? How the Media Can Help Build Futures-Literate Societies

Time: Friday 16 June at 9:45-11:00

Wyngaarden, Egbert van

Macromedia University, Germany

Citizens and civic organizations play a key role in the transition towards a carbon-neutral and environmentally just society. Certainly, politics, science, education, culture and religion can raise awareness on urgent global issues. The media however seem to have the strongest leverage when it comes to inspiring and mobilizing people for social change.

Many authors and editorial teams in media networks hesitate when asked to approach their topics from an emerging future's perspective. This paper investigates why this is so, and how content creators might overcome their impediments with regard to futures thinking.

Fiction writers have a great liberty to imagine alternative worlds, as the genres of science fiction and climate fiction demonstrate. Yet many stories still follow narrative conventions that are heavily indebted to rationalist, capitalist and neoliberal worldviews.

Journalists habitually focus on occurrences deviating from the state of affairs that people are familiar with, claiming to neutrally portray 'what is'. In an era of radical change, though, fixed points of reference are lost. What is? Post-normal journalism needs to include foresight.

Commissioning editors navigate between satisfying presumed audience needs and following their commercial and/or ideological interests. They often struggle to take a progressive stand on future issues, for fear of being criticized as moralizing or propagating activism.

Action-based research shows that all three groups lack important 21st century skills. Even experienced and engaged media professionals show little understanding of systems thinking, complexity theory and transition design. Their thinking about future developments tends to be muddled, uncritical and methodically weak.

The paper closes with recommendations for practices and topics that should be included in media education and continuous training programs. An interdisciplinary approach combining futures studies, presencing techniques and new forms of storytelling seems particularly promising.

Keywords: future, media, imagination, narrative, systems, journalism

SESSION 9 at 11.15–12.30

Methodological development of strategic foresight

Time: Friday 16 June at 11:15-12:30
Chair: Juha Kaskinen

Analysis of Strategic Variables for the National Development of Peru with Dynamic System

Ataucusi Ataucusi, Yiem – Vilchez Astucuri, Jordy – Stehli Torrecilla, Hans & Quinto Caypani, Sandra

National Center for Strategic Planning, Peru

To promote the achievement of goals and fulfillment of national objectives towards the year 2050, the National Center for Strategic Planning has identified six triggering or high-impact variables, whose associated strategic actions will allow for achieving a desired future, with economic growth and well-being. Social.

The trigger variables identified through prospective studies of different levels of government are the following: (i) access to health, (ii) capital, (iii) government efficiency, (iv) educational level, (v) the gross domestic product, and (vi) environmental quality. From this, alternative scenarios with coherent long-term narratives or histories were formulated, considering Peter Schwartz's Axes methodology and the quantitative simulations obtained with the International Futures (IFs) systemic model.

As a result, four scenarios were formulated: an optimal scenario of social welfare and economic growth, characterized by a favorable behavior of the trigger variables. Furthermore, a catastrophic scenario of stagnation of economic and social growth is proposed, where the opposite occurs, and the triggering variables have an unfavorable behavior. Complementarily, alternative scenarios described as economic growth without social welfare and social welfare without economic growth were explored.

In conclusion, an improvement in the social trigger variables (access to health, educational level, and government efficiency) through the regulatory quality of the government, the capacity to generate public revenue, and tax revenue generate greater favorable effects for the health system. national development variables, then the improvement of the economic trigger variables (GDP and capital). Therefore, they are a priority to achieve a desired future situation.

Keywords: variables, national development, Peter Schwartz Axes, systemic model, International Futures (IFs), national objectives.

Strategic Leadership and Employee Engagement in Singapore by 2030: the Mediating Role of Leaders' Foresight and Strategic Thinking Capabilities

Azmy, Wade & Laan, Luke van der

National University of Singapore, Singapore

The association between leadership foresight and employee engagement has been proposed but empirical studies investigating the same are rare. This paper reports on a futures research study conducted to investigate the predictive value of the relationship toward developing scenarios of employee engagement in Singapore by 2030. The results reveal theoretical insights as to what the relationship between foresight, strategic thinking and employee engagement is. The results further reveal four possible futures (scenarios) of employee engagement in Singapore resembling Dator's scenario archetypes.

Keywords: employee engagement, foresight, strategic leadership, Singapore, scenarios

Participation of Civil Society in Security and Defence Foresight Exercises

Vicente Oliva, Silvia

Centro Universitario de la Defensa, Academia General Militar, Spain

The general public in a country are fully aware economic politics, internal conflicts or health problems, however, security issues are only perceived when there is a lack of them. Until we know, foresight for security and defence issues is developed by military personnel, experts in technology, and politics because use to configure strategic assets for national governments -labelled “top secret”-, just by elites. Citizens are represented by elected politicians in democratic countries, although political agenda about defence issues can be very unknown. Children education or industrial development, for instance, are more interesting issues in political campaign with regard to civilian protection.

Methods for increasing the participation of citizens in security and defence issues require of well-informed people about threats, civil rights, technology development, international affairs, etc. in order to their opinion would be suitable. Then, multidisciplinary dimension of security matters makes more complex the selection of people for national foresight exercises at the same time than checking their level of knowledge would be necessary to increase the results. There are some sensible communities to potential future development, for instance artificial intelligence (AI) and its influence in human rights, fake news and their impact in electoral process, etc. but how to find people where a general knowledge about the big picture, and include their opinions, could it be possible? A deep reflexion about how to include citizens in foresight exercises concerning to security and defence topics is required for increasing their participation and representation, both in peacetime and wartime.

Keywords: defence, foresight, participation, security

Poster: Exploring the Anticipation Phase of Organizational Resilience from a Futures Research Perspective

Moser, Christina & Bechthold, Laura

Bavarian Foresight Institute, Technische Hochschule Ingolstadt, Germany

Living in a world of polycrisis increases the need for concepts and approaches which can help organizations mitigate and overcome disruptions. The concept of organizational resilience has received considerable attention during the recent years, attracting the interest of both researchers and practitioners alike. The concept refers not only to surviving a crisis but also to emerging stronger from it. To date, several theoretical conceptualizations of organizational resilience explicitly consider a future perspective by integrating anticipation as one stage of resilience. Yet, a clear linkage between organizational resilience research and futures studies seems to be missing. This indicates a need for research that integrates these two fields to further explore the potential of anticipation. To systematically map and explore the current discussion of anticipation within the organizational resilience literature, we present a comprehensive literature review that aims to link organizational resilience research with core concepts of futures research. Thereby, the review differentiates between the organizational and the individual level. On the individual level, we focus on how futures literacy, as an antecedent (or microfoundation) of organizational resilience, might help empower employees to cope with disruptions. On the organizational level, we explore the concept of foresight as a contributing factor for the anticipation stage of organizational resilience. We synthesize our findings by discussing the potential value futures studies can add to the existing conceptualization(s) of organizational resilience. To integrate existing streams of research, we close our work by developing and introducing a definition of organizational futures resilience and propose a research agenda therefore.

Keywords: organizational resilience, futures studies, anticipation, microfoundations, futures literacy

Long-term governance and actions in the present

Time: Friday 16 June at 11:15-12:30
Chair: Morgan Shaw

Exploring the Intersection of Advocacy and Foresight

Gardner, Annette^a & Burke, James^b

^a ALGardner Consulting, United States

^b DeepDive Foresight, United States

Advocacy – voting, educating decision-makers, media advocacy, protests and demonstrations, lobbying, etc. – is a potent vehicle for long-term, systems change. Despite being challenged by threats to democracy and representation, championing a cause or policy can influence and change the public and decision-makers' hearts and minds and improve decision-making.

While futures work and advocacy oftentimes share the aim of creating a better world, advocacy has received limited attention by the futures community, either as a topic for exploration or as a tool used by foresight practitioners. Conversely, advocates typically do not engage in foresight because of limited foresight capacity and the constraints of a short-term horizon that characterizes policymaking.

Consequently, a Community of Practice: Advocacy Meets Foresight was launched in March 2022 by a group of futurists, advocates, and evaluators with content expertise in advocacy. The purpose of the CoP is to explore the intersection of advocacy and foresight, including: how they overlap (such as shared long-term goals), where they diverge (such as diverse understandings of 'advocacy'), and models of embedding foresight in advocacy and vice-versa. A desired aim is to offer ideas for better cooperation between the two fields.

To achieve this aim, the CoP is engaging in the sharing of resources, presenting on topics of interest (like advocacy and postnormal times), and undertaking specific activities, such as working with alternative scenarios to think about the futures of advocacy, and exploring the different ways that foresight can enhance advocacy's foresight (such as envisioning a preferred future for advocacy), and ways advocacy can support foresight (such as strengthening advocacy on behalf of the future).

During this paper presentation, Annette Gardner, PhD, and James Burke, MS, will describe the CoP's key areas of focus, emerging models and constructs, and activities to bridge the advocacy--foresight gap. This paper is also an opportunity to assemble and engage futurists who are interested in advocacy and/or have engaged in foresight that has an advocacy component and invite them to share models and practices, such as participatory foresight and public sector foresight engagement of the public.

Keywords: advocacy, activism, democracy, representation, policymaking

Rapid Scenario Variations for Policy-Making: Experiences from Foresight on Demand Projects for the European Commission

Cuhls, Kerstin

Fraunhofer Institute for Systems and Innovation Research, Germany

Scenarios can methodologically be created in very different ways, and many variations exist for rapid scenario building. During the lockdowns of the Covid-19 pandemic, many scenario processes had to be conducted online, in virtual workshops, on boards and with desk research analysis. During that time, first "scenario sprint" processes were conducted completely online for the European Commission within the framework contract of "Foresight on Demand".

This paper describes scenario work of a follow-up project to advice the 2nd Strategic plan of the European Commission's Horizon Europe Framework Programme in the same framework contract. The "Foresight towards the 2nd Strategic Plan for Horizon Europe" project employs a combination of different forward-looking approaches, and many different ways of performing scenarios for policy-making and involving officers from the European Commission (Horizon Europe Foresight Network) into the processes.

The project "2nd Strategic plan" consisted of a platform for the involvement of different stakeholders (Foresight4Europe), the analysis of other Foresight activities for context scenarios, several workshops, e.g. one

using a Futures Wheel approach to identify new contexts for future research and innovation, a Horizon Scanning for filtering out relevant issues and a series of expert group workshops making use of scenario approaches. The different expert groups with dedicated fields of research were guided by one of the experts with Foresight experience. The groups worked independently on their own pace but had the task of developing scenarios in their “Deep Dive”. All of them had limited time and capacity. The groups followed different scenario methods and adopted a creative way of structuring and formulating the scenarios. All groups were successful in formulating new images of the future. The number of scenarios per group varied: most of them developed four scenarios, one group even more than ten.

This paper describes the different ways of conducting scenarios in one single project and discusses some pros and cons of the methodological performance on the one hand, and the suitability for policy-making approaches on the other. The results were used at the same time and for the same purpose: informing the 2nd Strategic Plan for Horizon Europe. The future will show, if the inclusion of the issues into the plan was successful and if policy-making profited more directly or only indirectly via the different participants working for the European Commission from the endeavour.

Keywords: foresight, scenarios, scenario sprint, policy-making, rapid scenario building, virtual workshops

Analysis of Technological Trends in Digital Public Services for the Development of an Anticipatory Public Policy Framework in the Colombian Context

Trujillo-Cabezas, Raul – Vanegas-Barrero, Viviana & Lesmes-Patiño, Javier Alfonso

National Planning Department, Colombia

The purpose of this study is to show the technological analysis for the development of an anticipatory Digital Public Services (DPS) public policy framework, which is a catalyst for the Digital Government Policy (DGP) of the Colombian government. The study linkage the use of field of futures studies in policymaking to contribute to the national policymaking process. The results aim to improve and strengthen the interaction and relationship between government agencies and citizens by creating public value and innovation through the integration of digital technologies over a period of ten years. The developed process uses competitive and technological intelligence practices and integrates six types of key social actors. The results recognize the relevant role of emerging technologies, which allow the design of measures to build a forward-looking policy framework that combines an "exploratory" vision and at the same time a "regulatory" vision that integrates five dimensions: institutional, normative, economic, social and technological. The results presented here refer to the future scenario named "DPS, an emergent way of networked institutions and laboratories to promote public innovation in the systematic and growing development of digital services". Therefore, it is expected that these contributions from the National Planning Department (DNP, by name in Spanish) in Colombia will help to reduce the difficulties faced by decision-makers in implementing policy initiatives to promote public digital transformation.

Keywords: Digital Public Services, policymaking, futures studies, foresight, DNP, Colombia

Complex Governance & Strategies of the Future

Saloff-Coste, Michel

Université Catholique De Lille, France

We are in a period of deep change, but paradoxically, at the same time, we seem to have forgotten all our capacity for in-depth understanding of the social and business revolution we are undergoing. In the face of rapid modifications, we often have a tendency to focus on the short-term and thereby get ourselves stuck in the quicksand of fashions.

While many roads of thought are opened by people trying to retain a detached attitude regarding the dimension of ever more tumultuous phenomena, two ways of reading the situation intersect. There is the deeper, global one involving the evolution of societies and human activities. Then there is the one entailing evolution of businesses, which gives the appearance of being more concrete in a world that has become essentially commercial.

In this article, three main themes will be presented, going from meta-strategy to practice, and including strategic diagnostics: 1) in-depth characteristics of the change that we are living through 2) adaptation period required for any company seeking to adapt 3) process of change to be implemented to modernize the company.

Keywords: complexity, governance, strategy, future, sociology

Futures research and sustainability transition

Time: Friday 16 June at 11.15-12:30
Chair: Ville Lauttamäki

What Should a Just and Sustainable City Look Like in the Future? A Review of Urban Visions

Fransolet, Aurore^a – Phillips, Amy^b & Vastenaekels, Julien^a

^a Université Libre de Bruxelles, Belgium

^b Vrije Universiteit Brussel, Belgium

Just transition occupies an increasingly important place in political agendas from global to local levels. In recent years, this concept has evolved from a reactive social project aimed at protecting workers in industries affected by environmental regulations to a proactive social-ecological project aimed at simultaneously reducing social inequalities and environmental degradation. This ambition of bridging justice and sustainable transition objectives is particularly relevant for the urban context, where social and environmental issues concentrate and intertwine. However, questions of what a just and sustainable city could and should look like in the future remain unexplored. While there exist several urban visions that center justice, namely Susan Fainstein's "Just City", questions of sustainability are not central to these visions. Yet it is unclear whether and how urban visions that do focus on sustainability (e.g. sustainable cities, eco-cities, green cities, low-carbon cities...) consider justice. This research has two goals; first, to identify and analyze the place of sustainability in the most prominent "just city" visions and, second, to examine visions of sustainable cities and their conceptualizing of justice. The research is based on an analysis of seminal texts on just cities and on a meta-analysis of existing reviews of visions of sustainable cities. The visions are analyzed through a framework that highlights considerations of procedural, distributional, and recognition justice. By analyzing the place of sustainability within just city visions and the place of justice in sustainable city visions, we give direction to and open discussion about the contours of possible just and sustainable urban futures.

Keywords: socio-ecological nexus, just transition, just city, sustainable city, urban futures, visioning

Social Intelligence for Creative Empowerment: Integral Part for Filling Current and Potential Social Gaps-Promoting Sustainability

Rastogi, Shweta

University of Technology, Canada

Current turbulent, dynamic and ever-changing global conditions has showed us, that knowing facts and having skills is very important, but what matters the most for survival and mental sanity is the ability to adapt to new circumstances and maintain a positive attitude when going through challenging situations.

When researchers, scientists speak about intelligence, they usually mean the "hard" skills e.g. problem-solving, verbal skills, logical reasoning. But when it comes to "soft" skill set such as understanding social roles, emotions, comprehending relationships, or effective listening; we rarely see them as part of an intelligence. The hard skills are very important, it's the soft skills that help us sustain relations, satisfaction at work, or happiness. Since social intelligence is one such skill, is often neglected in learning, despite a huge body of research revealing its undeniable benefits; hence I am happy to share what social intelligence is and how it can be instrumental for creative empowerment in filling the current and potential social gaps. This embarks the beginning of transformation.

The more you manage to develop social intelligence, the more skillful you become at managing complexity and promoting sustainability. Scientific research has proven time and time again that people with stronger social

connections, and who are more optimistic, tend to suffer less from mental health problems, experience less stress, and consequently have better mental and physical well-being. Now when it comes to either work or any arena in life, adaptability, emotional self-regulation, understanding other people's behaviour, building fruitful relationships, teamwork, along with a variety of skills and traits is associated with success and productivity.

The purpose of this study is twofold. Firstly, I aim to gain a comprehensive knowledge on social intelligence based on literature review and current models; to serve as a recommendation in designing a development program, and second to share this awareness in mentoring, counselling sessions with other professionals. Scope for future research in the social intelligence field is also suggested.

Keywords: social Intelligence, benefits, development, empowerment, models of SI, well-being

Critical Energy Utopias and Futures Consciousness

Wuebben, Daniel^a & Cuevas, Jomaylene Mae^b

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^b Instituto Franklin-Universidad de Alcalá, Spain

This paper examines how futures consciousness may be impacted by what I call critical energy utopias. The study subjects are undergraduates in two university courses, "Writing as Critical Inquiry" and "Global Environmental Policy." Like climate fiction (cli-fi) and solar punk, utopias displaying energy abundance or sufficiency help narrate the transformations of societies threatened by political persecution and ecological collapse. Course readings such as Ursula Le Guin's "The New Atlantis" (1975) and selections from Kim Stanley Robinson's Ministry for the Future (2021) seem to reflect collective visions for cleaner energy sources and more equitable societies; they also provide context for the energy transitions underway and their impact on local landscapes. How might these fictions provide readers, especially young people, with frames and nudges for real life changes?

Before the intervention, students took the Futures Consciousness Test which was supplemented with questions that critically analyzed their individual relationships with energy. Then, students read the energy utopias and non-fiction science and policy articles to help analyze their energy impacts related to diet, travel, clothing, etc. Instead of celebrating or shaming a particular lifestyle (e.g. veganism, recycling, driving an SUV, etc.). The goal is to have students critically reflect on hypothetical and actual energy choices. For instance, as these courses are taught in Madrid and many of the students are United States residents studying abroad, their round-trip air travel alone consumes approximately one-third of the annual 3 tons of CO₂ emissions allotment scientists say is necessary to reach carbon emissions goals this year. Do they envision a future without travel or with lower carbon options? How can we, as energy citizens, manifest different forms and possibilities for our energy futures?

The post-test may indicate how to better teach and develop energy literacy in relation to future consciousness and how the links between current and future energy consumption may help enact a fair, fast, and just energy transition.

Keywords: climate change, futures consciousness, climate fiction

Futures research and strategic foresight

Time: Friday 16 June at 11.15-12:30

Chair: Sari Söderlund

From Fiction to Fact: How Science Fiction Is Shaping the Transformation of Government Public Services – Abu Dhabi Culture and Tourism Case Study

AlKhoori, Khaled – Abu Sitta, Fawaz – Al Fazari, Saeed & Al Blooshi, Abdulla

Department of Culture and Tourism – Abu Dhabi, United Arab Emirates

Facts play a major role in deriving sustainable and strategic direction for the government sector. However, infusing imagination and science fiction into the process of strategic planning could further accelerate innovation and bolster government adaptability and resilience. With this in mind, the Abu Dhabi Department

of Culture and Tourism (DCT) has established a dedicated Futures Foresight function to complement the entity's strategic management and long-term horizons planning efforts.

Integrating foresight practices, which are largely driven by imagination and science fiction, with strategic planning has been observed to further enhance innovative idea generation, and has the potential to spur the development of advanced methods that are effective when applied to complex issues.

The DCT's mandate is to promote cultural awareness and preserve Abu Dhabi's heritage, as well as transform the Emirate into a world-class tourism destination. As part of its mission, the DCT has led the establishment of cultural megaprojects – prime examples being the Louvre Abu Dhabi, Guggenheim Abu Dhabi, and Zayed National Museum – in addition to driving strategic partnerships with global leaders in sports, such as the UFC and the NBA.

To tackle the VUCA (volatility, uncertainty, complexity and ambiguity) world and accelerate innovation, the DCT needed a novel method to anticipate future changes, which resulted in the entity developing its own Foresight Framework. Over the past five years, the DCT Foresight Framework has evolved from focusing solely on knowledge to integrating imagination as central to the process. To enrich the imagination perspective, models such as Casual Layered Analysis, Integral Futures and Futures Triangle have been fused into the DCT Futures Foresight Framework, with science fiction principles being adopted in order to articulate its futures scenarios.

The DCT Futures Foresight Framework is made up of three main pillars: Futures Reading, Futures Designing, and Futures Shaping. Futures Reading comprises three steps – curiosity (articulating powerful questions), horizon scanning, and the axes of uncertainties. Futures Designing centres on deriving the forces of change and articulating the futures scenarios, with science fiction writing and storytelling adopted to create vivid mental images of these scenarios. Finally, Futures Shaping consists of two main areas; backcasting and strategic alignment.

Integrating futures foresight and science fiction with strategic planning and policy development has boosted employee engagement levels across the DCT, whilst also accelerating idea generation.

It is recommended that further studies be conducted to measure the impact of infusing foresight and science fiction into strategic planning, particularly when this is specifically leveraged to promote and strengthen governmental innovation and resilience.

Keywords: government foresight, science fiction, imagination, strategic planning, innovation

Foresight Evaluation as a Learning Opportunity

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^b Executive Committee, World Futures Studies Federation (WFSF), Open Network of Foresight and Innovation for Latin America and the Caribbean (CYTED Program), and National Institute of Agricultural Technology, Argentina

This paper reflects on the trinomial “foresight – evaluation – learning”. It is based on the significant experience carried out in Colombia by Popper et al. (2010). In this case, the evaluation was a learning opportunity for the foresight, since it allowed anticipating problems and taking measures to avoid them or minimize their impacts, helping to identify opportunities and strengths that were taken advantage of during the implementation of the Colombian Technology Foresight Programme (CTFP) of Colciencias.

In this context, the present work focuses on the construction of a methodological design that contemplates the incorporation of monitoring and evaluation in a continuous and permanent way in a futures studies. The research proposes improving evaluation practices as a necessary condition for learning and redesigning futures studies, both in their development and implementation phases.

The argumentative structure is a) the need to improve evaluation practices as a pending challenge and as a necessary condition for learning and redesigning futures studies; b) the presentation of the basic notions of the constructed analytical trilogy and its interactions; c) the methodology and instruments designed and

applied to systematize and evaluate the selected experiences; and d) the presentation of the main findings, results and common and specific elements.

From the comparative analysis of the selected cases it is verified that none of their methodological designs contemplated the evaluation, which did not allow detecting difficulties both in the design and in the execution, in addition to the non-compliance with the schedules and the initial budgets. In short, foresight, assessment, and learning are interrelated and work together to help make more informed decisions and maximize study success.

Keywords: foresight, evaluation, learning, Latin America

The Entretiens Albert-Kahn, a Territorial Laboratory of Public Innovation: A Contribution to Local Governance

Dartiguepeyrou, Carine

Departement des Hauts-de-Seine, France

“One must act as a man of thought and think as a man of action”, said Henri Bergson, the French philosopher (1859-1941) and friend of Albert-Kahn (1860-1940) the philanthrope who supported many projects including the Archives of the Planet. This sentence illustrates the benefits and contributions of foresight which allows us to both feed our thinking and enlighten our actions.

We wish to emphasize here that the foresight approach – although useful in helping to make decisions – is not enough to take the path of desirable futures. It is up to organizations to reposition themselves in their relationship with time and space, to encourage inspiration and open-mindedness. The transition to the ethics of action requires that decision-makers be ready to transform themselves personally, by seeking coherence in their relationships with others and with society.

We propose to discuss three types of contribution of foresight and how it has built for the last ten years a culture of anticipation at the local level:

- How futures thinking and questioning can inform decision-making,
- How the identification and support to socio-cultural emergences (and weak signals) can accelerate sustainable transitions on territories,
- How the scripting of global trajectories and scenarios can support ethical choices.

The Departement of Hauts-de-Seine (France) is a local territory Western Part of Paris, very dense and with a strong presence of corporations and universities (Paris La Défense).

The Entretiens Albert-Kahn, Laboratory of public innovation was created in 2012 and was inspired by the political heritage of Albert Kahn. We will present rapidly the activities of the territorial Laboratory of public innovation, its purpose and realizations.

We propose to address the three types of contribution of foresight based on our experience at the department of Hauts-de-Seine. I am myself founder and general secretary of this Laboratory.

Keywords: foresight, culture of anticipation, public innovation, territory and governance

Special Session: Futures Literacy for the sustainability of present and future generations: key questions, means, contributions

Time: Friday 16 June at 11:15-12:30

Yakubovskaya, Tatiana^a – Voloshina, Evgenia^b & Danylova, Virac^c

^aFinnish Society for Futures Studies, Finland

^bNetwork “Tolstoy's School”, Israel

^cNetwork “Interactive Questioning Lab”, Ukraine

The interactive workshop “Futures Literacy for the sustainability of present and future generations: key questions, means, contributions” will be devoted to discussing the Futures Literacy programs in the terms of

participatory practice, and potential contributions of participatory approach in the field of future-oriented education.

The focus of the discussion is issues of the sustainability of present and future generations through future-oriented educational practices and Futures Literacy programs.

The workshop's range of questions will address empirical and conceptual as well as methodological issues about the benefits of a participatory approach to Futures Literacy programs.

The discussion will be based on a comparative case study around some pilot experiences (including educational practices from Finland, Ukraine, Israel, and others) considering the complexity of contexts, interconnections, and relationships in different regions

Therefore, one of the transversion focuses of the workshop will be the integration between the participatory approach and the ecosystem approach.

The purpose is to find out how the Futures Literacy programs could be conceived, planned, and designed taking into account specific features of the local environment, social, cultural, and economic “nature” of a region, which affect a collective and personal agency for constructing both different and joint versions of the future.

In other words, the main ideas of discussion are how Futures Literacy programs aimed at the sustainability of present and future generations, and what the methodological contributions of these interrelated aspects:

- ecosystem approach (super-complexity and systems particularities of regional ecosystems, etc.);
- participatory approach (a participatory practice for the collective knowledge creation process, etc.).

Keywords: futures literacy, future generation, participatory approach, ecosystem, comparative case study, futures-oriented education

SESSION 10 at 13:15–14:45

Sustainability and future generations

Time: Friday 16 June at 13:15-14:45
Chair: Morgan Shaw

Environment: Trends and Major Challenges for 2050

Ataucusi Ataucusi, Yiem – Vilchez Astucuri, Jordy – Stehli Torrecilla, Hans – Estrada Ramos, Milagros & Quinto Caypani, Sandra
National Center for Strategic Planning, Peru

The trends in the environmental sector will cause important changes not only in the physical environment, but also in the social, political, and business spheres. Trends such as the greater increase in the frequency of extreme weather events, the greater contamination by extractive industries in Peru, and the increase in solid waste are consistent phenomena over time that manifest themselves in the environment sector and that are generating new threats to the environment that affect national development. Undoubtedly, the countries that face and assimilate this reality sooner will be those that mitigate the negative impacts of the degradation of ecosystems and the reduction of the accelerated process of desertification. To build a desired future for society and make decisions based on strategic, timely, and relevant information.

The analysis of these trends not only impacts and influences national development, but also drives technological innovation and change, and stimulates regulatory and political reforms at the national level, in turn representing service opportunities concerning the generation of new types of intervention.

The methodology applied was the horizon scanning method, which consisted of (i) exploring the trends and events that have a behavior of permanent change over time, (ii) identifying the points of origin and (iii) generating the information sheet. That accounts for the findings of the Horizon Scanning, intending to generate long-term strategies.

In addition, the Delphi tool was used, since it allows the convergence of opinions and consensus among experts representing academia, public society, private society, civil society, and international organizations.

As a result, 14 global and regional trends and 12 national environmental trends were analyzed, in addition to considering their respective estimates for 2050. In conclusion, there is evidence of a growing and worrying trend linked to water stress, environmental degradation, events extreme weather, and global temperature. On the other hand, some trends that could improve prospects to some extent are the increase in renewable energy production and the greater number of initiatives in sustainable cities.

Keywords: trends, environmental, Delphi, climate change, temperature, water stress

Achieving Low Emissions Futures: Foresight and the Critical Role of Public Institutions in Delivering National Transformations

O'Mahony, Tadhg & Torney, Diarmuid
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Responding effectively to the climate crisis involves low emissions development, that is compatible with deep emission reduction targets, set for mid-century under the Paris Agreement. Low emissions development necessitates transformational change, to both steer sustainable development paths, and to transition to cleaner systems and technology. Successive IPCC assessment reports have increasingly highlighted both the imperative of transformational shifts -sustainable development paths in addition to technological transitions- and also the central role of public policy therein. Sustainable development paths both increase feasibility of technological transitions, and offer opportunities to maximise synergies, and minimise trade-offs with other development goals. While technological transitions are unfolding globally, transformational sustainable development paths typically receive less attention. For almost a quarter century, the literature has accepted

the importance of encompassing the wider perspective, but this is typically forgone in national analyses and policies, through excessive reductionism of a complex systems challenge.

Drawing on ongoing research, as part of the development of Ireland's first national climate assessment, this paper foregrounds the important role of foresight processes that apply systems thinking and that offer the methodological diversity and flexibility necessary to deliver holistic, integrated, multidimensional and interdisciplinary responses. This is consistent with the complex systems challenges of long-term low-emissions futures, and with understanding near term actions that can seed them. By doing so, the paper argues that the 'state' has a crucial role within broader 'governance' processes, that encompass market and civil society. Public policy in general, and public institutions in particular; are key architects and actors within framing, frameworks and solution diffusion. These roles emerge in conceptualisation; visioning; analysis; facilitation; mediation; decision-making; and policy implementation. We conclude that applying a wider toolkit of public policy foresight, sometimes termed 'anticipatory governance,' is paramount if we are to enable transformation to low emissions and sustainable futures.

Keywords: low emissions, transformation, sustainable development, governance, foresight, public institution

Rescuing the Future from Itself – Building Emancipatory Climate Future Thinking in Three High Climate Vulnerable States in India

Krishna, Priyanka & Parmar, Bhawna

Quest Alliance, India

While climate crisis is primarily framed as 'disruption,' 'surprise' threatening the usual way of life where the 'future' now is related to as something to be avoided, feared, and held hostage in negative connotations. Borrowing from Miller(2018), we argue that such framings close the potential for the emergence of futures and the new possibilities that the Future may hold. These also allow for the maladaptation of top-down governance by the state withholding agency of communities and youth affected by climate change. Through our research in three states of India in the global south in three climate vulnerable states – Assam, Odisha, and Gujarat we argue that design for Climate Futures thinking should allow for emergent informed, hopeful imaginations which will enable for decentralization of power and rescues the Future as the 'inevitable' and something to be 'adapted and mitigated' to something that can be built and hoped for.

A key hypothesis of the paper as scholars have noted is that Future Thinking is a capability that needs to be built. However, it goes further to build nuances bringing ground up stories of immersive fieldwork of five months using participatory futures method and speculative enquiry across different social, economic and cultural contexts to answer

- 1) How young people and communities experience climate change attentive to feelings such as hope, despair, and anxiety to three intersecting climate crises in the region which include floods, drought, and heat waves.
- 2) The current understanding of climate change and how anticipatory systems thinking may enable informed hope and allow for the emergence
- 3) The differentiated nature of Future Thinking in different communities and how it intersects with past violences, discrimination and systemic injustices
- 4) The key skills and processes required for building emancipatory Future Thinking and present the dystopian and utopian futures presented by youth in the said three states in the country as evidence while answering the above questions.

References

Miller, R. (2018) Transforming the future: Anticipation in the 21st Century. London: Routledge, Taylor & Francis Group.

Keywords: climate change, youth, climate futures thinking, participative futures, speculative enquiry

Power Systems are Systems of Power: Prospects of Democratizing Energy Access for Sustainable Futures in Lesotho

Tsoeu-Ntokoane, Seroala

National University of Lesotho, Lesotho

Lesotho is a small enclave country in Southern Africa which is trying to catch up with the rest of the world in transitioning to renewable, accessible energy. Its geopolitical location, its regime dynamics and global political economy, position it only to make modest gains in moving into dominantly renewable energy space. Using largely qualitative research design and conceptual framework, this paper aims to show that energy systems are more than technological fixes but are locked within the social economic and political environment that encapsulate them. The paper also intends to show that energy transitions are likely to accrue desired futures if these are couched in remaking relationships of power between those who provide energy and communities that they service. It advocates for energy democracy in which the very communities that have been classified as passive receivers of power systems, reclaim power systems that service them.

Keywords: power systems, energy transitions, renewable energy, energy democracy, Lesotho, Africa

Youth and creative empowerment for social change

Time: Friday 16 June at 13:15-14:45

Chair: tbc

Political Imaginaries and Perspectives on Climate Futures: Young People's Sense of Agency in Building Climate Action

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Can political imaginaries afford us hope in building more just futures? Political imaginaries can reveal the fundamental understandings that orientate political and social actions of individuals and groups. Through them, people delineate their political agency, based on what they consider feasible, desirable and thinkable. They make sense of the world and their place in it, based on current realities and prospective changes. Political imaginaries can guide the political activities in which people want to participate and be engaged with. They can be, therefore, indicators of forms of citizenship and engagement, providing us information on how young people are addressing the problems and priorities of our time. This presentation is based on a field research that took place between September 2022 and January 2023, involving 20 focused group discussions with young people living in Portugal. To better understand their future imaginaries on climate action, we elicited discussions on political alternatives, to identify, compare, and learn more about different possibilities envisaged by young people with diverse backgrounds and social trajectories. Our study included minoritized groups living in underserved communities, climate activist groups and mixed profiles such as high school and college students. Based on a thematic analysis, we look at how diverse groups of young people envision political imaginaries and their role in shaping climate future(s). We will particularly focus on the political imaginaries that have been poignant in building young climate activists' movements, their shared spaces of communication, their political language and how they collectively envision change and climate action. We seek to understand how young people build imagined future communities, how they would reorganize the world around individual vs collective agency, and which places would they occupy in the desired new political scapes. In a time when young people complain about society's symbolic violence of consent around climate change, we aim at better understanding the role of political imaginaries as a tool for new generations.

Keywords: political imaginaries, youth participation, climate activism, just futures, focus groups

Engaging Youth in Co-Creative Visioning Processes: Action-Research in the Italian South-Eastern Alps

Moriggi, Angela^a – Secco, Laura^a – Pisani, Elena^a & Angelini, Anna^b

^a University of Padova, Italy

^b Fondazione G. Angelini Centro Studi sulla Montagna, Italy

Young people are key stakeholders when imagining the (sustainable) future of any territory, and yet are often left out of planning and decision-making processes. Youth engagement is crucial not only to voice their ideas and desires, but also to enhance their future literacy skills. Visioning processes, when properly designed and implemented, can be opportunities for empowerment and capacity building, providing participants with new competences, exposing them to innovative scientific knowledge, while creating a safe space for reflection, network building, and creative expression.

This presentation focuses on a transdisciplinary action-oriented research project (“VERVE”), funded by the EU Marie Curie Actions, engaging young people (between 16 and 30 years of age) in a series of Creative Labs aimed at (re-)imagining the future of their territory. The activities are implemented in partnership with local institutions, long active in the sustainable development of the case study – i.e. Fondazione Angelini (Centre on Mountain Studies) and the Local Action Group “GAL Prealpi Dolomiti”.

VERVE focuses on the empirical case of Valbelluna, a rural area in the Italian South-Eastern Alps rich in biological and cultural diversity but facing ecosystems degradation processes, anthropogenic pressures, and socio-economic challenges. Examples include depopulation, ageing, lacking social services, and land abandonment. These challenges are common to other European rural and mountainous areas, due to urbanisation, tertiarisation, technologicalisation, digitalisation and welfare cuts. Despite structural vulnerabilities, rural areas can potentially be(come) vital and vibrant thanks to social innovation processes, unleashing residents’ creativity.

Through a participatory engagement process, VERVE aims to: a) create inclusive spaces for youth and for excluded voices (e.g. non-humans); b) sensitize participants on key topics, such as biodiversity and ecological integrity of rural areas and key natural resources under threat (water); c) tap into youth’ sense of place and care for their places; d) provide skills to envision regenerative futures, specifically in rural areas – often underexplored in comparison to urban areas.

In the presentation I will address the following questions: a) How can young people living in fragile rural areas be involved in visioning processes (in particular: what are the most effective tools and modes of engagement)? b) How can such processes catalyse regenerative visions of the future in rural areas?

I will introduce a multi-level methodological framework, combining elements of different transdisciplinary approaches (i.e. Theory U, Appreciative Inquiry, etc.) with participatory visual methods like Photo-Voice, and experiential activities in nature. I will also share the preliminary results of the first engagement phase, to be implemented in Spring 2023.

Keywords: youth, visioning, action-research, regeneration, rural, place

A Youth-Created Digital Narrative to Engage Communities in Futures Scenarios

Ostman, Rae & Martin, Paul

Arizona State University, United States

This session will present the design and findings of an Arizona State University program that empowers teenaged youth to explore alternative futures and engage Phoenix-area communities in understanding and finding solutions to local impacts of climate change. With support from adult team members, the youth leaders are investigating a series of futures scenarios that were previously developed by a team of interdisciplinary sustainability scientists and stakeholders through two major initiatives funded by the National Science Foundation. Additionally, the youth leaders are building skills in science communication, storytelling, and digital media. Using the Unreal game engine, youth leaders are creating a digital narrative that will immerse community members in exploring these scenarios – and identifying preferred futures – through interactive theatrical gaming events. Our hypothesis is: 1) by exploring futures scenarios of Arizona in 2060, youth leaders

will increase their understanding of climate science, possible solutions to climate change, and pathways to alternative possible futures; 2) by acting as science communicators, participating youth leaders will strengthen their agency and envision a future self that uses STEM and media to create the future they want to live in; and 3) by leveraging their perspectives as young people and community members, participating youth will create innovative informal STEM learning experiences that promote similar outcomes for participating community members. The project is organized as a research-practice partnership, with both adult team members and youth leaders systematically developing and investigating questions. Adult team members are conducting research related to the impact of the youth program, while participating youth leaders are investigating their own questions related to the impact of their digital narrative. The project includes a diverse cohort of youth participants, including minoritized racial/ethnic groups and genders.

Keywords: youth, gaming, interactive theatre, digital narrative, informal learning, community engagement

Integrating Philosophy for Children in Kenya's Competency Based Curriculum to Prepare the Child for Future Roles

Micheni, John-Patrick^a – Ogeno Jacton^b & Branya, John^a

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Children are the future of humanity and a careful education of children significantly affects their future. This paper explores the possibility of integrating Philosophy for Children (P4C) in Kenya's Competency Based Curriculum (CBC) as a means to equip the children with necessary skills and competencies in preparation for their (children) future roles.

Educational reforms in Kenya have undergone various stages since independence, with the most recent being the introduction of the CBC. Despite the attempts, there has been little progress in instilling value-based education to children right from the basic level. Admittedly, the implementation of Kenya's CBC has been experiencing challenges mainly of infrastructural, managerial and pedagogical nature. This paper focuses on the pedagogical challenges. While acknowledging the efforts made by the Government of Kenya (GOK) through the Kenya Institute of Curriculum Development (KICD) in documenting the basic education curriculum framework and training some personnel to facilitate the implementation of the CBC, there seems to be a need for a clearer framework on how the competencies could be uniformly inculcated in children.

In response, this paper suggests that a pedagogical framework anchored by Philosophy for Children (P4C) could be instrumental in enhancing CBC in Kenya. The P4C tool kit has a wide range of philosophical skills, values and intellectual aptitudes which could be blended with particular competencies to catalyze the process of implementing CBC, and, in the long run, prepare the children for the future. Hence the paper recommends the integration of P4C framework in Kenya's CBC for the many benefits the former has on children, their future and that of the nation.

Keywords: philosophy for children, competency based curriculum, value-based education, pedagogical framework, philosophical skills, intellectual aptitudes, future roles

Workshop: AI & Future of Corporate Governance

Time: Friday 16 June at 13:15-14:45

Stafie, Diana

Future Station, Romania

Corporate governance is on the verge of a transformation, fuelled by factors that boards with a futures-thinking mindset will need to fully comprehend. Boards' purpose and function will be reshaped as they expand their role into technology and organizational development as a result of this greater responsibility. In the last decade, there has been a great debate, in our society, about the role of governance inside organizations. Concerns, such as: transparency, diversity, compensation, strategy, risk oversight and accountability had sparked a series of debates whose result was, new corporate governance laws and business models. Ethics and transparency

remain fundamental. Moreover, current technology advances have the potential to dramatically change what governance would mean in the future. And Boards can strengthen their governance by adopting some of these disruptive technologies, such as: artificial intelligence (AI). Although we are witnessing several changes driven by AI, it is worthwhile remembering that this is just the beginning, plus that AI is only one part of the “tech story”.

As the world is changing so fast, we need to build future preparedness at both individual - as Board Members or leaders, and organizational level.

In the white-paper we illustrate 5 corporate governance changes driven by AI - A more intense human-machine collaboration, Use of big data, Rise of platform economy, Decentralization of work and business and Push for transparency. Moreover, in the second part of the report, we analyse 3 possible implications of such changes, at Board level - Future-ready Boards (ambidexterity, foresight / anticipation skills, continuous learning), Tech-savvy Boards (Digital literacy, data power and tech ethics) and Boards repositioning (visibility & reputation management).

Keywords: governance, long term, AI, board members, futures, foresight, anticipation

Special Session: The Next 8 Billion – An intergenerational dialogue on the future of multilateralism and the multilateralism of the future

Time: Friday 16 June at 13:15-14:45

Moderator: Colunga, Valeria, Y2O, the youth engagement group for the G20, Mexico

Speaker: Steven, David

UN Foundation, Italy

Panelists: Alim, Abdullahi^a – Richardson, Ruth^b – Salinas Leyva, Claudette^c & Machchate, Khalid^d

^a International Chamber of Commerce, Switzerland

^b Accelerator for Systemic Risk Assessment (ASRA), Canada

^c UN Foundation, Mexico

^d Special Commission on the Development Model, Morocco

In 2022 the world marked the Day of 8 Billion, with the UN Secretary-General describing the birth of the 8 billionth baby in the Dominican Republic as a milestone for considering humanity's shared responsibility for the planet.

This special session/workshop will look beyond the people already alive to the next 8 billion babies, asking how living generations can meet their responsibilities to future generations, and how the world can build an international system that is able to think, plan, and act for the future.

Based on the organizers' contributions to Our Common Agenda – the Secretary-General's vision for the future of global cooperation – and our new Multilateral Futures Initiative, the session will present new research that explores the drivers that will shape the lives of the Next 8 Billion, including the balance of risks and opportunities, the distribution of impacts, and policy levers that could deliver significant benefits for future generations.

Speakers will debate implications for the future of multilateralism and the multilateralism of the future, including assessing developments of current policy proposals such as the Strategic Foresight and Global Risk Report, the Futures Lab, the Emergency Platform, and the Declaration on Future Generations.

The session will also explore the implications of the 2030 Agenda, Paris Agreement, and other global policy frameworks to future generations, and the potential for future frameworks to explicitly promote the creation of intergenerational global public goods.

Leadership for the future will be a cross-cutting theme for the session, with speakers including those working with a network of young leaders, thinkers, and activists that presented the Contract for Our Future to the co-chair of the Secretary-General's High-Level Advisory Board on Effective Multilateralism at a Stockholm+ 50 signature event in June 2022.

It will also promote the leadership of young countries, mostly from the Global South, where the majority of future generations will live. It will build on work to establish an inclusive network of emergent initiatives for

future generations, national foresight, future planning, research bodies and other future-focused national institutions, creating an accessible support network for countries with limited resources.

The special session will provide input for the Summit of the Future on 22-23 September 2024 – which will be held to “forge a new global consensus on what our future should look like, and what we can do today to secure it” – and for the Summit’s preparatory ministerial meeting on 18 September 2023.

Keywords: future generations, multilateralism, intergenerational, UN



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