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SCIENCE AND TECHNOLOGY OPTIONS ASSESSMENT

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News | The ESMH kicks-off with the first event

The European Science-Media Hub (ESMH) launched its activities on 27 June 2018 with a stimulating debate on the challenges of communicating science via social media, organised at the European Parliament in Brussels. STOA Chair Eva Kaili and First Vice-Chair Paul Rübig opened the event in the presence of numerous stakeholders from the scientific community, the European institutions and research organisations, and many journalists from across Europe.

The ESMH has already set up an Interinstitutional Advisory Board composed of representatives of various EU institutions operation in the area: the European Parliament (STOA and DG COMM), the European Commission (DG RTD, DG CONNECT and Joint Research Centre (JRC)), the European Institute of Innovation &Technology (EIT) and the European Research Council (ERC) Executive Agency.

Besides creating a network of stakeholders, the main tasks of the Hub are monitoring the trends in media coverage of scientific topics, organising trainings and workshops for journalists, and creating an online platform to disseminate trustworthy sources of information. The ESMH has set itself the goal and the ambition to empower quality science journalism through access to trustworthy information, and contacts with scientists and policy-makers.

Event | Shaping EU's future through research

On 31 May 2018, the European Parliament premises in Strasbourg were a meeting place for scientists and MEPs. The aim of the event, organised jointly by STOA and the European Research Council (ERC), was to showcase Europe's research and innovation efforts through programmes such as Horizon2020 and one of its most successful initiatives, the ERC. The event also aimed at stimulating exchanges on the role of fundamental research in designing the future of Europe. The event was very timely, as it took place just a week before the European Commission (EC) announced its proposal for Horizon Europe, the next research and innovation framework programme, due to start in 2021.

The event attracted 14 MEPs (including ITRE Chair Jerzy Buzek) and 22 researchers funded by the ERC, Commissioner for Research, Science and Innovation Carlos Moedas and three Nobel Prize winners, among other participants. In addition, EP President Antonio Tajani, EC Vice-President Andrus Ansip and Bulgarian Minister of Education and Science Krassimir Valchev took part in the high-level science-policy debate organised the day before.

Besides the line-up of eminent speakers, the highpoint of the event were the parallel exchange sessions, in which MEPs, ERC grantees and other participants discussed techno-scientific topics of interest to them or linked to their ongoing work. The exchange sessions were organised around the following topics: modern energy solutions, eco-efficient transport, sustainable management of natural resources, potentials and challenges of the Information Society, health and life sciences, and science policy, communication and global networking.

Study | Overcoming innovation gaps in the EU-13

Investing in research is considered essential for achieving smart, sustainable and inclusive growth and creating jobs in Europe. The Framework Programme (FP) for research and innovation is the EU's primary instrument for building the European Research Area. Research needs to be of the highest quality, produced in international collaboration and selected on a competitive basis. Under such conditions, uneven participation is unavoidable. However, FP participation appears to be disproportionately weak for an entire region of the EU. After almost 20 years of access to the opportunities of the FPs, the EU-13 (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia) still lags behind the EU-15 (UK, Sweden, Portugal, The Netherlands, Italy, France, Ireland, Finland, Spain, Greece, Denmark, Germany, Belgium, Austria, Luxemburg). Moreover, the knowledge that is produced needs to be applied in national contexts, and the FPs also aim to increase cohesion and promote social responsibility. This is why uneven participation is an issue that impacts on the achievement of the higher objectives of the EU FPs as such.

The aim of this study was to explore, identify and enlighten reasons for the low participation and success rate of EU-13 countries, in order to improve their future performance in Horizon 2020 and in future FPs. The study includes an extensive literature review of various aspects of EU-13 participation in FPs, a comprehensive data analysis to allow a number of hypotheses regarding the origins of the low participation and success rates of the EU-13 countries in FP7 and Horizon 2020 to be tested empirically, a survey among public research institutions and interviews with policy-makers. The results point in the direction of possible solutions. Some solutions will be the responsibility of each Member State government. The EU needs to take action where low participation is caused by the design and governance of the FPs, as well as where patterns of participation, which have emerged over time and have now become self-reinforcing, create barriers to entry.

Study | New technologies and the future of labor

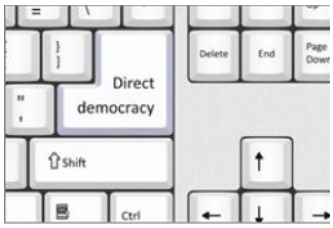
The relationship between new technologies, employment and inequality has gained a lot of attention in recent years. One reason for this interest is the growing number of alarming reports about possible negative consequences for employment from the widespread use of new information and communication technologies (ICTs), including machine learning, digitalisation of production, robotics and automated vehicles.

The aim of this STOA study was to investigate the potential employment effects of new ICTs, by examining the relationship between innovation, new technologies, employment and inequality. The challenge of the future – besides increasing innovation to spur employment growth – lies in coping with rising inequality as a result of technological change. Skill-biased and routine-biased technological changes are two mechanisms that may increase inequality, because they favour particular groups of the workforce and reduce the employability of others, in particular low-skilled workers who already bear a considerable share of the adjustment costs of innovation. The risk of displacement of their jobs is higher, and the number of available jobs that require only low qualification decreases.

The study argues that the race between job creation through new products, and job destruction from process innovation, has been won in the past by the job-creating effects of innovation. It concludes that there is an uneven distribution in the costs of digitalisation, due to the skill-biased nature of technological change, and proposes a number of policy options for dealing with the employment effects of digitalisation.

As part of this project, STOA had organised a workshop on 11 October 2016, chaired by MEP Georgi Pirinski. The workshop was an opportunity to discuss the preliminary study findings and to provide input for the formulation of the policy options.

Study | Prospects for e-democracy in Europe



Digital tools could create stronger connections between European citizens and the EU decision-making process and, by doing so, they might contribute to reducing the EU democratic deficit. The STOA study investigated what lessons can be drawn from local, national and European experiences with the use of digital tools for the operation of EU decision-making procedures and institutions. For that purpose, a review of current literature on e-democracy and the European public sphere was carried out, 22 local, national and EU experiences with existing digital tools were investigated and evaluated, and an analysis was made of the suitability of the most promising digital tools for implementation and use at EU level.

The most important factors for successful e-participation identified in the report are: there has to be a close and clear link between e-participation processes and a concrete formal decision-making process; the participatory process and the contribution of its outputs to the overall decision-making process have to be clear to participants from the start; feedback to the participants about what has been done with their contributions is an indispensable feature of the process; a participative process should not be limited to one event, but should be imbedded in an institutional 'culture of participation'; e-participation must be accompanied by an effective mobilisation and engagement strategy, involving communication instruments tailored for different target groups.

In order to make e-participation tools at the EU level more successful, this report provides four policy options: 1) stimulate experiments with participatory budgeting in relation to the regional and social funds, since e-budgeting produces the strongest results when it comes to impact on decision-making, 2) expand online engagement with MEPs beyond petitions; 3) create a platform for monitoring Member State action during Council decision-making; 4) explore crowdsourcing of policy ideas for the European Commission.

Study | Assistive technologies for inclusion

Many current and future ATs could have a substantial positive impact on the inclusion of people with disabilities in society, education and employment.

Assistive technologies (ATs) are designed to improve the functional capabilities of people with disabilities. Some are relatively low-tech and very familiar, such as reading glasses, crutches and hearing aids. Others are more advanced, using cutting-edge science and technology, with future ATs under development that could have a huge impact on all our lives.

The key results of the study are presented in a video, and are further summarised and developed in an In-Depth Analysis, which highlights that many current and future ATs could have a substantial positive impact on the inclusion of people with disabilities in society, education and employment. However, just because current ATs already bring many opportunities does not mean that no social or regulatory action is needed, nor does it mean that by waiting for future ATs we will inherit a more inclusive society. Indeed, if they are not developed and introduced carefully, ATs can pose risks for human rights, privacy, dignity, access to employment, freedom and social inclusion.

There are several key messages. First, a proactive approach should be taken to ensure that current and future ATs respond to the needs and challenges of society. Second, a 'one size fits all' approach to promoting ATs may be inappropriate, as individuals have different needs, desires and preferences, and live in different social, economic and infrastructural contexts. Third, technology alone is not enough and should be combined with social and regulatory action. Fourth, adequate responses to discrimination and stigma will require broad attitudinal and organisational change that permeates society. Finally, the study calls for more effective use of current technologies and regulations, combined with social action against discrimination and stigma, which could have a profound positive effect on all of our lives. The full study can be found here.

STOA (Science and Technology Options Assessment), an integral part of the European Parliament's structure, is tasked with carrying out expert, independent assessments of the impact of new technologies and identifying long-term, strategic policy options useful to the Parliament's committees in their policy-making role.

STOA Panel

The STOA Panel is composed of 25 Members of the European Parliament, including the EP Vice-President responsible for STOA and 24 MEPs appointed by nine parliamentary committees. With the input of committees and individual Members, the STOA Panel, on the recommendation of its Bureau, decides on projects and other activities in the field of science and technology. Each STOA project is overseen by one or more Panel members.

STOA Panel

The STOA Panel includes Members from the following committees:
Industry, Research and Energy (ITRE): six Members
Agriculture and Rural Development (AGRI): three Members
Employment and Social Affairs (EMPL): three Members
Environment, Public Health & Food Safety (ENVI): three Members
Internal Market and Consumer Protection (IMCO): three Members
Transport and Tourism (TRAN): three Members
Culture and Education (CULT): one Member
Legal Affairs (JURI): one Member
Civil Liberties, Justice and Home Affairs (LIBE): one Member

STOA Bureau

The STOA Bureau is comprised of four Members:
Ramón Luis Valcárcel Siso, EP Vice-President responsible for STOA
Eva Kaili, STOA Chair
Paul Rübig, STOA First Vice-Chair
Evžen Tošenovský, STOA Second Vice-Chair.

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