

FOR THE NEXT GENERATIONS

Report of the International Seminar
in the Finnish Parliament 7-8 June 2016



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ed. Paula Tiihonen

Covers: Part of the Artwork Tulevaisuus (Future), Väinö Aaltonen (1932),
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To the Reader

It was a great honour to arrange an international seminar “Work for the next Generations” in the Finnish Parliament on 7-8 June 2016 when so many participated and had presentations (programme in appendix).

Thank you all!

This seminar was one of the rare opportunities to different kind of institutions, networks and personalities – all interested in futures - meet and share their knowledge.

Some of you continued with issues of the seminar during summer and this report is a result of your efforts.

My deepest gratitude to the authors and all of you who contributed to the work!

Paula Tiihonen

Retiring Committee Counsel
Committee for the Future
Parliament of Finland

Speeches

MP Maria Lohela, Speaker of the Finnish Parliament

Predicting the future is kind of like trying to grab a cloud. The cloud looks like a concrete object, but you end up holding nothing but air.

The future is always surprising. All of us know examples of predictions that have ended up false; nonetheless, people have a need to look forward in order to evaluate their lives and place on Earth.

Politicians have the same need. I have noticed that Finnish politicians have at least four ways of talking about the future.

Firstly, members of Parliament might think that the current structures and trends in society will remain the same. They think Finland will become 'older' because current statistics show that birth rates are going to remain low, the average life expectancy will rise, and medicine will develop.

Secondly, politicians often seem to believe that the development of society will move towards certain values or ideologies. In political debate, the society or the future is envisioned as a place of more equality, more environment-friendly, and more individualistic – or just the opposite.

Also, politicians may think that history will somehow repeat itself. The Roman Empire, the city states of ancient Greece, or the Renaissance. The Weimar Republic or the czars of Russia. These are examples of the past, but politicians think they describe some signs of the future, such as society falling apart, the rise of the metropolis, hyperinflation, or more bureaucracy.

Fourthly, many seem to believe that the future is not going to be so different. Political rhetoric is often based on this assumption. This is indicated in sayings such as 'the rich will get even richer, and the poor will end up poorer'.

Members of Parliament end up creating images and scenarios for the future. Some of them are optimistic. Some cast dark shadows over what is to come.

We do not know what will happen, and there are many reasons for that. Let me point out a few.

The future is always linked with unique, unpredictable, and unstable phenomena. The forming of the European Monetary Union and the euro can be identified as a unique phenomenon. I will not take a position on whether either was a good idea, but I will look at the situation from the standpoint of predicting the future.

In 1996, Finland's greatest financial experts were invited to join a group to evaluate the effects the EMU would have on our economy. The group did what they were asked to do but found that conclusions were hampered with too many uncertainties because the new monetary union was something so different and new. There were no comparison data, historical examples, or experiences of anything similar.

After 20 years, we can now look back and see how our best predictions turned out. The Bank of Finland actually carried out a study in which they evaluated how these predictions, made by the greatest experts, were partially right and partially wrong. The working group was right in that with a common currency, the comparison of prices would be easier, competition would increase, and insecurity surrounding currency exchange rates would diminish. They did not, however, manage to predict the protracted economic downturn, the banking union, or the conscious violations of rules and regulations.

This shows that, from the perspective of futures research, even the views of the pre eminent experts are flawed, and insecurity as to predictions increases when we are discussing broader, social topics.

Scenarios fail also because the momentum of the various social changes is being exaggerated. People tend to see the future as suits them when they discuss topics such as the bio-society, a society of spectacle, or ubiquitous society. New forms of social life are constantly being born, and technological development brings forth innovations. New technology changes the way we think about time and place itself. Even nature transforms – slowly – and adjusts to new circumstances. Change and development seems to be the one constant factor.

Still, I would like to challenge this idea of constant change a bit. All around us, in political as in ordinary life, we can also find continuity and stability.

We Finns tend to accept continuity in the political sphere better than many others. I see that a single, simple reason lies behind this: the geographical position we have. In Finnish foreign policy thinking, we have always taken consideration of our whereabouts. This is a constant factor that does not change, even when political systems do.

Our location, circumstances of nature, and basic biological needs are not the only constant or slowly changing factors. Also, people have deep cultural roots, which evolve in slow motion. Even today, we can understand the thinking of ancient philosophers and the drama written by Shakespeare. The first book written and published in Finnish is from 1543, and we still can understand what its author wanted to express. The words and the terms have been modernised, but the grammar is still very much the same.

Scenario work that tends to focus on development, evolution, and radical change usually fails if one does not take into account the slowly changing dynamics of life itself.

Parliamentarians are in constant need of predictions and knowledge about the future. I am very proud of the Finnish Parliament's Committee for the Future, which began its work already in 1993. The work done by the Committee for the Future and its reports regarding future forms of energy, genomics, the welfare state, and technology have been groundbreaking, and they have affected the work of our parliamentarians and their

decisions. The committee has been at the forefront of enhancing international co operation and the relations of our parliament. This is why I am personally so glad to see so many experts from different corners of the world. The future is our shared business. Thank you all.

I will now return to where I began my speech, with the metaphor of clouds and the future. On the morning of election day, one should gaze at the clouds and figure out what kind of weather there is going to be. Research shows that if there is heavy rainfall on election day, the results can be dramatically different than predicted. Heavy rain is a perfectly ordinary phenomenon that can make all predictions futile.

This example goes to show how difficult it is to foresee all variables in a complex world. However, one factor emerges as very important: the children. The future is theirs, and it is for that reason that the theme of this seminar, 'For the Next Generation', is so important.

The future is connected with changes and stability, development and continuity, occasional and probable phenomena. From a parliamentarian's point of view, it is important to understand that the future can be influenced.

Therefore, the future should be approached as an opportunity.

I wish you a good seminar and enjoyable days in Helsinki and in Finland.

Thank you.

MP Merja Mäkilä-Ropponen, Vice Chair of the Committee for the Future, the Finnish Parliament

Welcome to this public seminar: Different Futures, Policies, Policy-Making Models and Methods

I am the Vice-Chair of the Committee for the Future, but I am also a mother and a grandmother, and that's why the future is very important for me. I believe that awareness of negative and positive signals and predictions helps us to prepare for different futures. One of the most important aspects of preparation is that we learn from each other. The aim of this seminar is for us to learn from different political cultures and get some ideas on how to apply them to our own situation.

During my statement I will say a few words about the Committee for the Future, because it is quite a unique institution. There are only a few countries and parliaments where this kind of committee exists.

What is the Committee for the Future?

The Committee for the Future has been part of the Finnish Parliament's work for years. It was established in 1993. The committee is one of 16 standing committees. The committee has 17 members who are all Members of Parliament and represent different political parties.

The main task of the committee is to think about the future and work towards the best possible future for Finland and the people of Finland. The committee's time perspective is long and its range of issues is broad. That means that we have to be creative and visionary.

Even though the committee doesn't prepare laws—that's the main task of parliament—the committee can have a lot of influence if it understands its role and wants to make the most of it. It can take initiatives and make politicians and parties think about future matters and future planning. It's very important if we think about, for example, nature conservation, the bio industry, gene technology, the ageing population and so on.

The committee prepares studies on future scenarios and proposes different options using methods of future research.

The official tasks of the committee are:

- To prepare parliamentary documents such as the report of the future. It is a large report that is published once every four years.
- To issue statements to other committees on matters related to the future.
- To discuss issues concerning the future factors and models of development.
- To analyse research regarding the future.
- To provide reliable and responsible assessments of technological developments and the consequences for society.

Why do we need this kind of committee? What are the benefits? I can mention a few.

Our reports help decision-making.

Too often politicians don't pay sufficient attention to issues that are beyond the current time frame—perhaps only for the next year or so—which is why many issues seem to catch us by surprise.

It is easier to prepare for the future if we can predict or anticipate what will happen (e.g. the immigration issue should not have come as a surprise if we had studied the situation in the Middle East better and more carefully).

It is possible to be aware of weak signals and project different directions for the future.

The important role of the committee is to plan and decide on its own initiatives and projects. The committee prepares its own agenda and chooses its working methods. If it manages to select significant subjects for the agenda, it would be a highly respected voice in the parliament and also in the wider society.

For an MP, the committee is a huge opportunity to influence committee action. For instance, I'm a doctor of health care sciences, so I'm interested in social problems and innovation, particularly the ageing population. One great problem in Finland is loneliness. Many experts in social policy insist that in Finland loneliness kills more than many diseases. I know this very well, because I have worked as a nurse in home care. I want to find out how to mitigate loneliness in our society.

The Committee for the Future is the only forum in Parliament where members of all parties—regardless of whether they belong to the government or the opposition—can assess together the development of the entire political system. We can see the possibilities and challenges that the future brings without unnecessary sectoral or other limits. As you may know, working like this is not very common in most political systems.

In Finland, we have very good experiences with this kind of committee work and I believe that this kind of work concerning the future is essential for other parliaments, too.

MP, Jean-Yves Le Déaut, Parliamentary Office for Evaluation of Scientific and Technological Options (France)

My first words will be to say how happy I am to be invited by the Finnish Parliament, and even better by the Commission of the Future which is a similar body to OPECST into French Parliament.

Indeed, just as the Commission of the Future, OPECST's duty is to enlighten all MPs by anticipating any question they may have on emerging topics.

I am also pleased to be part of this meeting because it is the last opportunity to work with Paula Tiihonen, who is an important person in our network of European Parliamentary Technological Assessment. Paula has always had an interesting contribution in our discussions. She brings experience, common sense, and her vision of the world from the other far end of Europe, in contact with other Scandinavian countries and with Russia, and thanks to her, we see things from another way.

Today we are here to explain how we work, each of us by our own way, in order to contribute to the preparation of the future for the new generations. I'll try to tell you how OPECST works in this preparation of the future.

That is not really our mission to foresee the future because our time horizon is much closer. Our job is to respond to requests made by standing committees and political groups in Parliament: they ask us about the impact of technological change, and about the subsequent adjustments of legislation and public policy which are necessary.

However the way we lead our technology assessment leads us to give great significance to the future.

First, we address the issues through science. There is a team of scientists around OPECST's rapporteurs to help them understand things more in depth if necessary. So we are in permanent contact with all the research organizations of France, which see us as a link to political world. But the inclusion of science gives to the analysis more strength and therefore durability. An example: in the field of CO₂ storage, which is fraught with geological problems and also the need for public funding, science has told us that one must consider also the recycling of CO₂, and so, we went to New Mexico, to Sandia, so to meet searchers working on an experiment that aims to produce fuels from CO₂ and concentrated solar power.

Secondly, we take into account a large range of views, in order to give greater strength, thus greater sustainability to our analysis. We do not solicit everyone's advice, even if I was the first to have organized a citizens' conference in France, about GMOs in 1998. The main form of our investigations is a public, collective, contradictory hearing. Its principle is to gather all stakeholders of a subject, including NGOs, in the same room, and to give floor to each one seamlessly, so that a debate may take place in front of MPs. This is a way to get genuine information, since everything which is argued wrongly is immediately spotted and

criticized. So we can build any study on a more secure basis, to make it valid for longer durations.

Finally, we strive to put our conclusions in legislation. That seems easy from a distant point of view because OPECST is an organ of Parliament. But as a matter of fact, OPECST has no monopoly. There is no automatic translation of our conclusions into law. In a democracy, everyone must convince the others that his views must prevail, and this is true in Parliament as everywhere. We have just an advantage, because we base our proposals on a study. And there are indeed areas where our influence is great. This is the case for the management of nuclear waste and nuclear safety, for example, whose entire law framework in France has fully incorporated the recommendations of OPECST for twenty-five years. In other areas, we must deploy more effort to convince, and that was the case for construction technologies: our recommendations to encourage innovation in energy savings were eventually introduced in the great French draft on energy transition of August 2015; but to succeed in this implementation, I have had to invest very much in negotiations with the Government.

Thus, based on science, fueled by a broad public consultation and written into law, our technology assessment is intended to mark the future.

The best proof is that our works have a period of relatively long useful life. Last year, in September, we celebrated the thirtieth anniversary of OPECST with our friends from the EPTA and many parliamentary delegations from all over Europe. This was actually the thirtieth anniversary of the first OPECST report which addressed acid rain. We made a quick assessment of the main analyzes of this report: thirty years later, they proved correct.

I think, as well, thanks to our work methods, many reports we publish now will reveal themselves correct in thirty years.

Thirty years is a generation. So I cannot speak of the influence of OPECST for all future generations, as asks the title of our conference today. But for the first generation, certainly, we have had our share of influence, and many laws bear our traces. This is not so a tiny result, I think.

Eventually, I will discuss how our work allows us to shape the future. To remain synthetic, I'll make three main observations.

The first concerns the increased presence of digital technology in the future. It's not a very original analysis. I think in particular that the "Big Data" will revolutionize the way we see things. Thus, at a recent public hearing during which we heard experts on what we call "digital humanities", we learned that some "big data" treatments showed very strong links between Lamartine's work and those of contemporary British authors.

Certainly the development of digital technology will help increase the quality of services and leisure, and will accelerate globalization.

But I do not think it will profoundly change the infrastructure of Western countries, which will go on using an energy mix which includes nuclear energy and fossil fuels, with vehicles on the roads, and buildings of stone or bricks along these roads. This is my second

observation, the infrastructure of our societies change very slowly, since they are based on heavy investments made on the horizon of the half century or the century.

This observation I make is undoubtedly very disappointing for young Y or Z generations who tend to believe that any technics can evolve at the same rate as digital technology. But I describe reality. Just go back in time to check it. Large infrastructures in our developed societies have not changed much since the early 70s, fifty years ago.

However, there will be surely a certain dimension of major transformation in the future, and this is my third observation: globalization and technological progress will accelerate the upgrading of standards of living in developing countries.

Again the past enlightens us: Europe caught up in the 60s the standard of living of American 30s. Hollywood movies would already show refrigerators, washing machines, telephones and bathrooms when many Europeans had still to get water from a public pump so to take a bath in a tub placed in the middle of their kitchen.

In the future, this same catching up will profit to the people who today are struggling to feed, nearly two billion people out of seven billion today, and out of nine billion by mid-century.

This is not a trend that will be visible to us, but this will anyway be a huge step forward for humanity.

This will be my final message: when one looks to the future, one must consider open horizons, because ultimately, this is not necessarily among us that the most important changes will occur.

Mr Zhang Hongli, Member of Committee of Population, Resources and Environment of the 12th CPPCC, Senior Executive Vice President of Industrial and Commercial Bank of China Limited

Green Finance - An Initiative Benefiting Generations to Come

Distinguished Mr. Chairman, ladies and gentlemen,

Good morning! As a representative of the national committee of Chinese People's Political and Consultative Conference (CPPCC), I'm honored to participate in this symposium. "For Future Generations" is a topic of insight. We need to make active efforts and leave a peaceful, stable and green world to our offspring. What should and can we do then? As vice president of ICBC, the largest commercial bank in the world, I'm always thinking what the financial industry can do for later generations, and today I want to share with you some of my views on "green finance".

I. Green finance is an important topic of global attention

Climate change and environmental restrictions have become global issues. "Civilization will prosper if ecology prospers; civilization will decline if ecology declines." Chinese President Xi Jinping pointed out that "eco-environmental protection is an undertaking accomplished now and beneficial for many generations to come." Ecology isn't an issue exclusive to any one region or country, but is a global issue because ecological progress concerns the common future of all humankind and our offspring. The international community should make united efforts to find a way of global ecological development, bear firmly in mind the idea of respecting, following and protecting nature, and insist on the path of green, low-carbon, circular and sustainable development.

As a developing country, China faces many problems in its economic development such as poverty alleviation and urbanization, which means development remains the top priority in China's agenda today, but the Chinese government is fully aware that a balance has to be kept between development and environment protection. In 2015, China put forth the five development notions of "innovation, coordination, green, openness and sharing", and emphasized that green development was the precondition for sustainability and an important reflection of people's pursuit for a good life. China will adhere to the basic state policy of saving resources and protecting environment, insist on sustainable development, resolutely follow the path of civilized development featured by advanced production, affluent life and sound ecology, and take faster steps to build a resource-saving and environment-friendly society. Based on these efforts, China will create a new landscape of modernization where people and nature go in harmony, push forward the construction of a beautiful China, and make new contributions to global ecological security.

As the blood vein of modern economy, finance, with its massive industrial foundation, powerful capital supply and flexible allocation capability, has set up a key bridge between economic behaviors, resource utilization and environmental protection. Under the background that protecting ecological security and promoting sustainable development has become a global consensus, green finance, as the bridge that guides private capital to green

investment, is not only the fountainhead that promotes green economic transformation and fosters new growth points, but also points out an important direction for financial development. Finance can be seen in every area of environmental protection and ecological conservation, such as the Equator Principles that are widely recognized in the international banking industry, the emission trading market, carbon emission trading market and carbon finance market that have grown rapidly in recent years, and innovative financial products like green bonds, securities and funds that are emerging in large quantities. On account of this, China actively upheld green finance when it was the host country of G20 in 2016, and as the co-chair of B20, I myself encouraged the discussion of green finance. The fact that green finance is listed in the G20 agenda will help improve the global environment, channel more capital to green investment and invigorate the global economic growth. According to the latest report by People's Bank of China (PBC), China alone will provide investment opportunities worth USD1 trillion in such fields as low-carbon construction, green traffic and clean energy by 2020.

Of course the development of green finance requires the common efforts of all countries. While intensifying law enforcement in environmental protection to improve environmental quality, governments should also issue favorable fiscal and tax policies to support green finance, strive to establish green financial systems, and improve relevant laws, regulations and policies, so as to channel more financial resources to green investment areas. On the other hand, financial institutions should focus on green finance, transform their operating approach and profit-making model, enhance sustainable competitiveness, and play a leading, driving and supervisory role in boosting green development and addressing environmental and social risks.

II. Chinese government and financial regulators work together to develop green finance

Green finance is flourishing in China. In September 2015, the CPC Central Committee and the State Council printed and distributed the General Plan for Institutional Reform of Ecological Civilization, which proposed for the first time the top-level design of building China's green financial system. In March 2016, based on full discussions among members of the CPPCC National Committee and the National People's Congress (NPC), the Outline of the 13th Five-year Plan was finally approved, which made it clear to "establish the green financial system, develop green credit and bonds, and set up green development funds". Building the green financial system therefore became a national strategy and was a strategic priority in China. The State Council has also issued the methods for atmospheric and water pollution prevention and control and revised the Law on Environmental Protection. Environmental protection is being promoted in China as never before.

In the meantime, the People's Bank of China (PBC), China Banking Regulatory Commission (CBRC) and other regulators all strongly support the development of green finance. PBC set up a green finance committee to be responsible for academic research and work coordination in that area, and officially launched more than ten research projects. It has released the Catalogue of Supported Green Bond Projects, hosted, sponsored and supported over ten green finance conferences and forums, published a large number of academic papers and reports, pushed exchanges among financial institutions, enterprises and policy makers, and promoted the green finance concept, making significant contributions to China's green financial development and economic transformation and upgrade.

CBRC has also taken active steps to push the green transformation and development of Chinese banking industry. Since 2007, it has issued a series of guiding documents including the green credit guide and statistics to urge Chinese banking industry to give more support to green economic sectors and improve green credit management level, so that policies and regulations on environmental protection can be implemented by way of credit allocation.

III. Chinese banking industry actively practices green finance

In recent years, green finance has developed rapidly in China - the concept of sustainability is gradually established, constant innovations have been made in green products, and a green financial market is taking shape step by step. First of all, green credit from banking financial institutions is growing continuously and the loan structure is optimized. In 2015, Chinese financial institutions provided more than RMB7 trillion green loans, up 16.47% over the previous year, and the projects funded by the loans saved about 167 million tons of standard coal and 934 million tons of water, and reduced 400 million tons of CO₂ emission. Second, the green bond market is flourishing. Regulations on green financial bonds and corporate bonds were issued at the end of 2015 and Chinese banks have issued green financial bonds successively. Third, carbon finance market is expanding quickly. By the end of 2015, there were 7 cities carrying out carbon emission transaction on a trial basis, which covered 2,000 enterprises and institutions and registered an accumulative transaction volume of more than 50 million tons. A nationwide carbon market is scheduled to start trial operation in 2017 that will cover key industrial sectors such as iron and steel, power, chemical industry, building materials, paper making and non-ferrous metals. Green financing approaches such as green fund, green insurance and green equity have also started, promising a vast room for multi-channel financing in the future.

As a large listed bank with international influence, ICBC is committed to creating a world-class green financial institution. It has applied the concept of green development in every link of operation, established a set of effective policies, institutions, procedures and risk monitoring systems for green finance, and striven for the steady increase of green credit and the continuous greening of loan portfolios across the bank. By the end of 2015, ICBC's loan balance in green projects stood at RMB702.84 billion, accounting for 10.2% of its total loan at the time, and the growth rate was 4.9 percentage points faster than the bank's loan increase in that period. In 2016Q1, the growth rate was 7.8 percentage points higher.

ICBC has also carried out several cutting-edge research projects in green finance, including the "pressure test research on impacts caused by environmental risks on commercial banks' credit risks". It completed the academic paper on "pressure test of environmental risks", the English version of which attracted a lot of attention in the industry when it was released at the G20 Green Finance Conference in London in March this year. It was the first time that a Chinese commercial bank studied the quantification and transmission mechanism of environmental risks. The research was a pioneering practice among global commercial banks and was of great significance for their development of green finance and quantification of environmental risks.

While actively promoting B20's green finance initiative, ICBC will continue to participate in the work of G20 green finance study group and carry out a series of research projects including green rating, risk quantification, green development of "Belt and Road" and green infrastructure investment. We hope to enhance green financing cooperation with the

Finnish government and financial institutions in such areas as infrastructure construction, data cable and reform of state-owned enterprises.

Mr. Chairman, ladies and gentlemen,

Green is the color of Mother Nature and also the symbol of modern civilization. It implies the benign cycle of economy and ecology, denotes the harmony and balance between man and nature, and carries the human wish for a bright future. Green is the most valuable fortune we can leave to later generations. Let's work together to build a global green financial system, create a community of shared destiny, and make joint contributions to green development and common prosperity of the whole world.

At last, I would like to make two suggestions on China-Finland cooperation. First, Finland should pay more attention to the international market and expand the global vision. Finland has a lot of successful experience, advanced technologies and high-quality products; especially in the field of renewable resources, it should seize opportunities in the Chinese market, tighten cooperation with Chinese enterprises, and make the best of the historical trend of ecological and economic development in China. Chinese and Finnish enterprises can also consider win-win cooperation in third-party markets. Second, to raise China-Finland cooperation to a higher level, we need to intensify communication, for which the key is people. Chinese students studying in Finland can play a big role in this aspect. Finland should not only provide them with education and degree, but also career opportunities, so that they can become envoys contributing to long-term friendly cooperation between the two countries.

Thank you!

Responsibility *to* and Responsibility *for* the Future

1 Introduction

1.1 The Finnish Committee for the Future

I was hugely honoured to be invited by Tulevaisuusvaliokunta/Framtidsutskottet (the Finnish Parliamentary Committee for the Future) to contribute to the special Public Hearing and Seminar on *For the Next Generations* in Helsinki in June 2016. This was but my latest interaction with the committee and its work, for which I have the greatest admiration. This goes back to when I became Director of the UK Parliament's Parliamentary Office of Science and Technology (POST) in 1998. Both institutions are formal bodies of *parliaments* – something to which I will return below. They share some common experiences. Both were initially created around the same time (late 1980s/early 1990s) on an experimental basis. The establishment of the Finnish committee as a permanent institution of the Finnish Parliament in 2000 was a great inspiration to us in the UK – POST followed in its footsteps a year later.



Plate 1: Statue of “Future” in the plenary chamber of the Finnish Parliament, by **Wäinö Aaltonen**. It is the central of five statues that face members.

I greatly regretted that seminar participants, because of refurbishment, were not able to visit the Finnish Parliament's permanent building, where they could have seen the statue shown in Plate 1. I like to think that their constant gazing on this image was a major factor in the Finnish MPs' decision regarding the Committee.

The Committee and POST are united in their work on *technology assessment* and I pay tribute especially to the Committee's work on innovation, on which it has really pioneered both methodological approaches and brilliant exegesis. The Committee, however, has one huge advantage over POST because it is a body concerned with the future *as a whole* – and not just the scientific and technological dimensions, critical though they are. This was

encapsulated for me in 2007, when the committee produced a report titled *Russia 2017: three scenarios*, a work which it has complemented with various updates. I wondered, could the UK Parliament ever publish a study on “*The USA: three scenarios*”?

Discussions over the years with Tulevaisuusvaliokunta/Framtidsutskottet chairs and MP members have been immensely stimulating but I would also like to pay tribute to the quiet but inspirational role of Paula Tiuhonen, its parliamentary secretary since 1991. The June 2016 seminar was to some extent a valedictory for Paula with her retirement but I have no hesitation in saying that I hope she will long contribute to discussions on the critical subject addressed by the occasion. Indeed, she has contributed a paper to this seminar¹, which considers many of the same themes as my own – and the two can very usefully be read in conjunction.

1.2 Structure of this paper

I will first elaborate on the title of my paper – particularly its distinction between “*to*” and “*for*”, and make some moral philosophical and political science observations. I will then go on to focus on the “next generations” element of the title of the June 2016 seminar. In doing so, I will draw upon some elementary demographic analysis to illustrate a few points – but also make a powerful but potentially controversial assertion about the role of members of the “Third Age” as *trustees* – a word used advisedly – for the future. I will conclude by returning to the theme of the role of parliaments as it relates to the overall discussion.

What is set out in this paper is very much a work in progress, which I hope to pursue over the next years. For that reason, there are undoubtedly deficiencies in reasoning and referencing – and I would enormously welcome any comments that any readers might wish to make.

2 Responsibility *to* and responsibility *for* the future

Let me make a bold statement. The substance of *every* book or paper which addresses “future” issues that I have read, the lectures I have attended, the political speeches I have heard over the years, and so on, can be dichotomised into those which have a fundamental approach to the future which is *facilitative* and those whose approach is *normative*. In fact, I could go further and say that this distinction infuses much wider debate and writing than that which is *specifically addressed* to “future” issues.

The “*to*” and “*for*” distinction is however, a very blunt dichotomy, and in truth, most discussions contain elements of both. As an *ideal type*, however, I find it an immensely useful lens. It is fairly clear that, in my presentation title, I classify the facilitative approach as responsibility “*to*” the future and the normative as responsibility “*for*”. There are some subtle nuances of the English language here – and I hope they are accessible to non-native English speakers.

¹ Tiuhonen, P, Power over coming generations, published later in another book.

The **facilitative** approach essentially assumes that if those who are currently alive have any responsibility towards the future it is to maximise the freedom of choice open to those who will inhabit it. It can immediately be seen that, at its most extreme, this perspective also embraces the Biblical exhortation, “Take therefore no thought for the morrow: for the morrow shall take thought for the things of itself”.² It is, however, obviously clear that simply through going about the routine of the current day, those who inhabit it are inevitably, even if unconsciously, influencing the circumstances of “the morrow”.

Indeed, the argument could be taken to a *reductio ad absurdum*, namely that the only way that those of the present can truly maximise the choices of those who will inhabit the future is immediately to terminate their own existence! I think the remainder of this paper effectively bottles up that extreme scenario.

The **normative** approach to the future, on the other hand, explicitly or implicitly, adopts a ‘colonial’ approach, if I can use that powerful term. It assumes that the future should, or must, be related to the present – indeed, it is the locus of the *fulfillment* of the present. It seems to me that it is immaterial whether the normative ‘image of the future’ embedded in this perspective assumes that, to a greater or lesser extent, the future should be *like* the present, or whether the future ought to be *different* from the present, for example, because problems confronting the present are resolved, through actions or circumstances proposed by the present.

It will not escape readers that the normative perspective has suffused many grand schematic political visions of the future, for example the 1934 declaration of the “Thousand Year Reich”³ or the Engelian goal of the “withering away of the state”, achieved through a long term transformation of the polity, a supposedly transitional period of which was of course the “dictatorship of the proletariat”⁴. Using these ‘dystopian’ examples illustrates my innate hesitancy regarding declamations of long term pathways, especially when they see the ‘state’ as a major, if not the sole, agent of delivery. Nevertheless, I regard them as remarkably valuable to explore, something I cannot do much further in this paper.

I used the word ‘dystopian’ in the paragraph above but, as its antonym, I do not have in mind the word ‘utopian’ and its interpretation as ‘impracticable’, ‘hopelessly unrealistic’, and similar. Rather, what comes to mind is the subtler word ‘eutopian’⁵ – and there have been convincing arguments that this indeed is what Thomas More was actually envisaging in his work which celebrates its 500th anniversary this year⁶. It is interesting that More does not set out a *pathway* to ‘eutopia’, rather, it is fortuitously discovered – and presented as a paragon.

² *Matthew 6:34* For the benefit of non-native English speakers, I should explain that while often the term “the morrow” (or “tomorrow”) refers specifically to the day after today, in other contexts, as definitely here, it has a far more extended connotation – and essentially means “the future”.

³ first declaimed, I believe, by Adolf Hitler at a Nürnberg rally in that year.

⁴ Engels, F, 1878, *Herrn Eugen Dührings Umwälzung der Wissenschaft*, usually referred to in English as *Anti-Dühring*

⁵ that is, not “utopia”, a “nowhere” place but a place with a perfect society or state of existence

⁶ More, T, 1516, *De optimo rei publicae deque nova insula Utopia*

My use of the term “image of the future” in outlining the normative approach above was an allusion to the encyclopaedic work of the Dutch philosopher, Fred Polak⁷, which is not today as well-known as it should be. One of its most powerful arguments, based on deep historical analysis, is that *all* societies have, and indeed *need to have* an ‘image of the future’. Those that do not will decay. In truth, most of these images are of a normative nature but I think that the facilitative approach – or even the Biblical “do not bother your head about it” are valid images in Polak’s typology.

Finally, in this section, I would like to quote a profound observation by the British philosopher, Terry Eagleton, made in a recent review of More’s book, which I came across while researching this paper. He suggests that “to portray the future in the language of the present may well be to betray it”⁸. If he is right, and the task is not a sheer impossibility, then maybe we should be working on not just a new lexicography but a linguistic semiology. That is a huge challenge.

3 Generations

I now move on from my fumbblings in moral and political philosophy to an area where I feel slightly safer – demography – to present a few inchoate thoughts about generations. Here I draw heavily on the work of my late and sorely missed, mentor, Peter Laslett, of this university. In a paper produced as early as 1970, he explored generational concepts and after a definitional foray, proposed an interpretation of generational relationships that tried to steer clear of too strong an invocation of “rights”, “obligations”, “contracts” and so on, and instead opted for the ‘gentler’, term “conversation” as the defining characteristic of inter-generational relations⁹.

Laslett attached a very powerful ‘health warning’ to his definitional exploration and argued:

it seems to me to be necessary to insist on the uncertainty, the lack of structure, in the connection between the generations. This is due to a large extent of course to the multiple character of the expression ‘generation’ itself; it is a word with such a tangle of related and overlapping meanings attached to it that it is surprising to find that it goes on being used without qualificatory adjectives.

He particularly stressed a distinction between a “temporal” definition, such as all persons between certain ages, or all those older or younger than a certain age¹⁰ and a

⁷ Polak, F, 1973, *The Image of the Future*, most easily accessible in a version abridged by Boulding, E

⁸ Eagleton, T, 2015, Utopias, past and present: why Thomas More remains astonishingly radical, *The Guardian*, 16 October

⁹ Laslett, P, 1970, The Conversation between the Generations, in *The Proper Study*, Royal Institute of Philosophy Supplement, **4**, 172- 189

¹⁰ Laslett identified, as a special subset of this temporal class, what is undoubtedly the most common use of the word “generation” in populist sources such as the media. It usually occurs as “the x generation”, where x is all those alive at a certain time, e.g. “the 60s generation”. He found this a very weak categorisation, full of internal inconsistencies and potentially false assertions of common identity and/or motivation simply by being coeval.

“procreational” definition, meaning all *progenitors* as contrasted with their own *progeny*, extending over time. It is the latter which suffuses most literature and *a fortiori*, political declamation, on the future¹¹. It is certainly the interpretation on which I draw in this section below.

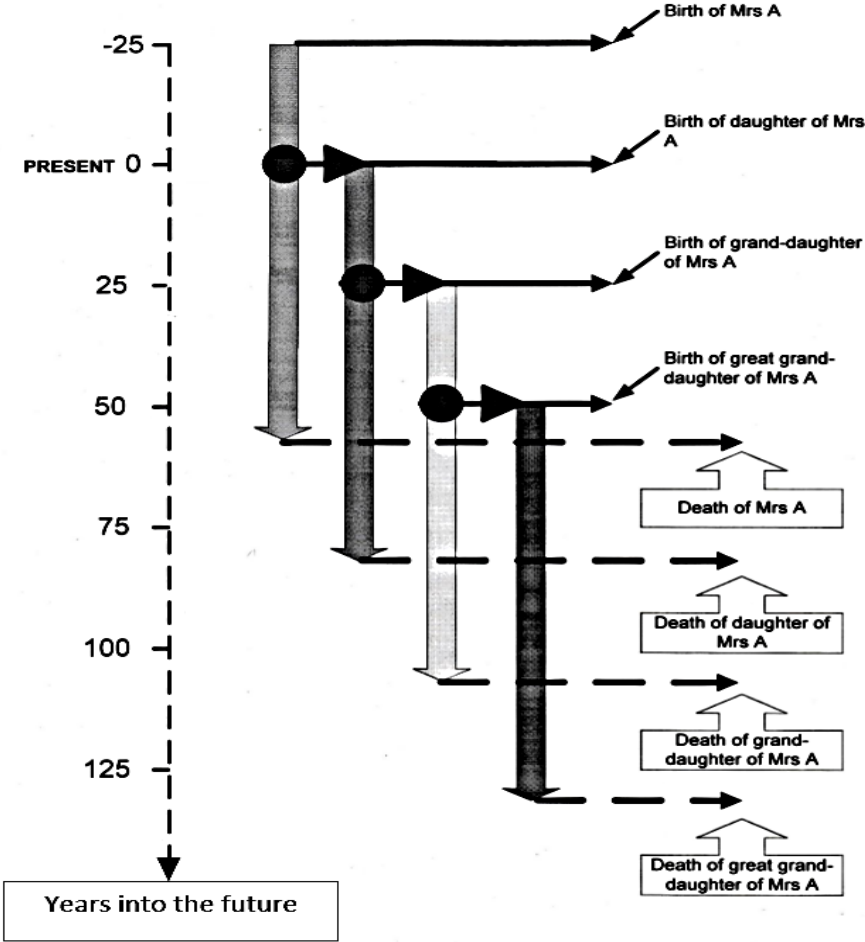


Figure 1: The succession of procreational generations¹²

¹¹ Such invocations have, for example, been made during the current presidential contest in the USA.

¹² Originally presented in Cope, D, 1995, Forecasting and Sustainable Development, *Proceedings of the Royal Commission on Environmental Pollution, 25th Anniversary Seminar*, Westminster

The relationship of procreational generations over time is encapsulated in Figure 1. It draws on the demography of advanced societies, especially on the long expectation of life of their citizens – and on a generalisation about their procreational characteristics. I chart data for females who become mothers but a similar figure could be constructed for fathering males. I originally explored this relationship some years ago in an attempt to ‘put some flesh’ on the frequently-made assertions of all manner of declamatory statements that this or that policy should be adopted “for the sake of our children and grand-children”. Less frequently, such declamations may extend their justification to great-grandchildren. Politicians especially love to make such statements – and if my memory serves me well, one or two were made at the Helsinki symposium!

For individuals, procreational generations come into existence at the time of their *first* birth and a reasonable approximation is that this occurs around the age of 25¹³. I then assume that this progeny then goes on to have its own children, and so on. The figure shows that, drawing on potential contemporaneity in advanced societies (that is, their being “coeval”), given the reasonable expectation of survival into at least the early 80s of an individual and her progeny, *then an individual at birth has a strong claim to ‘interest’ in circumstances extending circa 120 years into the future from her enfranchisement*¹⁴. By “interest” I mean that individual has a strong probability of being coeval with at least her first great-grandchild, let alone her grandchildren, for a significant period of time – up to a decade in fact, with great-grandchildren. In advanced societies, around one third of persons are grandparents by the time they reach 50 years old. This rises rapidly during a person’s sixth decade, so that by the late 50s, fully two thirds of people are grandparents.

It is clear that this relationship is dynamic, though within fairly defined ranges. If the age at which an individual has her first child increases, then her chance of being coeval with any great-grandchildren diminishes, *a fortiori* if her children and/or grandchildren also extend their periods to first birth. Conversely, if the life expectancy of the first individual grows, the chances of being coeval are obviously increased. The complex interplay of these factors varies in different societies and within those societies between different social and other groups.

There is some intriguing demography here, but there is also the nagging question, “those are fine statistics, but at the end of the day, *does it matter, does it have any significance?*” To that question, I have to reply, limply, that I do not know. My initial research suggests that there has been limited work on the social significance of grandparenthood, let alone great-grandparenthood. By “social significance”, I mean not just the significance for the individual experiencing the relationship but significance for attitudes and actions more generally, and especially for those who are at the stage before they actually experience being coeval with their progeny by becoming a parent. Procreation is an extraordinarily powerful social driver, as usually is the pursuit of the well-being of progeny, witness the large proportion of current resources invested in education of children.

¹³ Obviously, that individual is herself the progeny of her own progenitors, so this relationship can also be extended *backwards* in time, which is an interesting area of investigation. In this paper, however, I am concerned only with relationships *forward* in time.

¹⁴ I use “enfranchisement” here to mean the time of her adulthood and presumably broader general awareness, and exclude the first 15+ years of ‘innocent’ childhood from actual date of birth.

Another consideration here is that, as regards what may result as behavioural motivation arising from these procreational relationships, it may not be the objective estimates of future life expectancy (such data are used in the figure above and the text) but people's *subjective* expectations of the length of their future lives and, indeed, of their reproductive behavior, and those of their progeny. Factoring in such considerations would be complex. There has been some limited work on subjective life expectancies¹⁵. This suggests that people do underestimate or overestimate their *actual* life expectancies at various points in their passage through life. There is also work on people's expectations of their future fertility behaviour (which obviously can be obtained only from those who already exist). I suspect that including such data would change only marginally the periods of time during which successive generations are identified as coeval.

I am also interested in whether the possibility of being coeval acts as an inflection point, in bounding the reasonableness of concern for future generations. Does it dichotomise over time between future beings with whom persons have a strong chance of being coeval and the subsequent "indefinite unborn"?¹⁶ I have shown that the period of potentially being coeval extends a person's time frame at birth and at enfranchisement, well beyond a century into the future and pushing on to 150 years.

Before leaving the discussion in this section, I must point out that I have not covered in detail the literature that has burgeoned over the past quarter of a century or so on the *economics* of intergenerational relationships and on the interface between economics and moral philosophy. Taking numerical amalgamations of the procreational relationships I outline above, such work looks at matters such as the transfer of resources between generations and especially considerations related to the discounting over time of benefits and costs as they occur. I would like to point to a forthcoming *magnum opus* by my Cambridge colleague Sir Partha Dasgupta for those who are interested in this dimension.¹⁷

¹⁵ See for example, Nicholl, N and Zimper, A, 2014, *Subjective Life Expectancy*, University of Pretoria Department of Economics Working Paper 14-10

¹⁶ See Brenton Stearns, J, 1972, Ecology and the Indefinite Unborn, *The Monist*, **56**,4, 612-625

¹⁷ Dasgupta, P, forthcoming, *Time and the Generations*. A special adaptation of a key chapter in this book (Dasgupta, P, 2016, Birth and Death), can be obtained from the author at partha.dasgupta@econ.cam.ac.uk

4 The “Third Age”, wisdom, trusteeship and the future

I must immediately recognise that I am a member of the “Third Age” on which I elaborate below, so what I write could immediately be dismissed as egregious special promotion! I hope not.

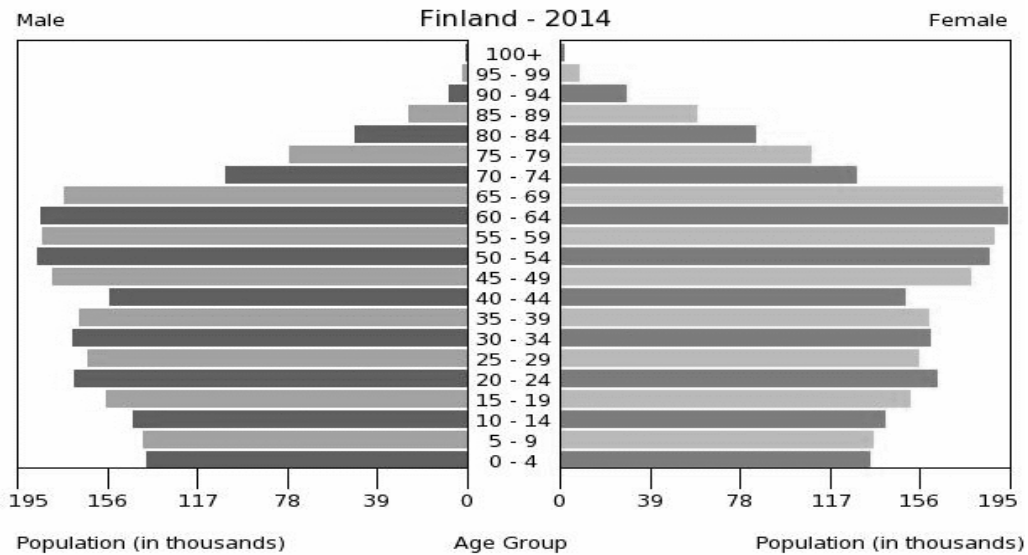


Figure 2: Current age structure of a typical advanced country

The circumstances shown in figure 2 are fairly well known, although there is often confusion about the drivers that result in the age structure shown, which is often called an “ageing”, or “aged” society. There is a distinct bulge in the pyramid for ages say from 50 to 79. It is often assumed that this results from medical progress that has extended longevity. That does indeed play a part but equally, or more, importantly, a key driver is that birth rates have declined, so fewer people are entering the younger age groups at the bottom of the pyramid. Note also the greater preponderance of females in the older age groups. This results from the generally prevailing higher life expectancies of females. I will return to that feature below.

Let us consider the relationship of such demographic structures with issues of ‘concern for the future’. It is quite frequently asserted that younger people, in particular those below the age of enfranchisement, because they will inhabit the future for a longer period than those in older age groups, have some form of greater claim to their views and interests being particularly taken into account in discussions and decision-making on matters whose unfolding will influence circumstances in the future. There are calls for “young persons’ parliaments”, “youth commissions” and the like, and such suggestions were heard at the

Helsinki symposium. In Scotland, similar arguments were made for reducing the voting age from 18 to 16 for the independence referendum in 2014. Inevitably, there have been since suggestions for this to become permanent – and for it to extend to the rest of the UK. Some campaigned for an age 16 qualification to vote in the UK's EU referendum this year but this did not occur.

Such calls are of course mainly well-intentioned and I am not arguing against the creation of such forums¹⁸. They might have validity whatever the nature of the age structure of a society. Often, however, advocates then go on to claim that the additional factor of the 'skewing' of the age pyramid towards older age groups that has occurred in most advanced societies is a powerful additional factor in favour of a rebalancing of influence towards the young. Such assertions are often made in relation to relationships between coeval age groups, without any reference to the future, in discussions of issues such as pensions or housing policy. In my own country, some commentators on the results of the UK's EU referendum, which occurred after the Helsinki symposium but before this paper was written, have even used terms such as the old "stealing" the future from the young, because not only did a higher proportion of older age groups actually vote than younger groups, but a higher proportion of those older groups voted for withdrawal from the EU.

There is, however, an alternative interpretation – and once again I turn to the writing of Peter Laslett. In a seminal work, *A Fresh Map of Life; The Emergence of the Third Age*¹⁹, he argues that those in the "Third Age" have *particular insights that relate to future circumstances*, by virtue of their accumulated life experiences. He sets this interpretation within a broader examination of 'ageing' societies which has a strong historical dimension to it. He argues, "much of the accepted account of age and ageing is simply the persistence into our own time of perceptions belonging to the past". For him, those in the Third Age of contemporary (and future) societies are an important and unprecedented social phenomenon – past societies did not contain Third Agers in the way he construes them²⁰. For him, those in the Third Age are at the "crown of life" for it is the point at which "the apogee of personal life is achieved". He argues that, drawing on their lifetimes' experiences, they can be, and indeed should make significant effort to be, "trustees for the future"²¹. They must, he asserts:

do all they can to respect the principles of inter-generational equity, and make whatever provision is open to them to see that justice will be done, even if this is to some extent at their own expense.

¹⁸ although I disagree with lowering the age of voting to 16

¹⁹ Laslett, P, 1996, *A Fresh Map of Life; The Emergence of the Third Age*, 2nd edition

²⁰ Of course, past societies included some people of the same numerical age as the age groups containing most contemporary third agers but in much smaller proportions. Laslett, however, strongly asserts that the Third Age is not defined simply by age group boundaries, although the great majority of members do fall within a fairly well-defined age grouping. He argues that members of Third Age age groups in the past were NOT Third Agers.

²¹ He elaborated further on this in Laslett, P, 1991, *The Duties of the Third Age: should they form a National Trust for the future?*, *Journal of the Royal Society of Arts*, 5748, 386-92

He argues that Third Agers are particularly predisposed towards a sense of:

an indefinite social future, one that does not confine itself to their own descendants, immediate or distant, (and) is accompanied as must be expected, by a strong sense of the past, the personal and collective past. Indeed it is my own view that those in the Third Age have a clearer and firmer view of what is or may be still to come precisely because they know what has gone before. They were there to see it happen.

Laslett himself does not make the following claim, but I will be more impetuous. *Third Agers have a predisposition towards wisdom, derived from their experiences of their lives.* It has been argued that Hegel had this in mind when made the gnomic statement that, “the owl of Minerva takes its flight only when the shades of night are gathering”²². It would be a travesty to argue that *all* members of the Third Age *actually do* manifest that wisdom, which is why I use the word “predisposition”. Extended life experiences are a necessary but certainly not a sufficient condition for accruing and displaying wisdom. I have often quoted a witty rebuff by Ronald Reagan in the 1984 US presidential election, when there were comments questioning his standing because of his age. “I want you to know”, he said, “... I will not make age an issue of this campaign. I am not going to exploit for political purposes my opponent’s youth and inexperience”²³.

One can display graphically the years of accumulated life experience for the different age groups comprising a population at any one time, as is done in figure 3 for the UK’s population. I do not show those below age 15, as they are all below the age of voting²⁴. A single measure which to an extent encapsulates the graph would, of course, be the median age in the population²⁵ but the distribution over age groups is far more revealing. Even more interesting is the way the pattern of accumulated years of life experience is changing over time. In most advanced countries, it is shifting, and will continue to shift, towards the right-hand side of the figure. This pattern can also be projected into the future, based on reasonable estimates of future life expectancies of population age groups and their fertility patterns²⁶. The only way in which the overall pattern and the rightward shift over time could change would be if there were a stupendous – and totally unrealistic – input into the left side of the figure, through a massive increase in the number of births²⁷. Returning to my impetuous assertion two paragraphs back, could it even be claimed that, over time, advanced countries’ populations are becoming *wiser*, collectively?

²² Hegel, G, 1820, *Philosophy of Right*

²³ Reagan was 73 and his opponent, Walter Mondale, was 56, coming on 57!

²⁴ I have already stated, in the 15-19 age group, actually only those aged 18 or over have the vote. Some might argue that the two to three oldest age groups also be removed, as members of those groups should be classified as belonging to the “Fourth Age” of senility, etc. That is a very contentious point!

²⁵ The UK population’s median age has risen from 33.9 years in 1974 to 40.0 years in 2014, its highest ever value.

²⁶ It is also possible to calculate the “inverse” of figure 3, which would show the cumulative years of future life expectancy for the different age groups.

²⁷ I rule out here two other contingencies which would shift the pattern back towards the centre of the figure, namely some form of disease which disproportionately or solely ‘harvested’ those in the older age groups – and compulsory older age euthanasia. On the latter, there might in the future conceivably be an increase in voluntary older age euthanasia, but resort to that is likely to be made by individuals only as they register and respond to their transition to the Fourth Age. It would not therefore deplete the numbers of Third Agers.

I cannot conclude without throwing in another potentially contentious statement. Could it further be that the collective ethics of such societies – and that wisdom – are influenced in any way by the fact that a higher proportion of the population of such societies is composed of *females*²⁸? This is because of the lower mortality rates experienced by women, especially at older ages, leading to a higher overall life expectancy. It is true that in most advanced societies, males are ‘narrowing the gap’ but all the indications are that it is likely to remain a permanent feature of such societies.

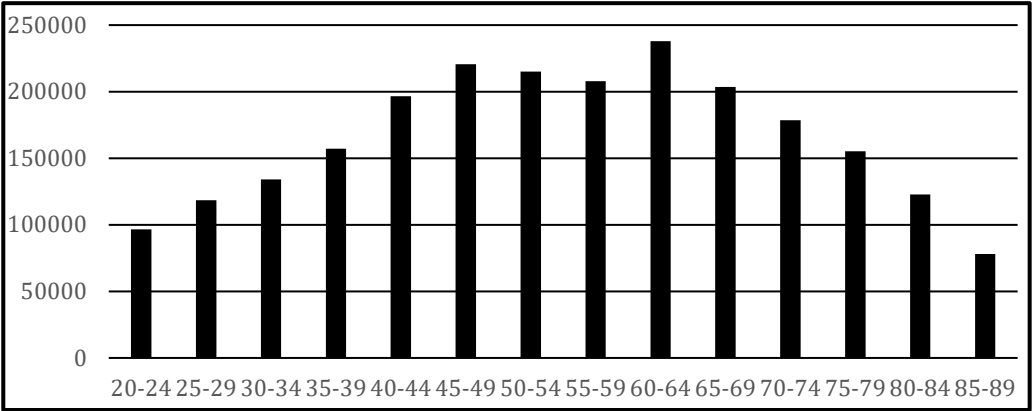


Figure 3: UK, Accumulated Years of Living in Five Year Age Groups, 2011
Note: The y axis shows the total years of life experience accruing to each age group in 000s of years. The figures are calculated by taking the numbers in each age group and multiplying by the mid-point age of the group (e.g. 22.5 for the first age group shown). The figures for the age groups 80 and over are adjusted as their distribution over the five year groupings are not uniform, due to deaths. The figures are for the “usually resident” population.

I am currently working on compiling similar distribution graphs for a wide range of circumstances, such as populations in the past, projections into the future, as far as they are reasonable, different countries, different social groups and so on. Once again I would welcome any comments. For now, I must leave the discussion of the Third Age.

5 Institutions and the future – the role of parliaments

At the beginning of the last section, I acknowledged I was could be accused of special pleading, as I am myself a member of the Third Age, hopefully at least for a few more years. In this final section, I may well be at the same risk, as I worked for both Houses of the UK’s Parliament for 14 years. Furthermore, I might also be arraigned for “playing to the gallery” because the symposium was, of course, organised by the Parliament of Finland.

²⁸ In the UK, there are currently around 90 men for every 100 women by age 70, dropping to only 40 per 100 for ages 90 and over.

Nevertheless, I think there are arguments to be made that it is *parliaments* which are, could be, or should be, the *primus inter pares* of institutions with a special responsibility for, a trusteeship role, and so on, regarding the interests of future generations. At the Helsinki symposium there were representatives of various types of institutions that have been created to that end; commissions, governmental administrative departments, ombudspersons, academic departments, learned societies and similar. Without in any way diminishing, still less deprecating, their activities, I feel my assertion remains true²⁹.

Parliaments are, of course, the *sine qua non* of democracies. In such democracies, they are usually accorded the status of the 'highest' institution of discourse and decision-making that a nation can possess. This is particularly true of *representative* democracies, and to elaborate on that, I can do no better than to turn to the profound words of the classical political philosopher Edmund Burke:³⁰

Parliament is not a *congress* of ambassadors from different and hostile interests; which interests each must maintain, as an agent and advocate, against other agents and advocates; but parliament is a *deliberative* assembly of *one* nation, with *one* interest, that of the whole; where, not local purposes, not local prejudices, ought to guide, but the general good, resulting from the general reason of the whole. (Burke's emphases).

Burke originally made this ringing declaration as a riposte to those (the citizens of Bristol) who were attempting to cajole him into advancing their special interests in parliament, hence his use of the word "local"³¹. I would not, however, be the first to argue that a relationship over *space* can be dimensionally transformed into a relationship over *time* and hence has *intergenerational* application. Deliberative, representative, parliaments must seek to advance that general good over future time.

Burke himself, of course, had a strong concern with the relationship between generations and later wrote:³²

Society is indeed a contract. It is a partnership . . . not only between those who are living, but between those who are living, those who are dead, and those who are to be born.

Subsequently, this advancement of a contract over time has been attacked as placing too great an emphasis on the legacy of *past* generations and indeed has been identified as the quintessential justification of 'modern' conservatism. It is true that Burke orders the temporal relationship in the quotation above as first "those who are dead" and second

²⁹ See Tynkkynen, O, 2015, Strengthening Futures Thinking in Parliaments, *epublica*, (electronic journal of public law) 5, July. Tynkkynen is a former vice-chair of the Committee for the Future of the Finnish Parliament.

³⁰ Burke, E, 1774, Speech to the Electors of Bristol, 3 November. This can be found in Bohn, H, 1854, *The Works of the Right Honourable Edmund Burke*, 1, 446-48

³¹ Unsurprisingly, the good burghers of Bristol did not take too kindly to this admonition and declined to re-elect Burke as their MP at the next general election!

³² Burke, E, 1790, *Reflections on the Revolution in France*

“those who are to be born”. Whether there is any significance to be read into that ordering, I leave to others to judge.

The UK Parliament, through the House of Commons’ “Select”³³ Committee on Public Administration last systematically looked at the subject of ‘the future’ as a whole in 2007.³⁴ The committee looked at, and was strongly influenced by, the Finnish experience. Its report covered futures thinking across government as a whole but also cast its eye on the UK Parliament itself. Beyond the parliamentary dimension, the committee recommended that “the Government ... publishes a ‘Report on the Future’ once a Parliament as the basis for parliamentary and public discussion of the key strategic issues facing the country”. Unfortunately, this recommendation was also not followed through in the comprehensive form envisaged by the committee.

It also concluded that the UK Parliament needed to augment its future perspectives and, flatteringly, that the Parliamentary Office of Science and Technology (POST) should be the locus of such effort³⁵. Unfortunately, this recommendation came just before the financial crisis of 2008, which impacted on the parliament alongside many other institutions. The funding for such an initiative was not forthcoming. Also, being completely frank, the proposal did not find favour in the eyes of some parliamentary administrators. They had their own pet projects to promote and did not welcome any upstart competition from a possible futures unit.

Since then, POST has attempted to increase the attention it gives to relatively longer term issues but has not been able to devote resources to the detailed studies, with large scale meta-analyses or even original research, which the committee had envisaged. Overall, then, this is a story of a missed opportunity. I remain hopeful, however, that in the not-too-distant future, the committee’s report will be revisited, will be seen as remarkably prescient, and something akin to its recommendations will be implemented.

6 Conclusion

As I was preparing my presentation for Helsinki, the plastic folder for one of the privileges of being a Third Ager in Britain – my older person’s bus pass – disintegrated after years of use. I needed a new one. This, inevitably, came from China and amazingly contained within

³³ that is, a committee made up of a selection of Members of the House, as opposed to a committee of the whole House. Such committees’ memberships are drawn from the major parties represented in the House, in rough proportion to their relative strengths. Most of such committees’ reports are consensual, as was this one.

³⁴ House of Commons Public Administration Select Committee, 2007, *Governing the Future*, HC 123-1, second report, Session 2006-7, March. The successor to that committee has more recently returned occasionally to some aspects of the subject but has not made such profound recommendations.

³⁵ It stated, “(the) Parliamentary Office of Science and Technology could be strengthened to enhance its work in this area. Together with our earlier recommendation for a regular ‘Report on the Future’, this would help ensure that Parliament as well as Government was well-equipped to consider long-term strategic issues”.

a small card, reproduced as plate 2. “That’s it”, I thought, “perhaps that underlies the entire message I am trying to get across and also is a good maxim for me to follow personally!”



Plate 2

Better still however, are the exhortations of Peter Laslett, on whose work I have drawn so heavily in this paper, without, I hope, in any way misrepresenting it. The first is “Britain, be your age!” The second, going beyond my own country, is imbued with deep significance for everyone across time and space. It is, “live in the presence of all your future selves!”

The International Legal Foundations of Intergenerational Solidarity

Humankind's responsibility towards our children is one of the oldest moral imperatives. The responsibility towards future generations has long been interwoven with the thought that we have the duty to pass on the Earth to our successors in at least the same condition as we inherited it. Dinah Shelton and Alexandre Kiss in their books about international environmental law trace it back to Noah in the Old Testament, whereby God entrusted Noah and his family to take care of the Earth and create an alliance between humans and the rest of the living creatures. The authors interpret this as some sort of a guardianship over the natural resources, embedded as a religious imperative in the Old Testament. The rights of future generations, therefore, were initially mostly a responsibility to preserve natural resources, then a new approach appearing in the 18th century has also introduced the obligation of the state to prevent unjust inheritance of debt by later generations. Just a couple days after issuing the Declaration of the rights of Man and of the Citizen, Thomas Jefferson has called the attention of James Madison in a letter to the concept that current generations had no right to undertake greater debt than what it was able to repay in its lifetime, otherwise the rights of future generations would be infringed.

The basis of the rights of future generations was first laid down in international public law: the definition of mankind encompassing succeeding generations has appeared in numerous international treaties, among others in the preamble of the Charter of the United Nations. An important milestone was when in 1967 the representative of Malta, Arvid Pardo in his speech before the General Assembly of the United Nations proposed that the entire seabed not falling under national sovereignty should be used and exploited for the benefit of humanity. He put forward that the profits generated this way should be partly employed for reducing the inequalities existing between the more affluent and the poor states, while another part of the profits should be made available to ensure the conservation of natural resources.

In 1970 the UN General Assembly acknowledged the seabed as common heritage of mankind in its resolution and the concept then appeared in the 1982 Montego Bay Convention on the Law of the Sea as well. The common heritage status of the moon and celestial bodies and the orbits around them was laid down in the 1979 Moon Treaty. The essence of the common heritage doctrine is that these territories cannot be brought under the sovereign jurisdiction of any state, that their resources are available for everyone's use and benefit, taking into account future generations and the needs of developing countries. In practice this concept ensures some kind of compensation for developing nations in return for more developed nations to be able to exploit the resources of the seabed. The original essence of the doctrine, that mankind is obligated to save certain natural resources for future generations cannot really be deducted from the articles of the Convention on the Law of the Sea.

While the definition of mankind and the concept of common heritage of mankind only represent sporadic incidences in legal history containing the philosophical element of intergenerational justice, after 1970 the explicit mention of the interest of future generations becomes more frequent in international legal documents. The 1972 Stockholm Declaration on the Human Environment laid down in its first principle that „Man ... bears a solemn responsibility to protect and improve the environment for present and future generations...“, while the second principle stated that „The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate“. This thought was then confirmed in the third principle of the 1992 Rio Declaration on Environment and Development. The Rio Declaration reinterpreted the concept by putting it in the context of development and stated that: „The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations“. The obligation to protect natural and cultural environment has also been included in the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCCC) . The standalone definition of future generations is contained in the Declaration on the Responsibilities of Present Generations Towards Future Generations as adopted by UNESCO and Cousteau Society, which is not a legal document between states, but a scientific background document, nevertheless it still has some relevance regarding international legal developments.

The World Commission on Environment and Development set up by the UN General Assembly, better known as the Brundtland Commission released its report „Our Common Future“ in 1987, which coined and defined the term sustainable development as a “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The Brundtland definition contains a new approach by trying to balance the needs and interest of present and future generations giving similar weight to both. This shows a compromise in international legal development by exchanging the somewhat controversial concept of the rights of future generations with the needs of future generations, which has proved fruitful also regarding interpretations in national legislative systems. The 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes similarly states that „Water resources shall be managed so that the needs of the present generation are met without compromising the ability of future generations to meet their own needs.“ This approach is typical also of the Declaration on the Responsibilities of the Present Generations Towards Future Generations adopted by the General Conference of the UNESCO in 1997. The first article declares that the present generations have the responsibility to ensure that the needs and interests of present and future generations are safeguarded. Article 4 on preservation of life on Earth states that the current generation only temporarily inherited the Earth, therefore natural resources should be used reasonably and should be passed on in a form that is not irreversibly damaged. Article 5 on the protection of the environment states that present generations should strive to preserve the necessary living conditions, the quality and integrity of the environment, should prevent exposure endangering the health or the very existence of future generations and before commencing major projects should take into account possible consequences for future generations. This Declaration, albeit soft law in the international legal sense, still expresses the common understanding of states and the direction of the development of international law.

The International Court of Justice of the Hague in 1997 in its decision on the case concerning the Gabčíkovo-Nagymaros project also acknowledged the interests of future generations and the responsibility of present generations towards them regarding the safeguarding of the state of the environment. Judge Weeramantry has also greatly influenced the concept of intergenerational equity, by describing the protection of the of the natural resources for future generations as a kind of wise trusteeship in his parallel opinions in the cases of maritime delimitation in the area between Greenland and Jan Mayen and in the Gabčíkovo-Nagymaros project .

The Institutional Representation of the Interests of Future Generations

Ways to guarantee the rights of future generations through specific institutional structures has already surfaced in international public law. The first initiative was tabled at the 1992 Rio Conference, where the Maltese representative proposed a Guardian for Future Generations within the framework of the UN. The initiative was largely endorsed in international legal publications, however, the states did not follow suit.

At the 2012 UN Conference on Sustainable Development international NGOs have also proposed to rethink the establishment of such institutions, but it again failed to get sufficient support from the member states. Drawing from the persistent challenges related to sustainable development, the Rio+20 Summit invited the Secretary General of the United Nations to provide a report on the need for promoting intergenerational solidarity for the achievement of sustainable development, taking into account the needs of future generations. In 2013 the Secretary General released his Report entitled “Intergenerational solidarity and the needs of future generations” , in which he established that intergenerational solidarity is embedded in the concept of sustainable development, and is a universal value of humanity. The Report highlighted eight national institutions from the countries of Canada, Finland, Hungary, Israel, New Zealand, Wales, Germany and Norway as playing a pioneering role in the national implementation of sustainable development and intergenerational solidarity. They represent unique, institutionalised forms of protecting the needs of future generations and can therefore be pioneering examples of spreading the concept of intergenerational solidarity. Furthermore, the Secretary General invited the UN High Level Political Forum to consider the most suitable mechanisms to promote intergenerational equity and sustainable development at the UN level.

All the institutions mentioned in the Secretary General’s report serve the institutional implementation of sustainable development and long term thinking, however, they all use different organisational and jurisdictional solutions to that end.

2.1. Future Generations Commissioner, Wales

In 2015, the Welsh Assembly passed the Well-being of Future Generations (Wales) Act, a ground-breaking piece of legislation, which established an independent Future Generations Commissioner and introduced a set of duties on public bodies to take into account and safeguard the well-being of future generations. The role of the new Future Generations Commissioner is to act as a guardian for the interests of future generations, and to support the public bodies listed in the Act to take a more precautionary approach and look to the

long term. The Commissioner is also mandated to establish social partnership through creating an alliance between and unifying the forces of the Government, business circles and civil society.

As a predecessor of Wales' first statutory Future Generations Commissioner, in 2011 the Welsh Minister for the Environment, Sustainability and Housing appointed a Commissioner for Sustainable Futures after the termination of the UK's Sustainable Development Commission. The work of the Wales' Commissioner for Sustainable Futures was also connected to the activities of the Welsh Government and public bodies. The task of the Commissioner was to work out basic principles and methods for national implementation, taking into account UN activities and recommendations related to sustainable development. Through his activities, the Wales Commissioner, on the one hand, contributed to properly informing the members of society on various objectives and programs aimed at preserving natural and cultural resources and transferring them to future generations. On the other hand, he had to render support to the representatives of business circles in their efforts aimed at promoting long term regional development through applying self restraint in their business activities and setting economic objectives contributing to a sustainable future.

The Well-being of Future Generations (Wales) Act enshrines in law the principle of intergenerational solidarity, and legislates to embed sustainable development as the central organising principle across Government and the public sector. The Act also provided for the establishment of an independent body, the Future Generations Commissioner, which continues the legacy of the Sustainable Development Commission and the Commissioner for Sustainable Futures.

2.2 Ombudsman for Children, Norway

The activities of the Norwegian Ombudsman for Children are mainly aimed at ensuring that the opinions of children and young people are heard and their rights are respected under any circumstances. The Ombudsman is in direct contact with the children and the educational and other institutions dealing with them, and propagates his or her experiences also through the press and media. He or she may inquire into individual complaints and act as a consultant in connection with the activities of the legislation and the Government. The Norwegian Ombudsman for Children is completely independent, and may formulate his or her positions and specify those fields of action where the protection and implementation of the rights of future generations should be facilitated.

It is common knowledge that the ombudsman institution has Scandinavian roots, and the institution of ombudsman for children is of Norwegian origin: the Norwegian example was followed later on by dozens of countries. The scope of activities of ombudsmen for children is typically focused on general children's rights issues; however, it is worth exploring whether such institutions are capable of not only investigating children's rights from the aspects of infringements related to inter alia school education or parental supervision, but also representing the rights of those who may not participate yet in formulating the political decisions of a given country. Among the numerous concepts related to future generations there is one according to which all those who do not have yet the active right to participate in political decision making should be included in the notion of future generations. Decisions concerning children's interests in preserving natural and cultural resources are made on their behalf by others, thus rendering children vulnerable and defenseless.

Consequently, the institution of ombudsman for children is capable of acting on behalf and in the interest of children still lacking political power or still unborn, in order to safeguard the preservation of natural and cultural resources for them.

2.3 Commissioner of the Environment and Sustainable Development, Canada

The Commissioner of the Environment and Sustainable Development is an Assistant Auditor General appointed by the Auditor General of Canada, who leads a group of auditors specialised in environment and sustainable development. Besides playing an active role in the Working Group established for environmental auditing, the Commissioner also has the obligation to submit reports to the Office of the Auditor General in order to monitor the procedures of implementing the country's sustainable development strategy and the incidental improprieties related thereto. The activities of the Commissioner provide a special aspect for the analysis of issues related to sustainable development since, uniquely among national institutions responsible for the protection of the interests of future generations, he or she monitors the proper utilisation of public funds allocated to sustainable development from the aspects of lawfulness, expediency and effectiveness. Another main task of the Commissioner is to prepare reports on various environmental issues, including biodiversity, quality of air, water and soil. In the course of inquiring into petitions, the Commissioner forwards all submissions related to a given environmental measure to the competent authorities and prepares his or her reports on the basis of the answers received. These reports are published on the website of the Office of the Auditor General.

Therefore, the activities of the Commissioner, on the one hand, ensure that citizens' complaints are properly considered in the environmental decision making process and, on the other hand, aim at monitoring the proper utilisation of funds allocated to environmental protection. Thus, the Commissioner has no decision making powers in matters of sustainable development; however, he or she may assure that the utilisation of funds allocated by the legislative and executive branches of state power to objectives related to the interests of future generations be monitored also from the point of view of expediency, and the uncovered controversies become known to the decision makers.

2.4. Knesset Commissioner of Future Generations in Israel

The Commissioner of Future Generations was nominated by the Speaker of the Knesset, the Israeli Parliament, in 2001, and his activities expressly bore upon legislative issues related to future generations. Unfortunately in 2006, after a short period of operation, the Israeli Parliament abolished this institution. While functional, the primary task of the Commissioner of Future Generations was to inquire into any issues related to future generations and falling under the competence of the Parliament if the Knesset was about to adopt legislation in connection therewith. The Commissioner could review the draft legislation and draw up a report on its expected effects on future generations. No legislation in connection with future generations could have been adopted until the Commissioner submitted his report.

The establishment of the institution had major significance, since its activities could affect a broad spectrum of legislative proposals: its competence covered the review of all legislative proposals related to natural resources as well as technology and education. The

Commissioner's right to withhold any legislation until his report would be submitted also included the possibility of a kind of "pocket veto", since withholding a legislative proposal could lead, in many cases, to the given proposal's having become obsolete due to the ever changing political circumstances. While active, the Israeli Ombudsman considered children as a part of future generations; therefore, he used to act as their spokesman in the Israeli Parliament.

2.5. Committee for the Future of the Parliament of Finland

In the case of institutions and prominent officials responsible for the protection of future generations, one may often raise the critical question whether and how a person or a body can predict the needs and interests of future generations, and on what moral grounds can they take action even against the institutions of state power. In most cases, it is difficult to answer this question. However, the Finnish model can preclude such critical remarks. The Committee for the Future is one among the sixteen committees of the Finnish Parliament; its competences do not exceed those of any other committee. The significance of the Committee lies in the fact that it comprises almost 10 percent of the representatives of the Parliament, and its members hold consultations twice a week, for three hours altogether, on issues related to the future of Finland and the Finnish people. The representatives are entitled to submit reports that could be adopted by the Committee, provided there is consent thereto. Reports may touch upon any and all issues of science and technology or environmental protection, from climate change to energy security and development factors; topics depend, to a great extent, on the personal interests of the representatives in the Committee. The Committee for the Future maintains direct contact with the most prominent experts in the country, organises professional conferences and prepares forum reports. The Committee submits its findings in the form of position papers to the Parliament.

In most parliaments of the world the directions of political actions are determined mainly by short term thinking, adjusted to the four year election cycles. The influence of the Finnish Parliamentary Committee is substantiated by the fact that it strives to implement long term thinking in political decision-making directly through the representatives, and it tries to ensure that this approach could have a beneficial effect on the activities of the entire Parliament. According to its members, political partisanship does not affect the work of the Committee for the Future; as a result, its activities have a positive and constructive influence on the overall operation of the Finnish Parliament.

2.6. New Zealand Parliamentary Commissioner for the Environment

The activities of the New Zealand Parliamentary Commissioner for the Environment are, above all, research oriented. His or her main task is to prepare reports on those acts adopted by the Parliament which have a significant impact on the environment. Other tasks of the Commissioner include monitoring the effectiveness of environmental planning and management by the competent authorities of New Zealand. Therefore, the Commissioner for Environment may not, in any way, prevent acts from taking effect or conduct preliminary legal analyses of draft bills. His or her competence is more scientific in character, aimed at collecting and submitting to the Parliament, in a systematic manner, all scientific knowledge available in connection with the implementation of a given act. Thus the Commissioner facilitates the amendment, if necessary, of environment related acts by

the Parliament, and the adjustment of the rules of management or environmental planning at the level of the authorities implementing those acts.

2.7. German Parliamentary Advisory Council on Sustainable Development

The Parliamentary Advisory Council on Sustainable Development (PACSD) is a special body of the German Parliament which, unlike the committees of the Parliament, operates on the principle of consensus. While the Finnish Parliamentary Committee for the Future is not tied in any way to the legislative schedule of the Finnish Parliament, the German institution functions as a de facto parliamentary advisory body: its activities are partly concerned with legislative acts discussed in the German Parliament, partly with other issues unrelated to the former.

One of the most important tasks of the Parliamentary Advisory Council is related to the national strategy for sustainable development adopted by the German Council for Sustainable Development: PACSD monitors its implementation in the course of legislation. Its comprehensive task is to facilitate the strategy's enforceability within the German parliamentary system. It monitors sustainability in four areas, namely, in the fields of inter generational equality, social cohesion, quality of life and international responsibility. PACSD maintains constructive dialogue with other parliamentary bodies within the European Union and promotes the participation of social actors in decision-making, thus facilitating the wider public debate of sustainability related parliamentary initiatives and questions and the establishment of civil dialogue.

The strength of this body derives from its consensual character. Although the German Parliament is not bound by rules requiring the participation of the Parliamentary Advisory Council in the legislative process, this special body, weighing and monitoring the long term effects of issues debated in the Parliament on future generations, is a major means of intra parliamentary control.

2.8. Ombudsman for Future Generations of Hungary

The Hungarian Ombudsman for Future Generations has an autonomous position within the Office of the general Ombudsman (the Commissioner for Fundamental Rights). In Hungary, the general Ombudsman has two Deputies, and all three of them are elected by the Parliament. One of the Deputies, the Ombudsman for the Rights of National Minorities, is responsible for the protection of the rights of nationalities living in Hungary, and the other, the Ombudsman for Future Generations, is responsible for the protection and realisation of the interests of future generations. In the Hungarian constitutional system, the protection of future generations is based on the provisions of the Fundamental Law, describing the Hungarian nation as an alliance among Hungarians of the past, present and the future. Article P of the Fundamental Law stipulates that natural resources, particularly arable land, forests and water resources, as well as biological diversity, in particular native plant and animal species and cultural assets shall comprise the nation's common heritage that should be protected and preserved for future generations. The protection of future generations is carried out on two planes. The Ombudsman for Future Generations monitors the realisation of the interests of future generations, and draws the attention to those legal situations where the laws in effect do not serve properly the interests of future generations, related mainly to the preservation of natural resources.

Since the Ombudsman for Future Generations is entitled to express his or her opinion in any and all issues related to the interests of future generations, the Ombudsman does not have to restrict his or her activities to cases where there is a breach of constitution. Therefore, he or she may speak out against the implementation of such environmental policies which, albeit not in breach of the constitution, would have an adverse effect on the living conditions of the children and grand children of those living in the country.

In connection with the activities of the Ombudsman for Future Generations, one might raise the question whether and how a private person may speak out against the policies of the Parliament or the Government, adopted with significant social support. The answer to this question has been elaborated by the practices of those who used to hold this position. Damage to the interests of future generations could be established mainly in those cases where the adopted legal regulations could adversely affect the future generations' equitable rights to the utilisation of natural resources. The Ombudsmen for Future Generations always tried to adjust their positions to the strict standards of science and sought close cooperation with the Academy of Sciences, as well as its competent specialised committees.

Resolutions of the Ombudsman for Future Generations are not binding upon either the Parliament or the Government; however, when an infringement also constitutes a violation of the constitution, i.e., the adopted Hungarian legal regulations are not only harmful to the interests of future generations but, on their own merit, also constitute a breach of constitution, the Ombudsman for Future Generations may turn to the general Ombudsman and recommend that the general Ombudsman submit a petition to the Constitutional Court requesting the annulment of the regulations concerned.

3. Working for the Future: Network of Institutions for Future Generations

3.1. Budapest Memorandum adopted at the Conference of "Model Institutions for a Sustainable Future"

Since global protection has failed to deliver the desired results, a deeper cooperation between national human rights institutions entrusted with the protection of the interests of future generations could potentially contribute to the effective implementation of global commitments. In this spirit, the representatives of the seven still functioning institutions mentioned in the UN Secretary General's report and the former head of the already defunct Israeli Commission for Future Generations participated in the international conference entitled "Model Institutions for a Sustainable Future", held in Budapest between 24-26 April, 2014. Convened upon the initiative of the Ombudsman for Future Generations of Hungary, the participants of the conference adopted the Budapest Memorandum, in which they confirmed their commitment to lend a helping hand, through collecting and sharing best state practices within the frameworks of an international cooperation network, to those non governmental organisations that strive to establish similar national institutions in other countries. For instance, the conference was also attended by the representatives of Dutch and Norwegian civil society organisations, working for the establishment of their respective national institutions for the representation of the interests of future generations.

The Budapest Memorandum aimed at creating and maintaining a continuous consultative relationship between the bodies referred by the Secretary General as model institutions for future generations, and international environmental NGOs fighting for similar purposes, as well as the most prominent environmental and human rights experts.

3.2. Cardiff Conference on the “Essential Ingredients for a Sustainable Future”

The subsequent meeting of the members of the network took place in Cardiff in April 2015 within the framework of the conference entitled “Essential ingredients for a sustainable future: Why do we need independent institutions, and how should they work for the long term?”. The conference, which built on the inaugural network conference held in Budapest in 2014, was organised by the Office of the Commissioner for Sustainable Futures, the World Future Council, the Welsh Government, Cynnal Cymru and the Oxford Martin Programme on Human Rights for Future Generations.

The participants of the conference laid down a number of key areas of future cooperation. If we are going to tackle global challenges, we have to make decisions for the achievement of long-term changes today that take into consideration the needs of future generations. We need to create values of responsibility, and pass the natural and cultural resources on to future generations in at least the same condition as we received them. This goal reinforces the importance of the role of those national and regional institutions that can contribute to improving governance for the long term in achieving the post 2015 agenda. To this end, it is necessary to establish and connect the democratic institutional structures, as well as the representation of the interest of future generations at the UN level. In this spirit, the participants of the conference discussed the significance of building the global network of such institutions, recognising their distinctive role but differentiated structures, which have commonality in being built into the national governance models. For the effective communication between the members of the network, the Hungarian Ombudsman for Future Generations created an online platform to provide a surface for sharing of knowledge and experience of institutional solutions aiming at safeguarding the interests of future generations.

3.3. Helsinki Conference “For the Next Generations”

The third meeting of the members of the network was held in Helsinki in June 2016. The Conference entitled “For the Next Generations” was jointly organized by the Committee for the Future of the Parliament of Finland, the Prime Minister’s Office, the National Foresight Network and The Finnish Innovation Fund Sitra. The aim of the meeting was to build on former conferences in Budapest and Cardiff and further define rules of membership, networking goals and terms of objectives for the network. Participants agreed that they will further promote and share opportunities and best practice in respect of institutionalisation, legislation, policy and governance arrangements to secure the wellbeing of future generations. Besides strengthening their existing cooperation, members of the network also strive to increase the number of national and regional institutions joining the network who share the same purpose of contributing to long-term future shaping. The network aims at developing and disseminating institutional solutions, monitoring developments, commissioning studies, research and analysis and working with the United Nations and its Member States to develop a framework of action to safeguard the interests of future generations.

3.4. The Way Forward: Fostering Sustainable Development and Intergenerational Solidarity on the National, Regional and the UN level

Through their cooperation, the participants of this network of institutions shall facilitate the establishment of further national institutions supporting the realisation of the interests of future generations, and assist the establishment of such institutions at the regional level as well. The network has already encouraged several initiatives worldwide to help them blossom into a fully grown future generations protection institute. As a result, very promising developments are underway in various regions, such as the establishment of the Guardian of Future Generations in Malta and the Commission for Sustainable Development and the Rights of Future Generations in Tunisia and other noteworthy initiatives are advanced in the countries of the Netherlands, Ukraine, Indonesia, Namibia and Afghanistan.

This endeavour has also raised the prospect of cooperation between national institutions, NGOs and experts in Europe in order to establish the institutional representation of future generations at the level of the European Union and the United Nations. An efficiently working intergenerational protection mechanism would be to ultimately have this bottom-up national institutional network function under the auspices of the UN. It is a sad reality that many of the most noble goals of the UN do not necessarily get translated into the reality of national scenery as many fall victim of the national political arena, and practice shows that only the democratically most advanced countries took appropriate responsibility to implement these noble and far-reaching aims.

However, in this proposed arrangement the strengths of both sides, namely the practical, bottom-up approach of the network of national institutions, being politically independent and closely linked to individuals and the supranational nature of the UN could create a Guardian for Future Generations that could more efficiently fight for overcoming political and economic short-termism and reluctance to implement national and international sustainability targets. This collaboration would be most effective if headed by a UN High Commissioner for Future Generations or UN Ombudsman appointed by the UN Secretary General as principal advocate for the interests and needs of future generations.

In its discussions with the United Nations Environment Programme (UNEP), the network has already identified two areas where it could provide the UN with practical knowledge as background for eventual policymaking: a) national future generations audit based on which member states could report on how future generations interests are taken into account in their policy-making and b) environmental impact assessment to also account for the interests of future generations in the long term.

In this vision the network could build on the existing and well-functioning example of the cooperation between the High Commissioner for Human Rights and the National Human Rights Institutions (NHRIs). It is an exceptionally useful combination for such an essential guardian of human rights to be able to rely on the NHRIs as national legs for promoting and ensuring that the policies, international standards and general guidances are actively followed up through the NHRIs broad mandate in the national legislation and practice. The proposed Guardian for Future Generations structure with the Network of Institutions for Future Generations under the leadership and support of the UN High Commissioner for Future Generations could achieve similar efficiency and success in the future.

Freedom of Conscience: A Question for Now and Future Generations

1. Introduction

Freedom of conscience frames the Universal Declaration of Human Rights and appears in all of the major human rights treaties. However, despite its pervasiveness, it is perhaps less well understood than other human rights, which has led to a weakening of the respect society affords this foundational right.

Despite freedom of conscience being enshrined in Section 11 of the Constitution of Finland, in practice it has been understood as more of a general principle or a ‘good practice’ recommendation, rather than a distinct human right that merits robust protection. There also seems to be a general misunderstanding that medical staff or State officials in Finland do not benefit from freedom of conscience in the exercise of their duties.

This article outlines why freedom of conscience is an essential and foundational human right, and shows how its protection increases respect for human dignity and ensures tolerance and intercultural understanding in an ever-increasingly diverse society. It will demonstrate that strengthened protection for freedom of conscience is essential to robustly safeguard the rights of present and future generations.

This contribution is divided into five main parts. The first part analyzes freedom of conscience and conscientious objection as general concepts. The second part highlights how freedom of conscience is viewed under international and European law. The third part scrutinizes conscience claims in practice, focusing on two main areas: employment and the provision of services, while the fourth part deals with future concerns for freedom of conscience in light of technological advancements. Finally, this contribution proposes a number of practical recommendations to adequately safeguard freedom of conscience and constructively address the concerns raised in this article.

2. Freedom of Conscience and Conscientious Objection

Conscience, or *conscientia*, was identified by the Romans and was understood to be shared knowledge. For thousands of years, understanding of this concept has crossed the religious and secular divide and today is relied upon by people from all walks of life as something which may justify their action, or inaction.³⁶

Moral beliefs, whether religious or non-religious, have a central place in the individual’s moral identity and, for this very reason, must be distinguished from mere personal preferences or opinions. They are ‘core or meaning-giving convictions and commitments’ that ‘allow people to structure their moral identity and to exercise their faculty of

³⁶ Mika Ojakangas, *The Voice of Conscience: a Political Genealogy of Western Ethical Experience* (Bloomsbury, 2013), p. 34 et seq.

judgment.’³⁷ Therefore, the more a belief is linked to the moral identity of the person, the stronger the legal protection afforded to it must be. If the values underpinning the moral identity of a person are contradicted by behaviour obliged by law, then the person finds himself or herself in a conflicting situation that challenges his or her moral integrity.

By way of example, there is a clear difference between (a) a person who refuses to participate in military service because of a deep objection to the taking of life, and (b) a person who refuses to participate in military service because they would prefer not to witness bloodshed. It is evident from this example that core beliefs which are deeply related to conscience, and which have an essential and structural role in the moral identity of a person, should be distinguished from preferences, tastes, opinions and desires. If action that was contrary to one of the latter categories were compelled, it would bring about feelings of uneasiness, discomfort, perhaps even disgust. Conversely, if one of the former categories were conflicted by a compelled act, then it would result in a sense of moral betrayal – harming the values and beliefs that fundamentally define the person concerned. This is precisely why such core beliefs (either religious or non-religious) ‘play the role of a compass and criteria of judgment in an individual’s life.’³⁸ If they are transgressed, then the person violates their deepest moral structure.

While it is undisputed that the inner realm of conscience should benefit from maximum protection under international law, there is more debate as to whether such protection should extend to cover an individual’s refusal, grounded in deeply held religious, moral, ethical or philosophical beliefs, to comply with a legally mandated duty which appears, on its face, to be neutral. Or in other words, to what extent should states protect the right to conscientious objection.

One of the main objections to the legal protection of conscientious objections is that it would open a Pandora’s box to eccentric and frivolous claims that would be advanced to provide an ‘escape route’ for the sake of convenience. However, Thomas Aquinas drew the line between conscience and a mere belief by stating that conscience is: ‘the application of knowledge to what we do.’³⁹ Therefore a refusal to protect conscientious objection fails to protect the most basic notion of freedom of conscience.

Modern history is full of instances where conscientious deviation from the law has, sometimes with hindsight, been vindicated as an acceptable course of action – laudable even. Learning from the history of Tiananmen Square, to the American south and apartheid South Africa; a legal system which makes an allowance for those who do what they believe to be right, guided by a moral code or framework which constrains their behaviour, is one that affords the individual the dignity anticipated in the Universal Declaration of Human Rights.

As two judges of the European Court of Human Rights have rightly observed: “Freedom of conscience has in the past all too often been paid for in acts of heroism, whether at the hands

³⁷ Jocelyn Maclure and Charles Taylor, *Secularism and Freedom of Conscience* (Harvard University Press 2011) p. 76.

³⁸ Jocelyn Maclure and Charles Taylor, *Secularism and Freedom of Conscience* (Harvard University Press 2011) p. 90.

³⁹ Thomas Aquinas, *Summa Theologica* (1265-1274), Article 13.

of the Spanish Inquisition or of a Nazi firing squad ...”⁴⁰ The notion of accommodating moral beliefs, no matter how irksome a state finds them, stems from the reluctance of European civilization – born of decency, forbearance and tolerance – to compel our fellow citizens to humiliate themselves by betraying their own consciences.⁴¹

Since there is an inextricable link between conscience and action, any robust protection of freedom of conscience must embrace a right to conscientious objection. Without the right to conscientious objection, freedom of conscience as a concept is stripped of any meaningful value in practice.

3. Freedom of Conscience in Law

a. United Nations Treaties

The international desire to enshrine freedom of conscience in the wake of the horrors endured during the two World Wars was embodied in the Universal Declaration of Human Rights. Adopted in 1948, the Declaration explains that “disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind”⁴² and goes on to explicitly state that “[All human beings] are endowed with reason and conscience...”⁴³ and that “everyone has the right to freedom of thought, conscience, and religion.”⁴⁴

This language has been repeated in countless international treaties, negotiated documents and national constitutions. Among these is the UN Declaration on the “Elimination of All Forms of Intolerance and of Discrimination Based on Religion or Belief.”⁴⁵ The preamble to the Declaration notes that infringements of this right, in particular, “have brought, directly or indirectly, wars and great suffering to mankind.” Furthermore, protecting freedom of conscience will “contribute to the attainment of the goals of world peace, social justice and friendship among peoples...” In a later Resolution on the “Elimination of all forms of religious intolerance”, adopted by the General Assembly in 1993, the UN unambiguously reaffirmed that position.⁴⁶

b. The Council of Europe

The Council of Europe⁴⁷ – founded in 1949 with the vision of safeguarding democracy, the rule of law and human rights – adopted the European Convention on Human Rights shortly

⁴⁰ *Eweida and Others v. the United Kingdom*, Application nos. 48420/10, 59842/10, 51671/10 and 36516/10, Dissenting Judgment of Judges Vucinic and De Gaetano, ECHR 2013 (extracts).

⁴¹ Charles Fried, *Saying What the Law is: the Constitution in the Supreme Court* (Harvard University Press, 2005), p. 168.

⁴² Universal Declaration of Human Rights, preamble.

⁴³ *Ibid.*, Article 1.

⁴⁴ *Ibid.*, Article 18.

⁴⁵ General Assembly resolution 36/55 of 25 November 1981. UN Doc. A/RES/36/55.

⁴⁶ “That freedom of thought, conscience, religion and belief is a human right derived from the inherent dignity of the human person and guaranteed to all without discrimination”. Furthermore, the resolution urged States “to ensure that their constitutional and legal systems provide full guarantees of freedom of thought, conscience, religion and belief...” A/RES/48/128, 20 December 1993, para 1.

⁴⁷ Finland became the 23rd Member State of the Council of Europe on 5 May 1989.

into its tenure as the treaty which founded the European Court of Human Rights and is credited with being the leading instrument in protecting fundamental rights and freedoms in Europe. The Convention followed the Universal Declaration of Human Rights by incorporating freedom of conscience into Article 9, which states that: “Everyone has the right to freedom of thought, conscience and religion”, and includes the right to manifest one’s religion or belief in “practice and observance.”⁴⁸

Although the right to manifest one’s religion or belief under Article 9 is qualified, the limitations are narrow in scope. In fact, it has been noted that when the Convention was being drafted: “the final draft of Article 9(2) was the narrowest of the proposed articles.”⁴⁹ Article 9(2) states that: “Freedom to manifest one’s religion or beliefs shall be subject only to such limitations as are prescribed by law and are necessary in a democratic society in the interests of public safety, for the protection of public order, health or morals, or for the protection of the rights and freedoms of others.” These restrictions make Article 9 the least qualified of all the qualified articles in the Convention. Whereas privacy, freedom of expression and freedom of assembly can be lawfully restricted for a number of reasons, including “national security” or “the prevention of disorder or crime”, Article 9 cannot.

The Council of Europe’s representative organ, the Parliamentary Assembly of the Council of Europe (‘PACE’) has long been an advocate for practical measures to affirm freedom of conscience across its Member States. In Resolution 730 (1980)⁵⁰ the Assembly recognized that: “the right to worship God counts among the most fundamental human rights of all, and that the foundation of this right lies in man’s unalienable dignity as a human person,” and called on its Members to secure: “the lifting of all restrictions on the practical expression of freedom of belief and conscience.”

PACE has also recognized that to be compelled by threat of punishment or sanction to act in a manner that the individual finds morally repugnant violates that person’s dignity and human rights. In passing Resolution 1763 (2010)⁵¹, PACE specifically affirmed the rights of medical professionals to conscientiously object to abortion procedures, stating that:

No person, hospital or institution shall be coerced, held liable or discriminated against in any manner because of a refusal to perform, accommodate, assist or submit to an abortion, the performance of a human miscarriage, or euthanasia or any act which could cause the death of a human foetus or embryo, for any reason.

The Resolution, which enjoyed broad support from across the political groups and included the majority of Member States, is a clear example of the understanding that protecting freedom of conscience is about more than the *forum internum* and that it extends to protecting manifestations of conscience.

⁴⁸ European Convention on Human Rights, Article 9.

⁴⁹ Evans, Carolyn, *Freedom of Religion under the European Convention on Human Rights* (Oxford University Press, 2001), p. 137.

⁵⁰ Parliamentary Assembly of the Council of Europe, ‘Freedom of thought, conscience and religion in Eastern Europe’ (Resolution 730 Final version, 1980).

⁵¹ Parliamentary Assembly of the Council of Europe, ‘The right to conscientious objection in lawful medical care’ (Resolution 1763 Final version, 2010).

More recently, in Resolution 2036 (2015), PACE again focused on the concrete application of Article 9 of the Convention, and called on Member States to: “uphold freedom of conscience in the workplace while ensuring that access to services provided by law is maintained and the right of others to be free from discrimination is protected.”

Turning to the European Court of Human Rights (‘ECHR’), which is charged with safeguarding the rights protected under the European Convention of Human Rights, the case of *Bayatyan v. Armenia* afforded the Grand Chamber of the Court an opportunity to expressly consider the right to conscientious objection within Article 9. In a powerful judgment affirming freedom of conscience, the ECHR held that:

[O]pposition to military service, where it is motivated by a serious and insurmountable conflict between the obligation to serve in the army and a person’s conscience or his deeply and genuinely held religious or other beliefs, constitutes a conviction or belief of sufficient cogency, seriousness, cohesion and importance to attract the guarantees of Article 9.⁵²

It noteworthy that the language used by the Court offered a wider scope of protection to instances of ‘serious’ and ‘genuine’ conscientious objection, rather than constraining it to objections raised in the context of military conscription. This finding was followed by a revealing explanation by the Court as to precisely why the applicant’s objection should be safeguarded by the Convention:

The Court cannot overlook the fact that ... the applicant, as a member of Jehovah’s Witnesses, sought to be exempted from military service not for reasons of personal benefit or convenience but on the ground of his genuinely held religious convictions (...) Thus, respect on the part of the State towards the beliefs of a minority religious group like the applicant’s by providing them with the opportunity to serve society as dictated by their conscience might, far from creating unjust inequalities or discrimination as claimed by the Government, rather ensure cohesive and stable pluralism and promote religious harmony and tolerance in society.⁵³

Thus the ECHR has found, in *Bayatyan v. Armenia* (and in the ensuing line of case law),⁵⁴ its readiness to protect conscientious objection where it is motivated by a serious and insurmountable conflict between an obligation imposed by the state and a person’s conscience or deeply and genuinely held beliefs. Conversely, the ECHR has held that a ‘strong personal motivation’ not to be buried in a cemetery, but to have the ashes scattered at home does not meet the threshold for the protection of belief.⁵⁵

⁵² *Ibid.*, § 110.

⁵³ *Ibid.*, § 124-126.

⁵⁴ See *Jakóbski v. Poland*, no. 18429/06, 7 December 2010; *Bukharatyan v. Armenia*, no. 37819/03, 10 January 2012; *Vartic v. Romania (No. 2)*, no. 14150/08, 17 December 2013 .

⁵⁵ *X v. Germany*, no. 8741/79, 10 March 1981.

c. Protection of Freedom of Conscience at National Level

Notwithstanding its inclusion in major international treaties, it is significant to note that, as is the case in Finland,⁵⁶ the vast majority of EU Member States have chosen to adopt provisions in their constitutions or national legislation which guarantee citizens' freedom of conscience in general terms.⁵⁷ This protection is usually framed in similar language to that used in the Universal Declaration on Human Rights or the European Convention on Human Rights.⁵⁸

However in addition to the more general protection of freedom of conscience, many countries explicitly protect the right to conscientious objection in certain contexts. For instance, there is now near universal recognition of the right to conscientiously object in the realm of compulsory military conscription, and countries that operate an active conscription regime will often have specific provisions – either in practice or enshrined in law – providing for the right to conscientious objection.⁵⁹

Additionally, the vast majority of European Union Member States also recognize a right in their national legislation to conscientiously object in the medical field, in particular where abortion and euthanasia are concerned. For example, in Austria the law stipulates that no medical professional: “is required to perform an abortion or to participate in it, unless an abortion without delay is necessary to save the pregnant woman from an imminent, not otherwise preventable death.”⁶⁰ Similar provisions can be found in the laws of 21 out of 28 EU Member States.⁶¹

4. Conscience Claims in Practice

a. Employment

Despite the emergence of an international consensus firmly in favour of protecting freedom of conscience, even in Europe there are numerous instances which indicate that States are failing to adequately protect the conscience of their citizens. A contemporary setting that simultaneously showcases these failings and highlights the vital importance of protecting conscience is employment.

⁵⁶ The Finnish Constitution 1999 says, in Section 11: “Freedom of religion and conscience entails the right to profess and practice a religion, the right to express one’s convictions and the right to be a member of or decline to be a member of a religious community. No one is under the obligation, against his or her conscience, to participate in the practice of a religion.”

⁵⁷ 22 out of 28 EU Member States have general clause(s) guaranteeing freedom of conscience. For more information, see Annex 1 to the Expert brief filed by ADF International in the case of *Linda Steen*, T 2153-15. Available at <<https://adflegal.blob.core.windows.net/international-content/docs/default-source/default-document-library/legal-documents/europe/linda-steen-v.-landstinget-i-j%C3%B6nk%C3%B6pings-l%C3%A4n/linda-steen---amicus-brief.pdf?sfvrsn=10>> accessed 4 August 2016.

⁵⁸ *Ibid.*

⁵⁹ For instance, the Austrian Constitution, Art 9a(3): “Every male Austrian is liable for military service. Conscientious objectors who refuse the fulfillment of compulsory military service and are exonerated therefrom must perform an alternative service. The details are settled by law.”

⁶⁰ The Austrian Criminal Code, Art 97(2).

⁶¹ See footnote 24 [general clause guaranteeing freedom of conscience], above.

Given that employees are in a subordinated position, where they are expected to conform to their employers' strategies, vision, and policies, the absence of conscience protection may result in them finding themselves out of work for objecting to a controversial aspect of their employment. An example of this is two licenced Swedish midwives – Ellinor Grimmark and Linda Steen – who are unable to find employment in their home nation due to their refusal to participate in abortion on account of their deeply held conviction that life begins in the womb.

In November 2013, midwife Ellinor Grimmark explained to a women's clinic where she was due to begin work that she could not carry out abortions due to her beliefs. Consequently, she was told that her job offer had been revoked and she was no longer welcome to work with the clinic. Ms. Grimmark ultimately applied for three midwifery jobs in the County of Jönköping, and was denied by all three because she would not take part in abortion procedures. Ms. Grimmark was repeatedly told that no health care workers at the clinics would be allowed to take a stance against abortion.

In March 2015, midwife Linda Steen was also denied employment as a midwife because she objected to assisting with abortions for reasons of conscience. After explaining her position to the nursing unit manager, the Women's Clinic of Nyköping refused to hire her, and a subsequent letter from the management stated: "It is not our policy or our approach to leave any opening for a conscience clause. We have neither the ability nor the intention to work with such exceptions." The manager of the clinic went even further by contacting another potential employer about Ms. Steen's convictions, who consequently cancelled Ms. Steen's interview.

It is interesting to note that Sweden is the only EU Member State which does not have any legislation – specific or general – guaranteeing freedom of conscience for its citizens. Both midwives have challenged their treatment in the Swedish Courts under Article 9 of the European Convention of Human Rights.⁶² Their cases are a stark reminder of the grave ramifications that face those who choose to object to the performance of certain employment obligations that are in serious and insurmountable conflict with their deeply held beliefs.⁶³

b. Provisions of Services

The provision of goods and services is another area which illustrates the practical implications of decisions made on the grounds of conscience, especially in jurisdictions which have enacted 'equality' legislation.⁶⁴ Ashers, a family-run bakery in Northern Ireland,

⁶² For more information on this matter, see ADF International, '*Sweden faces human rights problem*' (ADF International, 26 January 2016) <<https://adfinternational.org/detailspages/press-release-details/sweden-faces-human-rights-problem>> accessed 4 August 2016

⁶³ Also note the case of two highly experienced Scottish midwives, Ms. Concepta Ward and Ms. Mary Teresa Doogan, who discovered that the provisions protecting freedom of conscience in the United Kingdom did not extend to supervisory acts when their case came before the UK Supreme Court - *Greater Glasgow and Clyde Health Board v. Doogan and another* [2014] UKSC 68.

⁶⁴ For more on equality legislation, see Paul Coleman and Roger Kiska, 'The Proposed EU "Equal Treatment" Directive: How the UK Gives Other EU Member States a Glimpse of the Future' [2012] 5(1) International Journal for Religious Freedom.

was asked to make a cake with a message which read, 'Support Gay Marriage'. The McArthur family, who owns the bakery, said that they would make the cake but that they could not write this particular phrase on it because doing so would compromise their deeply held religious beliefs on marriage. The family was later found guilty of discrimination on the grounds of sexual orientation, although the finding has subsequently been appealed.⁶⁵

The family has consistently asserted that their refusal was not based on their customer's sexual orientation, of which they were not aware. It was rather based solely on the message conveyed by the cake, which was in serious conflict with their deeply and genuinely held beliefs. As the family's lawyer outlined, 'it would be the antithesis of democracy' if people were compelled to promote a cause which would violate their conscience.⁶⁶

Their situation was indicative of the biggest concern surrounding this kind of 'equality' legislation; instead of tackling discrimination, such legislation creates irresolvable conflicts of conscience, amounting to coercion, and can even lead to new forms of discrimination on grounds of conscience. Citizens should not be forced by law to choose between their businesses and their conscience. Rather than imposing penalties on citizens where they refuse to do what they believe to be morally wrong and objectionable, States should be looking to accommodate different worldviews and beliefs by guaranteeing freedom of conscience and safeguarding respect for a democratic diversity of opinion.

5. Future Challenges

Rapid technological and scientific development has led to the emergence of serious ethical and moral concerns in the field of so-called 'transhuman transition'⁶⁷ i.e. the artificial 'enhancement' of human beings through brain computer interfaces, augmented reality, artificial intelligence, and genetic engineering.

With these novel procedures being trialed in laboratories around the world,⁶⁸ some even gaining official state sanction,⁶⁹ they are raising weighty questions that challenge our most

⁶⁵ BBC News, 'Gay cake' case: Ashers bakery appeal adjourned' (BBC News, 3 February 2016) <<http://www.bbc.com/news/uk-northern-ireland-35474167>> accessed on 4 August 2016.

⁶⁶ Gerry Moriarty, 'Ashers Bakery found guilty of discrimination' (The Irish Times, 19 May 2015) <<http://www.irishtimes.com/news/crime-and-law/ashers-bakery-found-guilty-of-discrimination-1.2218032>> accessed 5 August 2016.

⁶⁷ Daniel Faggella, 'Ethics and Policy Concerns in the Transhuman Transition' (H+ Media) <<http://hplusmagazine.com/2014/07/29/ethics-and-policy-concerns-in-the-transhuman-transition/>> accessed 5 August 2016.

⁶⁸ China has recently reported that it carried out the world's first experiments to genetically engineer a human embryo. Sarah Knapton, 'China Shocks World by Genetically Engineering Human Embryos' (The Telegraph, 23 April 2015), <<http://www.telegraph.co.uk/news/science/11558305/China-shocks-world-by-genetically-engineering-human-embryos.html>> accessed 5 August 2016

⁶⁹ Great Britain has passed legislation which authorizes the creation of three parent children which possess genetic material belonging to three separate adults in an attempt to prevent the transmission of mitochondrial diseases. Fiona Macrae, 'Britain's First Three-Parent Baby Could Be Born within ONE YEAR' (Mail Online, 8 June 2016) <<http://www.dailymail.co.uk/sciencetech/article-3631770/Britain-s-three-parent-baby-born-ONE-YEAR-Scientists-say-controversial-IVF-technique-ready-use.html>> accessed 5 August 2016.

basic understandings of life and morality. Francis Fukuyama, Professor of International Political Economy at Johns Hopkins University, has suggested that:

These developments...will challenge dearly held notions of *human equality* and the *capacity for moral choice*; they will give societies new techniques for controlling the behavior of their citizens; they will change our understanding of *human personality* and *identity*...⁷⁰

Researchers and experts alike have expressed concerns that these technologies could significantly impact personal identity and the most fundamental concept of human dignity, as they seek to alter what we understand as natural physical and psychological traits.⁷¹

Additionally, technologies paving the way for human ‘enhancement’ and augmentation have the potential to exacerbate social inequality by disproportionately advantaging certain members of society. The ability to ‘create’ stronger, healthier, happier, more attractive and intellectually superior humans would profoundly impact the basic notions of equality and dignity as enshrined in Article 1 of the Universal Declaration of Human Rights:

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Whether or not these kinds of technological advances are considered to be beneficial for society, it is clear that they raise significant moral and ethical concerns that will be grappled with for years to come. In light of these extremely sensitive and difficult questions, it is of primary importance to preserve the right of future generations (whether they be medical staff, researchers, or scientists) to conscientiously object to such procedures and processes. In the absence of strong protection for freedom of conscience, it may be the case that medical staff will be compelled by their employers, on pain of dismissal, to participate in, for example, genetic manipulation between human and animal genes.⁷²

States should be looking to protect the right of future generations to refuse to participate in procedures they find morally objectionable, especially where the trajectory of scientific advancement is on a collision course with deep-seated notions of personal identity and human dignity. As the stakes increase, so will the importance of the guarantees that future generations will have the right to live in accordance with the dictates of their conscience. This forbearance represents the cornerstone of democracy, and guards against citizens

⁷⁰ Colin McGinn, “Our Posthuman Future” - *Biotechnology as a Threat to Human Nature* (*The New York Times*, 5 May 2002),

<<http://www.nytimes.com/2002/05/05/books/review/05MCGINNNT.html?pagewanted=all>> accessed 5 August 2016 (emphasis added).

⁷¹ Leon Kass, Preventing a Brave New World (*Stanford University*)

<<https://web.stanford.edu/~mvr2j/sfsu09/extra/Kass3.pdf>>, accessed 5 August 2016, and Philip Brey, *Human Enhancement and Personal Identity*, in Berg Olsen et al. (eds.), *New Waves in Philosophy of Technology* (Palgrave Macmillan, 2009), pp. 169-185.

⁷² Park Alice, ‘Human-Animal Chimera Studies Are Now Allowed in the U.S.’ (*Time*, 5 August 2016)

<<http://time.com/4440907/human-animal-chimera-stem-cells/>> accessed 10 August 2016.

being compelled to participate in activity which betrays their core understanding of what they believe to be inherently right or wrong.

6. Recommendations

Not only is there wide international recognition of the crucial importance of freedom of conscience, but it is clear that the concept will become increasingly relevant to future generations as society advances into unknown territory. Attitudes to freedom of conscience are a litmus test for democracy, pluralism, human dignity and respect for human rights. Therefore, in order to uphold robust protection for freedom of conscience, we propose the following recommendations.

That States should:

Accommodate citizens' deeply and sincerely held convictions and abstain from imposing penalties on them for holding such convictions, particularly where there are viable alternatives;

Identify specific areas which attract a divergent plurality of moral views in society, and seek to be proactive in enacting legislation that preserves and protects this diversity;

Ensure that domestic legislation provides for adequate guarantees and protection for freedom of conscience in all areas, including in employment, the provision of goods and services, and medical procedures. Likewise, States should put in place measures and strategies to prevent violations of freedom of conscience and to ensure accountability when such violations occur, in particular by carrying out thorough and transparent investigations;

Promote respect for fundamental rights and ensure pluralism, tolerance, and intercultural understanding in an ever-increasingly diverse society by introducing the concept of reasonable accommodation for religion or belief;

Ensure that future legislation does not impose upon its citizens a binary choice of either violating their conscience or professional ruin.

7. Conclusion

Freedom of conscience has consistently been enshrined in major human rights conventions and national constitutions because, in its essence, it upholds the values of respect for dignity and tolerance crucial to sustaining a truly democratic society. Legislatures and courts around the world have developed the concept from its roots in the domain of compulsory military service to more comprehensive, holistic accommodation of citizens' deeply and genuinely held religious or other convictions.

Contemporary examples illustrate that freedom of conscience is already under threat in Europe, and as technological and scientific innovations push the boundaries of ethics and morality, States should be actively looking to incorporate meaningful safeguards into their legislation to ensure that their citizens are protected from being compelled to betray their

convictions and comply with the prevailing majority view. State should not force citizens to act against their own conscience, and must recognize that the ability to accommodate wide-ranging, diverging views and opinions is key to maintaining a tolerant and healthy democracy. Conversely, they should also recognize that systems which impose a singular 'correct' viewpoint on sensitive and controversial matters are totalitarian in nature and have no place in a modern democracy.

This article has therefore made a number of practical recommendations that can be seized on by Finish legislators to incorporate meaningful protection for freedom of conscience into law. By safeguarding the deeply held convictions of current and future generations, Finland will demonstrate a commitment to the dignity of its people.

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ADF International is a global alliance-building legal organization, with more than 3000 allied lawyers around the world, which advocates for religious freedom, life, and marriage and the family before national and international institutions. ADF has been involved in more than 50 cases before the European Court of Human Rights, and has argued cases before the Inter-American Court of Human Rights, the United States Supreme Court, and a number of United Nations bodies. As well as having ECOSOC consultative status with the United Nations, ADF International has accreditation with the European Commission and Parliament, the Organization for Security and Co-operation in Europe and the Organization of American States, and is a participant in the FRA Fundamental Rights Platform. ADF is a leader in the area of litigation surrounding rights of conscience.

The Netherlands Scientific Council for Government Policy: an introduction to the Council and its contributions to the craft of scientific advice

Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information? (T.S. Eliot (1888-1965), Collected poems 1909-1935)

Introduction

Policy making consists of ‘puzzling’ and ‘powering’.⁷³ The puzzling is aimed at finding, defining and analysing relevant policy issues and synthesizing the best available knowledge, in order to identify appropriate policy options. The powering element is choosing policy options to be realized. Governments, supported by ministries, and parliaments are responsible for the latter, while public knowledge organisations and scientific advisory bodies must address the first element. In this context, since 1972, the Netherlands Scientific Council for Government Policy (Wetenschappelijke Raad voor het Regeringsbeleid, WRR), works to achieve its mission at the interplay between the field of knowledge, science and research on the one hand, and the field of policy and politics at the other.

In this paper, we first describe the Council’s legal task, position, organisation and methods. Furthermore, we discuss the independence and impartiality of the WRR, and the way how to achieve and maintain these key requirements for credible scientific advice for policy. Moreover, present examples of past and current topics, and discuss challenges and learning points that are relevant to those who work at the interplay of science and policy.

Mission and position

The central mission of the WRR is to provide scientific advice with a special focus on longterm challenges and opportunities, in order to develop options for better and innovative government policies, and to identify new issues that should be added to the policy agenda. This mission has been defined in a special Act on the WRR, which was implemented in 1976.

In order to understand the unique role of the WRR as an independent science-based thinktank for policy, five important characteristic features should already be noted, some of which will be discussed later more extensively:

The WRR is an advisor for government policy, which is a much broader role than advising a current government based on a specific political coalition. Accordingly, the council is also advisor to the parliament and the nation at large.

⁷³ Hoppe R. The Governance of Problems. Puzzling, Powering, Participation. Bristol, Policy Press, 2010

The council's work is not limited to certain domains. Its mission covers the interplay between the full range of scientific disciplines and all policy domains, and their interrelations in whatever combination.

The council decides on its working programme, taking input from government, parliament, ministries, academia and societal stakeholders into account. Advice can be solicited and unsolicited.

All information sources, including those of ministries, are available to the WRR in order to achieve its mission.

The government is obliged by law to publicly respond to the council's recommendations, in a letter to the parliament.

The WRR is fully publicly financed, and its staff is formally part of the Ministry of General Affairs. However, the ministry has no influence on the content of the WRR's work, nor on its staff recruitment.

In this way, WRR's mission is dedicated to pursue the specific craft or 'métier' of providing independent scientific input for optimising governmental policies, based on all knowledge and expertise that is needed to do so.

Composition and organisation

Preparing well-founded multidisciplinary and cross-sectoral scientific advice for policy requires the commitment of leading experts from a broad variety of disciplines, who have also vast experience at the interplay between science and policy. Moreover, a strong scientific and supportive staff must ensure that all relevant information is harvested and synthesized, that important developments are monitored, and that writing and production of publications are achieved.

To meet these requirements, the (eight) members of the WRR cover the domains of law, economics, social and behavioral sciences, natural sciences, medicine, and health sciences. All are university professors, part-time involved with the council. Most of them are member of Royal Netherlands Academy of Sciences and have experience as director, dean, or policy maker. The directors of the national agencies for economic, social, environmental and statistical research and analysis are external advisory members of the council. The members are selected according to strict criteria of scientific quality and affinity with policy, and after broad external consultations. The chair is responsible for the process of selection and nomination of the members, who are appointed for a five-year term and can be re-appointed once. The chair is selected by an independent committee of academic and policy experts. The appointment of the members and the chair must be approved by the government and formally decided upon by the Crown. The council composition is not changed when a new cabinet comes in. The latter, together with the five-year term (which is deliberately different from the four-year periodicity of the general elections) reflects the objective that an advisory council cannot be independent if its composition is the result of political daily rates.

The scientific staff, like the council, covers a broad range of relevant disciplines and has strong roots in the academic community. Most staff members have PhD degrees and a number of them hold academic positions and chairs. The supportive staff facilitates all organizational, production and communications tasks. The staff is headed by the director of the WRR office, who is also the council secretary. While the staff is formally part of the Ministry of General Affairs, the WRR has its own selection procedures for the staff. There is a limited budget for requesting external studies. The total annual public investment related to the WRR is about 3.5 million euros.

The council presents its recommendations to the cabinet and the parliament, and makes them available to the media and the public. All publications are freely accessible via www.wrr.nl. As said before, a public cabinet reaction to the recommendations is compulsory and is presented to the parliament.

The WRR chairs the national network of domain-specific strategic advisory councils – working, e.g., in the fields of health, education, science and technology, the environment, international affairs, culture, and public administration. This facilitates cross-sectoral collaboration and complementarity, both in agenda setting and advisory processes.

While the primary target group of the WRR is the government and the parliament, also the ministries, societal actors and stakeholders, domain-specific think tanks, the media, the scientific community, and the public at large, are important addressees. In addition, as much of the council's work deals with issues that are also relevant for other countries or have a transnational or international nature, collaboration with sister organisations in other countries or European or globally working think tanks is important.

Processes, methods, and approaches

WRR's publications are prepared by project teams of about five persons, consisting of council and staff members. Guided by the problem and questions at hand, knowledge, expertise and experience are harvested from literature, field explorations, consultation of external experts, interviews of stakeholders in policy and society, and additional surveys. If necessary, specific investigations and contributions are invited from national and international experts.

In addition to advisory reports with recommendations to the government, the WRR publishes exploratory studies, policy briefs, and background papers. Much of its contributions are also realized in interactive meetings with members of the cabinet, hearings in the parliament, and presentations and debates in various audiences of stakeholders, the academic community, the public media, and international fora.

Presentation of a report is generally not sufficient to ensure that its message will be picked up and that recommendations and policy options are considered in the process of decision making. Therefore, the WRR invests a lot of time and efforts in the 'landing' phase of its contributions. Also in this context, interactive meetings with the cabinet, parliament, and presentations in stakeholder audiences and the media are often essential. The more

innovative, and the more derogating from existing insights messages and recommendations are, the more efforts are needed to ensure that they get political and public attention.

At the same time, an advisor should not become an advocate selling out and trying to implement its recommendations. He would then take the role of policy maker and lose credibility as independent and impartial advisor. While bridging the gap towards implementation is important to the point that the messages and recommendations are clear to the relevant policy makers and target groups, from that point the responsibility to follow, not follow, or to adapt recommended options must be left to those who have the responsibility to decide.

In the first two decades of its existence the WRR was expected to make substantial contributions to prediction and forecasting. However, the council did not feel comfortable with this for various reasons. First, the problems the WRR has to address are generally characterized by complexity and uncertainty ('untamed problems'), on which few data for extrapolation into the future are available. For example, future development of international relations or financial markets is not the type of issue to be predicted. One could say that demographic change is more or less predictable, but apart from the fact that this is not always as simple as it seems, this is often just one factor in a complex of which many variables are yet unknown. A second issue is that future developments are sensitive to normative and not seldomly controversial judgments and decisions, that are generally unpredictable. Finally, and most essentially, advising for policy is not an issue of predicting favourable or unfavourable outcomes. The issue is to provide solid input based on which unfavourable developments can be avoided and favourable ones promoted. The objective of good advice is to contribute to favourable changes by suggesting actions to achieve them, not to wait and see whether predictions come through. Accordingly, it is naive to think that good advice can be recognized by checking afterwards whether it has predicted reality. Good advice can be defined by its contribution to make things happen more favourably than they would have happened without advice.

Foresight studies can help as a reference for designing alternative, better 'futures' that could be achieved by choosing other policies. Where such choices are not just about probabilities and opportunities but also about values, shaping the future is also a matter of weighing values and making normative decisions, guided by 'critical futures' as defined by the advisor.⁷⁴

Sometimes 'backcasting' is helpful. This is especially useful if policymakers have a well defined, consensus-based view on what direction or what future situation is most desirable. In that case, one could reason back until today and identify what steps should be taken to make the desired future more likely to happen.

Generally spoken, anticipation is important, but this is quite different from prediction. This can be easily understood by thinking of the chess player, who cannot predict what the

⁷⁴ van Asselt MBA, Faas A, van der Molen F, Veenman SA (eds). Scientific Council for Government Policy. Out of sight - exploring futures for policymaking: on forecasting, foresight, backcasting and critical futures. The Hague, WRR; Amsterdam: Amsterdam University Press, 2010 (English synopsis: http://www.wrr.nl/fileadmin/en/publicaties/PDF-samenvattingen/Exploring_Futures_for_Policymaking.pdf)

opponent will do. But he can anticipate by preparing as much as possible what should be done if the opponent would make certain moves. Anticipating a larger number of possible moves from a certain position makes a better player. As preparedness is limited by memory and time, preselection of the most important options is desirable, guided by likelihood, theoretical knowledge, experience, and the opponent's preferences, strengths and weaknesses. *Mutatis mutandis*, such anticipation obviously has a place in scientific advice.

According these lines, the WRR is practicing and constantly contributing to the craft of scientific advice for policy, having shifted from the idea of forecasting the future to formulating policy options that may help to achieve a better future, and by timely advice on important developments and dilemmas, policy alternatives, and essential knowledge gaps.

Methodology of the craft

As science itself, scientific advice can and should only be convincing when it is based on solid methodology.⁷⁵ This methodology is not just reflecting scientific research methodology nor is it a direct result of policy and societal input. It is the methodological basis of the specific craft of science-informed strategic policy advice. Here we briefly describe and partly repeat essential elements of this methodological basis, to be seen as subsequent steps that can sometimes also be taken in parallel where appropriate during the process:

Setting the advisory agenda: own expertise - based on comprehensive insight in relevant national and international developments in policy, science and research and society at large, and among relevant subgroups and stakeholders – and input from key actors in the fields, provide constant overview of potential topics for advice. These can be prioritized according to importance, urgency, timeliness, possible impact, added value of scientific advice, and available resources. For the Scientific Council this also implies periodical exchange with the prime minister and his cabinet, members of parliament, and ministries, in addition to contacts with scientific experts and societal actors.

Formulating key problems and questions. The topics for advice are generally complex by nature and given the mission of the council, which is reflected in the problems and questions that are the starting points of the advisory process. These are generally border –crossing, multidisciplinary and under-researched, never simple nor limited to a certain predefined domain, and not solvable by just reading some scientific publications. At the same time, the council must find the balance between sufficient broadness to be policy relevant, and appropriate focus to achieve sufficient depth. This may require decomposing a broad topic into manageable parts that can be simultaneously or sequentially addressed, while maintaining their interconnectedness. Since problems under study are often underexplored, ill-

⁷⁵ Knottnerus JA. Keynote. 2nd EuSANH conference. Luxembourg, 29 November 2007.

defined, and 'untamed',⁷⁶ there should be room to adapt problem definitions and questions during the advisory process, making them more focused (funneling).

Composing an appropriate team with primary responsibility for the advisory process. This should include the most essential disciplines and experience to credibly address the issues at stake. This can be organized in project groups or expert committees. In the Scientific Council for Government Policy, project groups consisting of one or two council members and two or three staff members fulfill this role. Guided by the problem and questions at hand, additional specific expertise can be mobilized to ensure that all relevant input will be obtained.

Force-field analysis provides a framework of (f)actors that have influence on the problem under study. In mapping this framework, one should look at both helping forces, that are driving movement toward a goal, and hindering forces, that are blocking that movement.⁷⁷ This framework is important in all phases of the project, e.g., the collection of information, problem analysis, formulating recommendations, and communicating with target groups.

Harvesting and synthesizing relevant knowledge, expertise and experience, generally using various sources and methods, often in combination: scientific literature (both quantitative and qualitative research, and both original articles and systematic reviews⁷⁸), field explorations, consulting national and international experts, interviewing stakeholders in policy and society, performing additional surveys, and by inviting specific investigations and contributions from national and international experts. Harvesting relevant information from experts and stakeholders can also be carried out by site visits, and structured methods such as focus groups and Delphi methods. All collected evidence has to be critically reviewed as to content and methods, and synthesized and presented in a way that is accessible to a broad audience.

Analyzing and interpreting the evidence. The collected material has to be analysed and interpreted along lines that are methodologically justified. It is essential that interested readers can fully follow and understand the reasoning of the authors, also when, in case of knowledge gaps, expert judgment is used or when innovative routes are explored.

Translating findings in conclusions and recommendations. The findings resulting from the previous step have to be translated into conclusions and signaling messages or recommendations. In many cases, the reported findings do not necessarily lead to one obvious way to go. Often, value judgments and normative issues play a role. Advisers can then prepare possible policy options and alternative routes, with pros and cons and considerations of urgency and priority. These options can be weighed

⁷⁶ Scientific Council for Government Policy. Learning government. A plea for problem-oriented politics (in Dutch). The Hague, WRR; Amsterdam: Amsterdam University Press, 2006.

⁷⁷ Lewin K. Defining the 'Field at a Given Time'. Psychological Review. 1943; 50(3): 292–310. Republished in Resolving Social Conflicts & Field Theory in Social Science. Washington DC.: American Psychological Association, 1997.

⁷⁸ <http://www.campbellcollaboration.org/>

and decided upon by policy makers. Indicating what type of actors (e.g., policy makers, professionals, businesses, researchers) can have a role in addressing a recommendation may help.

Recommendations targeted at the longer term should meet the following requirements:

While focused on the longer term, politicians should recognize them as relevant for today's decision making. First, because the future always begins now, and we should not lose time to address grand challenges. And second, recommendations that are not recognized as relevant for today are unlikely to be picked up by policy makers. Accordingly, advisors must find a topical policy 'hook' to attach the message and enable policy makers to 'score' by using it.

Second, recommendations should have an appropriate level of abstraction.

On the one hand, making them too detailed and 'executive' carries various risks. First, if details would develop differently on the shorter term, the key strategic recommendations may be also considered outdated quickly. Second, executives may not feel respected as professionals if advisors go sit on their chairs in elaborating details. And third, advisors can get involved as actor in the debate on today's details, undermining its credibility as impartial advisor for the longer term.

On the other hand, recommendations should not be on a too high level of abstraction, as this would make it difficult to understand what they imply for policy practice. Moreover, they could be easily re-interpreted in a unintended direction.

So, the challenge for the advisor is to find the right level of abstraction, representing useful and effective strategic guidance for policy. To put it briefly: science-based strategic advice for the longer term is about the direction, not on the details.

Choosing formats for reporting and interaction. As said before, in addition to publishing advisory reports, exploratory studies, policy briefs, and background papers, the WRR organizes interactive meetings with members of the government, hearings in the parliament, and presentations and debates in various audiences of stakeholders, the academic community, the public media, and international fora. Which format is chosen depends on various considerations. If a comprehensive complex issue or stagnant policy needs a thorough content analysis before useful further steps can be taken, an extensive project leading to an advisory report is often required. In order to ask attention for a new, relatively unknown topic or development, a compact explorative study can be an efficient way to put it on the policy agenda. When much knowledge and previous studies are already available, and a fast contribution to policy making is urgent, a policy brief may be the best option. An interactive presentation can be the key activity if a direct dialogue between policy makers and experts has unique added value to discuss backgrounds

and weigh policy alternatives. Combinations of approaches can be useful and be coordinated over time.

Effective communication. Well designed, science-informed messages should not get lost in the hypes of the day nor stay underused because they are not heard. Therefore, a well designed 'landing' and communication strategy is indispensable, to share the findings, conclusions and recommendations with the relevant target groups (from the prime minister to the general public), using effective methods and (multi)media activities.

Balancing on the bridge to implementation. Part of the craft of an advisory body is communicating its messages and providing them a good landing on the one hand, and avoiding to get an advocate of its own work on the other. If the latter happens, the advisor is no more independent and impartial and loses its credibility. The advisor should bring his messages on the bridge to implementation, but should not cross it, as making policy decisions is outside its responsibility. This does not mean that advisers, who went deep into the matter and may have unique expertise, cannot be invited to contribute to elaborate recommended policies after having been adopted.

Implementation will however be facilitated to a certain extent, since in the beginning (setting the agenda), during the process (input of knowledge and experience), and at the end of the project (communication with target groups), many policy and societal actors who are part of the force-field, are involved and may then more easily recognise and adopt the recommendations.

Monitoring and evaluation. Finally, advisory bodies should *monitor and evaluate* the impact of their contributions. This should be done not only per project but also in general, in the context of a periodical external review of the advisory body's work. This is essential for continuous quality improvement of that work, and for being keen on new developments that may lead to updating findings and recommendations.

For the whole process as described, important safeguards are:

Independence and impartiality. Safeguarding independence and impartiality is essential for its credibility, also given the described required interactions between the advisory body and the various actors with vested interests. This is also necessary for an advisory body to have real added value, avoiding echoing the already existing ideas. In a modern, dynamic society, independence and impartiality cannot be like the splendid isolation of pillar saints but should be anchored by the advisory body's position, but also by process and quality safeguards, such as:

Disclosure of (conflicts of) interests, e.g., by publishing all relevant affiliations of board and committee members on the organisation's website, and by excluding actors with direct interests in a specific outcome of the advisory process from having any influence on conclusions and recommendations.

Transparency of the process of preparing the advice.

Independent external review of draft reports.

Full accountability of the advisory body for all the above to policymakers and the public.

As to the independence and impartiality of the WRR a special safeguard is the Act on the WRR that was accepted by the parliament in 1976, in which was determined that:

the WRR is a council for government policy, not of the government,

decides upon its own working programme, after having received feedback of the prime minister and the cabinet, and

determines its own working processes leading to its analysis, conclusions and recommendations;

that the government is obliged to send a public response to WRR advice to the parliament

and that there is a five years cycle of (re-)appointing council members, deliberately meant to be essentially different from the regular four years periodicity of the election of the parliament.

Working programme

WRR's mission addresses the broad interplay between the fields of science and research on the one hand and politics, policy and society on the other, and this is reflected in its working programme. Broadly spoken, this covers welfare and well being; citizens, democracy and institutions; and the relation between national and international developments. This is reflected in table 1 providing an overview of WRR's publications in the past years, and table 2, showing topics of the current working programme.

Table 1. Some recent WRR publications

2013

- Towards a learning economy - investing in the Netherlands' earning capacity
- Making migration work - the future of labour migration in the European Union
- Housing, healthcare and pensions: reforming and connecting
- Supervising public interests -towards a broader perspective on government supervision

2014

- How unequal is the Netherlands? Investigation and factsheet focusing on economic inequality on economic inequality
- Separate worlds ? An exploration of sociocultural dividing lines in Netherlands
- Strengthening internal checks and balances in semipublic organisations
- Environmental risk and safety policy
- Societal initiatives at the interface of housing, care and pensions
- Towards a food policy
- Using behavioral knowledge in policy making

2015

- Reappraisal of arts & culture
- The public core of the internet – an international agenda for internet governance
- Strengthening the relationship between internal and external oversight
- Mastering the robot - the future of work in the Second Machine Age
- Integration of asylum migrants

2016

- Big Data in a free and secure society
- Own fault ? A behavioral perspective on problematic debts

Table 2. Current WRR topics (2016)

Social policy

- Societal dividing lines
- Future of the middle class
- Migration diversity
- Socio-economic differences in health
- Philanthropy

Economy and sustainable development

- The financial sector and society
- Money creation in the modern economy
- Future of the labour market
- Policy perspectives for sustainable development

Global and European perspectives

- Public tasks in the European Union
- International security and defense policy

A recent innovation in WRR's working programme is its memo to the program committees of the political parties for the next national elections.⁷⁹ This input is based on its work in the past years and focuses on insights and recommendations that are relevant to government policy for the coming years. This fits the council's task to advise independently about long-term issues that are of great importance for society. The council considered this input especially relevant as the political parties' program committees in fact give direction to a new governmental period, and may - amidst all the hectic of the day - need impartial guidance focused on the longer term future.

How does provided scientific advice have impact?

Monitoring and evaluating to what extent and how scientific advice has impact is important to make sure that the advisory process works, and to systematically organize feedback for continuous improvement. This should be done for each project separately, but also periodically for the whole organisation, its methods, and working programme. Accordingly, the WRR has project-specific evaluations, that are also input for independent external audits of the work of the council as a whole. In these audits, also the input of policy makers and other key stakeholders integrated, together with a self-evaluation report with a 'SWOT' analysis (on strengths, weaknesses, opportunities, and threats) by the council itself. Additional basic material for these evaluations is the registration by the WRR of all scientific, professional, press and social media publications and presentations regarding its work, of citations in national and international policy documents, of discussions and decisions of government and parliament, and of concrete policies, legislation, and other (e.g., professional) developments related to its recommendations (societal impact).

Over the past fifteen years, the external audits have concluded that the council's work receives much attention from the relevant stakeholders and is often used in policy making. At the same time, recommendations have been made - and followed by the council - to further strengthen its work regarding, e.g., setting of the advisory agenda, transparency of the working programme, timeliness, product diversification, interaction with government and parliament, and further developing the international dimensions of the advisory work.

It has also been shown, that WRR's work has impact in various ways:

Direct policy impact: an example is the report on the innovation of development aid in 2010⁸⁰, essentials of which have been integrated in the new coalition agreement later that year and have still impact today. Another example is a policy brief on integration of asylum migrants, which has been fastly adopted in local policy making.⁸¹

⁷⁹ Scientific Council for Government. Policy Memo to the program committees. Themes for the next term of government (in Dutch). The Hague, WRR, 2016.

⁸⁰ van Lieshout P, Went R, Kremer M. Less pretension, more ambition. Development policy in times of globalization. The Hague, WRR; Amsterdam: Amsterdam University Press, 2006. Amsterdam University. http://www.wrr.nl/fileadmin/en/publicaties/PDF-Rapporten/Less_pretention_more_ambition.pdf

⁸¹ Engbersen G, Dagevos J, Jennissen R, Bakker L, Leerkes A. (WODC), with the assistance Klaver J and Odé A. No time to lose: from reception to integration of asylum migrants. The Hague: WRR, 2015

Longterm strategic impact: examples are reports on foreign policy,⁸² environmental risk and safety management,⁸³ food policy⁸⁴, and the public core of the internet,⁸⁵ all proposing strategic policy directions for the future. These have been adopted as key features of the government's policies in those fields.

Setting the policy agenda: this has been achieved by, e.g., publications on labour migration in the EU,⁸⁶ social divides,⁸⁷ robotisation,⁸⁸ and using knowledge from behavioral sciences in policy making.⁸⁹

Initiating political and public debate, which, for instance, was the result of publications on a learning economy⁹⁰ and economic inequality.⁹¹

Direct impact in professional fields: publications can, apart from the official governmental responses they evoke, have also direct impact in professional and societal fields, which for example happened with the council's recommendations on

http://www.wrr.nl/fileadmin/en/publicaties/PDF-WRR-Policy_Briefs/WRR_Policy_Brief_-_No_time_to_lose.pdf

⁸² Scientific Council for Government Policy. Attached to the world: on the anchoring and strategy of Dutch foreign policy. The Hague, WRR; Amsterdam: Amsterdam University Press, 2010. (In Dutch, with English summary http://www.wrr.nl/fileadmin/en/publicaties/PDF-samenvattingen/Attached_to_the_world.pdf)

⁸³ Scientific Council for Government Policy. Consistent customization - suggestions for a comprehensive environmental risk and safety policy. The Hague: WRR, 2014 (in Dutch).

⁸⁴ Scientific Council for Government Policy. Towards a Food Policy. The Hague, WRR; Amsterdam: Amsterdam University Press, 2014 (English synopsis: http://www.wrr.nl/fileadmin/en/publicaties/PDF-samenvattingen/Synopsis_WRR-report_93_Towards_a_Food_Policy.pdf)

⁸⁵ Broeders D. The public core of the Internet. An international agenda for Internet governance. The Hague, WRR; Amsterdam: Amsterdam University Press, 2015, http://www.wrr.nl/fileadmin/en/publicaties/PDF-Rapporten/The_public_core_of_the_internet_Web.pdf

⁸⁶ Holtslag JW, Kremer M, Schrijvers E. Making migration work. The future of labour migration in the European Union. http://www.wrr.nl/fileadmin/en/publicaties/PDF-Overige_uitgaven/Making_Migration_Work-web.pdf

⁸⁷ Bovens M, Dekker P, Tiemeijer WL (eds) (2014) Divided Worlds? The Hague: SCP and WRR, 2014.

⁸⁸ Went R, Kremer M, Knottnerus A. Mastering the Robot The Future of Work in the Second Machine Age. The Hague, WRR; Amsterdam: Amsterdam University Press, 2015, http://www.wrr.nl/fileadmin/en/publicaties/PDF-Verkenningen/Mastering_the_Robot_Web.pdf

⁸⁹ Scientific Council for Government Policy. Policymaking using behavioral expertise. The Hague: WRR, 2014. Amsterdam: Amsterdam University Press. English summary.

⁹⁰ Scientific Council for Government Policy. Towards a learning economy. The Hague, WRR; Amsterdam: Amsterdam University Press, 2013 (English synopsis: http://www.wrr.nl/fileadmin/en/publicaties/PDF-samenvattingen/Summary_Towards_a_learning_economy.pdfWRR Foreign policy)

⁹¹ Kremer M, Bovens M, Schrijvers E, Went R (eds). How unequal is the Netherlands? An exploration of the evolution and consequences of economic inequality (in Dutch). The Hague: WRR, Amsterdam: Amsterdam University Press, 2014.

government supervision and internal checks and balances in semi-public organisations.^{92,93,94}

Methodological impact: an example of this type of impact is the influence of a publication on the state of the art and the challenges in the field of futures studies, which is now often used as the standard in this field.²

Of course, combinations of the above often occur. It is especially important to note that recommendations are sometimes too early to be appropriately appreciated but picked a number of years later. For example, in 2013 the WRR criticized current parameters to guide economic development, that mainly focus on short term economic performance, and recommended to develop additional parameters showing the Netherlands' performance on a broader field and also addressing longer-term issues.¹⁸ Three years later, in response to this recommendation, a parliamentary committee confirmed the need for an authoritative tool to define and measure prosperity in a broad sense, and formulated a widely supported proposal to instruct the National Bureau of Statistics to develop a 'Broad prosperity monitor' to be annually discussed in the parliament.

Final remarks: some inherent challenges and learning points

In summary, scientific advisory bodies are responsible for optimal 'puzzling' in order to improve the quality of 'powering.' Their task is to find, define and analyse relevant policy issues, to evaluate and synthesize available knowledge and insights, and to suggest appropriate policy options. In this context, the Netherlands Scientific Council for Government Policy works to achieve its mission at the interplay between the field of knowledge, science and research on the one hand, and the field of policy and politics on the other. Let us end with an overview of ten inherent general challenges for the craft of scientific advice for policy, that we find essential for those who work at the interplay of science and policy:

Combine agenda setting, responsiveness and expertise development. Independent agenda setting (including unsolicited advice) and being responsive to concerns and questions from policy makers (solicited advice) must be combined with building a comprehensive knowledge and expertise base to address the need for advice. Working programme priorities should be reconsidered sufficiently frequently in the light of new developments, while at the same time the available evidence base and

⁹² Scientific Council for Government Policy. Supervising public interests. Towards a broader perspective on government supervision. The Hague: WRR/Amsterdam: Amsterdam University Press, 2013. (English synopsis http://www.wrr.nl/fileadmin/en/publicaties/PDF-samenvattingen/Supervising_public_interests.pdf)

⁹³ Scientific Council for Government Policy. Improving internal checks and balances in semi-public organisations. The Hague, WRR; Amsterdam: Amsterdam University Press, 2014 (English synopsis http://www.wrr.nl/fileadmin/en/publicaties/PDF-samenvattingen/Synopsis_Van_Tweeluit_naar_Driehoeken.pdf)

⁹⁴ Bokhorst M. From incident to prevention. Restriction and strengthening the relationship between internal and external oversight. The Hague, WRR, 2015. (in Dutch)

expertise network must be maintained and further developed. For this purpose, international collaboration is essential.

Connect the long term with today's relevance. Advisers need to connect political relevance as perceived amidst today's hectic, with the long term perspective that is required for 'future-proof' policy making.

Make clear that scientific advice seldomly provides certainty. The study of societal problems and future challenges are generally confronted with knowledge gaps and uncertainties at the time that decisions are to be made. New research to reduce uncertainties in the future can and should be recommended, but decisions for the present cannot await results that take very long. The advisor's responsibility is therefore not only to provide the best available knowledge but also map uncertainties, making clear that deciding under uncertainty is a key characteristic of the craft of policy makers.

Strive for consensus but do not force it. Broad support for the analysis, conclusions and recommendations to the extent that consensus of all experts is reached, will make life of policy makers easier. However, if there is disagreement that cannot be solved by a good discussion, it is important to transparently present this in the report, as this will often concern value judgments that should be reflected in terms of options for policy makers to decide upon. This is how democracy, instead of aristocracy, should work.

Find the optimum level of abstraction of recommendations. Science-based advice for the longer term should be strategic and not executive; it is about the direction, not the details. In doing so, indicating what type of actors can have a role in addressing a recommendation may be helpful.

Make things as simple as possible, but not simpler (a quote attributed to Einstein). Policy makers and media like simple presentations and one-liners, but tend to forget that this is a way to fastly and easily communicate essentials, not to reflect the often complex reality. Adding this disclaimer to communications may appropriately manage public expectations and promote realistic policies.

Build the bridge to implementation but do not cross it. The relevance of a selected topic, but also all the work done and the efforts made by those who gave their best to prepare optimal advice, justify that advisory bodies invest in maximizing the policy impact of their work, while at the same time they stick to their role of impartial advisor and not be an actor in the field of stakeholders.

Strive for timely, not hasty advice. Timely advice, at the moment that decisions have to be made, is important for policy makers, but avoid haste that threatens scientific thoroughness and quality. This also requires wise policy makers who understand the deal that, while advisers should do their utmost best to deliver good quality as soon as possible, there is a minimum of time and resources needed to make that happen. Ignoring this will threaten the quality of both advisory processes and policy making.

Quality and impartiality are conditios sine qua non. If scientific quality and impartiality are not safeguarded, credibility of the advisor is at high risk. This may lead to a 'total loss' of authority and even the raison d'être of the advisory body. Accordingly, externally validated quality processes and procedures to safeguard independent and impartial advice are of vital importance.

Maintain and further develop international cooperation. Both science and policy have longstanding traditions of international interaction. But more than policy, science puts internationally accepted standards of transparency, validity, open criticism, and dealing with misconduct into practice. This is reflected in a much higher score of the public trust in science than in politics.⁹⁵ Therefore, in addition to collaborating in the advisory process itself (see also point 1), scientific advisers also have an important responsibility for optimising international cooperation in general, in the interest of better policies globally.

⁹⁵ Tiemeijer WL, de Jonge J. Trust in Science. Den Haag: Rathenau Instituut and WRR, 2013 (in Dutch)

Towards a Sustainable Development Strategy in Uruguay 2050

Uruguay is a small country in the southeastern region of Latin-America. With a population of 3.3 million people, Uruguay is between two very big neighbors, Brazil and Argentina, and the Atlantic Ocean. Its capital, Montevideo, is the most austral capital in the Americas, distant 3811 miles from the South Pole. Uruguay has been regarded as one of the most liberal nations in the world, and one of the most socially developed, outstanding regionally, and ranking highly on global measures of personal rights and tolerance. Uruguay, unlike other Latin-American countries, has a deeply rooted and stable political party system. It has also a secular State, which was separated from the influential Catholic Church in the first half of the XX century. The British journal "The Economist" named Uruguay "country of the year" in 2013, acknowledging the innovative policy of legalizing the production, sale and consumption of cannabis, same-sex marriage and abortion. These three laws, especially the two last ones, were mostly pushed by the civil society articulating with the legislative

Those three laws, especially the two last ones, were mostly pushed by the civil society articulating with the legislative. They are part of a complex and contradictory array of cultural change in terms of values. Tolerance is higher regarding homosexuals. While in 1996 45% of the Uruguayans said that "homosexuality is never justified", in 2011 only 18% asserted this. However, other issues raise higher intolerance. While in 1996 only 12% of the population thought that people are poor because they are "lazy and lack of willpower", in 2011 the figure raised up to 45% of the population

Like other small countries, Uruguay has decided to explore and anticipate its possible futures. On that basis, it will elaborate a National Development Strategy Uruguay 2050 based on sustainability. Environmental sustainability is one development pillar as Uruguay's territory covers an area of 176,215 km² of which almost 90 %, i.e. approximately 16 million hectares, are devoted to agricultural production composed mostly of natural grasslands. Other pillars of its sustainable development are linked with social, productive and institutional issues.

Uruguay has achieved important results during the last decade. Indigence was reduced to 0.3% of the population and poverty to 9.7%. The income distribution measured by the Gini index is 0.38. These are relatively good indicators in the context of Latin America. But of course these measures are in monetary terms. If we measure poverty with a multidimensional approach (including education, health and standard of living) poverty raises two percent points, reaching 12%.

Uruguay has a high human development index, ranked 52 among the 188 worldwide countries classified by the United Nations. It is the third best country from Latin America. It ranks behind Argentina and Chile because of the education indicators. And yes, education is an unavoidable issue for the future sustainable development in Uruguay. There is full consensus in the society as a whole, the private sector and all the different political parties that education is the most important unresolved problem of the country. However, in spite

of huge increases in public education spending during the last decade, there are no visible results yet. There are of course other educational structural problems not only related to spending.

Another issue linked to sustainable development is gender. Women in Uruguay conquered very early important rights. It was the first Latin-American country in 1927 to obtain women's suffrage. However, currently, female political participation is the worst in the region. On the other hand, in 2012 a law legalized abortion as mentioned above. Still, teenage pregnancy is high and mostly related to poverty. These women have enormous problems to find jobs and continue their education.

An innovative and ambitious National Integrated Care System is being installed by the government since 2015. One goal is to formalize the care service market, mostly offered by women. It also pretends to promote gender equality in caring responsibilities over the lifecycle. Additionally, the system wants to assure excellence in care services to early childhood, elderly people (unlike other Latino-American countries Uruguay has an ageing population) and people with disability. This system will impact women in various ways. A sustainable development is impossible if the same gender model persists in Uruguay. This issue cuts across rich, poor and middle classes.

Uruguay has bet very early to the decarbonization of its economy and has already achieved important goals. In 2015, 98% of electricity was generated by renewable energies (59% hydropower, 26% wind power, 12% biomass and 1% photovoltaic). This was made possible because of the following institutional milestones: a long term (2005-2030) global energy policy, including economic, environment, cultural and social issues, was implemented; the policy was backed in 2010 by all political parties and it has a strong social support; adequate and well-functioning organizations were created or reinforced; and, strong public-private partnerships were implemented to undertake the necessary investments to transform the energy matrix.

On the other side, there are positive contributions (CO₂ removals) because forestation. Uruguay is a country with no net deforestation; this is quite a unique attribute among developing countries. The total coverage of native forests has, actually, increased in the past 30 years.

However, cattle emissions have to change dramatically. Uruguay's production is heavily dependent on food production, and this sector (basically cattle, crops and dairy) accounts for 70% of national exports. Uruguay's total agricultural sector currently produces food for 28 million people, while the country, as noted above, has a population of 3.3 million. Additionally, Uruguay's food production is expected to continue growing in the future, since the country has particularly fertile soils, global demand is on the increase and the country is to contribute to global food security. Uruguay cannot mitigate climate change at the expense of food production, but rather work on improving the efficiency of the emissions per product in the sector. This activity accounts for 78% of domestic CH₄ emissions (due to enteric fermentation) and 63% of domestic N₂O emissions (due to manure left on pasture by grazing animals). For the past 20 years Uruguay has significantly reduced such emission intensity. In particular, as a result of the 2010 Climate-Smart Agriculture Policy, Uruguay has made, and will continue to make, efforts to build a more efficient, resilient and low-carbon cattle farming sector, by introducing new technologies and incorporating successful

experiences undertaken by other countries with similar characteristics. Sustainable development cannot succeed if this is not achieved.

Historically, cyclical economic instability has been the rule in Uruguay. This vulnerability has strong roots in the productive structure as it is composed mostly by natural resource's commodities. For twelve years, Uruguay has been able to sustain growth because of the growth of commodities demand and also because of investments in new activities. The question remains if this recent evolution has armored the economy to resist future fluctuations. The deepening of diversification of the productive structure is unavoidable to achieve sustainable development. The bio-economy is certainly full of opportunities, particularly the use of forest biomass to manufacture, which doesn't compete with food and promises to be a major source of high value added bio-products.

The ICT revolution offers other opportunities to the country's productive diversification. Uruguay is the first country in the world to universalize the "One Laptop per Child" program. The generation that started primary school in 2007 is the first full generation with this educational tool since its early age. However, we still have to observe the results of this policy in the quality of learning. On another side, the country has also universalized the use of electronic traceability in cattle. Uruguay has twelve million cows, each one with a radio frequency tag in its ear. This allows tracing beef from the farm to the plate, essential to ensure beef safety and access the highest income markets. Additionally, there are important developments aiming to strengthen Uruguay's beef production chain by integrated traceability and genomic selection tools, reflecting the technological convergence between ICT and bio-economy.

From its foundation to the present Uruguay's wealth has been built on the base of natural resources. Will it continue to do it in the future? ; Will natural resources generate enough quality work?; Will there be capabilities to protect the soil and water from pressures in their use? ; Will there be externalities in the territories derived from the exploitation of natural resources in the new era of the bio-economy? ; Which will be the new institutions required to govern sustainable development?

These questions above, along with the other posed before about education, poverty, income distribution, environment, the social protection matrix, culture and the gender model have to be responded in some way to be able to think about the future of Uruguay. Recently, there has been an institutional change at the government level in order to create State capabilities to be able to respond to those and other questions about the future of Uruguay in a systematic way with in-depth and appropriate responses.

The Office of Budget and Planning (OPP) created last year the Planning Direction to put the long term development in the government agenda. Until now, the planning activities of the OPP were absorbed by the elaboration and monitoring of the five-year-long government budget and some punctual long term studies elaborated during the precedent years. The last time that the Uruguayan long term development was systematically studied at the level of the government was the so called Comisión de Inversiones y Desarrollo Económico (CIDE) back in the sixties.

The new Planning Direction is a central government foresight agency that puts its view on the professionalization of foresight and its impact on public management and planning. It includes both standardization of foresight methods and better application of foresight to policy problems. It also pretends to consider and include different and sometimes dissenting opinions from all parts of the society and all the political parties.

Uruguay, imitating other small countries, like Finland or Singapore, which have been successful to anticipate their futures and reinvent themselves, is initiating this difficult pathway. However, it has the advantage that these other small countries have already lessons to give from their own experiences, and certainly Uruguay will take them as an asset to create the new State capabilities to construct the country's future.

Figures from the Uruguayan Instituto Nacional de Estadísticas (INE); Uruguay's Intended Nationally Determined Contribution (2015) to the U.N. Framework Convention on Climate Change (UNFCCC) ; the 2015 Human Development Report (United Nations Development Programme) and Uruguay's chapter of the World Values Survey Wave 6 (2010-2014).

Mr. David Gerber, Secretary of the state-based Swiss Strategic Council for the future of the financial market

Advisory board for the future of the financial centre – a new institution of Swiss financial market policy⁹⁶

Background

On 5 December 2014, the Federal Council acknowledged the final report of the group of experts for the "further development of the financial market strategy" and announced that a strategic advisory board for financial centre issues would be created. In this way, it also took account of demands made by Parliament. Based on the proposals of the parties concerned, the Federal Department of Finance (FDF) set up a corresponding "advisory board for the future of the financial centre" at the start of 2015. Its activity is scheduled to run until 2019.

The advisory board is an additional instrument of Swiss financial market policy. The Federal Council presented a comprehensive strategy for the Confederation's financial market policy for the first time in 2009 (see box). Prior to this, the FDF had led institutional talks with the financial sector and developed a conceptual basis. The backdrop for a Federal Council strategy were the significant changes and turning points that had emerged with the financial crisis. These included the intense international cooperation in tax matters (keywords being "administrative assistance", "banking secrecy", and "exchange of information") and also the state bailout of UBS in 2008 by the Confederation and the SNB.

The objectives of the Federal Council's financial market policy can be described using the terms "quality", "stability" and "integrity". The framework conditions for the financial centre should help households and companies achieve a high-quality and competitive range of services, enable a high level of value creation, ensure stability of the financial system and help to preserve the integrity of the financial centre.

⁹⁶ This article will also be published in German in the compendium „haushalten & wirtschaften III – Ziellandschaften 2030 und erste Schritte für eine zukunftsfähige Wirtschafts- und Geldordnung“ 2016.

Box: Important milestones of Swiss financial market policy

2016	<p>Initial recommendation of the advisory board for the future of the financial centre on the stability risks posed by incentives in the tax system to take on debt will be published together with a report by the Administration</p> <p>Federal Council adopts the too-big-to-fail provisions based on the group of experts' evaluation and thus further enhances the resilience and resolvability of systemically important banks</p>
2015	<p>"Advisory board for the future of the financial centre" gets to work</p> <p>Parliament adopts Financial Market Infrastructure Act</p>
2014	<p>Report by the group of experts for the "further development of the financial market strategy": broader focus (regulatory process, stability, taxes, market access)</p> <p>Federal Council adopts negotiation mandates for implementation of the automatic exchange of information (AEOI) in tax matters</p>
2013	<p>Report by the group of experts for the "further development of the financial market strategy": focus on cross-border asset management;</p> <p>G20 countries ask the OECD to develop a global standard on the automatic exchange of information (AEOI)</p>
2012	<p>Report on Switzerland's financial market policy (update)</p>
2011	<p>Parliament adopts TBTF bill to strengthen financial sector stability</p>
2010	<p>Implementation of financial market policy measures, creation of State Secretariat for International Finance (SIF)</p> <p>Final report of the commission of experts for limiting the economic risks posed by large companies</p>
2009	<p>Federal Council adopts the report "Strategic Guidelines for Switzerland's Financial Market Policy"</p> <p>Administrative assistance in tax matters in accordance with the standard Art. 26 of the OECD Model Convention</p>
2008	<p>State stabilisation of UBS by the Confederation and the SNB</p>
2007	<p>Institutionalised talks with the financial sector in response to its "Swiss Financial Sector Master Plan"</p>
2005	<p>FDF guidelines for financial market regulation</p>
2003	<p>FDF guide for financial market policy based on deliberations of the "Groupe de réflexion".</p>

The following article examines the background that led to the establishment of the advisory board, describes its main tasks and how it is organised, and makes an assessment.

Why was the advisory board for the future of the financial centre created?

Various reasons led to the creation of the advisory board for the future of the financial centre:

Firstly, the Swiss financial centre is currently facing many *challenges* that require the careful, broad-based strategic further development of its financial market policy. This includes:

Intense competition among locations: the competitiveness between major financial centres in Europe, the USA and Asia has intensified. The pressure on margins, as a result of modified framework conditions, and adapted business models following the financial crisis have increased the pressure on financial institutions to maximise efficiency. The Swiss financial sector's high share of value creation of about 9.5% of GDP⁹⁷ reflects its large amount of export activities, but it also shows the sector's importance for the national economy.

New technologies: the digitisation of the financial industry brings with it new products, more efficient operating processes and creates opportunities for new providers on the financial services market. Current business models, value chains and regulatory framework conditions must be rethought.

Wave of regulation and new financial architecture: after the financial crisis, new international standards were created or tightened (e.g. AEOI, FATF standards, Basel III, TLAC), and national regulations were revised. In general, the influence of international legal developments is steadily growing. This is also as a result of the new international financial architecture since the financial crisis, in which the G20 plays a considerable role. Although reduced, the regulatory scope for action that still exists at the national level should be exploited as optimally as possible. Cost/benefit considerations become more important in this process.

Macro-economic and monetary policy imbalances: the stability of the financial system remains fragile. Even though system stability in Switzerland was strengthened, for instance with the too big to fail (TBTF) legislation, significant risks persist in the economic and financial system at the international level. This is due to monetary imbalances, failure to introduce structural reforms and the low growth potential of emerging economies. Crises abroad can trigger crises at home.

Secondly, given the significance of the financial sector for the national economy, a broad and full *involvement of all relevant stakeholders* is very important for shaping the framework conditions to ensure they are accepted. At the same time, this contributes to financial

⁹⁷ Cf. Key figures on Switzerland as a location for financial services – April 2016 (www.sif.admin.ch).

market policy coherence. The *experience* gained in recent years with groups of experts in the area of financial market policy was also positive. The discussions among those concerned made it possible to draw up viable reform proposals. For instance, the work of an expert commission led by Peter Siegenthaler, Director of the Federal Finance Administration at that time, resulted in the first TBTF legislation. The swift implementation of this comprehensive and, by international standards, impressive reform was possible only through consensus in the group of experts (including those concerned). Mention can also be made here of the first group of experts for the further development of the financial market strategy, which contributed to changing Switzerland's stance in the area of international cooperation in tax matters (AEOI instead of final withholding tax).

Thirdly, *Parliament and the general public* recognised the *usefulness of strategic advice* for the Federal Council from a broad-based group of experts. Accordingly, there was a call for the continuation of the group of experts in the form of a strategic council (see Motion 14.3923 Bischof).

Task and organisation

Like the two previous groups of experts, the advisory board is chaired by Professor of Economics Aymo Brunetti and ensures regular exchanges on financial market strategy issues between all of the main players. Isolated from the authorities' daily business, the board performs its mandate of assessing the strategic challenges and future prospects for financial business in Switzerland. In doing so, it must consider the interests of the economy as a whole. Based on its assessment, the board submits recommendations to the Federal Council for adapting the financial market strategy and enhancing the framework conditions for the financial centre. The federal government decides whether and to what extent the Federal Council acts on the board's recommendations.

The board is characterised as follows:

Broad range of people: the board has a broad composition and includes representatives of all relevant stakeholder groups (see table). The members are people who enjoy a high degree of decision-making power in their organisations. This should account for the strategic focus of discussions. At the same time it limits the availability of board members. The board generally meets three to four times a year. It may also schedule more meetings if necessary.

Table: Composition of the advisory board for the future of the financial centre (as at July 2016)

Academia	<p>Aymo Brunetti, Professor of Economic Policy and Regional Economics, University of Bern (chair)</p> <p>Susan Emmenegger, Professor of Private Law and Banking Law, University of Bern</p>
Private sector	<p>Patrick Odier, Chairman of the Swiss Bankers Association, Chairman of the Board of Directors of Lombard Odier & Cie SA</p> <p>Axel Weber, Chairman of the Board of Directors of UBS AG</p> <p>Beat Oberlin, Chairman of the Executive Board of Basellandschaftlichen Kantonalbank</p> <p>Urs Berger, Chairman of the Swiss Insurance Association and of the Board of Directors of Mobiliar Holding AG</p> <p>Tom de Swaan, Chairman of the Board of Directors of Zurich Insurance Group AG</p> <p>Alexandre Zeller, Chairman of the Board of Directors of SIX Group AG</p> <p>Martin Neese, Chairman of Forum SRO</p> <p>David P. Frick, Senior Vice President of Nestlé S.A., SwissHoldings and economiesuisse</p> <p>Hans-Ulrich Bigler, Director of Swiss Union of Crafts and Small and Medium-sized Enterprises</p> <p>Daniel Lampart, Chief Economist, Confederation of Swiss Trade Unions</p>
Authorities	<p>Fritz Zurbrugg, Vice Chair of the Board of Directors of Swiss National Bank</p> <p>Mark Branson, Director of FINMA</p> <p>Luzius Mader, Deputy Director of the Federal Office of Justice</p> <p>Jürg Lindenmann, Deputy Director of the Directorate of Public International Law</p> <p>Eric Scheidegger, Deputy Director of SECO</p> <p>Jörg Gasser, State Secretary, SIF</p> <p>Adrian Hug, Director of the Federal Tax Administration</p>
Secretary	<p>David S. Gerber, Deputy Head of Markets Division, Head of Financial Market Policy, SIF</p>

Independence: The board is not integrated into the Federal Administration, but is independent and is not restricted by directives. Although the representatives are nominated by the stakeholders, they are appointed in a personal capacity. It submits a report on its work to the Federal Council at the end of each year.

Confidentiality: The board's work is not public and is subject to the rules of professional secrecy. This should ensure the confidential setting of discussions and at the same time enable information that is not publicly accessible to be used to develop a decision-making basis. In this way, the discussions in the board are not subject to any permanent pressure in terms of official communication or information. Communication of the board's work has to be coordinated with the FDF.

Streamlined structure: The members must actively participate in the preparation of discussion papers frequently. The board does not have its own administrative team. There is just a secretary who SIF has made available for this role. The secretary's tasks are the preparation and follow-up of the content for meetings, which also includes drawing up input papers in collaboration with board members. He performs his work subject to SIF directives and was also appointed in a personal capacity.

Assessment

The advisory board for the future of the financial centre is an innovation in policymaking. Its work should provide valuable impetus for the strategic further development of Swiss financial market policy, especially during a very challenging time for Switzerland as a location for financial services. The following findings have been made at the end of its first year.

The board works. The discussions in the board have triggered, influenced or driven forward more extensive work in different areas in the Administration and the private sector. Furthermore, an initial recommendation for the attention of the Federal Council was drawn up and published.

The discussions can be characterised as long term and strategic. The focus is on pragmatic and realistic deliberations on reform, not least because of the composition of the board, and less on the pursuit of radical proposals.

The chosen institutional arrangement of the board reflects a typically Swiss approach: very broad involvement of the possible parties concerned, while at the same time a streamlined and economical organisational structure, which refrains from establishing a permanent secretariat. Although the initial experience shows that this can work, it is still too early to tell if it will prove its worth in the long term.

The scheduling of the board's activity until the end of the 2016-2019 legislative period will enable conclusions to be drawn about the board's continuation and adjustments to be made to its organisation. However, it can already be postulated from the experience gained that there is a basic need for institutions which develop forward-looking, viable reform proposals. This is not just true for financial market policy, because the ability to successfully implement reforms is crucial for a country's future prosperity.

What will happen to work and capital in the sharing economy?

The term sharing economy refers to the more efficient utilisation of micro-resources through exchange and shared use. The object of sharing can range from ownership (marketplaces for selling and exchanging goods) and restricted access (Spotify, couchsurfing) to selling, renting, exchanging or donating services (TaskRabbit, time banks). The object of the sharing economy can also be capital (peer-to-peer lending and crowdfunding instruments).

The sharing economy is not a new phenomenon per se. Familiar institutions representing the old sharing economy include co-operatives, libraries and the shared-use laundry rooms of housing companies. However, what is new about the sharing economy today is its digitalisation. Global platforms facilitate trading also outside the traditional networks of acquaintances and physical marketplaces. They also create connections between people who do not know each other and people who are geographically distant from each other.

Open source code and Wikipedia are among the pioneers of the sharing economy, as are various recycling-oriented websites. At the same time, it is a question of the transformation of business models. In the sharing economy, production is typically decentralised instead of being owned by a single company. Small and agile businesses and ordinary individuals take advantage of crowdfunding, open data and the advertising models associated with social media.

The sharing economy is growing. Its global cash flow is estimated at approximately EUR 5 billion. While this figure is not tremendously high, the rate of expansion is fast. Capital investments in the sharing economy have doubled for three consecutive years now. In Helsinki, the number of airbnb hosts grew by 71% last year.

The change has already spilled over from online platforms to other sectors of society. At the beginning of May, the City of Berlin implemented substantially stricter regulations on Airbnb rentals, due to the perception that Airbnb is reducing the availability of housing in the local long-term rental market. This came only a few months after Uber suspended its UberPOP service in France following violent riots. In Finland, people are only beginning to wake up to the phenomenon.

What will happen to work?

The sharing economy is a combination of old community-based practices and modern communication methods facilitated by new technology. Besides digitalisation, the erosion of traditional safety nets could be considered another driver behind the new rise of the sharing economy in the Western world: when confidence in social security and the permanence of jobs is compromised, people look to ensure their livelihoods in other ways.

Resources, such as an apartment or special skills, are used to balance out income fluctuations in official working life or to supplement transfer payments.

A growing number of Finns live in a world where their earnings can fluctuate substantially from one month to the next. While social security can partly compensate for periods of low income, due to heavy and unpredictable bureaucracy, it is not something people can fully rely on. The sharing economy is growing out of this uncertainty. It provides opportunities within local communities for the shared use of resources (such as cars or tools) and the exchange of resources, which helps maintain a stable everyday life even in times of lower disposable income. It also offers occasional low-threshold opportunities for earning income.

However, it is obvious that the sharing economy challenges the traditional labour markets. Consequently, the sharing economy, boosted by the uncertainty associated with people's livelihoods, expedites the trend of replacing stable and formal full-time jobs with less certain occasional jobs. There have already been comments—particularly in the transport and lodging industries—about unfair competition. This was in response to major platforms taking advantage of a decentralised structure to play by rules that were originally intended to cover non-professional activities at the micro scale.

With this in mind, it would be essential to think about ways to take the elements of protection and moderation that have been introduced in the formal labour market and transfer them to the sharing economy. Failure to accomplish this would inevitably lead to a situation where the growth of the sharing economy results in weaker general terms of work. It is clear that it will, for instance, increase the number of self-employed people who fall awkwardly between the categories of entrepreneurs and wage-earners in our existing legislation.

What will happen to capital?

In addition to technological development and the increasing general uncertainty associated with livelihoods, the third factor behind the sharing economy is a shift from the ideal of permanent ownership to greater appreciation for the right of use. It is a question of an ecological choice but also of the fact that shared use and ownership are becoming easier.

Many forecasts suggest that the buying of access will grow at a faster rate than the buying of ownership, especially in cities. Owning things no longer gives the owner the status it did a few decades ago and the rapid obsolescence of technology means that it does not always make sense to buy it for personal ownership. Alternatively, buyers have to think about more efficient ways of using things to pay off their investment or to divide the purchase price between multiple users.

At the same time as the change in consumption culture, we may be facing a larger transformation of ownership in the process of the accumulation of capital. In the industrial-era society, the factory was the key location for generating added value. Only the wealthy could afford to invest in large production machines, which meant that capital was accumulated among a relatively small segment of the population.

Futurists predict that this mechanism is now being challenged and will be challenged even more by the proliferation of 3D printing, which facilitates the decentralisation of physical production into small local units, thereby representing a comeback for the traditional idea of the village workshop. In principle, the same type of developments could also be seen in energy production with the introduction of solar panels and other renewable mini power plants.

However, development could also be different. History tells us that capital is inclined to maintain its tendency to accumulate even in changing circumstances. On the other hand, the first phase of the sharing economy has been characterised by monopolisation, with resources concentrated in a small number of popular platforms. If this trend were to continue, it would represent merely a new form of capital accumulation.

Nevertheless, it is no exaggeration to say that we are, at least, seeing new potential for the opposite trend, namely the dispersal of capital. Part of the sharing economy model is that the capital required for adding value is dispersed and the platforms that act as intermediaries for services typically have no more right to the services than a marketplace supervisor has to the products sold by market sellers. This business model challenges the traditional service businesses where companies are slowed down by the costs associated with real estate, vehicles and other fixed assets.

What to do?

The sharing economy is neither good nor bad. It is a structure that is only just taking shape and that, for the time being, contains ingredients for both of these alternatives. With wise politics, we could prevent the threats and redeem the promises.

Currently the national regulation foundation for the sharing economy is practically non-existent, however. There are no rules related to taxation, insurance, protection of privacy and many other issues, and in the meantime, platforms have started to create their own order across national borders. They are forming communities of their own, with their own rules, hierarchies and sanctions.

As a result of monopolisation, some of these platforms are growing and becoming heavyweight companies. This development trend could be turned by, for instance, legislation that would protect the right of platform users to the data they produce themselves, such as photos and reputation assessments. This would make the competitive selection of intermediary platforms easier in the same manner as the right to keep one's telephone number launched the competition among operators.

Federal institutions shaping a sustainable future – Reflections about their structure and how to develop them further

Introduction

During the last years, the number of state-based institutions for shaping a sustainable future has grown faster than before. The concepts of short-termism and long-termism and rights of future generations have become key words in the international discussion about how to form the institutional and legal bases for safeguarding a sustainable future. By now, within several dozens of national constitutions reference to the rights of the next generations can be found. In summer 2013, the Secretary General of the United Nations has published, for the first time, a report on “Intergenerational solidarity and the needs of future generations”. There he has mentioned several national institutions that serve to protect the needs of future generations. Some of these institutions and a few non-governmental organisations have since begun to form an international network in order to exchange informations, share their experiences and strengthen and develop their cause.

This article starts with some conceptual and methodical specifications about what future shaping may be and with a few remarks on the importance of the institutionalisation of this kind of work within our political systems. It discusses already existing institutions for long term future shaping, starting from a national level (taking the case of Switzerland, the author being Swiss), then presents some pioneer institutions in different countries and discerns different kinds of such institutions. and finally giving some information about the new founded UN-institutions in charge of organising and coordinating long term future shaping globally under the sustainable development umbrella. On this basis, there follow some reflections about how to develop all these institutions and their networking further. It is recommended that the already existing state-based institutions for long term future shaping should be strengthened and their competences extended, and in countries where there aren't any, new ones should be established. They can make a decisive contribution to the elaboration and specification of the UN Sustainable Development Goals on a local, national, international and global level. The more thoroughly the goals are elaborated for a concrete political and geographical territory, the better they can be tackled and worked upon.

Long term future shaping

At least since the last century, humanity changes and shapes by its own growth, by implementing its scientific knowledge, technological know-how and organizational power in economics and communication, the face of the earth, with fundamental long term consequences for the generations to come. And this at a still increasing velocity. In order to indicate that humans have become the predominant driver of change at a planetary level in our time, the term Anthropocene has been proposed.

In Switzerland, for example, the area filled with houses, roads, covered with cement and other construction materials has more than doubled within the last sixty years. Household waste has multiplied 3.6-fold, the output of CO₂ 4.5-fold, the consumption of gasoline 15-fold, the amount of private cars 26-fold, the consumption of fuel for aeroplanes more than 40-fold, and the goods transported in transit through Switzerland on the road by lorries, measured in tons per kilometre, more than thousand-fold. – Those few figures suffice to illustrate the huge impact of modern human society on nature. There are other fields of action where human activity has transformed and is transforming our world profoundly within just a couple of years: The households have been filled with all kinds of electronic tools - useful, pleasant and superfluous ones. Industrial over-production has led to the question, “How can people be led to ask for things they don’t really use?”. The annual expenses for advertisement are by now as high as those for the Swiss army. Progress in medicine has led to the prolongation of human life and the treatment of many diseases that previously led to death. On the other hand, modern life has created new diseases as well and confronts us with the question what a dignified life and a dignified death look like. Even goods of daily consumption are imported from all over the world. Food is a good example: It happened that the chive I used to buy in a shop of one of the big Swiss food distributors came from South-Africa, at the same price as if it had been of local origin. To find out which vegetables and fruits are currently available locally, you have to go to a nearby farmer as you are hardly likely to find this information by checking the food available at a usual grocery shop. There are no food seasons any more as even food trading becomes a worldwide enterprise. The basis of the country’s energy household has been changed from coal, water and wood to petrol, water and uranium within just a few years.

Once the industrial goals of production have been reached, and exceeded, we cannot go on making the same things faster, wider and higher. If we keep going that way, it comes to self-destruction. Our world, including human beings, is not designed for that kind of stressful programme. Within this context, long term future shaping has quite a basic and vital meaning: *To conceive ways of living and of human societies and organisation that do not lead to self-destruction, but support human life and assure its long-term future.*

This general term must be specified: How long a time period should we consider? Since our society develops and changes very fast, it can not be too long. 50 or 100 years seem too long a time. Too many factors not known to us may intervene. A generations period, about 15, 20 or 25 years, would be more appropriate. It is a time period that most of us have already experienced consciously. It is quite longer than a legislative period. Most of us shall still be alive to experience the outcome when it is achieved. This strengthens responsibility and commitment of the actors in charge.

We may start thinking about the future of our society as a whole and try to formulate some general ideas and aims for a first orientation. But given the complexity of our society, that is not enough. *We have to formulate goals for the many different fields of action* like mobility, health, energy, inequality and equity, country planing and many others. By this way, future shaping becomes, step by step, more concrete.

Thinking about long term aims can not start out of nothing. One must know how the field of action concerned has developed within, at least, the last few decades, for example since World War II. For Switzerland, the Future Council Foundation has provided a small book with the title “Pathways of development – a basis for shaping Switzerland's future along 45

themes". Every theme is presented on two pages. Its development is described from 1950 until today, with one page of simple graphics, showing the dimensions of the development, and a text-page introducing the key actors and the factors shaping that development. At the end of the text-page, a box with some questions about which pathway to choose for the future invites the reader to form his own opinion. The themes chosen cover a wide range of natural, political, social, economic, environmental and cultural developments. The smaller the political and geographic unit considered is, the easier and more thoroughly is future shaping. It would be fine to have at hand such *thin pathway books* of all countries and regions of the world.

How to specify and formulate *goals*? One can start with good elements of a development that should be clearly strengthened, and new and good elements worth to be added; and with bad ones that must be diminished and avoided. Goals will be qualitatively formulated. Good examples and practises will help to make them more concrete.

Once some goals are formulated, one can start to think about *first steps* and measures for today to be undertaken in order to come nearer to the goals.

This methodical outline should help to make the term long time future shaping more precise. In order to make it an effective tool with a strong impact on our society's decision making, it must be strengthened by particular institutions and become part of our education and everyday culture.

Institutions

Schools, parliaments and governments, public health care, news services, banks, mail services, courts of justice - these and many other institutions and their good functioning are vital for modern human society. Without them, it can hardly exist.

When an institution is established with a specific task, then its work on this specific task is normally characterized by several items:

- it is done systematically and not by chance;
- it is continuous;
- it leads to specific experience and knowledge;
- it is often connected with specific competences and procedures to make possible and influence the development of a society in a specific way.

If an institution is well organized, resourceful and has assured procedures to bring its competences early into decision-drafting and decision-making of a society, there is a good chance for it to be able to advance its cause within society.

During the last decades, several states have realised that traditional political systems are formed in a way that strongly gives priority to short term thinking and decision-drafting, so that long term issues rest behind or are not treated at all. They have understood that this difficulty has become more and more urgent, since our societies produce always more and

graver long term impacts. In order to amend this bias, quite a few new (and mostly still small) state based institutions have been installed or are created now. According to the principle of subsidiarity, this challenge can be tackled within political units of different extensions. To get a better understanding of these institutions, we start with an insight into the state-based institutions for long term future shaping within a particular country (Switzerland).

Switzerland: Several federal institutions – small shoots

Since the beginning of the 21st century, several institutions for long term future shaping and safeguarding the rights of future generations have been created, as well on the level of the federation as within particular cantons.

In the revised federal constitution from 1999, the responsibility towards future generations is literally mentioned in the preamble. And with article 73 sustainability has become its own article: “Federation and cantons aim at a durable balance between nature and its capacity to renew itself on one hand and its use by man on the other hand.” Since Switzerland does not have a proper constitutional court, these items can hardly be used for concrete law suit.

Since 2009 the Swiss government is obliged by parliamentary law to check every affair that it brings to parliament about its consequences for future generations “as far as substantial information can be provided”. Until today, this obligation has not yet become really effective. Only in 37 of the 560 messages brought to parliament by government between 2009 and spring 2016 a mentioning of future generations can be found, and mostly in very general terms without any substantial information and reflection. So an intention to take into account the consequences for future generations can be noted, but a thorough practice does not yet exist.

In reaction to the financial crises 2008, the pressure on the federal government to establish a future or strategic council for economic and financial matters has increased. The Future Council Foundation, collaborating with about twenty federal MP, elaborated a concept for such a council that could be presented to the commission on federal institutions of the small chamber in 2011. In 2014, a member of that chamber made a motion for a similar council. The government had already installed an expert group in 2009. In 2015, the motion was accepted by government and parliament, and a strategic council established by the government, with the members of the expert group. As often in the federation, that council has to work almost without any resources. It meets only three times per year, for one day. Its members are mostly presidents of the boards of directors of several enterprises of the financial market and high officers of the federal administration. Critical thinkers and experts are hardly represented. The council is presided by a professor in economy, and its part-time secretary is an officer of the federal financial administration. The task of the council is to produce recommendations for the government which is free to consider them or not. The group's procedures and its recommendations are confidential and not accessible for public. One can only wonder how this almost resourceless secret group will provide for a well reflected and coherent strategy for the Swiss financial market. On the other hand, the pressure on the council is remarkably high: It is to a high degree held responsible to avoid

further financial crises. (You find more information about the council in the article of David Gerber, the council's secretary.)

Since the nineties, the Swiss government produces a sustainability strategy that is revised all four or five years. Its focus lies on the federal administration. The measures proposed in the report are not binding. Action is voluntarily. In the strategy for 2016-19, aims and measures are, for the first time, clearly structured within a time-frame: long term aims for 2050 (visions), challenges and mid term aims for 2030, and measures to be realised in the period 2016-2019, but still without obligation.

Since 1992 there exists a small federal office for technology assessment TA. Its assessments are used to identify the consequences of new technologies as early as possible. The resulting recommendations are used by Parliament and the Federal Council as an aid for decision making – especially when controversial technology topics are discussed. In addition, project results are communicated to interested politicians, experts from science and administration, as well as the media and interested citizens.

In a few cantons, there exist some particular institutions for long term future shaping, too. The canton of Waadt has been the first canton to embody a special institution for preparing the future in its constitution. This was done in 2002. The regulations followed in 2008. One half of the members of the new body are members of the cantonal government, the other half rectors of the universities of the canton. The institution is part of the presidential department. 2012 it presented a first report to the cantonal parliament with several different scenarios about the future of the canton until 2030. In the canton of Grisons, the parliamentary commission for strategy formulates every four years long term principals for the government. They are voted about in parliament and until now always accepted with large majorities. The principals could be an effective instrument to check and discuss the government's work from a long term perspective. Until today, such a practice has not yet been developed. In the canton of Zurich, the constitutional assembly rejected the institution of a sustainability council in 2005, but only with 44 against 40 votes.

To sum up: There exist several small federal institutions for long term future shaping and to consider preventively the consequences of today's actions for future generations. But some of them are not yet really working and lack a transparent and effective practice. They are not connected with each other to make their efforts more effective. They are hardly known by the public, and often neither among politicians.

Different kinds of state-based institutions in a number of countries

One of the oldest institutions for future shaping that practices future shaping in a way as described at the beginning of this article is the Netherlands' scientific council for government policy, established in the seventies. Its members as well as its staff are mostly scientists and academics. The chairman is selected by an independent committee of experts from the fields of university and policy. He prepares the selection of the seven other members of the council. It is a working council. Its staff counts about thirty scientific collaborators. The council chooses its subjects by itself. It produces different kinds of reports and policy briefs. The reports are public, and the prime minister is obliged to

answer to the report's recommendations. Asked about the political effectiveness of the council's recent work, its current president is used to list several items:

- Direct political impact (Development aid. 2010)
- Strategic direction (Foreign policy 2010, Food policy and Internet foreign policy, 2014)
- Debate (On the Dutch identity 2007, Towards a learning economy, 2013, Economic equality 2014)
- Agenda setting (Labour migration in the EU 2013, Robotisation 2015)
- Direct impact in professional fields (Supervising public interests, 2013)
- Methodological impact (Exploring futures for policy making, 2010)

The Finish parliamentary committee for the future, installed at the beginning of the nineties, meets weekly and deliberates parliamentary documents referred to it. When requested to do so, it makes submissions to other committees on future related matters, which have a bearing on development factors and development models of the future. We may both these institutions, the Netherlands' council maybe even a bit more than the Finish parliamentary committee, consider as quite effective long term future shaping institutions, where future shaping is understood in a specific sense as described at the beginning of this article.

Another kind of institutions allows to thematise, by way of public procedures, developments and actions, practices, laws and rules that are supposed to have a problematic impact on future generations.

The task of the commission for future generations in Israel (2001-2006), installed by the parliament, was to audit the new laws on its impact for future generations.

The basis of the work of the Hungarian ombudsman for future generations is a passage in the Fundamental Law of the country: Natural as well as cultural assets are part of the nation's common heritage, and the state and every person are obliged to protect, sustain and preserve them for future generations. The ombudsman can initiate investigations ex officio as well as upon complaints. If there is a piece of legislation violating the Fundamental Law, he can propose to turn the case to the constitutional court.

As their names indicate, the Parliamentary Commissioner for the Environment of New Zealand, the Canadian Commissioner of the Environment and Sustainable Development and the Commissioner for Sustainability and the Environment of the Australia Capital Territory work in a similar way as the above mentioned ombudsmen in a more restricted field. They provide investigation and information about the proceeding of their governments to protect the environment and to advance sustainable development.

To create new institutions is one way to make long term future shaping more effective and safeguard the needs of future generations. On the other hand, existing institutions can be used for that purpose as well. As Jan van de Venis reports in his contribution, this happens in recent case law. Human rights of future generations are claimed in current climate litigations. The proceeding seems always similar: International climate change norms and data are used to hold individual countries accountable through their domestic courts.

Several claimants in different countries have already won their cases. As a result, governments must for example take measures to reduce emissions, have to protect old forests from being cut down, or are obliged to find a balance between mining on the one hand, and agriculture, social and environmental aspects on the other hand.

Not a few national institutes for technology assessment TA exist by now for several decades. Most of them support their parliaments. They provide public dialogue and knowledge about new technologies and its consequences in order to secure early and well founded opinion making and decision making. The national institutes are connected by its member organisation European Parliamentary Technology Assessment. It counts 13 full members and 5 associates.

One of the outputs of the UN-Earth Summit in Rio 1992 was the Rio Declaration on Environment and Development, together with the Agenda 21 – “a blueprint for action for global sustainable development into the 21st century”. Since then, many states have started campaigns to promote sustainable development within their own territory. Based traditionally on the topics of environment and development, the approach has become more holistic and is by now often described by its three dimensions, ecological, economical and social. The national campaigns have sometimes led to more durable structures, new offices and the elaboration of long term goals. Some governments provide national action plans on a voluntary basis, or try to establish more binding forms, as for example in Wales. There, the Well-being of Future Generations Bill came into force in April 2015. It compounds more than fifty pages and obliges government and many public bodies to formulate their own specific goals in order to promote sustainable development. They are assisted and controlled by a commissioner for future generations and an auditor general. Under the UN sustainable development umbrella (High level political forum, Agenda 2030 (sustainable development goals SDG) and global report on sustainable development) coming into force since 2013, all states of the world are now asked to produce their own national reports about the current sustainable development state and the specific national priorities and aims under the seventeen SDG. With the forthcoming of these reports within the next years, the overview about where this process stands in every country will become more accurate.

To summarise: By now, there exist worldwide some state-based institutions for long term future shaping and to safeguard the needs of future generations. According to the complexity of modern society and to the peculiarities of the political organisation of the different countries, their working methods are of several kinds:

- long term future shaping
- ombudsmen, auditor
- case law
- technology assessment
- sustainable development activities.

Until now, there seem to be only a few countries where these kinds of institutions have a noticeable impact. And within the majority of the world's states, hardly any can be found.

The degree of organisation among these institutions themselves is weak. Only a couple of the TA-institutions are systematically cooperating within a proper member organisation. The long term future shaping institutions and those for the rights for future generations have started networking only recently.

The new sustainable development umbrella of the United Nations: High level political forum, Agenda 2030 (sustainable development goals SDG) and global report on sustainable development

From 2012 onwards, the United Nations have made sensible efforts to strengthen its institutions for long term future shaping and safeguarding the rights of future generations. The High level political forum on sustainable development was inaugurated in September 2013. Its task is to organise and coordinate the efforts of its member states and further stakeholders for a sustainable development globally. In September 2015, the General Assembly passed the Agenda 2030 with its seventeen sustainable development goals, and in the same year the first global report on sustainable development was published. These instruments can provide an effective head-structure for the efforts undertaken by a large number of different stakeholders everywhere in the world. At the same time, the importance of the principle of subsidiarity is repeatedly emphasized. It seems obvious that a good part of the many efforts must be undertaken locally and within states.

So the following frame to advance and bring the world's development into a sustainable frame emerges: The Agenda 2030 provides a global orientation in what direction the world is to be developed. The states and all the other local, regional, and international stakeholders have to specify their own priorities among the many SDG and their contributions as well. The UN-institutions would foster a good worldwide information and coordination. The more stakeholders undertake effective and durable measures, and the better these efforts are coordinated and informed about, the more thoroughly and faster becomes the world's development sustainable.

This sounds maybe a bit complicated. But the world we are living in is complicate and highly interrelated. So we – citizens of this one and common world – have to learn to move and act with a reasonable idea in mind about towards what aims we want to develop our world and how. Ernst Ulrich von Weizsäcker called this “World-Inside-Policy”. There is no out-side to what we are doing. Everything is highly interrelated.

Next steps

Since we are living in a fast developing world that can change its face within decades, it is very important to have clear ideas about the long term goals of the development of our society, country and our world. The UN Agenda 2030 provides but a very general list of global goals. Locally, within the states and internationally, the development goals must be specified and set into an order of priority. The more thoroughly and concrete the goals and the ideas about first steps in order to approach them can be elaborated, the better.

To tackle this task effectively, institutions for long term future shaping are decisive. The existing institutions should be strengthened, and in countries where there haven't been any,

first long term institutions should be established. The traditional technology assessment institutions with their specific field of action and own methods can contribute their share, and should be strengthened and spread, too.

Because quite a few pathways of development of our societies are not durable, institutions for safeguarding the needs of future generations must also be strengthened and spread. They can help to correct these problematic developments effectively and in time. And the more and faster long term issues become negotiable under the perspective of the rights of future generations in case law and in court, the better.

Most of the institutions for long term future shaping are not very strong institutions. They provide information and advise but often don't have much authority and competences to intervene. To make them more effective, they should be given more authority, and their proceeding and interventions should become an element of public and daily life as the work of parliament. In particular, long term institutions could be given some of the following competences:

The right to make propositions of its own concerning long-term issues, the right to be listened to as well as the right to get a serious answer.

The right to bring in its long-term view about issues dealt with by government and parliament in advance (decision-drafting), when those issues have a long term impact.

Discussing its propositions in public.

To call forth people's consultations with options about specific long-term issues to promote people's understanding and forming of opinions as well as to find out their opinion. People would choose between several different pathways and agree or disagree by degrees.

The right to set a delay until an issue has to be dealt with by government or parliament, if the issue has been voted for by the people or decided about by government or parliament but has not been dealt with correspondingly for years.

The right to fill in "constitutional windows", one window for each chapter, with its long-term aims for our society within twenty years. This window-work would fill the gap between the articles of the Constitution, often too generally formulated to ever become operative, and the laws, often resulting from daily discussions and urgent issues and therefore lacking long term reflection. Those windows would be the basis for the discussions between members of the future council and members of parliament and government. Becoming accustomed to this system, government and parliament would learn more and more to take into account the long-term considerations of the future council.

To give more power to the window-work of the future council, the council could be given the right for a qualified veto: If discussions between council and government or parliament did not lead to agreement, the council could bring forward its veto and ask for a majority of, for example, three fifths or two-thirds.

The competences at the top of the list could be given to long term institutions as they already exist today.

To give competences from the bottom of the list to an institution would mean to create a new kind of institution. It would particularly work on the long term and make it negotiable and to a certain degree accessible for shaping. Within the political system, it would give more importance to the long term. It would append traditional government and parliament and constitute a new kind of institution among the basic institutions of democracy (executive and legislative power, court of law, administration). Since today's democracy is by nature short term biased, its actual structure was formed in the 19th century, and the economic, technical and organisational powers of our society of the 21st century produce remarkable long term consequences, it may be appropriate to develop the organisation of the political institutions in a way that enables them better to deal with long term issues in time and rather in a creative than reactive manner.

A further way to strengthen the capacity and impact of long term future shaping globally would be to create more councils like the World Energy Council on different subjects, and to make the elaboration of long term goals for 2030 and corresponding measures a basic element of their work.

The council was formed in 1923. Today it is the UN-accredited global energy body, representing the entire energy spectrum, with more than 3000 member organisations located in over 90 countries and drawn from governments, private and state corporations, academia, NGOs and energy-related stakeholders. Globally, it is the principal impartial network promoting an affordable, stable and environmentally sensitive energy system for the benefit of all. The council informs global, regional and national energy strategies by hosting high-level events, publishing authoritative studies, and working through its extensive member network to facilitate the world's energy policy dialogue.

Similar councils could be created on food, water, mobility, finance, economy, arms and many more subjects, or one could chose the seventeen SDG and organise a World (Future) Council for each theme.

Finally, in order to make long term future shaping an efficient and well understood element within society, it must become a basic element of education and everyday culture. In Switzerland, in the canton of Berne, the revised curriculum for grammar schools provides for every subject a special paragraph about the specific contribution of the subject for an education for sustainable development. The curriculum will come into force in 2017. And the small book Pathways of development mentioned at the beginning will be used for instruction of teachers at Berne University from September 2016 onward.

And as the seventeen SDG of the United Nations are a help for orientation for governments and states in order to promote sustainable development, so are they a very helpful basis to start education in sustainable development at school. The colourful logos of the 17 goals and their keywords can be produced on a large poster and made so present on a wall of the school. Discussion may start about what the goals could mean to students and teachers. Concrete projects by interested classes or groups of students may follow and be realised. All actors in the school are kept well informed. The goals provide much choice, so that one can engage where one likes most and has something to contribute. Step by step, the projects

realised create a proper school-tale that may move others to bring in their share. Teachers and students coordinate and develop their steps. So the structure of action in school becomes similar to the structure of action of states, with the common goal to promote the Agenda 2030 within one's field of daily action.

This article shows that there exist long term future shaping institutions in several counties. It recommends that they should be strengthened, and new ones should be established in countries where there haven't been such institutions yet. Networking and coordination among them are to be strengthened, too. These institutions, connected and coordinated in a federal structure, can make a decisive contribution to the specification of the SDG locally, within states, internationally and globally. Long term thinking and future shaping must become a part of education and of a local-global culture.

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100 Opportunities for Finland and the World. The Radical Technology Inquirer (RTI)

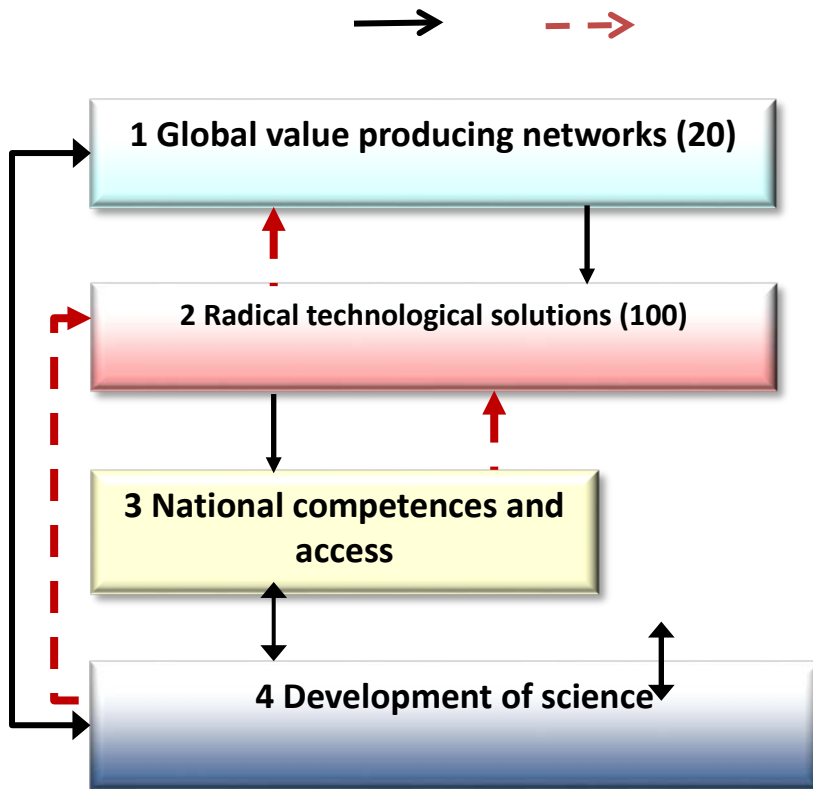
Background and the basic structure of the RTI

In autumn 2012, the Committee for the Future of Eduskunta, the Parliament of Finland started work to develop a method for anticipating the effects of radical technologies on society. As a result of this work, a four level model of radical technologies, Radical Technology Inquirer, was developed and

published in September 2013 in the Finnish report “Suomen sata uutta mahdollisuutta: radikaalit teknologiset ratkaisut” (Linturi, Kuusi and Ahlqvist 2013). The publication has been translated and updated and published in 2014 under the name 100 Opportunities for Finland and the World. The Radical Technology Inquirer (RTI). Based on the crowd sourcing described below, Risto Linturi made the further updating of the list of the 100 radical technological solutions that is published in the English report Technological change 2013-2016 (Linturi 2016). In this paper, we will focus on the methodological features of the Inquirer. At the end of the paper is, however, the first ranking list of 100 radical technological solutions. It describes those technological solutions that in 2013 according to the RTI were most promising.

The four-level model for the identification and evaluation of radical technological opportunities evaluates the significance of radical technological solutions from the perspective of twenty global value-producing networks; Finnish national competences and the Finnish access or presence in relevant markets; and scientific research activities related to the technological solution.

Figure 1. Four levels of the Radical Technology Inquirer and influences evaluated in the pilot study and other in the pilot study not-discussed relevant connections



The 20 value-producing networks aim to cover the added values produced and needed by different actors in society without excessive overlap. Value-producing networks help to detect the potential impact of a technological solution on society as a whole and to detect any needs to change present norms that regulate emerging technologies.

In order to be a radical technological solution that is suitable for the list of 100, the technological solution has to be important for many global value-producing networks (GVPN) or it has to be crucial for some GVPNs. This implies that the radical technological solution will be able to change current practices either by saving costs, easing people's everyday lives or by increasing comfort or by strengthening or weakening power structures. Typically the radical technological solution belonging to the list of 100 does not refer to a single technology but a cluster of technologies that aim to meet some shared challenge. It was anticipated in the pilot study that every selected RTS in the list will be available in the consumer or the user market by 2020, at the latest, and its impacts will be vast by the year 2030. To have been selected on the list, the minimum requirement is that the principles of the solution have already been proved in a scientific publication.

Stages of the evaluation process of the RTSs in the pilot project

The identification of the pilot study list of 100 radical technological solutions and their ranking process proceeded in the following stages:

1. For the identification of promising radical technological solutions, facilitated Facebook pages were opened in spring 2013. In summer 2016, about 1900 persons were registered to the discussion pages. About 130 people have made important contributions to the reports and several hundred people have participated in discussions on the proposed contributions affecting the evaluations. In practice, the most valuable contributions of the crowdsourcing have been suggestions of interesting Internet sources of RTSs.
2. Three experts – Risto Linturi, Osmo Kuusi and Toni Ahlqvist - defined and described the 20 Global Value-producing Networks (GVPN) combining global megatrends, changing consumption patterns and technological opportunities. The three experts have long careers in the anticipation and evaluation of technological development. The three experts considered that in 2030, Finnish people will fulfil most of their needs in the selected 20 GVPNs.
3. The mentioned three experts and vice-counselor of the Committee for the Future Olli Hietanen made systematic evaluation of the future prospects of 100 radical technological solutions referring to 25 indicators. Risto Linturi and Osmo Kuusi made evaluations concerning 5 first indicators (500 parameters). Impacts on 20 Global Value-producing Networks (indicators 6-21, 2000 parameters) were evaluated in face-to-face sessions of four evaluators. The indicators were defined as follows:

(1) *The maturity of the solution* was evaluated on a scale from 1 to 4. The value 1 was given when the solution seems possible based on a scientific, peer-reviewed report. The value 2 was given when a prototype developed in a research institution exists, and value 3 is given when several mutually independent, well-funded institutions have prototypes and invest in further development of the solution. The maximum value 4 for maturity was given when some version of the solution is on the market and the market seems to grow in such a way that further development is worth the investment for commercial reasons.

(2) *The scientific interest* was evaluated on a scale from 0 to 2. The value 1 was given when such scientific research is widely conducted that is on tangent with the solution and advances its development. The value 2 was given when a vast amount of research is conducted on the solution.

(3) *The scope of independent paths of R&D* was evaluated on a scale from 0 to 1. The value 1 was given when product development related to the solution is done widely on commercial markets, public administration or hobbyist markets and in user communities.

(4) *Finland's know-how* was evaluated on a scale from 0 to 1. The value 1 was given when there is significant R&D know-how or research know-how in areas related to the radical technological solution in Finland.

(5) *Finland's access* was evaluated on a scale from 0 to 3. The value 1 was given, if Finnish actors have a clear connection to such a global client base, which could use the examined solution in its own operational area. The value 2 was given if the connection is of such nature that the examined solution could be supplied to products that are currently being sold or it is directly related to them. The value 3 was given, if the above-mentioned terms are fulfilled and the position in the entire potential market segment is strong.

(6-25) *Expected impact of a radical technological solution on a GVPN* was evaluated separately concerning each value-producing network on a scale from 0 to 20. The value 1 was given, if the successful solution can be seen to produce some added value from the point of view of the main value produced in the network. The value 3 was given, if the produced added value can be significant if it succeeds, i.e. at least tens of millions of euros in Finland's scale or it would have a vast impact on people's everyday lives. The value 5 was given, if the potential added value was worth over a hundred million euros or the impact on people's everyday lives is vast and significant. The value 10 was given, if the potential impact is over one billion euros or the impact on people's everyday lives is vast and crucial. The value 20 was given, if the solution is necessary for the main described development of the value-producing network.

4. In crude terms, the general promise of a radical technological solution was calculated first summing on the one hand the first 5 indicator values and on the other hand the 20 indicator values related to GVPNs. The income of these sums gave the index value of the general promise of the RTS.

Concluding remarks

MP Ville Vähämäki, the Chair of the steering group of the RTI construction effort concluded at the end of the introduction of the English edition of the first RTI report:

"I think that the whole EU, EU countries, European companies and other European actors could benefit much from the Inquirer. The Committee for Future has already informed technology assessment units of the parliaments of EU countries (the EPTA-network) about the Inquirer. A suitable way to update internationally the Inquirer and promote its use on national level is a project financed by EU. For example, a project financed in the Horizon 2020 program might be a good choice for Europe. I like to end this preface of the English edition as I ended the preface of the Finnish edition.

The journey is just beginning!"

The hope of Vähämäki realized in July 2016 when the European Commission DG Research and Innovation published the call for tenders N° 2016/RTD/A6/OP/PP-04441-2016.

“Horizon scanning for radical innovation breakthroughs”. An evident source of inspiration of this call was the Radical Technology Inquirer that was also specially mentioned in the call. Now in September 2016, there are good hopes that the whole Europe would benefit from the basic ideas of the RTI.

RTI reports

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Attachment

TOP 100 radical technological solutions from the Global and the Finnish perspective

The radical technological solutions of the 2013 published RTI include also social innovations. Like in the EU commission call for tenders N° 2016/RTD/A6/OP/PP-04441-2016, a more suitable name for them would be radical innovation breakthroughs. The difference between the global ranking and the Finland specific ranking is that the Finnish specific indicators (4) and (5) are not taken into account in the global ranking.

	Radical technological solutions	Global	Finland
****	2.72 Extremely dense processors that take quantum phenomena into account	1	5
****	2.19 Open data and big data	2	1
****	2.13 Freely organizing remote work and organizations that form on the Internet	3	2
****	2.22 Glasses of augmented reality	4	3
****	2.12 Schools in the cloud	5	6
****	2.20 Gamification	6	4
****	2.02 Biochips and biosensors able to diagnose cheaply and rapidly diseases, physiological states and genetic features of organisms	7	8
****	2.28 Cloud computing	8	10
****	2.56 3D printing of goods	9	9
****	2.45 Self-driving car	10	7
****	2.82 Rapidly cheapening solar energy	11	12
****	2.01 Routine and complete DNA sequencing	12	14
****	2.43 Printed cheap biosensors	13	11
****	2.07 Continuously monitored personal health	14	13
****	2.53 Modular robotics	15	17
****	2.40 “Material Radar”	16	15
****	2.99 Electronic money, time banks	17	23
***	2.31 Effortless 3D imaging of parts	18	32
****	2.09 Drugs that prevent dementia	19	16
****	2.32 Real-time 3D modeling of the environment	20	20
****	2.89 Rapidly charging light batteries and supercapacitors	21	18
****	2.21 Interfaces reacting on movements	22	22
****	2.70 Robotic legs and the exoskeleton that reinforces movement	23	24
****	2.74 Antibacterial and other dirt repellent materials and surfaces	24	19
***	2.30 Pattern recognition and pattern search services	25	27
***	2.04 Drugs based on genetically modified organisms	26	30
***	2.54 A walking robot with hands	27	26
***	2.38 Cheap Lidar	28	35
***	2.17 Automatic speech recognition and translation	29	34
****	2.23 Interfaces based on feeling of touch	30	21
****	2.78 Cellulose nanofiber and –microfiber	31	25
***	2.14 Human recognition systems	32	31
***	2.39 Lenseless camera and image construction based on data analysis	33	28
***	2.47 Quadcopters	34	39
***	2.16 Capturing and content searching of personal life	35	40

	Radical technological solutions	Global	Finland
***	2.15 Emotion management in robots and automatic recognition of emotions	36	42
***	2.61 Sensitive robot fingers and hands capable of remote work	37	43
***	2.71 Genetically modified organisms as producers of multi-use materials	38	38
***	2.24 Large haptic screens	39	44
***	2.68 Artificial cell and simulating life on cell level	40	37
***	2.91 Solar heat and long-term storage of heat	41	36
***	2.46 1 or 2 wheeled vehicles for personal or good traffic	42	45
***	2.52 Light continuously flying equipments	43	33
***	2.41 Cheap gas sensors	44	46
**	2.26 Thoughts monitored from brain and action based on them	45	52
***	2.36 Simulation and mapping of brain	46	48
***	2.44 Graphene based terahertz devices	47	50
***	2.29 Grid computing	48	49
***	2.97 Wireless transmission 2.5 terabytes per second (vortex beam)	49	29
***	2.80 Ultralight and strong materials	50	41
***	2.90 Massive storage of energy in high capacity batteries	51	47
**	2.25 Digital mirror	52	64
**	2.60 Robotic surgery and other cutting of biological objects	53	53
**	2.93 Wireless electricity transmission (magnetism) for electric cars and other electrical devices	54	58
**	2.06 Longer life time and slower aging processes	55	56
**	2.51 CubeSat and other minisatellites	56	55
**	2.08 Inside brain implants that restore or develop brain functions	57	59
**	2.83 Efficient and light solar panels	58	62
**	2.35 Universal memory based on new materials and solutions	59	65
**	2.27 Flexible and transparent screens using cheap materials	60	61
**	2.87 Piezoelectrical energy sources, harvesting of kinetic energy	61	51
**	2.98 Multi-channel communication and software-based controlling of information networks	62	54
**	2.18 Crowd funding and micro finance	63	74
**	2.57 3D printing of buildings	64	57
**	2.77 Nanocarbon as a reinforcement or as functional surface	65	60
**	2.34 Predictive analytics based on self-organizing data	66	67
**	2.100 Internet for robots	67	68
**	2.81 Spray-on textiles	68	73
**	2.65 Artificial muscles	69	66

	Radical technological solutions	Global	Finland
**	2.86 Flying wind power and other new ways to produce wind energy	70	71
**	2.10 Repairing and regrowing of human organs, (stem) cell cultivation	71	75
*	2.73 New building materials that replace reinforced concrete	72	77
*	2.84 Artificial leaf and synthetic fuel from the sun light and carbon dioxide	73	80
**	2.85 The production of biofuels using enzymes, bacteria or algae	74	63
**	2.42 Very sensitive camera sensors based on nanocarbons	75	69
**	2.75 Carbon nanotube yarn or thread	76	70
*	2.33 Self-organizing virtual world from the 3D data of the Internet	77	76
*	2.03 Small portable magnetic resonance imaging scanner	78	78
**	2.58 3D and 4D printing of material	79	72
*	2.50 Magnetic or superconductor based levitation	80	83
*	2.05 Nanorobots (nanobots) in the health promotion	81	79
*	2.96 LED "radio"	82	81
*	2.88 Serial production of small nuclear reactors, fission and fusion	83	82
*	2.63 Nanosurfaces that convert air moisture to water	84	87
*	2.37 Quantum computers	85	88
*	2.62 Robo-tailoring	86	90
*	2.48 On-demand personal aviation services	87	84
*	2.76 Nanocarbons in salt or bacteria removal and other separation techniques based on nanocarbons	88	85
*	2.64 Biobots	89	86
*	2.94 High-performance lasers, wireless power transfer, laser weapons	90	93
*	2.67 DNA memory	91	95
*	2.55 The cyber insect	92	91
*	2.92 Inexpensive storage of hydrogen in nanostructures	93	97
*	2.66 Artificial, self-renewing skin	94	94
*	2.11 Synthetic cartilage in human joints	95	92
*	2.59 3D printing of organs	96	89
*	2.49 High-performance lasers, wireless power transfer, laser weapons	97	99
*	2.69 In-vitro meat and meat-like plant protein	98	96
*	2.95 Nanoradio	99	98
*	2.79 Materials that levitate on nanolevel	100	100

New technologies in Poland and an assessment of their impact on the society

In recent years we have witnessed unprecedented technological progress on a global scale. The development of modern technologies has deeply affected the organisation of social life. As politicians and legislators we need to be ready to face challenges related to the development of new technological solutions.

There are many examples to illustrate the social context of the development of new technologies:

- progress in medicine leading to transformations in healthcare systems and the market of medical services.
- automation of production processes or new business models based on digital platforms (e.g. Uber) influencing the job market (number, nature of jobs, ways in which work is performed, etc.)
- small power generation systems (photovoltaics, prosumers) contributing to the transformation of the power generation and distribution systems (these changes will speed up once economically viable energy storage technologies are available).

New technologies bring more than just benefits. Many also create new threats. New technologies often lead to deep controversies and social tensions. This is why from a politician's perspective it is important to keep an eye on such developments, follow in advance new technologies and analyse their prospective impact. *Foresight* and *technology assessment* can be important instruments for that purpose. Finland's experience in the use of such practices by centres, which develop public policies are very inspiring. Technology assessment activities in Poland are much more modest.

Controversies and deep divisions concern both modern technologies, which have been with us for rather long (e.g. GMO or nuclear power), but also those in early stages of development (e.g. nanotechnologies). Discussions on technologies usually deal with safety or undesirable side effects, but can also focus on the ethical dimension (e.g. cloning, cell research).

Instruments for research into the future:

- Foresight - a method for forecasting changes, based mostly on dominant expert opinions in relevant areas; used mostly to develop growth strategies, facilitate the identification of key growth factors and adaptation of polities to such factors.
- Technology assessment - research oriented on analysing growth consequences and the consequences of the use of certain technologies; mostly intended to provide knowledge and support decision-making processes.

Future forecasting and anticipation of changes (including the technological dimension) are firmly rooted in the Finnish strategic planning model. This is shown e.g. by institutional solutions, including the parliamentary Committee for the Future, which has been active for

three decades or the whole network of think-tanks and academic institutions (National Foresight Network). The Poles attach great importance to technological development, as attested by the founding of the prestigious Millennium Technology Prize (often called the Nobel Prize in technology).

In Poland, there are some academic centres (e.g. Forecasting Committee "Poland2000plus" of the Polish Academy of Sciences and independent research centres, involved in forecasting future development trends. They often focus on sectoral studies (which assess e.g. demographic prospects, changes in the labour market, energy strategies, etc.), but interdisciplinary analyses, combining political, social, economic and technological assessment are lacking. One important problem is that there is little demand for such analyses from government bodies responsible for long-term strategic planning.

The years 2006–2008 saw the implementation of a National Foresight Programme, which covered three research areas: Poland's sustainable development, ICT and Security (the project was coordinated by the Institute of Fundamental Technological Research of the Polish Academy of Sciences, acting under a mandate from the Ministry of Science and Higher Education.) Methods associated with forecasting have been also used in developing the document "*Poland 2030*". Third wave of modernity", i.e. a long-term national growth strategy prepared by the Chancellery of the President of the Council of Ministers, under the direction of minister M. Boni (in the years 2011-2012). This document identified the main trends, challenges and social & economic growth scenarios for Poland, as well the guidelines for spatial planning. It focused on the following priority areas: competitiveness and innovativeness of the economy, balancing the growth potential of Poland's regions and the effectiveness and efficiency of state institutions.

Poland is not perceived as one of the world leaders in the development of modern technologies. Nonetheless, it does have certain achievements in this area. Some particularly promising areas include e.g. research on new materials (including graphene - our national speciality), medical technologies or ICT solutions.

Building an innovative economy is one of the priorities of Poland's growth strategy. Devising mechanisms allowing the practical application of research work and support for the implementation phase of new inventions should be seen as crucial. State institutions, such as the National Centre for Research and Development and the Polish Agency for Enterprise Development have an important role to play with this respect. The appropriate use of EU funding is an opportunity to increase innovativeness.

Poland ranks low in innovation rankings. According to the report *The Global Innovation Index 2015, Effective Innovation Policies for Development*¹⁹⁸ we stand somewhere in the middle of innovation rankings. Poland ranked 46th among the 141 countries listed. This is the penultimate place in the EU (with only Romania behind us). Many economists feel that our country may fall in the so-called middle income trap, due to insufficient innovation levels (such economies grow mostly as suppliers of semi-products for more developed countries). An unfavourable regulatory system, the shortage of capital and/or fear of taking business risks, poor collaboration skills (low social capital) can be named as the main barriers responsible for that state of affairs.

⁹⁸ <https://www.globalinnovationindex.org/content/page/GII-Home>

A report of the Central Bank of Poland published in May 2016 - *Innovation potential of the economy - Conditions, determinants, prospects* - presents a thorough analysis of factors related to innovation in Poland's economy. The report hypothesises that the basic growth factors, which have been crucial to the growth of Poland's economy in the past two decades - capital accumulation and growing employment - are being gradually depleted. In the coming years, Poland's economic growth will be increasingly dependent on the increased productivity of production factors, which can be achieved by increasing the economy's innovation potential⁹⁹.

The competition Poland's Product of the Future (*Polski Produkt Przyszłości*) organised by the Polish Agency for Enterprise Development is one of the initiatives designed to promote innovation and identify modern technological solutions with high market potential. The idea behind the competition is to promote modernity, innovation and entrepreneurship. The competition identifies products, which can significantly contribute to improving living conditions. Award-winning projects included e.g. equipment using new technologies to treat hearing impairments in children, low invasion orthopaedic implant systems or a thinner, innovative photovoltaic module.

In 2013 the plebiscite for Poland's invention of the year was won by Cyber-eye - the work of a team headed by Professor Andrzej Czyżewski from the Gdańsk Technical University. This system is made up of hardware and software allowing the integration of equipment designed to follow eyesight, the analysis of brain waves (EEG) and olfactory stimuli. This invention makes it possible to check the state of consciousness of patients in vegetative state. The Cyber-eye allows the patient to establish contact with the outside world, which would be totally impossible using standard methods.

Research on new materials, including graphene are very promising. Graphene is a flat, extremely thin structure, one atom thick, made of carbon atoms combined in hexagons. This material is light and flexible. The electrical and mechanical properties of graphene make it a substitute for silicon in many applications, allowing the production of new-generation integrated circuits, which may revolutionise electronics. Polish scientists were the first to develop an industrial method of manufacturing graphene. In 2011, the Institute of Electronic Materials Technology and the Department of Physics of the Warsaw University informed that they had jointly developed a technology to obtain large fragments of high-quality graphene. In 2015 the Technical University of Łódź presented a device to produce graphene from the liquid phase, which allows the production of large graphene flakes with properties close to its theoretical properties. This product was called HSMG (*High Strength Metallurgical Graphene*). A spin-off called *Advanced Graphene Products Sp. z o.o.* is dealing with its marketing and developing prospective applications. In 2016 the HSMG method was patented in the EU and USA.

For a long time science has not played a sufficient role in Poland's economy. This is beginning to change. In August 2011 the Council of Ministers adopted the National Research Programme drawn up by the Committee for Scientific Research of the Ministry of Science and Higher Education. One of the goals of the programme is to increase innovation in our industry through closer cooperation with scientific circles. This is supposed to translate

⁹⁹ http://www.nbp.pl/aktualnosci/wiadomosci_2016/20160530_Raport_innowacyjnosc.pdf

into an increased effectiveness of Poland's economy and narrowing the gap between Poland and the more developed countries.

The National Research Programme lays down the strategic guidelines for scientific research and development work, which should significantly contribute to Poland's economic growth. The Programme identifies seven strategic directions. Three are related to technologies dealing with power engineering, materials and one to IT, telecommunications and mechatronics. One deals with the natural environment, agriculture and forestry, another with Poland's economic growth in globalised markets and the two remaining with medicine and national defence.

Increasing innovation in our industry calls for mechanisms, which will boost demand for research useful to the economy. Developing systems, which will promote private investment in the scientific sector is worthwhile. Cooperation platforms are required to ensure that scientific institutions and business organisations decide to collaborate in developing innovative solutions for the economy. We need programmes, which will secure funding for applied research oriented on practical applications, which can be then implemented in the industry. Such programmes are developed and co-financed by the National Centre for Research and Development - an executive agency supervised by the Minister of Science and Higher Education. The NCRD finances R&D work in applied research, as well as the marketing and transfer of R&D results to the economy.

Programmes designed to support scientific research and R&D financed with EU funds in the framework of dedicated operational programmes play a special role: Innovative Economy (2007-2013) and Smart Growth (2014-2020). It would appear that especially small and medium-sized enterprises should invest in R&D and implementation. As a general rule, such enterprises have a greater capability to develop and adapt innovative solutions. On the other hand, they face the greatest problems with securing external funding. This is why it is precisely small and medium-sized enterprises should be an important beneficiary of EU funding.

National parliaments may play an important role in stimulating debates on the prospects of technological development. Parliaments are natural places for unbridled debates between speakers holding different views, but enjoying public trust. They are a ground for the confrontation of different views and building consensus. MPs also have a controlling role in supervising government activities, which often deal with issues concerning the development of science and technology. In Poland's parliament this is the role of the standing Committee for Digitization, Innovation and Modern Technologies (*this thought to be potentially developed in the presentation with additional information of the Committee's work*).

When designing public policies, decision makers should aim for evidence-based policies, take account of worldwide trends, new standards and other countries' experiences. This is why it is important to develop an appropriate expert base and apolitical advisory institutions, which will support the MPs in their law-making activities. Summing up, we should salute the Finnish initiative, as the conference "For the next generations" has allowed the sharing of experiences and the presentation of good practice in developing long-term, responsible development policies for future generations.

Law-making and debates on new challenges should never take place without regard for global dynamics or megatrends, i.e. economic, social or cultural trends, which seriously affect all the aspects of our lives. Observing trends and forecasting their influence on the global order could take place in a dedicated research unit working for the parliament (modelled e.g. on organisations, which make up the EPTA network). Such activities would promote change in the ways public policies are developed, from reactive to proactive, capable of reacting to elusive, not immediately visible, but significant global changes. Such an institution, working in support of parliamentary committees, would help define new, long-term challenges facing Poland. It could also assess proposed legislative solutions in the aspect of long-term national and social interests. As of today, there is no institution effectively performing this function. In the past, this role was to a certain extent played by the Government Centre for Strategic Studies, but it worked mostly for the Council of Ministers, rather than the parliament (this centre was liquidated in 2006).

The European Parliamentary Technology Assessment Network

The European Parliamentary Technology Assessment (EPTA) network has been founded on 17 June 1992 in Brussels by six European organisations carrying out technology assessment activities for their respective parliaments: OPECST (France), STOA (European Parliament), TAB (Germany), NOTA (Netherlands), POST (United Kingdom), and DBT (Denmark). Since then the network has grown considerably¹⁰⁰ and now comprises 18 members, covering the major part of Europe and stretching beyond its borders.

While there is no official mission statement, the main aims of EPTA can be said to organise professional exchange between its members and to contribute to spreading parliamentary technology assessment in the whole of Europe and beyond. On the EPTA website it reads: “EPTA aims to advance the establishment of technology assessment as an integral part of policy consulting in parliamentary decision-making processes in Europe, and to strengthen the links between TA units in Europe.”

How EPTA functions

EPTA always had and still has a light organisational structure and is no formal association. However, it has given itself a few organisational rules, which developed over time:

(1) Activities

Over time EPTA has developed a number of more or less regular activities:

The *Council meeting* also takes place annually and is a half-day organisational session in the presidency’s capital, usually in the premises of the national parliament. The Council takes all formal decisions. There are no fixed voting rules, but the practice is that the presidency seeks a common understanding shared by all; usually majority voting is avoided.

The *Directors’ meeting* is an annual three-days working retreat of the directors of all members in the current presidency’s country. Usually observers do not participate in this retreat and members are only represented by two persons maximum. This allows the group to discuss in-depth current organisational and strategic issues as well as to develop new activities, such as common projects. No decisions are taken by the directors, so no formal voting procedures apply.

The *Conference* is an annual one-day symposium organised in the premises of the presidency’s parliament. Its main aim is to attract and to involve many members of

¹⁰⁰ We should note, however, that over the years EPTA has also lost two members: VAST, the Italian PTA committee was for a number of years no longer functional (but seems to be revived in 2016); viWTA/IST, the Flemish TA organization has been closed in 2012.

parliament of all EPTA countries (and beyond), therefore it has a specific, up-to-date topic of interest for parliamentary work. Usually the conference has several sessions with expert keynotes and comments by parliamentarians.

The *Practitioners' meetings* are irregular, but usually biannual three-days working retreats of staff of EPTA members, organised by the practitioners themselves, led by one member institution. The practitioners choose one topic of common interest, such as a methodological question, the communication of TA results, or how to improve the impact of TA projects, and exchange their views and experiences against the background of their national cultures of doing TA. So far eight such meetings took place (Netherlands 1988, Austria 2000, Switzerland 2002, Belgium 2004, United Kingdom 2006, Norway 2008, Germany 2010, Austria 2015).

Comparative Reports: Recently the presidency is regularly organising and seeking input for an annual comparative report on conference topic of the year. On the basis of a template with a few questions, each member institution contributes with a short report (approx. four pages) from the point of view of this country. The presidency summarises these country reports and presents a synthesis. So far, there have been four such reports, namely on Energy transition in Europe (2006), on Productivity in Europe and the United States (2014), on Innovation and climate change (2015), and on The future of labour in the digital era (2016).

Projects: Occasionally, a group of EPTA members carries out a major collaborative project. While in some cases there is external funding for such projects (e.g. by the European Commission within the research framework programmes or by the European Parliament), the genuine EPTA projects have to do without any external funding. So far there have been only two such projects, namely on ICT and privacy in Europe (2004-2006) and on Genetically modified plants and food (2006-2008).

Internet activities: EPTA has an Internet website (eptanetwork.org) providing members' profiles, a database for policy-briefs and projects, as well as a news feed. Furthermore, there is a Facebook page and entries in the English and German Wikipedia.

(2) Membership and observer status

There can be only one member per country. For full membership the following criteria apply:

The respective institution

- operates in Europe (as defined by the Council of Europe),
- is devoted to TA or related activities,
- serves the parliament,
- has its own budget and secretariat,
- has a competence regarding issues with a scientific and technological component.

An institution can apply for associate membership if one of the above criteria for full membership is not met, for instance if it does not operate in Europe (this is currently the

case with Russia and the USA) or has not yet an own budget. More recently, the EPTA Council did not allow institutions to become (associate) members, which do not have a relationship with their national parliament. They have been asked for a letter or document providing evidence that this applicant is indeed serving or currently establishing close ties with the respective parliament.

All other institutions failing on more than one of the above criteria may be granted observer status from the current presidency. This decision is only valid for those meetings that this presidency is organising, so that the next presidency is not bound to invite all those who have been observers in previous years.

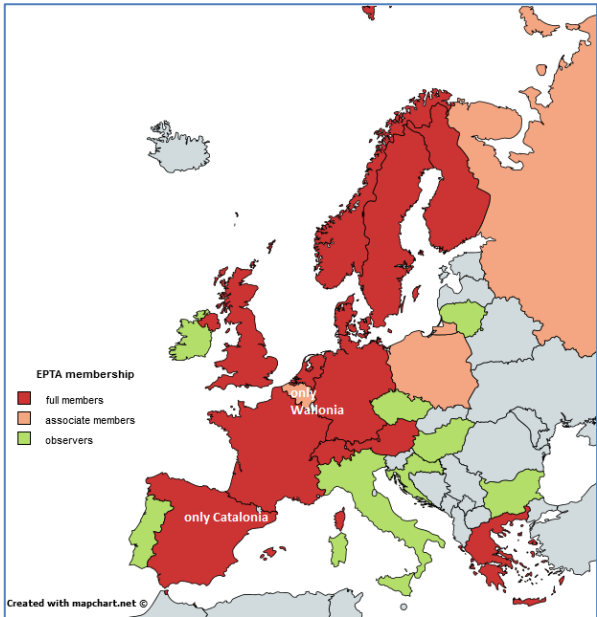


Fig. 2: Members and observers in Europe (as of August 2016)

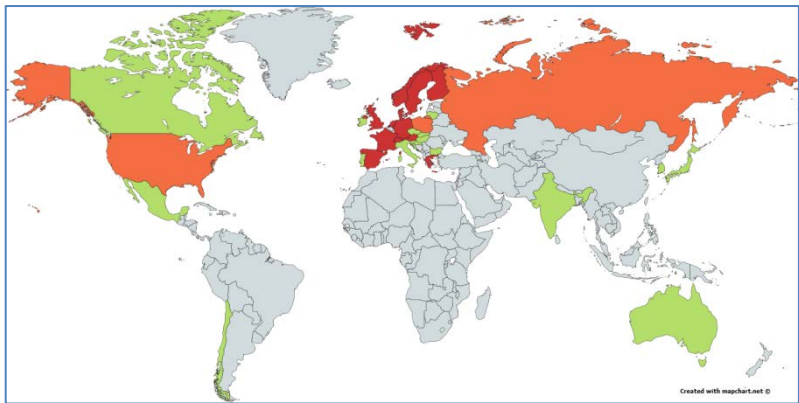


Fig. 3: Associate members and observers in the world (as of August 2016)

(3) The presidency

The presidency rotates annually among the full members. The decision who will be the next president is taken by the Council for the forthcoming year, after previous debates among the directors.

The tasks of the presidency are

- to represent EPTA externally, i.e. receiving and answering letters addressed to EPTA;
- to foster internal cooperation and exchange
- to prepare and chair the three annual EPTA meetings (directors' meeting, Council, and annual conference, see below) and to take notes of these meetings;
- to cultivate the external network of EPTA, including to administer membership issues;
- to invite observers to the meetings;
- to keep the EPTA website up-to-date and to amend the internal archive of minutes, letters, and decisions taken.

On the future of EPTA

As of mid-2016 and from the personal perspective of the current Austrian EPTA presidency we can point at the following current developments that will certainly shape the future of EPTA as an organisation:

EPTA is still widening. On the one hand, the impetus of the EU-funded project PACITA¹⁰¹ triggered considerable PTA or PTA-like activities in the participating countries, in particular in Bulgaria, Lithuania, Hungary, the Czech Republic, Portugal, Wallonia, and Ireland. In the meantime SPIRAL, the Walloon TA institution has been accepted as associate member in 2015, Portugal applied in 2016, and we expect further applications soon. In Italy PTA seems to get revived in 2016. Finally, there is the hope that the European Commission might fund a new PACITA-like project, with a view to including more countries. On the other hand, we observe a growing interest from all over the world. Russia, for instance, became interested in connecting to EPTA and became an associate member in 2015. At the time of writing we have received two new applications for associate membership from Japan and South-Korea, and Chile and Mexico have recently set-up parliamentary TA units and ponder closer relationships with EPTA. Furthermore, the observer network is growing constantly, stretching out to Australia, Canada, India, Slovakia, Ukraine and the Balkan region.

EPTA is slowly deepening. While the traditional activities, such as the directors' meetings, the conferences, the practitioners' meetings, have consolidated and found their fixed place in the agendas of EPTA members, over recent years, the level of cooperation among EPTA members is rising further. It seems that, as opposed to the more complex larger common EPTA projects, the network has now found a suitable format for regular cooperation,

¹⁰¹ See pacitaproject.eu; the project has run from 2011 to 2015.

namely the annual comparative reports on the conference topic. This has triggered a lot more communication among the members. The recent relaunch of the EPTA website on the basis of a new database allows for potentially more exchange on TA results and activities, not least by a collective TA news feed and an EPTA news channel. In addition the members agreed on more exchange with regard to their policy briefs: in the meantime most members have also an English version of them, so that all others have better access to the results of the network members. Furthermore, the public relations' staffs have started a closer cooperation in communicating TA.

Both developments combined hint at a bright and sustained future of EPTA.

Mankind is not the world

“Why doesn’t anybody do anything?” – a frequent question about where the world is going, isn’t it?

Typically, the person asking isn’t doing anything and has no intention of doing anything for anyone other than him- or herself. I suppose that’s fine. After all, there are many people who don’t even look after themselves. But the question is also baseless, as there are many recent and well-known examples to the contrary:

Edward O. Wilson, in an essay he published on 29 February 2016: “Half of the Earth’s surface and seas must be dedicated to the conservation of nature.”

Bill Gates, in his annual letter on 22 February 2016: “The world needs a miracle to solve climate change. When I say ‘miracle’, I don’t mean something that’s impossible. I’ve seen miracles happen before.”

Leonardo DiCaprio at the Oscars on 29 February 2016: “Climate change is real. It is the most urgent threat facing our entire species. Leaders of the world: it is time to respond to mankind’s greatest challenge.”

There are many people who, through the decades, have not only made statements like this on one occasion, but actually devoted large parts of their lives in some shape or form to saving the world. But they face an even larger group of people who have wasted their energy to assert that things are better than ever. Both groups have it right – although the latter group only in a short-sighted and biased manner.

The planet and mankind

It is likely that the hundred billion galaxies in the universe hide at least ten billion planets with conscious life. That’s more than the number of people on Earth. As a thought exercise, let’s imagine that there is a neutral observer whose job it is to classify these planets and award grades to them.

Most of the planets would probably be home to several species of life, and many of them would have a species that represents the pinnacle of evolution in that world and exercises autocratic control over it. The richest planets would have millions of different species and, on some of them, they would have been successful in maintaining the balance of life for hundreds of thousands of years. Having discovered planet Earth in the Milky Way galaxy, what would our surveyor pay attention to? Would we receive good grades?

I expect the surveyor would be delighted by the colourful riches of our planet: its mountains and diverse waterways, its atmosphere and clouds, coral reefs, rainforests, sandy beaches,

sunrises and sunsets, glaciers, islands, deserts, the incredible range of species, and maybe even our cities and roads. Our surveyor would note that the millions of species on this planet have reached this point through the winding flow of evolution over a period of some 3.5 billion years. He would be enchanted by the different climates around the planet, the changes in seasons and the varying amounts of light during each day, all of which naturally support the diversity of Earth's species.

The observer's attention would, of course, also be drawn to the dominant species on the planet, one that has only been around for a fleeting moment, merely one one-hundred-thousandth of the total timespan of life on Earth. That's like five minutes out of a year. This species—Cro Magnon—has taken it upon itself to reproduce, develop tools, shape the terrain, enslave, exploit everything he sees and boast about his achievements, which he calls culture.

It is a militant and power-hungry species. The nastiest part of its destructive technology has only existed for three seconds – again if one year were equal to the history of life on the planet. It appears that this species is now destroying the most valuable heritage of its planet in an even shorter period of time.

The observer would focus on mankind's values, which are narrow and superficial. It seems that having a dominant position among the planet's species is not enough for it, so this creature also wastes tremendous resources on its internal power struggle. The horrendous problem with the attitude of this species appears to be a complete disregard for the world it inhabits; to it, the interests of the species are synonymous with the interests of the planet. Power, and particularly its subtype of financial power, is the one-eyed goal accepted by the majority of the species. The dominant cultural creature has no long-term plan about the future of the planet. Instead, it carries on with an attention span measured in milliseconds on the previously mentioned scale.

The observer draws a conclusion that is similar to that of some other galaxy it has visited in the past: the pinnacle of evolution may become a grave affliction for its planet. Healing would require the species to engage in intense self-criticism and a drastic change in its attitude regarding its rights. The lack of honest assessment and replacing honest assessment with unfounded self-righteousness has become the largest problem faced by this planet. The observer continues his rounds, moving to the Milky Way's neighbouring galaxy, and leaves a brief message for the group on Earth that calls itself mankind. The message has three parts.

Values

In the message, the observer first calls attention to how mankind's values have withered away. That subtype of power known as financial power has become permanently associated with material greatness. This is a short-sighted attitude. Instead of emphasising the good, it emphasises the rights of the strongest and, therefore, quantity over quality. There is no ethical or aesthetic foundation for this attitude. The observer urges mankind to condemn narrow-minded complacency, to think about the future of the planet on a time scale of at least thousands of years, to value the irreplaceable natural riches created as life has evolved

to take its current forms and their ethical and aesthetic brilliance, and to create a deep and far-reaching plan for the planet instead of superficial and petty power struggles.

As a little carrot for mankind, the observer writes that, over the long term, the Earth could develop into a giant work of art in space, where all life forms mature side by side, where they all have a justification for their existence, and where the size of the human population would remain at a reasonable level from one millennium to the next, engaging in its culture as a harmonious byproduct of the cyclical movement of matter and energy. He exhorts us to reject the damaging impacts of religions and the illusion of the anthropocentric ethic. He also reminds us that beauty means being natural, not unnatural. He issues a particular warning about a phenomenon that has insidiously infiltrated modern society as a painkiller for the disease that afflicts us. It acts as a drug that alienates large groups of people from the problems of human civilization. Frivolous entertainment in its countless forms makes people blind to the dangers that threaten their planet in the coming decades. Mankind is cavorting in momentary pleasures, shiny things and possessions.

Mankind could yet develop into the great artist of its galaxy. As it stands, it is well on the way to decaying into an entertainment-addicted clown. But the observer understands that a fundamental shift in attitudes requires generations of thinking in order to achieve acceptance, as Cro Magnon is a social animal.

Action

During his visit, the observer notes an amusing aspect of the way mankind spends its time. It is a model that other living beings have not adopted. Largely based on the distorted values discussed above, mankind has placed tremendous emphasis on a pair of activities that feed on each other on a reciprocal basis. Man calls it the union of production and consumption. For some unfathomable reason, this union—and particularly its volume—has been elevated as a value worth pursuing. Its magnitude is measured on the planet-wide scale, it is fought over and the individuals and groups called nations who achieve success by this measure are held in high esteem.

It seems that the dominant species on the planet has unwittingly become a servant to a system that lacks deeper meaning. The observer has seen similar phenomena on some of his previous assignments and he has noticed that meaningless high-volume activity quickly leads to the deterioration of the planet and, ultimately, to suffering for the dominant species responsible for it. Before that final outcome, all of creation—as mankind playfully calls all living things—has borne the brunt of the consequences of this foolishness. It is a process that tends to accelerate, which the dominant species has failed to see.

Irritated by the lack of a deeper meaning behind all that activity, the observer adds a comment to his feedback for the planet to note that the entropy of the universe is always increasing, and intentionally adding to it will not have pleasant ramifications for the offender. In his message, he issues a stern warning against short-sighted activity and the superficial appreciation of its results. He invites the dominant species to focus on deeper spirituality and culture, and to appraise the results of its activities on the scale of millennia rather than decades.

Again, the visiting observer wishes to wrap up the section by emphasising a key point. He has noted that, as the centuries have gone by, the population of the dominant species has risen to an inconceivable level. He urges the dominant species to compare the size of its population with that of a close relative, the mountain gorilla. There are 10 million humans on the planet for each mountain gorilla. Even closer relatives, such as the Neanderthals, have already been entirely eliminated by the Cro Magnon. This scandalous behaviour doesn't stand up to any kind of scrutiny, neither ethical nor aesthetic.

The observer gravely calls mankind's attention to a key question that has been entirely forgotten. What would be the size of the human population that the planet could withstand from one millennium to another? And what would be the key justifications for that choice? And what would be the timetable for achieving that result, and what would be the methods to get there?

First aid

In spite of his good advice, the observer is in low spirits. He sees that man, as a social animal, relies on a long-established method for solving problems that has been given the grand name of democracy. It's a nice and genial model of governance, one that mankind always disregards when it's time to go to war. It involves a great deal of dishonesty and hypocrisy, but it's a widely accepted lesson that a pleasant lie is better received than an unpleasant truth. The tools of democracy are endless meetings, sessions, seminars, symposia, working groups and committees. A lot of time is wasted on all that prattle. The observer proposes a bold change to how decisions concerning the entire world are made. Global issues, such as population growth, land use and the protection of waterways and biodiversity must be entrusted to a collegial body consisting of politically independent and indisputably wise representatives of the species.

The observer is also puzzled by a strange contradiction. Why has mankind, a species so boastful of its culture, not analysed its future options, prepared long-term plans, made decisions on radical measures and the timetable required for them? Why does it not take advantage of available resources such as military forces and put them into good use? Why is the war machine not obligated to defend the future of the entire planet? Why is it allowed to continue to engage in damaging acts, destroying itself and many other things along the way? Redirecting armed forces to positive objectives—either directly or by reallocating funding—would be a solution for obvious problems of gigantic proportions.

The planet is facing massive challenges that, in many cases, have a mutually accelerating effect on each other. Its atmosphere, lands and oceans are in the throes of large-scale harmful changes and its most shining attribute, the diversity of its species, is deteriorating. While all of these negative changes are aimed at the planet's basic nature, they will inevitably take their toll on mankind as well. Is the goal mass suicide at the planetary scale? Does this behaviour indicate a complete disregard for future generations? Is this foolishness intentional or thoughtless?

The observer concludes that it's a question of the thirst for power among some individuals, which is a basic trait of living beings much like the reproductive drive, and a fundamental fuel for evolution. Wisdom and the thirst for power do not seem to be able to coexist in the same individual. When you combine this negative trait with the obedience of a social animal, the end result is what it is. Even the subset of the dominant species that calls itself the intelligentsia is part of the scheme. Tremendous resources are directed towards satisfying the thirst for power, when those same resources could be used as tools for wisdom. To sum up, the observer suggests that Earth is a fine planet that deserves a better mankind. He concludes his message with a question:

“Why doesn't everyone at least do something?”

MP Sari Tanus, Committee for the Future, the Finnish Parliament

Who has the power / the right to speak in the name of/to/for/against next generations?

Who, where and when does making a decision concern “life”, “death” and “living”?

are the rules of democracy and the rules of equality in the “vision power” - media, tv, radio, newspapers, internet, social media?

Can decision-making be based on facts?

Do we notice enough the power of manipulation of media?

Can, for instance, women in the name of all women, in the name of all people, neglect democracy, neglect equality, the rights of others?

Does personal pain or fear determine political decisions?

We are living in a quickly changing, hectic world, where different values and philosophical ideologies strive to prevail. The minority’s voice may through media gain ground and what originally was a perspective of the minority can in time turn into and be considered a modern and progressive ideology or philosophy. This philosophy can be supported with some scientific studies and publications and slowly the philosophy is considered as a foundational fact of life, and everyone else’s philosophy is assessed according to it.

Do we have the courage to stand against “the progressive currents” of, example, the media, or does fear of getting the stamp of old-fashioned or fear of hurting someone else’s sense of justice ultimately prevent us from making decisions we deem right? These are questions I have found myself asking lately.

Many values and truths that stem from Christian culture heritage are being currently questioned, although the whole Western democracy and welfare have their origin in lasting Christian values and have been built on the principles rising from lasting, Christian values.

The professions of midwives and gynaecologists have in history been important, respected professions – these professions have after all been involved in helping to bring new life to the world. The beginning of life was once much more respected than it is in our times. These life-protecting and life-preserving professions are nowadays harnessed to terminate lives in an organized manner.

The situation in Finland

According to the Finnish constitution, everyone has freedom of speech and religion. However, to the surprise of many, one’s conviction can become a serious obstacle in advancing in one’s career, getting hired or getting a study place. I am speaking of conviction

that respects the life of the little ones, and not wanting to participate in terminating a precious life.

In Finland, there is no statutory right for conscientious objection in healthcare to refuse to terminate life on grounds of ethical or religious conviction.

Euthanasia is not legal here and we do not execute capital punishment after one's birth. However, terminating life before one's birth, killing foetus, abortion is legal.

Here the patients have rights and they should be well taken care of.

But health care professionals do not have the important right to refuse to terminate a life on the grounds of personal conviction. Here health care professionals are not taken care of.

In practice, the situation is such that in Finland, it is not possible for a physician to specialise in gynaecological diseases and deliveries unless one is ready to perform abortions. This special field and all scientific research related to it remain ruled out for physicians with a personal conviction.

Sadly, many midwives are not even hired to hospitals or their work contracts do not get continued because of their deep conviction. The professions of obstetrician and midwife belong to the dream job lists of especially girls, but sadly, for many it is not possible to consider these jobs do to their conviction.

Besides Finland, in the EU Sweden, Bulgaria and Czech have the same situation: health care professionals do not have a statutory right to refuse to participate in performing abortions. According to our knowledge, in all the other EU-countries this right is guaranteed in the legislation or it is otherwise realized in practise.

The Citizen's Initiative

In order to get a change to this regrettable situation, hard work began in 2014: We organized a citizen's initiative calling to give a statutory right to conscientious objection in health care on grounds of ethical or religious convictions. The initiative aimed to give equal possibilities to study, to work and to advance in one's career for those who cannot participate in performing abortions. The initiative got nearly 70 000 supporters.

The Parliament had a lively debate on the issue. In some of the statements the different bodies gave, and also in the media reports, threatening scenarios were given of deterioration of women's position in the society, availability of abortions generally and the worsening situation of patients. Many MP's reacted extremely strongly to the issue. The initiative did not even speak of the woman's right to have an abortion, but still that was fiercely defended in the discussions.

The right to study and to work, to advance in one's career, the freedom of speech and religion guaranteed in the constitution, and the correct contents and purpose of the initiative were all neglected and the Parliament dismissed the initiative with clear majority.

I heard many false accusations. Many of those working in the health care service and representatives of trade organizations strongly opposed the initiative and got back-up from the media.

What happened in reality? The proper contents of the initiative did not even get discussed. Many of the MP's had already formed their opinion on how to vote before the initiative was debated. So, when the issue was discussed at the Parliament, many did not even pause to think about what the initiative was about.

In various contexts, it became clear to me that abortion for many was a too difficult or sensitive issue due to one's own experiences, due to a friend's experience, or due to work history. Pain and emotions related to it came to the fore. A defence reaction replaced proper handling of the issue. The issue was to be quickly dealt with. Personal pain or a pain of one's loved one started to determine the actions.

Overcoming fear in our societies

Fear was a visible emotion when a few persons came to wish me strength and told they hoped to see a change in our legislation, but this only happened in private conversations. In the meetings and in the parliamentary sittings they sat quietly. When the voting took place they voted according to their parliamentary groups or opted out of the voting altogether. Fear of presenting a deviating opinion and the affect one's opinion might have on one's position became the determining factor. This is a clear example of a case where personal pain and fear determined also political decisions.

When the fears and wounds of the decision-makers affect the political decision they make, it has an effect on the future generation's possibilities also. Here we are speaking of professions that are essential for the continuance of life and healthy societies.

I have to ask, is it right that those persons, who hold human life in great value regardless of its size, age, capability to function, place of living and productivity, are ruled out? Who has the right to decide that they are to be ruled out? Is this right for the future generation's possibilities?

In high-quality healthcare, the social skills and the ability to empathy in addition to professional knowledge and expertise are essential factors for medical staff to do their work properly. This becomes very difficult if one is forced to work against one's conscience.

The freedom of speech, the freedom of religion, and the freedom of conscience are, or should be, the basic elements in the Western democracies. Please, tell us, help us, how can we reach these values in our societies?

Thank you.

Tuulikki Tepora, Master of Arts (Education), Class Teacher (Finland)

The Parliament of Finland decided on November 2014 to change the law of marriage to include same sex marriage. This means that if the law comes into effect on the 1st of March 2017 also male and female couples can get "married" in Finland. Up until now Finland has had legal provision for the so called registered partnership between same-sex couples.

This proposed change to the marriage law came to Parliament through a citizen's initiative called Tahdon ("I Do") 2013 campaign. According to law 50 000 signatures were required for the initiative to move forward in Parliament and Tahdon - campaign gained over 166 000 signatures. The huge success of this initiative was possible partly because of the effective media influence. Different opinions arguing for the traditional view of marriage between a man and a woman were largely suffocated in public media. The traditional views were not heard, sometimes not even allowed. This citizen's initiative for same-sex union was accepted by the parliament after a vote despite the fact that the Legislative Affairs Committee had rejected it on December 2014. In Parliament 105 voted for and 92 against the same sex marriage bill.

There was also much speculation of the use of terminology, namely was it misleading to talk about 'marriage equality'. This terminology was used when signatures were collected. But was that meaning enough clear to citizens? We doubt that.

And it is not only about simply changing marriage law. It has now become obvious that this change will affect over 200 other laws. Many laws have been changed already. In its own report the Legislative Affairs Committee of Parliament rejected Tahdon - I Do 2013 - initiative because it found it wanting. Both the Legislative Affairs Committee and the Ombudsman for Children pointed out that there should be a thorough evaluation of the impact on Children before the law is passed. Such evaluation is required both by the law of Finland and the UN convention of the Rights of the child. Such evaluation was not done. The initiative of Tahdon 2013 proceeded to Parliament and was accepted against the recommendation of the Legislative Affairs Committee and without the proper evaluation of the impact of the law on children. This political decision is in conflict with the principle that such far-reaching change in family law should not be made without thorough evaluation of the impact of such legal change on children. This is also in conflict with political decisions and values.

On March 2016 The Finnish Board of Education published a new set of guidelines for schools to be used for drawing up new curriculum. The name of this document can be freely translated as: "Working for equality takes great skill - A Guide for advancing gender equality in comprehensive education." The first edition was published 2015 and the second edition in 2016. The same sex marriage law has clearly influenced the contents of the second edition. This guide creates a tension with the Finnish law that presumes the existence of two sexes - man and a woman - by claiming that there are more than two sexes (or genders) that all should be treated equally. This guide collapses the meanings of sex, gender, gender identity and gender expression creating a serious confusion for the reader. According to this guide teachers are required to accept that there are more than two sexes or genders that should all be treated equally. Here we have a very strong question about

values. It is obvious that there are many kinds of girls and boys, women and men. The gender expression can vary between female and male. But the sex of an individual is genetically based, man and woman.

The guide prompt educators to avoid calling students boys or girls based on their external traits. Educators must naturally be sensitive and recognize individuality and personality in every child. However in practice the recommendations of this published guide means that a teacher is not allowed to call pupils boys and girls. If this instruction is put in practice, what would be the attitude towards those educators and parents who still talk about girls and boys? Such instructions feel totally unnecessary anyways, because being sensitive to each child's individuality and personal character has already been a part of basics of curriculum and these concerns have been put in practice among educators for many years.

It is alarming that the guide by Board of Education was published without hearing the views from teachers and parents. Rather The Board admitted to the newspapers that they only heard views from ideological groups that want to push the new gender neutral norms into curriculum.

We may ask how many teachers or fathers and mothers are ready for not to call children girls and boys? How many teachers or fathers and mothers are ready to think that there are more than two sexes? How many agree that gender is purely a matter of one's can self-identification and one's own feelings?

Curriculum is binding on teachers. Many teachers and parents are deeply concerned about the contents of this gender neutral curriculum. Is there any more room for open and free discussion? Many parents are worried about their rights to raise their own children according to their own values. It is difficult to teach that there are many different genders and same time hold to the biological fact that there are only two sexes. It is hard not to call students girls and boys, when these terms are very practical in everyday teaching job - they are clear and more importantly true to the genetic reality. It is hard to dispute the sex of a child when it is so obvious from the birth.

To hold the conviction that marriage is between a man and a woman and that children born in such unions have right to their own biological parents, mother and father, and to grow in their care, is a very deep ethical value. Gender neutral union changes profoundly our understanding of parenthood. According to this new understanding child may have two mothers or two fathers, or even several parents!

Gender neutral union dismantles the foundation of our marriage law which is based on our common Christian heritage. Gender neutral thinking is an ideology that aims to change the structures, institutions and relations in our society. It has already changed attitudes and impeached moral and ethical values. Biased media has boosted the success in this change. And now the marriage law and educational curriculum are in the line of fire in this ideological attempt to bring societal change.

If by political decision we abolish marriage as a union between a man and a woman, how would it impact on such basic freedoms as freedom of conscience and freedom of religion and freedom of speech towards those who disagree? If teachers and parents hold a different

world-view will they be discriminated? Is state going to intervene to save the children from their parents or suspend teachers, who see things differently?

I am thinking about the future of education and it makes me wonder whether different values can co-exist equally in school education so that our schools will remain as schools for everybody. Is the alternative to have more ideologically oriented schools out of which parents can choose for their children one that suits their world-view best? In Finland education is compulsory, but it is not compulsory to attend school. Should we have more homeschooling where parents take responsibility for the education of their children because they cannot accept the curriculum in public schools? Will the change in society lead us to legislation where society in the end will assume the responsibility for education of children and young people and take parental rights away, if necessary, by force?

Politicians represent the people and it is important that they act justly in their decision-making. Their task is to maintain peace in society and uphold democratic principles of equality and of the freedom of speech, freedom of conscience, freedom of religion. Our society is changing fast and that requires purposeful evaluation of things that are good and valuable and worth keeping and also the direction of where we want to go. Respecting others and recognizing the uniqueness of every individual and accepting differences are Christian values that are needed for building a better and more equal Finland and world.

Finnish wellbeing: remarkable, yes; notable, undeniably; but is it also sustainable?

A new governance framework, endorsed by the OECD, may provide us with an answer.

Every so often, progress strikes root in the most unfavorable circumstances.

Visit Uusimaa region, on the coast of the Gulf of Finland, and witness: a Nordic place, only 2°C above the threshold to be considered subarctic. In winter, days will last some 5 hours. Finland, a flat plot of land that stretches far into the north, dim and frigid half the year, is the most sparsely populated country in the European Union. It was also a latecomer to the industrial revolution.

Fairly hostile for planters and plowers, ironically enough, everything else flourishes in Finland: civil liberties, educational performance, economic competitiveness and technological innovation. Unrivalled by most other nations, in 2015, Finland topped the World Human Capital index in a World Economic Forum report. In 2012, it ranked 2nd in National Happiness in an Earth Institute survey. In a turbulent epoch, fraught with uncertainty, it was celebrated as the most stable place in the world.

The headquarters of Santa Claus and his international package distribution outfit, Finns know very well that gifts do not present themselves – rather, it takes solid, meticulous work to deliver them. The government invests heavily in healthcare, scientific research and infrastructures. Tertiary education is free. In 2014, the World Economic Forum ranked Finland's tertiary education first in the world. Finns are, evidently, the best students in the class.

Unfortunate Finns: first class situated, they are nevertheless strapped to their seats on "Spaceship Earth". They too, are "passengers on a little spaceship, dependent on its vulnerable reserves of air and soil", as portrayed by Mr Adlai Stevenson, a former American Ambassador to the UN. Like any other nation, progressive or not, Finland is facing a polluted planet, short on resources.

Under harsher settings than ever before, pressured by external and internal vicissitudes, the country will have to test and apply new philosophies, principles and policies, to sustain its national wellbeing.

This may not be a smooth sail. Applicable ideas of how to sustain progress – like the very resources that facilitate progress – are in scarce supply.

Sustaining social and national development: inappropriate ideas

Around the Baltic Sea, and elsewhere, the question of how to sustain development^{102, 103} is arguably one of the utmost intellectually, ideologically and administratively challenging dilemmas of our times. Certainly, the need to avoid social, economic and environmental decay is a pressing concern facing 21st century governments in capital-constrained, competition-driven and fragile environments.

There is nothing contemporary about these concerns. The science of social decline and development is eons-old. Since perhaps Ibn Khaldun's *Muqaddimah* (1377) and the more recent *Decline and Fall of the Roman Empire* by Edward Gibbon (1776-1788), the study of social progress and decay, of the rise and fall of civilizations, and of long-term socio-economic transformations has attracted great scholars and scholarship, as well as great statesmen and statesmanship. All of whom have offered many explanations of social and national decline. Few, offered remedies.

This is a front-page list, including Giambattista Vico (in his *New Science*), Baron de Montesquieu (his *Spirit of Laws*), Max Weber (in his seminal *Protestant ethic and the "spirit" of capitalism*), Karl Wittfogel (*Oriental Despotism*), and Carroll Quigley (the popular *Evolution of Civilizations*), as well as present-day theorists, such as Jeffrey Sachs (in *Government, Geography, and Growth* and *Tropical Underdevelopment*), Jared Diamond (in his bestseller *Collapse: How Societies Choose to Fail or Succeed*) and Niall Ferguson (*Civilization: The West and the Rest*).

However, a careful read through these hypotheses validates their inability to capture the full spectrum of causal factors of the decline and development of 20th century societies.

The former researchers – Vico, Montesquieu, Weber, Wittfogel and Quigley, present a limited-in-scope analysis, if not anachronistic ideas, and therefore, inappropriate for governance in the 21st century. The latter – Sachs and Diamond, dismiss other important determinants of social progress. Those scholars have focused on civilizations as the subject of the process of decline and development, rather than on nation-states.

Other intellectuals, such as Ronald Wright (*A Short History of Progress*) offer little relief, leaving the the civil servant with propositions that are too general to be usefully applied:

“...the reform that is needed... is simply the transition from short-term to long-term thinking... from recklessness... to moderation.”¹⁰⁴

¹⁰² Sustainable development is “development that ensures non-declining per capita national wealth by replacing or conserving the sources of that wealth; that is, stocks of produced, human, social and natural capital” (United Nations et al., 2005, p. 4).

¹⁰³ United Nations, European Commission, International Monetary Fund, Organization for Economic Co-operation and Development, World Bank, 2005, *Handbook of National Accounting: Integrated Environmental and Economic Accounting 2003*, Studies in Methods, Series F, No.61, Rev.1, Glossary, United Nations, New York, para. 1.21

¹⁰⁴ Wright, R. (2004): *A Short History of Progress*, House of Anansi Press, p. 131

At other times, intellectuals will suggest deterministic models where development itself leads inevitably to decline, such as Wright's self-reinforcing "Progress Trap".

The Finnish government has very little to do with an "environmental-determinism" theory of development, an "oriental despotism" thesis, a "cultural-ethnic" theory, or an "inclusive institutions" theory (proposed in 2012 by Acemoğlu and Robinson).

Most theories, capturing only some explanatory variables of societal decay, cannot provide Finnish policymakers with evidence-based policy prescriptions for sustainable development. Nor can they offer Helsinki guidance on how to avert potential decline and beat a path toward sustainable wellbeing.

Most theories, yes; but not all theories.

There is one idea that does work: a theory that best explains social and national development, it is called the Capital Theory Approach to Sustainability, or simply, the Capital Approach.

The Capital Approach – Managing Finland's Broad Resource Base

At the heart of the capital approach lies the premise that every national administration, including, naturally, the Finnish administration, has a multi-faceted portfolio of assets at its disposal: natural, economic, human and social, and institutional assets. Together, these assets comprise four capital stocks.¹⁰⁵

The Capital Approach underscores the important – this article argues, the most important – yet under-recognized role of governments in managing this portfolio of capital stocks.

Historically, this role of governments has been overshadowed by their focus on managing economic welfare and GDP growth. Development, prosperity, progress or well-being, at any given time, has never been an explicit policy focus until recent years.

Perhaps in older times, less populated times, the focus on economic growth and GDP was justified: human development could be assumed to increase more-or-less in concordance with GDP. Economic growth was categorically a positive thing. This is no longer the case. Particularly, as the world bumps up against capital constraints and socioeconomic shocks: debt burdens, credit crunches, Euro-Zone crises, Brexit, civil disorders, migration of skilled workers, biodiversity loss, water scarcity, climate change and air pollution, among others.^{106, 107}

¹⁰⁵ OECD (2013): *How's Life? 2013*, OECD Publishing, Paris

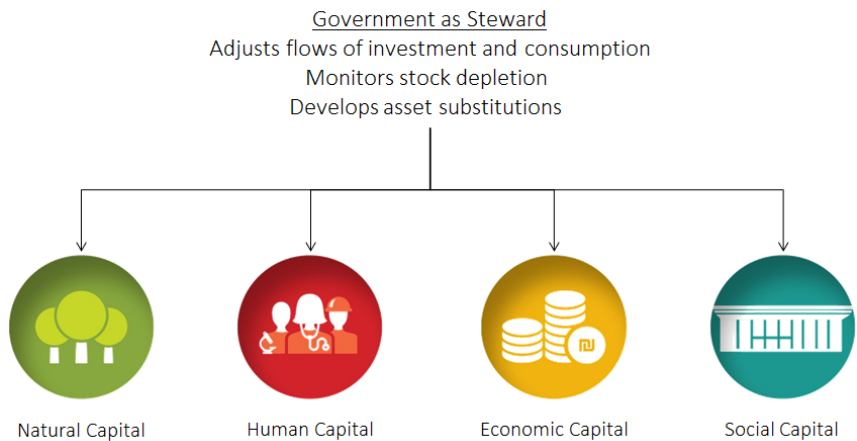
¹⁰⁶ Stieglitz, J.E., Sen, A., Fitoussi, J-P (2009): Report by the Commission on the Measurement of Economic Performance and Social Progress, Commission on the Measurement of Economic Performance and Social Progress

¹⁰⁷ Costanza, R., Kubiszewski, I., Giovannini, E., Lovins, H., McGlade, J., Pickett, K.E., Ragnarsdóttir, K.V., Roberts, D., de Vogli, R., Wilkinson, R. (2014): Development: Time to leave GDP behind, *Nature*, 505, 283–285

Focusing on GDP alone, as a proxy measure for wellbeing and sustainability is, admittedly, nonsensical. And quite myopic. Governments should direct their attention to the state of the "factors of production" of wellbeing and progress – the four capital stocks which they steward on behalf of society (see illustration 1 below).

As outlined in the OECD’s *How’s Life?* (2013), sustaining well-being outcomes over time requires the preservation of four types of capital stock for future generations: (a) economic capital, (b) natural capital, (c) human capital, and (d) social capital.

Illustration 1. Governments as Stewards of Capital Stocks



The OECD’s imperative echoes the Hartwick–Solow rule for the sustainability of well-being – “a non-declining capital stock over time” (Solow, 1986; Repetto, 1986).¹⁰⁸

A lengthy account of the evolution of the term “capital” and its interdisciplinary expansion is included in the Stiglitz, Sen and Fitoussi Report on the *Measurement of Economic Performance and Social Progress* and in the UNECE, OECD and EUROSTAT’s *Measuring Sustainable Development*. Both present the term’s evolution from the original uses in macroeconomics in the aggregate production function, also known as the exogenous growth model or the Solow Growth Model¹⁰⁹, to its current uses, in its broadest sense.

According to *Measuring Sustainable Development* (2008, p.44): “All goods and services can be viewed as being produced through the use of capital, normally in conjunction with human labour. Since the concept of sustainable development demands that a very broad

¹⁰⁸ Tzachor, Asaf (2015): Report on the Measurement of Sustainability, State of Israel, the Ministry of Environmental Protection, Jerusalem, available at:

<http://www.sviva.gov.il/infoservices/reservoirinfo/doclib2/publications/p0801- p0900/p0808.pdf>

¹⁰⁹ Solow, R.M. (1986): On the Intergenerational Allocation of Resources, *Scandinavian Journal of Economics*, 88: 141-149

view of consumption be taken, then it is necessary to take an equally broad view of capital”.¹¹⁰

The Capital Approach – Stocks and Assets

In broad terms, the four capital stocks comprise an index of tangible and intangible assets that together are affected by national decisions taken today and contribute to the production of well-being (or progress/development) in the future (see illustration 2 below).

According to Smith et al. (2001)¹¹¹ and UNECE (2008) capital stocks are defined as follows: Economic Capital consists of both financial capital and produced capital, such as roads or machinery.

Natural Capital includes extractive natural resources that are being harvested to enter economic production (such as minerals, oil, fish and water, among others) but also non-market resources with amenity values (such as biodiversity or landscape for recreational activities) whose services are critical to the health of humans and ecosystems. Natural capital differs from other forms of capital due to the irreversibility of some natural assets when they are used (over-exploited).

Human Capital includes labour, knowledge, skills, health and attributes embodied in individuals that, together, create personal, social and economic progress and well-being.

Social Capital, the least understood of the four¹¹², comprises a range of factors related to the capacity of people to cooperate in a society, including trust, security, and social norms. It has been defined as “the network of shared norms, values and understanding that facilitate co-operation within and between groups” (OECD, 2001, p.119).¹¹³

Traditionally, “social capital” has been viewed in one of two ways: either as an individual resource or as a resource of communities; cities, regions or countries. According to the “individual perspective”, members of communal networks, with high level of “social capital”, would benefit from strong personal networks based on reciprocity and financial

¹¹⁰ United Nations (2008): Measuring Sustainable Development, Report of the Joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development, United Nations, New York and Geneva

¹¹¹ Smith, R., Simard, C., Sharpe, A. (2001): A Proposed Approach to Environment and Sustainable Development Indicators Based on Capital, Prepared for The National Round Table on the Environment and the Economy’s Environment and Sustainable Development Indicators Initiative, UNECE, 2001

¹¹² Scrivens, K., Smith, C. (2013): Four Interpretations of Social Capital: An Agenda for Measurement, OECD Statistics Directorate Working Paper, OECD, Paris

¹¹³ OECD (2001): The Wellbeing of Nations: The Role of Human and Social Capital, Centre for Educational Research and Innovation, OECD, Paris

aid in an emergency, and from diverse networks of associates that give access to crucial resources (Bourdieu, 1986¹¹⁴; Lin, 2001¹¹⁵; Coleman, 1988¹¹⁶; Boxman et al., 1991¹¹⁷).

According to the communal-collective perspective, social capital is to be understood as a feature of societies (Putnam, 2000)¹¹⁸. “Community involvement and social contacts give rise to the standards, values and behaviours that benefit the whole of society”, Turcotte claims (Turcotte, 2015)¹¹⁹. In this collective view of social capital, “one of the fundamental characteristics of communities with a high level of social capital is the tendency of citizens to trust one another – even if they do not know each other” (ibid). In a country known for its communal saunas, this is intuitively understood.

Studies based on the communal-collective view found that when a society has high levels of social capital, “children perform better in school... and economic growth is stronger” (Kay and Johnston, 2007; Scrivens and Smith, 2013).¹²⁰

While certain capital stocks and assets may have a bigger impact on some dimensions of societal decline and development than on others, each of the four capital stocks contributes in one way or another to outcomes in all dimensions of decline and development.

¹¹⁴ Bourdieu, P. (1986): *The forms of Capital*, Handbook of Theory and Research for the Sociology of Education, published under the direction of J.G. Richardson, Greenwood Press, New York

¹¹⁵ Lin, N. (2001): *Social Capital: A Theory of Social Structure and Action*, Cambridge University Press, Cambridge

¹¹⁶ Coleman, J. (1988): *Social capital in the creation of human capital*, American Journal of Sociology, vol. 94.

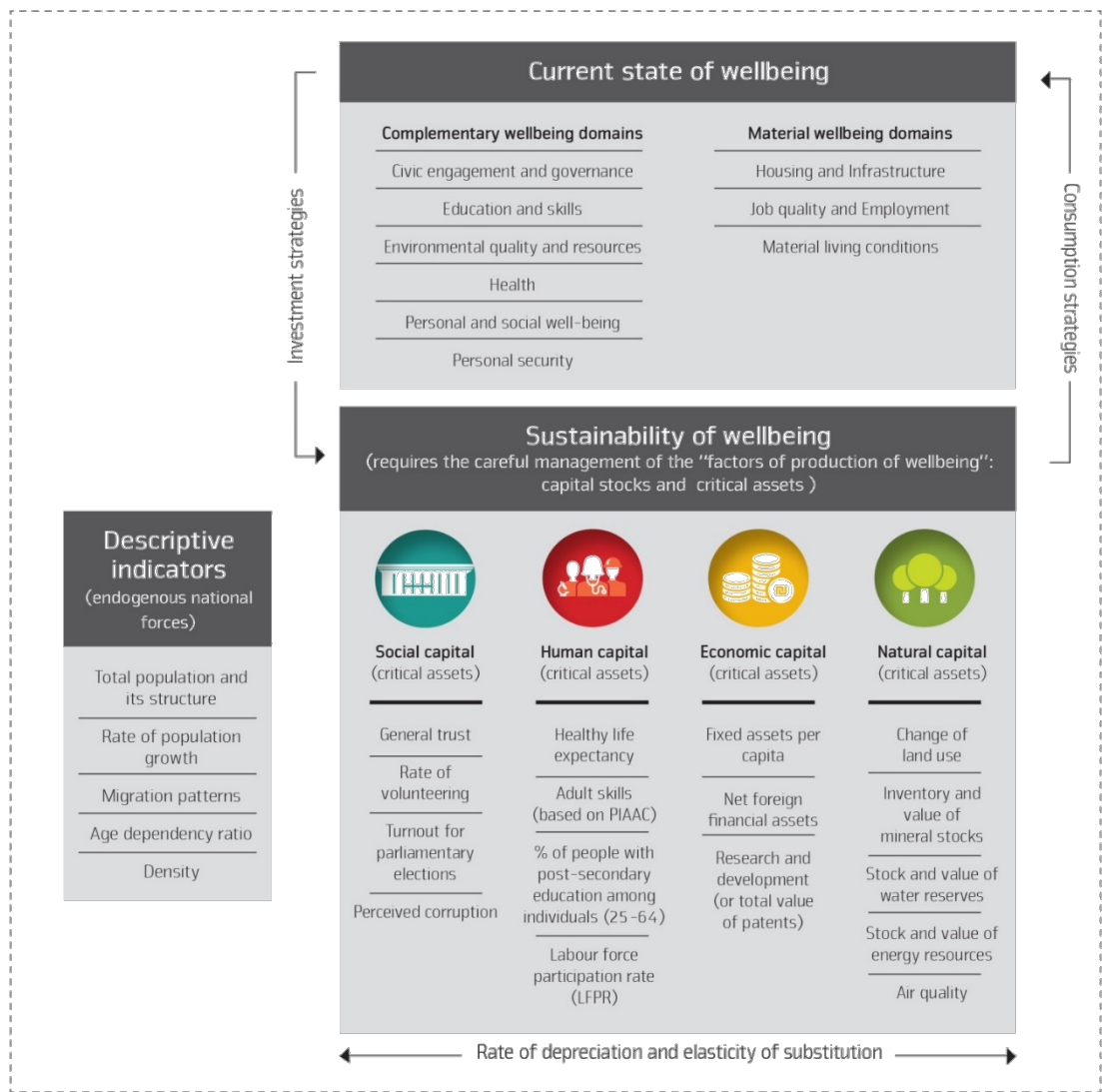
¹¹⁷ Boxman, E., De Grant, P., Flap, H.D. (1991): *The impact of social and human capital on the income attainment of Dutch managers*, Social Networks, vol. 13.

¹¹⁸ Putnam, R. (2000): *Bowling Alone: The Collapse and Revival of American Community*, Simon and Schuster, New York

¹¹⁹ Turcotte, M. (2015): *Trends in Social Capital in Canada*, Statistics Canada

¹²⁰ Kay, F., Johnston, R. (2007): *Social Capital, Diversity, and the Welfare State*, University of Washington Press

Illustration 2. Framework for Measuring the Determinants of Wellbeing



The proposed framework, a work of the author¹²¹, is based on a modified capital approach to the measurement of sustainability. The framework is based upon the OECD’s conceptual model from 2012.¹²²

¹²¹ Tzachor, Asaf (2015): Report on the Measurement of Sustainability, State of Israel, the Ministry of Environmental Protection, Jerusalem, available at: <http://www.sviva.gov.il/infoservices/reservoirinfo/doclib2/publications/p0801- p0900/p0808.pdf>

¹²² OECD (2012): Measuring wellbeing and progress, Paris: OECD

The framework has four measurement domains. The first measurement domain, at the top of the figure, covers the measurement of wellbeing and material living conditions. The GDP indicator was developed in this “area”, which also covers housing and income, among others.

The second measurement domain, adjacent to it, covers the complementary aspects of wellbeing. In this area, aspects of health, education, personal security, environmental quality, personal and social wellbeing, civil action, and others are measured. Non-market benefits and utilities also appear in this area.

The third domain of measurement at the base of the framework includes a list of 16 asset indicators, tangible as well as intangible assets, in four capital stocks: natural, economic, human and social.

The framework has been developed to include descriptive indicators regarding population growth, rate of growth, age dependency ratio and migration patterns, as these are critical forces in any discussion on the sustainability of the socioeconomic development of nations.

Two types of flows connect the “state of current wellbeing” to “sustainability of wellbeing”: (1) investment in critical assets, and (2) consumption of critical assets. Both are in the realm of a nation’s portfolio management strategy.

Measure the state and the rate of depreciation of these assets, challenge their elasticity of substitution, adjust investment policies in assets, and consumption policies of assets – and Finland will sustain its wellbeing for a very long time.

Policy Benefits of the Capital Approach

In a longstanding history of statesmanship and scholarship, dedicated to understand and prevent national decline, past societies and nations have not been as successful in figuring out how to sustain progress. The difficulty, as abovementioned, is not a lack of ideas explaining social decay. On the contrary. The difficulty is the overabundance of hypotheses, and that those hypotheses suffer from scientific shortcomings.

Good governance, far-sighted governance, in the 21st century requires a more holistic assessment of the determinants of wellbeing and welfare. National governments need better guidance as to what to govern (what assets?), how to govern it (in what assets to invest; what assets to replace?), and what governance strategies work.

The main policy benefit of the capital approach is that it underscores the long-term determinants of development. Accordingly, the approach takes a comprehensive account of wellbeing, and a comprehensive account of the resources and stocks that “produce” wellbeing. It allows decision makers to think more broadly about investment and consumption policies. In addition, applying the approach, decision makers can focus on the state of non-market critical assets that contribute to sustainable wellbeing, for instance air quality, general trust, perceived corruption. So the approach sits well in both the academic and policy zeitgeist.

Finally, the Finnish government, known for its effective planning, foresight capacity and innovative practices, could use the framework to evaluate and discuss how megatrends might impact on sustainable development (the capital assets and their accumulation): block chain technology on trust; biotech, energy technology and nano-materials on research and development and the accumulation of patents; virtualization and data digitization on adult skills; and pharmacology on healthy life expectancy, to name just a few.¹²³

Acknowledging these benefits, the OECD has gone to endorse the approach and the model. In the words of Martine Durand, Chief Statistician and Director of Statistics of the OECD:

"More than ever, the OECD is committed to put the notion of wellbeing now and its sustainability into the future at the core of its policy-advice. As recently stressed by the OECD Secretary-General: "Our fundamental assumptions about the functioning of economies, our policies and structural reforms, our systems and institutions, need to be re-oriented towards one supreme objective: improving the wellbeing of people". Such a re-orientation demands a big change in our mind-frames, in how we understand the functioning of markets and the behaviors of people. This is what the OECD is trying to achieve."¹²⁴

It is to this calling, that Finland must answer. For its own sustainability, first and foremost, but also to continue to set example for other nations.

¹²³ Sitra (2016): Megatrends 2016: the future happens now, Sitra, Helsinki, available at: <http://www.sitra.fi/en/julkaisu/2016/megatrends-2016>

¹²⁴ Tzachor, Asaf (2015): Report on the Measurement of Sustainability, State of Israel, the Ministry of Environmental Protection, Jerusalem, available at: <http://www.sviva.gov.il/infoservices/reservoirinfo/doclib2/publications/p0801-p0900/p0808.pdf>

Network of Institutions for Future Generations

The events in Finland 'For the Next Generations' provided an important opportunity to convene members of a recently formed network of institutions, working for the interests of future generations.

The network is designed to share knowledge, experience and promote good practice from around the world on implementing intergenerational justice, and the promotion of effective long-term governance. The network consists of a diversity of institutions, highlighting the need as well as the opportunity to safeguard the interests of future generations through different means and across various disciplines.

The 2013 report from the UN Secretary-General Ban Ki-moon, 'Intergenerational solidarity and the needs of future generations' helped to build the case for action at the international level to reflect the interests of future generations. The first recommendation of the report calls to establish a UN High Commissioner for Future Generations. It was also this report that for the first time recognized a number of institutions working at the national and regional levels. These institutions form the core membership of the network:

- Committee for the Future - Finland
- Parliamentary Advisory Council on Sustainable Development - Germany
- Commissioner of the Environment and Sustainable Development - Canada
- Commissioner for Future Generations - Wales
- Parliamentary Commissioner for the Environment - New Zealand
- Former Commissioner for Future Generations - Israel
- Ombudsman for Children - Norway
- Ombudsman for Future Generations - Hungary
- Commissioner for Sustainability and the Environment - Australia Capital Territory

The World Future Council has identified some defining principles that help to ensure the impact of these institutions: independent, impartial and unbiased; resourced to sufficiently carry out its duties; transparent working methods, reporting annually to the Parliament on its work and findings; legitimate by democratic standards, established through legislation; with access to information and finally, accessible for integrative assessments, allowing for institutionalized and inclusive input and assessment, with full, open access from civil society.

Following previous meetings in Budapest, Hungary in 2014 and in Cardiff, Wales in 2015, members of the network met in Helsinki for the third time. With the backdrop of inspiring discussions and presentations, the Helsinki meeting helped to generate further interest in and commitment to the network. Members voted in the Hungarian Commissioner for Future Generations, Dr Marcel Szabó as the network Chair. A number of supporting

members, including the World Future Council and Worldconnectors will provide further administrative support.

A series of aims and objectives were endorsed:

To promote and share opportunities and best practice in respect of institutionalisation, legislation, policy and governance arrangements for long-term future shaping and to secure the rights and wellbeing of future generations.

To increase the number of national and regional institutions joining the Network whose purpose is to focus on long-term future shaping and protection of the rights and wellbeing of future generations.

To work with the UN and member states to develop a framework for action to secure the rights and wellbeing of future generations.

To monitor developments in relation to the way in which countries, states and regions are safeguarding the wellbeing of future generations and to provide support in how these approaches are developed.

To commission studies, research and analysis on the key issues of institutions for long-term future shaping and protection of the rights and wellbeing of future generations and develop and disseminate ideas and best practice on how these may be addressed. This could, at a later stage include, for example advising UN on ingredients for a framework.

a) future generation audit based on which member states could report on how future generations interests are taken into account,

b) environmental impact assessment to take into account in the long term the interests of future generations.

The network presents a unique platform for innovative ideas on the institutional protection of future generations and their environment. Work ahead will build on the core membership of the network, generating further interest and momentum. As Governments take steps to implement the 2030 Agenda on sustainable development, we increasingly understand that effective and transparent institutions play a critical role. Intergenerational justice is firmly embedded in the concept of sustainable development, by true definition, "Sustainable development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs." Independent institutions looking to the long-term can help government deliver this complex agenda for the benefit of present and future generations. We have a lot to learn from some inspiring action around the world, showing this is already possible.

More information on the network and its members can be found here:

<http://futurroundtable.org/en/web/roundtable-of-institutions-for-a-sustainable-future/welcome>

Farewell: Please take care of our Democracy

In June was the final Committee for the Future (which is unique in the world) meeting at which I was present. Since the very first meeting in 1993, I have served in the core of parliamentary democracy as a secretary organising the twice-weekly official meetings of this Committee. Now, after all these intensive and exciting years, it was time to retire and say something important to the 17 MPs in the Committee by way of farewell – briefly, in just a few minutes, before the cake and coffee, in a very sensitive moment after all the nice words from the Committee members. What’s most important? It is the future of democracy.

When saying my farewell words, by intuition but based for sure on my common knowledge and long experience, I realised at that same moment that it would be best that my message of weakening or falling democracy would for the long run show up totally false or anyway strongly exaggerated.

Democratic government has, in my lifetime, spread to over 100 nations around the world, on every continent, to people of all races and religions. And, we have had peace among the great powers. Being worried about the state of our democratic system, I asked the Committee members to take care of the future of democracy for the next generations. I want to say that I believe a liberal world order is worth defending on behalf of a certain set of principles – a belief that the rights of the individual are primary, that it is the responsibility of governments to protect those rights, and that democratic government offers the best chance for freedom, equality, justice and human dignity.

The political systems of the western democracies are liberal because they seek to guarantee the rights of individuals, including those of minorities, and they are democratic because their institutions are supposed to move popular views into public policy. In this, our world of globalisation, economy and finance has unfortunately more power than politics. Macroeconomic decisions are made by independent central banks and trade policy is made by secretly negotiated international agreements. Business has invested in Asia and the jobs of ordinary people have went with the investments. Good for people in Asia. Good for democracy - Millennium Goals of the UN have been achieved mainly by globalization and Asia. But, people in the west are not all winners. National governments no longer have the means of safeguarding employment for their citizens - politics do not make jobs! But, politicians are still responsible. In recent years, when in the West the living standards of ordinary citizens' have stagnated, anger among people has grown. The “Democratic West” is going into conflict.

Never in modern history has a long-established democracy collapsed, but now we are quite suddenly living in a time that we should be careful, with signs of failing democracy all over the world. Technology is a new driver. It has made totally new options for good and bad actors also in this broad field of ruling and governance. The Internet of Things and robots will change in the near future a lot.

Coffee and strawberry cake were waiting 15th June in the committee room. I connected my farewell message to three political news stories from that day, which I thought showed in practise how something looks to be really wrong in democracy: 1) In Britain, the country of the majority voting system, the ruling Conservative Party quite soon after winning the elections is asking the opposition Labour Party to help save Britain from leaving the EU when people are voting for Brexit, 2) in the USA, both main parties are also in the situation that they need each other if they do not want an outsider of politics, a rich populist businessman, to be the president of the country and, at the same time, the most powerful man in the world, and 3) in France, which is a model of strong, centralized state-system, at the time of the European Football Championships, the infrastructure (railways, metro etc.) is not functioning because of strikes, mainly by public sector workers and civil servants. Politicians are helpless.

Common and notable to these news stories is that people have not only lost their trust in politics by staying passive, they are actively using direct democracy to fight against representative democracy, against the system, against the leaders and rulers – on every level of society. It is not a question of anarchism, nazism, communism – those old high-level movements normally organised by extreme people. No, ordinary people wanted to show they do not follow the leaders, nor even listen to them and, if listening, doing just the opposite. People are totally against the rulers, the whole elite, all kinds of elites. You can call it populism. The point is that at the same time it has spread all over western democracy and, more importantly, this time it has tools for power. Technology has made it possible for citizens as a group and as individuals to take power and use it. Representative democracy, politics, has become weak; it has given up; it has given away the heavy tools of democracy. To whom and based on which kind of legitimacy?

Let us be honest – we do not know! But what we do know is, if you leave the game field empty, it will be filled after a while. If democracy is not using the power it has been given, it is taken by non-democracy.

On the other hand, there isn't any kind of big, secret plan of history to the triumph of non-democracies; the victory of authoritarianism. This does not allow us to be naïve and believe the world would inevitably move all the time towards liberal democracy.

I wrote my doctoral thesis on democracy and have worked for over 40 years as a public official in the service of democracy. For me, democracy is one of the great values that our generation has to hand over to future generations. My job has only been to be a gardener, toiling in the garden of democracy and governance. A garden is never ready, you must work hard for it, be humble, and if you do not take care of it, it will first fade and then collapse totally.

Democracy has its pillars also in our time. The discourse on people's own relationship with decision making is eternal in the sense that every generation must create its own interpretation of democracy, in its various sectors and on its various levels and do this in a democratic way. A set of stage settings depicting democracy is not enough. Not even a good democracy functions without errors in times of transition and upheaval. The long-term and fundamental character of democracy means that maintaining and renewing it can be compared to tending a garden.

As a gardener in my parliamentary Committee, I am used to being on the one hand firm and patient; results can be seen only slowly. But, on the other hand, while it has been an original task of the Committee to look for new things and push them forward, a gardener has to be open-minded and sensitive, but also aggressive and quick. A garden must be a platform for all kinds of experiments. While in democracy the balance between a majority and many minorities is important, you must take care of big, old trees, but give opportunities for many new, fragile, small flowers. Have the courage to encounter and support every kind of new and wild thing – even unknown unknowns – but at the same time be prepared for risks. (More in my article “Power Over Coming Generations – Who has the power to decide on behalf of coming generations? Who has the right to speak in the name of coming generations?” which will be published in a book edited by Marcel Szabó).

Anyway, after my last Committee meeting it was the right time to update my knowledge on the future of democracy. I started from international newspapers. I was a bit shocked that during only half a year so many prominent western writers were handling the same problem – fading western democracy. The main slogan in the US-based discussion in Spring 2016 was “too much democracy!” starting from conservative journalist Andrew Sullivan (essay for New York Magazine, “Democracies End When They Are Too Democratic” May 1, 2016). Discussion has continued really lively for months. What did I learn reading tens and tens of these writings?

First, I asked “Too much democracy” at a time when

- 1) with growth in the economy economic power has increased compared with politics and it has become concentrated in the hands of a small elite,
- 2) the capital market has slipped out of the control of nation-states,
- 3) big actors in the economy have acquired a new and powerful means of exercising power called veto/exit,
- 4) in economy, especially in the US, the top 1 per cent of the population owns more than a third of the national wealth,
- 5) those who have the ability and wish to pay for politics and whose interests lie in doing so have the main role in democracy,
- 6) the most important political post in the world would in 2016 have gone without problems to the Republicans with any candidate if he/she only would have been democratic and
- 7) the middle class has lost the dream for better future, lost even the belief that education is a key to a better future.

“Too much democracy” in the coming rule under Trump? Many writers said that the trouble with Trump isn't because of too much democracy- it's decades of political malfeasance that have made Americans furious. Writers wondered also what is the future of democracy at the same time in the middle of old Europe under leaders like Johnson in the U.K., le Pen in France, Orban in Hungary, Wilders in the Netherlands, Fico in Slovakia, and, on the eastern borders of Europe, Erdoğan in Turkey or Putin in Russia. It is clear that people in the US and in Europe feel that no one asked them if this was the future they wanted. It looks that the western world was supporting and pushing with eager the idea of democracy during the

Cold War, at the time when the West had to show it had a better society than the enemy. After collapse of the Communism democracy was not an interesting thing at all.

But, what was more shocking for me in this learning process was how soon all over from the eastern semi/non-democracies came comments especially after Brexit: every superpower/global power centre has its time, now is a turning point in the western democratic dominance, old parliamentary/representative democracy has come to its end, the moral weakness of politics is destroying western societies, strong leadership without politics /democracy is better for business and for the people. In one of those recent articles on democracy the situation was expressed shortly: "In its heyday, Communism claimed that capitalism had betrayed the worker. So what should we make of Moscow's new battle cry, that democracy has betrayed the voter?(Jochen Bittner, The New Ideology of the New Cold War, International New York Times, Aug.1,2016).

Then I looked at some new studies on development trends of democracy. The situation looked sad. The American NGO Freedom House and the British Economist Intelligence Unit review data from 195 countries, describing the development of political participation, democratic institutions, freedom of the press and opinion, and human rights. From 1990 to 2005, parliamentary democracies grew from 76 to 119. Free countries grew from 65 to 89. The past 50 years have seen an unprecedented growth in prosperity, lifting billions out of poverty. Asia has moved to democracy in many countries but it is still fragile. Since the end of the 1990s, the number of voters in the world has risen from 2.6 billion to 3.4 billion, mainly in Asia, where parliamentary democracy has taken its place especially in Indonesia, South-Korea, Myanmar and Sri Lanka.

Trends are important. For around 10 years, both indexes have been registering downward trends. The newest editions once again show a clear regression for 2015. Democracy has broken down in 27 countries. In 30 years, almost a quarter of democracies have eroded or relapsed. In many authoritarian countries governments are less open, transparent or responsible for their actions than earlier.

In 1995, the World Values Survey, which studies representative samples of citizens in almost 100 countries, asked in the US from Americans for the first time whether they approved of the idea of "having the army rule." One in 15 agreed. Since then, that number has steadily grown, to one in six. So, according to a growing share of Americans, it would be better to let the president make decisions without having to worry about Congress. Key decisions could be entrusted to unelected experts (the Federal Reserve, the Pentagon etc). Still five out of six Americans would rather not have a military coup. Not every American who tells a pollster that he would rather have the army in charge would actually allow it. But what is important is the movement towards the readiness and willingness to accept other than democratic forms of government. So many writers warned that we are perhaps handling a deep disillusionment with democracy.

At the heart of Europe, Hungarian lawmakers have passed a bill that gives the Prime Minister free rein to spend citizens' tax money without parliamentary approval. Altogether, writers remind us that so many large and important western countries seem heading towards illiberalism. Many young democracies in Eastern Europe are in danger of turning into non-liberal democracies. One of the largest new semi-democracies, Turkey, which is a part of NATO and is planning to be a part of the EU, is struggling under the authoritarian

Fundamentalism and Militarism. After the recent attack of Militare, situation is very dangerous. It is no wonder that in transitional countries people start to hesitate if the key to good governance and dynamic economy is really based on liberal democracy.

In many European countries, also in the Nordic ones, populism and new authoritarianism is focused on resisting the loss of national sovereignty. Especially the middle class is on the move; it equates with globalism and the EU/Brussels, which are named in public discussions as the basic reasons for losing national sovereignty. Another big issue of the new authoritarianism is immigration, which appeals also to middle class people. France, which is one of the biggest and strongest democratic countries in Europe, over 10 000 potential Islamist terror suspects have been tagged with a card (fishe S or S card) which indicates a serious threat to national security. Many are criticizing that opposition leader has called for arrest of all such terror suspects, so, this means jailing people who have not been found guilty of any crime.

How the democratic governments have handled the situation of populism in the Nordic countries? Even in Sweden and Finland you can see two totally opposite political strategies after populist parties got so big and strong. In Finland the main populist party was taken to the Coalition/Conservative Government, they were given so important posts as minister of Foreign Affairs, minister of Defence, Minister of Justice and Labour and minister of Social Affairs. In Sweden they are left totally out of the Coalition/Social Democratic Government and they are not accepted in any way in the parliamentary democracy. We do not know which strategy is wiser for the long run, but in Finland the polls/gallups after a year from the elections show that populists are losing.

In Asia's young fragile democracies, authoritarianism appeals to the up-and-coming middle class, winners of globalisation, those longing for strong rulers. Rulers want to start a new national era. For example in South Korea, the "iron fist" daughter of a former dictator is accused to manipulate elections and harassed labour unions and the press in order to "save the nation". In the Philippines, the new president advocates death squads and has promised to eliminate 100,000 criminals. The ruler in the name of sovereignty attacks strongly against the UN and wants Asian countries out of this rotten international institution. In India, the ruling Hindu nationalists are openly against Muslims and other "dangerous" minorities in the name of "a new national community."

The move in the middle class in the West is perhaps more on the levels of mindset, feelings and atmosphere. People want their old, good, safe world back; so, too, do they want back national politics, national banks on the corner, familiar firms, shops and products, and back domestic permanent jobs, their own music, lifestyle, good manners, and also old-fashioned families, even the tradition to eat homemade healthy food at the dinner table together (in Finland at 5 o'clock). We are forgetting that in 2016 our individual lives and those of the next generations are so deeply tied to the global humanity. We already include in our personal identities a sense of ourselves as members of the whole human race. Then, in every society there are people who won't always play by the rules and there are totally bad people. Police, law, safety, caretaker and sharing organisations are necessary to protect citizens. The same with globalisation, with global business and with the global humanity; we need international laws and international institutions. We need positive, active aspects of sharing. The responsibility to share – especially share opportunities for some kind of

positive future for big majorities– is more important than ever. National institutions are too weak for this task.

From the point of democracy these phenomena have something very much in common. The platform is almost the same everywhere. New populist parties and such movements inside old parties have promised to bring back discipline, law and order, borders in the society. And with that the old, happy life for the people. They promise an alternative political order and unfiltered governance without institutional or legal obstacles and political compromises. The authoritarian rulers promise to protect their own people against everything bad and rotten. They promise to cast aside the institutional roadblocks (critical media, independent courts, universities, trade unions, international institutions, you name it) standing in the way of the will of the people. They promise that the people will again become the masters of their political fate.

When I studied 40 years ago Administrative Sciences it was said that all good societies need discipline (Lipsius/Luther/Weber). It was a positive term. The social contract was based on trust. People believed that the basic task of the state/liberal democracy was to create stability and save from chaos, protect rights of people but take care of responsibilities also, protect nations and protect minorities against too powerful majorities, defence equality, and also at the end save societies from moral weakness. Today in the articles on democracy they talk about “orderism”, but, mainly in a negative sense. This new social contract is built on patriotism, military strength, hierarchies, all kind of borders, traditional gender roles, old/orthodox religion, strict moral rules etc but on the other hand also on the cohesion and the common spirit of the order of the nation. Orderism prioritizes stability over democracy, strong rules for way of living over the moral abyss of *laissez-faire*.

Democracy is based on people’s voice and vote. One of the most recent biggest failures of politicians all over the western world has been free unregulated mass population movement. The analysis of professor Robert Skidelsky, a member of the British House of Lords and the author of the biography of Keynes, is important (The failure of Free Migration, Project Syndicate Jul 18, 2016). He reminds us of some facts:

During the last 30 years, for liberal-democratic societies a key benchmark has been their openness to newcomers and that immigration has benefited both hosts and migrants. 55 million people left from Europe for the Americas between 1840 and 1914. Between 1955 and 1973, 14 million guest workers mainly from Turkey came to Germany. They were economic migrants.

In recent years, refugees have mainly been fleeing either persecution or extreme insecurity following state disintegration. The most critical example is 5 million Syrians in Turkey, Lebanon and Jordan.

History indicates that most refugees do not return to their country of origin. It just takes too long for the feeling of extreme insecurity to subside. Meanwhile, the lure of a better life takes hold.

Most people in the host countries do not distinguish between economic migrants and refugees, and both are viewed as claimants of existing resources, not as creators of new resources.

Skidelsky writes that historical perspective suggests three conclusions. Firstly, anti-immigrant sentiment is not based only on prejudice, ignorance, or political opportunism. You cannot manipulate something unless there is something to manipulate. We have little chance of changing the words unless we alter the realities to which they refer. Secondly, the era of unregulated mass population is drawing to a close. The Brexit vote shows that Europe's political class greatly underestimated the strains caused by free mobility across borders. Free mobility in the EU presupposed a state to manage the movement. There is no such a state. Thirdly, we have to accept that most of the refugees will not return home. He ends with some ideas of how to solve the problems but admits one thing is certain to him: "without increased security at both ends, political violence will spill over from the Islamic world to its nearest neighbours in Europe".

We should not underestimate either people's will and call for new discipline/orderism nor the answer - populism/new authoritarianism - in any way. Western democracy should not reject criticism of liberal democracy as an outcome of an anti-liberal worldview. Strong welfare was an answer of Roosevelt and Europe's postwar leaders against utopian promises of Communism. Leaders had then to make a choice between revolution and building progressive state institutions. As a political editor for *Die Zeit*, Jochen Bittner says (in article mentioned above): "If jobs are lost and terrorist attacks are mounting, democratic politicians have to have the steady nerves and fresh ideas to carry out the necessary repair work. In this new clash of worldviews, we need a new generation of Roosevelts, Adenauers and Monnets, leaders who will take on orderism's challenge without lashing out at its adherents. A calm adversarial spirit is what can make democracy great again."

The authoritarian rulers are nowadays more sophisticated and clever than earlier. They are more educated and they use modern technology in ruling. They can behave correctly and use nice words, but in their nasty rhetoric they hide a tough order. They hide the fact that they want to forget individual rights, freedom and equality are just words, they want to erect pillars of democracy, hold corrupt elections, exclude jobs, education and hope for future from certain minorities, weaken social and welfare support, use government-approved shell groups to edge out civil society, control nomination to political, juridical or other for democracy important posts, control media, opinions and life through IT tools etc. In Russia, for instance, when any group receiving money from abroad is labelled a foreign agent, the international connections of people are suddenly again limited. In Turkey, international connections from educated (university) people are in practice almost denied. People are afraid. Both rulers and citizens close gates in fear. Fear and hate start to reign. For sure we can recognise authoritarian sophisticated ruling also in the West. There are a lot of fine examples of using really complicated methods in the US elections.

A new phenomenon on the level of world order is that the most powerful semi-authoritarian/semi-democrat countries are pushing beyond their borders, and not only in the virtual digital world. China has invested a lot abroad buying big and small, old and new firms, financing and building infrastructure. My own experience is from Mosambique, when five years ago I arrived to the brand new airport of Maputo "made by China". China has a new role in the control of the seas, starting from the South China Sea. It seems tahta international legal institutions are ignored more often. Russia took part of Ukraine and now many important politicians, including Trump, say that we should accept that Crimea belongs to Russia. Turkey is important to the West. While writing this (16 June 2016), I am listening to the news that NATO member country Turkey has switched off all

lights/electricity, just like that without warning, at the NATO-US cooperative nuclear-armed airplane base in Incirlik in Southern Turkey. 1,500 US soldiers and civilians were almost locked there in darkness among 50–90 B61 US nuclear weapons for a week. The explanation: the ruler is defending democracy against military attack.

To be “big and great” is, in the western world, one of the main messages in elections. Trump’s ideas we already know, but for me was a surprise that in Britain in July 2016 the new Foreign Secretary, Boris Johnson, seems to think that colonialism would have perhaps in some cases been better for Africa and Asia than independence and democracy. Think the future where the same message to be “big and great” is coming dominant in elections all over the world.

Large countries such as Russia and China have started to master at the global level soft power tools through modern technology with the same efficiency as in most advanced old democracies. They spread their news, views, opinions and culture. They follow and control discussions, opinion-building, new ideas, innovations, technology, life on the home front and abroad. Russia is deeply involved in the elections of the US through IT. The Internet of Things is opening huge new possibilities all over the world to master and govern. What’s done with the information from TVs, phones, cars, refrigerators, sofas, clothes, connected to where and for what purpose? Politicians and democracy should be ready.

New especially in the western world is the fact that the ruling is said to be based more than ever before on the opinions of the people: it can be positively called a direct democracy. Governments and governance are based on and confirmed by a vote. More based on a direct vote from the people and a vote focused on every political or other issue separately is a vote in a referendum. It is a dangerous path when at the same time people are neglecting to use their right to vote in elections. The legitimacy of the whole political system, including the rule of law, is weakening.

The role of the state is important in democracy in many ways. I explained already what it means to have/not have a state to handle immigration and mass refugees. The state/the states must be ready to handle the situation of real massive population movements of climate change. In this summer in many countries near Europe (Iraq, Iran, Syria etc) living has been almost impossible in temperature over 50 C. Problems must be managed and governed.

In populist movements, the state is certainly not any kind of EU state or such a nation state as in the Nordic countries; a supporting and caring welfare state. During the last 20 years in the western world, the state has been defined on every level of governance in exclusive terms: the smaller the better. All kinds of elites with their state-based or state-oriented institutions must be shattered and rendered powerless. Populism has gained brilliant tools and marvellous new options from technology, the internet and digitalisation to act in this our time of globalisation.

In the US, as the age of democracy dawned, wise statesmen feared the oppression of small groups. In Europe, the French revolution soon degenerated into mob terror. Alexis de Tocqueville, the French aristocrat, called it briefly the tyranny of the majority. How does the situation look now? Anyway, the tyranny of the minority seems possible. People have too little time, energy, motivation or interest to devote to politics. Small groups can easily take

the power if they have a lot of money, great interest of their own and strong motivation. One thing is sure: big money, paid lobbyists, strong individuals and organisations obsessed by a single issue can take the floor.

Technology is neutral, but it is available for good and bad. One task of the Committee for the Future is technology assessment. Dhruva Jaishankar, from Brookings Institution India, has in his article 'Brexit: The First Major Casualty of Digital Democracy' (Huffington Post 30 June 2016) analysed the relations of representative and direct democracy in this technological time. Globalisation with the internet has been believed to lead to the democratisation of information and decision-making. Citizens are better informed, able to communicate their views not only among others without limits and borders but also to their leaders and rulers. People would have a greater understanding of other people the more they live next to them, visit their countries, read their news, communicate directly and do business. So we thought, but Jaishankar argues for instance that:

Brexit represents the first major casualty of digital democracy over representative democracy

Digital democracy has contributed to polarisation, gridlock, dissatisfaction and misinformation

Leaders only exploit the vulnerabilities of a post-fact world; the conditions have been laid by the digital sphere

In a digital democracy, a lie or (better yet) a half-lie if told enough times becomes true, and

Social media, rather than creating connections with people who possess differing views and ideologies, tends to reinforce prejudices.

A fine analysis, but in no way an excuse for representative, parliamentary democracy to lie down. Just the opposite, in fact. Vice versa.

Some can say that I would have learned more by reading research papers of IMF/the World Bank/best universities than these US-based newspapers. Perhaps. For me living in a Nordic Society, at the time when so many politicians and experts in my country insist to have more inequality in the name of economic growth, I delighted from this in August published IMF Working Paper No. 16/176: Growing Apart, Losing Trust? The Impact of Inequality on Social Capital Author/Editor: Eric D Gould ; Alexander Hijzen. Summary:

There is a widespread perception that trust and social capital have declined in United States as well as other advanced economies, while income inequality has tended to increase. While previous research has noted that measured trust declines as individuals become less similar to one another, this paper examines whether the downward trend in social capital is responding to the increasing gaps in income. The analysis uses data from the American National Election Survey (ANES) for the United States, and the European Social Survey (ESS) for Europe. Our analysis for the United States exploits variation across states and over time (1980-2010), while our analysis of the ESS utilizes variation across European countries and over time (2002-2012). The results provide robust evidence that overall

inequality lowers an individual's sense of trust in others in the United States as well as in other advanced economies. These effects mainly stem from residual inequality, which may be more closely associated with the notion of fairness, as well as inequality in the bottom of the distribution. Since trust has been linked to economic growth and development in the existing literature, these findings suggest an important, indirect way through which inequality affects macro-economic performance.

With the message "Take care of the Future of Democracy" I want also to say farewell to my international networks. So many of my friends had the possibility to take part in this Public Hearing and Public Seminar for the next generation in the Finnish Parliament in Helsinki.

Thank you all!

APPENDIX

COMMITTEE FOR THE FUTURE
Parliament of Finland

7.6.2016 / PT



FOR THE NEXT GENERATIONS

Wednesday 8 June 2016

The event is jointly organized by the Committee for the Future of the Parliament of Finland, the Prime Minister's Office, the National Foresight Network and The Finnish Innovation Fund Sitra.

Programme:

Part I PUBLIC HEARING

Time: 9.00 – 11.30
Place: Parliament of Finland, New Building Little Parliament Annex, Auditorium
Chair: MP Carl Haglund, Chair of the Committee for the Future, the Finnish Parliament
MP Merja Mäkilä-Ropponen, Vice Chair of the Committee for the Future, the Finnish Parliament

The Hearing will be web-casted: <https://www.eduskunta.fi/FI/Sivut/Live.aspx>

8.30 – 9.00 *Coffee and tea will be available outside the Auditorium*

9.00 – 9.05 **Opening**

MP Carl Haglund, Chair of the Committee for the Future, the Finnish Parliament

9.05 – 9.20 **Greetings**

MP Maria Lohela, Speaker of the Finnish Parliament

9.20 – 9.30 **Experience and Visions**

MP, Jean-Yves Le Déaut, Parliamentary Office for Evaluation of Scientific and Technological Options (OPECST), the French Parliament

9.30 – 9.40 **Future Studies Network**

Mr Erik Overland, Executive Board Member, World Future Studies Federation (WFSF), Norway

9.40 – 9.50 **Green Finance for the Future**

Mr Zhang Hongli, Member of Committee of Population, Resources and Environment of the 12th CPPCC, Senior Executive Vice President of Industrial and Commercial Bank of China Limited

9.50 – 10.00 **Responsibility TO and Responsibility FOR the Future**

Mr David Cope, Professor, Foundation Fellow, University of Cambridge (UK),
Former Head of Parliamentary Office of Science and Technology (POST), the British Parliament

10.00 – 10.10 **Rights of Future Generations in Recent Case Law**

Mr Jan van de Venis, Human Rights Lawyer, Worldconnectors (Netherlands)

10.10 – 10.20 **The Israeli Case – Lessons Learnt**

Mr Shlomo Shoham, Judge (ret.) Former Commissioner for Future Generations,
the Israeli Parliament

10.20 – 10.30 **Freedom of Conscience and its Protection for the Next Generations**

Mrs Adina Portaru, Legal Counsel for Human Rights, ADF International (Belgium)

10.30 – 10.40 **Well-being of Future Generations Act 2015**

Mrs Sophie Howe, Future Generations Commissioner for Wales

10.40 – 10.50 **Experiences of the Roundtable Secretariat and its Chances for Networking**

Mr Marcel Szabó, Ombudsman for Future Generations,
the Office of the Commissioner for Fundamental Rights (Hungary)

10.50 – 11.00 **One of the Oldest State Future Institutions**

Mr André Knottnerus, Professor, Chairman of the Netherlands Scientific Council for Government Policy

11.00 – 11.10 **European Parliamentary Technology Assessment Network (EPTA),**

Mr Michael Nentwich, Director of Institute of Technology Assessment (ITA/Vienna),
President of EPTA 2016

11.10 – 11.30 **Questions and Answers**

11.30 – 12.00 *A light lunch will be served outside the Auditorium*

Part II PUBLIC SEMINAR

Different Futures, Policies, Policy-making Models, Methods

Time: 12.00 – 14.00

Place: Parliament of Finland, New Building Little Parliament Annex, Auditorium

Chairs: MP Merja Mäkilä-Ropponen, Vice Chair of the Committee for the Future, the Finnish Parliament
Mrs Taina Kulmala, Prime Minister's Office

The Seminar will be web-casted: <https://www.eduskunta.fi/FI/Sivut/Live.aspx>

12.00 – 12.10 Strategic Foresight

Mrs Mathilde Mesnard, OECD

12.20 – 12.30 Towards a Sustainable Development Strategy in Uruguay 2050

Mrs Lucia Pittaluga, Deputy Director to the Planning Direction,
the Office of Budget and Planning (Uruguay)

12.30 – 12.40 A New Institution to Develop Long Term Strategies for the Financial Market: the Swiss Case

Mr. David Gerber, Secretary of the state-based Swiss Strategic Council for the future
of the financial market

12.40 – 12.50 Participative and Collaborative Policy Maturity Model: institutionalization Challenges

Mrs Agne Paliokaite, Director of Visionary Analytics (Lithuania)

12.50 – 13.00 Education on Parliamentary Democracy

Mr Stanislav Caletka, Office of the Chamber of Deputies, Parliament of the Czech Republic

13.00 – 13.10 The Sharing

MP Anna Kontula, Committee for the Future, the Finnish Parliament

13.10 – 13.20 Federal Institutions Shaping a Sustainable Future

Mr Robert Unteregger, Future Council Foundation (Switzerland)

13.30 – 14.00 Discussion

Part III SPECIAL ISSUES in Sessions

Participants: The following keynote and parallel sessions are open to all participants of For the Next Generations –event as well as to anyone interested.

Keynote Future of Work

15.00 – 15.15 Opening Speech for all sessions

Timo Lankinen, Permanent State Under-Secretary, the Prime Minister's Office

Parallel Sessions

Session 1 Radical Technologies and Technology Assessment (TA)

Time: 15.15 – 17.30

Place: Säätytalo, House of the Estates, Snellmaninkatu 9

Chair: MP Ville Vähämäki, Committee for the Future, the Finnish Parliament

New Version of Radical Technology Assessment Model

Technological Change 2013-2016: Preliminary investigation of the development of radical technologies after the 2013 review

Welcome Words

MP Ville Vähämäki

The Technology Update and Assessment of the 2013 Radical Technology Inquirer (RTI) for Anticipation/ Evaluation of Technological Breakthroughs

Mr Risto Linturi

Opportunities for European Collaboration Based on RTI –model

Mr Osmo Kuusi

Comments and Discussion

MP Paweł Pułowski, Chairman of the Committee of Digital Affairs, Innovation and New Technologies, the Polish Parliament

Mrs Ira van Keulen and Mrs Rosanne Edelenbosch, Rathenau Institute/ Netherlands

Mr Michael Nentwich, President of EPTA 2016, Director of Institute of Technology Assessment (ITA/Vienna)

Mr Eero Paloheimo, emeritus 1. Chair of the Committee for the Future 1991 – 1993

Mrs Hebakova Lenka, Project manager Technology Centre ASCR (Czech Republic)

Session 2 Future of Education and Learning

Time: 15.15 – 17.30

Place: Säätytalo, House of the Estates, Snellmaninkatu 9

Chair: Mrs Elina Kiiski-Kataja, Finnish Innovation Fund Sitra

Speakers and themes:

Professor Jouni Välijärvi, Director of the Institution of Educational Research: Pisa Results and the Future Perspective

Ms Maarit Korhonen, Teacher, Author of the book "Wake Up School"

Ms Jenna Lähdemäki, Sitra: Sustainability perspective and the Future of Education and Learning

Mr Aape Pohjavirta, CEO Funzi: Global Perspective for Exporting Education

Mr Arminas Varanauskas, Director of Knowledge Economy Forum (KEF, Lithuania)

Session 3 Welfare and Futures

Time: 15.15 – 17.30

Place: Säätytalo, House of the Estates, Snellmaninkatu 9

Chair: MP Sinuhe Wallinheimo, Committee for the Future, the Finnish Parliament

Healthy Life and Futures

MP Sinuhe Wallinheimo, Committee for the Future, the Finnish Parliament

Futures Studies and Foresight in Building Welfare

Mr Juha Kaskinen, Director, PhD, Finland Futures Research Centre, University of Turku

Building a Better Future with More Equal Opportunities for All through High Quality Education - Finland University's Case Sukma Teachers's

Mr Pasi Kaskinen, Executive Vice President, Finland University Inc

Universities of Applied Sciences in the Finnish Education System - Are There Good Practices to be Applied in Development of the Indonesian Education System?

Mr Timo Juntunen, Director of Global Education Services, JAMK University of Applied Sciences

The Future of Education - Teachers for the Future - Case Brazil

Mrs Carita Prokki, Dr, Director, Business Operations, TAMK EDU, Tampere University of Applied Sciences

Customer-Oriented, Intelligent Health and Welfare Services in the Future

Maaret Viskari, M.A., Manager, Global Education, Häme University of Applied Sciences (HAMK)

Special Guests

Delegation from Regional Representative Council of the Republic of Indonesia

Session 4 Values and Politics

Time: 15.15 – 17.30

Place: Säätytalo, House of the Estates, Snellmaninkatu 9

Chair: MP Sari Tanus, Committee for the Future, the Finnish Parliament
Ambassador Pablo Sader, Embassy of Uruguay

Does Personal Pain or Fear Determine Political Decisions?

MP Sari Tanus, Committee for the Future, the Finnish Parliament

Freedom of Conscience and its Protection for the Next Generations

Mrs Adina Portaru, Legal Counsel for Human Rights, ADF International (Belgium)

Political Decisions and Contradictions in Parents' and Educators' Values

Tuulikki Tepora, Master of Arts (Education), Class Teacher

Questions, Answers and Comments with the Audience:

- Who has the power/the right to speak in the name of/to/for/against next generations?
- Who, where and when is making a decision what is "life", "death" and "living"?
- What are rules of democracy/equality in using of the "vision power"?
- Is decision making too much believed to be based on facts and do we notice enough the power of manipulation of media etc.?
- Can for instance women in the name of all women/all the people neglect democracy/equality, the rights of others?

Session 5 Sustainable Development Goals – Working for the Future

Time: 15.15 – 17.30
Place: Säätytalo, House of the Estates, Snellmaninkatu 9
Chairs: MP Harri Jaskari, Committee for the Future, the Finnish Parliament
Ms Eeva Furman, Finnish Environment Institute SYKE
Mrs Eeva Hellström, Finnish Innovation Fund Sitra & Prime Minister's Office

Session Organizer:

[Finnish Expert Panel for Sustainable Development](#)

The purpose of this session is to discuss various models for enhancing synergies between sustainable development goals and foresight and other work on the future.

Programme

- 15:15 – 15:25 **Opening Words** / Chair, MP Harri Jaskari
The Finnish Approach to Sustainable Development and the Role of Scientific Support
Mrs Eeva Furman, SYKE, Chair of the Finnish Expert Panel on Sustainable Development and
Ms Eeva Hellström, Sitra & Prime Minister's Office
- 15:55 – 17:20 **How Do Major Trends Challenge Our Thinking of Sustainable Development and the Needs of Next Generations?**
Mr Asaf Tzachor, Ministry of Environmental Protection, Israel
- How Does the Aim of Sustainable Development Challenge Foresight and Other Work on the Future?**
Ms Catarina Tully, School of International Future, UK
Ms Katriina Siivonen, Finland Futures Research Centre, Finland
Finnish Expert panel members will join the discussion after introductory speeches.
- What Are the Roles and Synergies of Research and Foresight Activities in Contributing to Sustainable Societies?**
Finnish Expert Panel on Sustainable Development:
Mr Heikki Hiilamo, University of Helsinki; Ms Tuuli Hirvilammi, University of Jyväskylä;
Mr Janne Hukkinen, University of Helsinki
- 17:20 – 17:30 **Closing Words**
Mrs Eeva Furman, SYKE and Chair of the Finnish Expert Panel on Sustainable Development

Dinner

Time: 18.00 – 19.00
Place: Säätytalo, House of the Estates, Snellmaninkatu 9

Cultural Possibilities and Networking



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