STOA
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PANEL FOR THE FUTURE OF SCIENCE AND TECHNOLOGY

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Event | Science Week, 5-7 February 2019

The first edition of the 'Science Week at the European Parliament' featured various scientific events with a common objective: to strengthen a fruitful dialogue between scientists, policy-makers and — for the first time — science journalists. The week saw the launch of the seventh edition STOA's MEP-Scientist Pairing Scheme with 13 scientists, who followed their MEP counterparts in their daily political activities, in order to gain an understanding of the EU science, technology and research policy framework, including, in particular, EP work in this area.

Other events during Science Week included the 'Science meets Parliaments' event co-organised with the European Commission's Joint Research Centre (JRC), the European Science-Media Hub workshop 'Tackling misinformation and disinformation in science', and a Conference co-organised with the European Research Council (ERC) and entitled 'Investing in researchers, shaping Europe's future'. These events aimed to raise awareness about politically relevant, cutting-edge scientific issues and about the importance of science for evidence-informed policy-making.

On 6 February 2019 scientists and journalists teamed up, as part of the Science Week, to discuss how to ensure better dissemination of sound scientific information and how to fight disinformation in science in the post-truth era. Several case studies, from different scientific disciplines, and featuring the use of various tools against disinformation, were presented to the audience. In addition, several pitching sessions and interviews were organised between scientists and journalists.

Nahema Marchal and Richard Fletcher discuss technology and social polarisation with STOA First Vice-Chair Paul Rübig during the STOA Panel meeting.

Study | Technology and social polarisation

In recent years, techniques such as psychological profiling have been mobilised for political campaigns on social media with worrying effects. News consumption is increasingly personalised to individual users, while news production grows more reliant on advertising revenue generated by clicks. These trends could lead to more polarised societies in which citizens share less common ground and are less understanding of those with different political ideologies, attitudes to populism, or perspectives on major issues of the day. In this context, STOA launched a project to explore the mechanisms by which technology trends may foster polarisation.

One study, conducted by Richard Fletcher and Joy Jenkins of the Reuters Institute for the Study of Journalism at the University of Oxford, considered the effects of technology on news production and consumption across Europe and their potential to lead to more polarised societies. The other study was conducted by Lisa Maria Neudert and Nahema Marchal of the University of Oxford, and focused on trends in political campaigning and communication strategies.

Both studies present policy options that could help to foster healthier digital environments and mitigate trends towards social polarisation. These are combined and further developed in a STOA Options Brief, which includes options targeting news consumption, digital divides, political communications, news producers and governance institutions. The authors of both studies presented their work during the STOA Panel meeting on 14 March 2019, which can be viewed here.

Event | Optimising treatment in personalised medicine

Despite numerous therapeutic strategies authorised on the market, survival and the quality of life of patients remain major public health issues. This can be partly explained by the multiplication of agents with the same mechanisms of action, instead of true innovation. For example, there is limited knowledge on how to use anti-cancer agents for dose, sequence, combination with surgery and/or radiotherapy. Sub-optimal administration of costly treatments may generate unnecessary toxicity for the patients and burden national healthcare budgets.

In Europe, most clinical research focuses primarily on drug development for regulatory approval, instead of addressing patient and public health needs. Once a drug enters the common market, each EU Member State determines its real-world application, pricing, reimbursement, and clinical indications — leading to disparities among EU citizens. In this context, many healthcare practitioners call for reforming the current system to a truly 'patient-centred' paradigm with systematically coordinated treatment optimisation in conjunction with drug development.

The STOA workshop 'Innovative solutions for research in healthcare', held on 10 January 2019, in the European Parliament in Brussels, discussed these issues. In his closing remarks, Paul Rübig, STOA First Vice-Chair, said: "It is urgent to implement a better treatment optimisation as part of personalised medicine development in Europe. This requires efforts that need to go beyond the clinical audience, addressing patients and their care-givers, politicians, research funders, industry and other stakeholders". At the end of the meeting, the European Organisation for Research and Treatment of Cancer (EORTC), co-organisers of the event, presented its manifesto for 'A new approach for better medicine in Europe'.

Event | Virality and influencers in digital communication

STOA Chair Eva Kaili chairing the STOA workshop on virality

On 3 April 2019, the European Science-Media Hub organised a workshop about virality and influencers, including the broader question of how the European message can be conveyed more effectively.

STOA Chair Eva Kaili opened the event, highlighting the importance of investigating how activism and key messages work online and of assessing their political impact, in particular in the current European context. The subsequent discussion focused on what virality means, how it manifests itself, and how influencers affect online communication. The first part of the workshop focused on the theoretical aspects of virality, while the second moved on to its practical aspects.

George Markopoulos, associate professor at the Department of Linguistics, School of Philosophy, University of Athens, presented the socio-linguistics of virality. Michael Bossetta, political and data scientist at the University of Copenhagen, took over with a presentation on the potential and pitfalls of virality for politics. Kristof Varga, consultant on policy development and social media, formerly director at Bakamo.Social, explored what motivates people to share online.

Diarmaid Mac Mathúna, director at Indiepics, recalled that, despite possible disinformation, we can still use social media for good. Emmanuel Rivière, chairman at Centre Kantar sur le Futur de l'Europe, presented the subject of the 'yellow jackets' movement and explained the particular French circumstances that favoured it. Facebook public-policy manager Meg Chang covered the best practices in storytelling and presented the key variables of virality, i.e. interactivity, authenticity, timeliness and consistency.

STOA First Vice-Chair Paul Rübig concluded the event with a passionate call for the audience to vote at the EP elections in May.

Kay Swinburne, MEP and STOA Panel Member, chairing the STOA working breakfast

Event | The science and ethics of gene drive

Gene drive is a biotechnology with potential applications in various areas. It can be applied to plants or animals, e.g. for controlling invasive species or for decreasing resistance to pesticides or herbicides in pests and weeds. For policy-makers it is crucial to understand the benefits and possible risks when using such technology.

A STOA workshop held on 19 March 2019 focused upon an application of gene-drive technology that could have an enormous societal impact, namely for eradicating malaria. STOA conducted a preliminary foresight assessment, which included synthesising the available scientific evidence and a brainstorming with people with various backgrounds: the research community, malaria communities, ethicists, and experts with ecological, biotechnological, medical and legal knowledge. Following STOA's foresight approach, they discussed possible impacts of this application of gene drive: intended or unintended, promising as well as troubling ones. Even though the technology is seen as very promising for malaria-affected communities, a significant threat was identified in the potential impacts on the wider ecosystem. A central question is whether the end justifies the means. To address this one would need a framework for systematic qualitative and quantitative risk assessment.

Wrapping up the event, the chair, STOA Panel member Kay Swinburne, praised the EU's strong regulatory framework, which prevents technologies such as gene drive from being introduced just for the sake of profit. She welcomed the fact that such implementation only takes place after a serious debate that covers all aspects of the topic: from the ethical to the economic, and from the societal to the environmental.

Joanna Goodey, (European Union Agency for Fundamental Rights – FRA) discusses how AI affects the protection and enjoyment of human rights with STOA Chair Eva Kaili during the workshop.

Event | Does artificial intelligence threaten human rights?

Asking the question 'Is artificial intelligence a human rights issue?', the workshop, co-organised by STOA and the European Parliament's Committee on Civil Liberties, Justice and Home Affairs (LIBE) on 20 March 2019, gathered academic experts, non-governmental organisations (NGOs), AI practitioners and representatives of international organisations to share their perspectives on how artificial intelligence (AI) affects the protection and enjoyment of human rights. Despite the speakers' diverse experiences, there was a consensus that AI poses a wide range of new risks for human rights that need to be addressed immediately. The panellists agreed that there are no established methodologies yet to track the effects on human rights and assess the potential for discrimination in the use of AI, particularly machine learning.

STOA Chair Eva KAILI, who also chaired the event, emphasised the need to assess the capacity of the current universal human-rights and EU ethical frameworks to confront emerging governance challenges, when it comes to the deployment and application of AI, and argued that Europe has the opportunity to shape the direction of AI, at least from a socio-ethical perspective.

The panellists advocated an ethics-by-design approach that will facilitate the embedding of values such as transparency and explainability in AI development. They also noted that legally binding norms are needed in the field of AI-based decision-making processes, rather than soft-law instruments, and that EU legislators should consider the possibility of integrating a requirement for systematic human rights impact assessments, or even developing new legal mechanisms for redress/remedy for human rights violations resulting from AI.

STOA (Panel for the Future of Science and Technology), 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.

Panel for the Future of Science and Technology (STOA)

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

In the second half of the 8th parliamentary term, the STOA Bureau was comprised of the following 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.
A new Bureau will be elected by the STOA Panel when it is newly constituted in Autumn 2019.

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