STOA Newsletter

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PANEL FOR THE FUTURE OF SCIENCE AND TECHNOLOGY

INSIDE THIS ISSUE

1 STOA work on COVID-19
2 The future of AI for Europe
3 Digital sovereign identity
4 Using blockchain to support international trade
5 Negative effects of Internet use
6 Digital contact tracing
7 ESMH coverage of the corona crisis
8 Nanotechnology is transforming medicine

Highlights | STOA work on COVID-19

STOA has continued and even reinforced its activities while working under the emergency measures. Our coronavirus-related publications include: What if we could fight coronavirus with artificial intelligence?, What if smartphones could help contain COVID-19? and Ten technologies to fight coronavirus, a compilation of 10 'What if' papers on technologies at the forefront of the coronavirus battle, placing them in the current legal, policy-making and ethical context.

STOA also organised several successful online events. 'STOA meets experts on COVID-19' on 23 April was the occasion to discuss the effectiveness of the measures to combat the health crisis, the reliability and comparability of the data grounding the various national strategies and the timeline for the development of an effective treatment and/or vaccine. 'The big future of nanotechnology in medicine' on 25 June covered also the role of nanotechnology in the fight against coronavirus and future pandemics. In the STOA roundtable on 'Deconfinement going digital: The rise of contact tracing apps' on 7 July, experts discussed with MEPs the technology behind contact tracing apps, lessons learned and best practices developed while maintaining privacy protection and citizens' trust.

Lastly, several STOA studies are in preparation, on topics such as the impact of COVID-19 on EU priorities like the green transformation and the digitalisation of Europe; the impact of social isolation; contact tracing applications; and the contribution of EU-funded R&I partnerships in improving global health security.

Event | The future of AI for Europe

STOA Chair Eva Kaili with Margrethe Vestager
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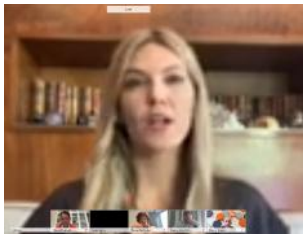
This workshop, held on 29 January 2020, focused on how Europe can maximise the benefits and address the challenges of artificial intelligence (AI) in a human-centric way. The first STOA event in this parliamentary term (2019-2024) drew a full house with MEPs, European Commission leaders, academic experts and representatives of international organisations debating how to strike the right balance with AI.

The workshop was chaired by Eva Kaili, STOA Chair, who argued that the development of AI is a battlefield between those in favour of a transnational regulatory control of its applications and those supporting digital protectionism and localised solutions for its governance. Margrethe Vestager, Executive Vice-President of the European Commission (EC) for 'a Europe fit for the digital age' and keynote speaker, emphasised the need to make sure that the deployment of AI respects all EU values of an open and free society, by strengthening stakeholder engagement and enhancing the transparency and explainability of algorithmic decision-making.

There was a consensus that AI poses a wide range of new risks that need to be addressed in a proactive and step-wise manner, by putting in place the necessary safeguards and standards that would ensure that European citizens remain protected. The panellists also agreed that AI regulation should be pursued on the basis of a thorough risk-assessment approach and a thorough evaluation – and potential adaptation – of the EU regulatory framework within clearly defined ethical boundaries. Closing the event, Eva Kaili announced the establishment of an ambitious specialised Centre for AI (C4AI), under STOA's responsibility.

Event | Digital sovereign identity

On 11 June 2020 STOA hosted a roundtable discussion about how citizens can manage their online identities while maintaining privacy, safety and security. The event was organised in cooperation with ELONTech and the IOT Council in the context of the work of next generation internet, a European Commission initiative to reimagine and re-engineer the internet for the third millennium and beyond.



The event featured experts on digital sovereign identity from industry, academia and policy-making. In her introduction, STOA Chair Eva Kaili highlighted the importance of managing digital identities safely and securely in the digital age, paying particular attention to who owns and controls the identity management tools. During the discussion, inclusion emerged as a key issue: many citizens prefer or require traditional physical interactions, and they should not be excluded from key services such as banking. Technology could provide some alternative solutions, but it remains important to maintain an ecosystem of identity management services that can cater to all citizens' needs. STOA second Vice-Chair Ivars Ijabs closed the event stressing the important role of STOA, working at the interface of science and policy-making, to address these issues.

"Inclusion is key: it is important to maintain identity management services that cater to all citizens' needs"

Study | Using blockchain to support international trade

Blockchains combine techniques such as encryption, consensus methods and distributed storage to record transactions. They are particularly useful for maintaining ownership histories in cooperation with other actors. Therefore, blockchain technology may offer solutions to some of the barriers in digitalising supply chains and international trade processes, and several actors at EU and international level as well as the private sector are exploring the opportunities. In this context, and on a request of INTA Committee Chair Bernd Lange (S&D, DE), STOA launched a study of potential use cases and their impacts.

The study examines key features of blockchain technology and how it could be used to support various aspects of supply chains and international trade, before analysing the potential impacts of eight specific use cases: decentralised marketplaces, letters of credit, cross-border payments, maritime insurance, supply-chain management, e-certificates of origin, proof of authenticity for luxury products, and ethical sourcing for the food industry. The level of maturity and impact varies across applications. While there are no major technical barriers to using blockchain for some elements of trade, adaptations to the legislative framework may be required. The Options Brief summarises 20 policy options organised into six themes, including measures to support customs facilitation, sustainable trade, SME involvement, leadership in standardisation, evidence-based policy and awareness raising.

"There are no major technical barriers to using blockchain for some elements of trade, but adaptations to the legislative framework may be required"

Study | Negative effects of internet use

Although the benefits of the internet are undeniable, the way in which it has developed has also had adverse consequences in relation to core European values such as equality, respect for human rights and democracy. Technology companies are coming under increasing pressure to mitigate the harmful effects of the internet, whilst politicians and opinion leaders are advocating drastic measures to reverse such impacts. This in-depth analysis provides an overview of some ways in which the internet can have a negative effect on society and culture, as well as a number of policy options for mitigating these effects.

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'Harmful or negative effects on society and culture' are defined to include: (i) harm to the interests, wellbeing, health, social status or civil rights of large groups of people in society; and (ii) harm to the proper functioning of social structures and practices, such as communities, cultural practices and social institutions. This publication presents a summary and an update of the two-part STOA study entitled 'Harmful internet use' and published in January 2019, introducing updated bibliographic appraisals in different parts of the study. Each section features an infographic encompassing the most salient issues in order to aid consultation.

Event | Digital contact tracing

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This online roundtable, held on 7 July 2020, brought together technology experts, privacy advocates, digital rights activists and representatives of the EC, the European Data Protection Supervisor (EDPS) and the European Institute of Innovation and Technology (EIT) to discuss the effective deployment of this technology without compromising our values. The event was moderated by STOA Chair Eva Kaili, with closing remarks by Petra De Sutter, STOA Panel member.

There was a consensus that, although hundreds of coronavirus contact-tracing mobile applications are being developed worldwide and start being deployed in Europe, there is currently limited evidence to evaluate their effectiveness and impact. Additionally, their implementation raises privacy and stigmatisation concerns and questions about their accessibility, inclusivity, accuracy and security that need to be addressed in a proactive and step-wise manner, by putting in place the necessary safeguards and standards that would ensure that European citizens trust this technology. The panellists also agreed that digital contact tracing provides policy-makers with a unique opportunity to deploy a technology that could be socially beneficial and valuable in epidemiological terms if designed in an inclusive way and implemented under concrete legal and ethical conditions.

Highlights | ESMH coverage of the corona crisis

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The coronavirus crisis has demonstrated, as never before, how crucial is the interaction between science, politics and media. Facilitating and enhancing this interaction was the main idea behind the creation of the European Science-Media Hub (ESMH) in 2018. The ESMH team realised the importance of quick, relevant and timely scientific information in these critical times and modified its offer.

The ESMH started a series of interviews with leading European virologists and immunologists about strategies to fight the epidemic and the experiences of different EU countries. These interviews have been picked up by several European media and were included among the top resources and information listed by the Science Advice for Policy by European Academies (SAPEA) Consortium. The ESMH also began to collect the most relevant releases from a range of EU and international actors. Particularly popular are the list of reliable sources of information, and the list of fact-checking and debunking sources tailored for reporters and people interested in tackling the spread of disinformation on the topic. The infodemic challenge around the coronavirus will remain in the focus of future ESMH activities. The ESMH has also covered, via various articles, different aspects of the public health measures against COVID-19, possible treatments, the social impact of the crisis and the challenges of the lockdown exit strategies.

Event | Nanotechnology is transforming medicine

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This STOA workshop, held on 25 June 2020, focused on different aspects of nano-technology and nanomedicine. The scientific culture shift of recent years, in which different disciplines converge, is accelerating discoveries in nanotechnology. Applications such as cancer immunotherapies, vaccines, 3D-printed organs, and nanobiosensors for the diagnosis of pathogens are revolutionising medicine. This workshop provided a space for discussions covering the latest developments in the field, including the link to COVID-19, consumer perception, as well as ethics and responsible innovation. Chaired by Lina Gálvez Muñoz, STOA Panel member, four speakers presented different perspectives and ideas on the impact of nanotechnology, with closing remarks by Petra De Sutter, STOA Panel member.

Sonia Contera, the author of *Nano Comes to Life*, argued that the reductionist approach of 20th century science is transforming to embrace the complexity and diversity of nature, leading to novel nanotechnology applications. Ethics and public perception were discussed as major factors leading to acceptance or rejection of nanotechnology. Petra De Sutter highlighted that there are many ethical and policy-making challenges linked to nanotechnology and that regulatory frameworks should promote evidence-based approaches and public trust.

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 27 Members of the European Parliament, including the EP Vice-President responsible for STOA and 26 MEPs appointed by eleven 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
International Trade (INTA): one Member
Legal Affairs (JURI): one Member
Civil Liberties, Justice and Home Affairs (LIBE): one Member
Regional Development (REGI): one Member

STOA Bureau

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Eva Kaili, STOA Chair
Christian Ehler, STOA First Vice-Chair
Ivars Ijabs, STOA Second Vice-Chair

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