

## Special Committee on Artificial Intelligence in a Digital Age (AIDA)

### September 2020

Parliament's research capacities within the Directorates-General for Parliamentary Research Services (EPRS), Internal Policies (IPOL) and External Policies (EXPO) stand ready to support the work of the new Special Committee on Artificial Intelligence in a Digital Age (AIDA) and its Members. This selection of publications and online resources has been prepared for AIDA's constituent meeting.

#### [Artificial intelligence and civil liability](#)

*Study coordinated by Giorgio Mussa, July 2020*

This study analyses the notion of artificial intelligence technologies and the applicable legal framework for civil liability. It demonstrates how technology regulation should be technology-specific, and presents a Risk Management Approach, where the best capable party of controlling and managing a technology-related risk is held liable as a single entry point for litigation.

#### [Artificial intelligence in law enforcement and criminal justice: Impact on fundamental rights](#)

*Study coordinated by Alessandro Davoli, July 2020*

This study examines the impact of artificial intelligence on fundamental rights in the field of law enforcement and criminal justice, from a European Union perspective. It presents the applicable legal framework (notably in relation to data protection), and analyses major trends and key policy discussions. It also considers developments following the Covid-19 outbreak.

#### [Artificial intelligence: How does it work, why does it matter, and what can we do about it?](#)

*Study by Philip Boucher, June 2020*

This study opens with a clear explanation of key techniques that come under the AI banner before examining the current and potential future opportunities and challenges presented by their application. It then sets out over 100 measures that could respond to these challenges, with sections on policy, technical and social options. Key messages include that language matters; that algorithms are subjective; that AI is not an end in itself; that it might fall short of its promises; and that Europe needs to run its own AI race.

#### [Opportunities of artificial intelligence](#)

*Study coordinated by Frédéric Gouardères and Matteo Ciucci, June 2020*

This study focuses on presenting the technological and regulatory state of play in the field of artificial intelligence in the EU, and its impact, as compared to key competitor countries. This study also highlights industrial areas in which AI will bring significant socioeconomic benefits, before presenting a methodology for scrutinising the fitness of the EU policy and regulatory framework in the context of AI.

#### [Artificial Intelligence: Opportunities and Challenges for the Internal Market and Consumer Protection](#)

*Briefing by Mariusz Maciejewski, Kristine Naess and Louise Blandin, June 2020*

Artificial intelligence affects multiple issues, including data protection, fair algorithmic treatment, transparency and explicability, and protection from undue influence. This briefing contains studies presenting research resulting from an on-going interest by the Committee on Internal Market and Consumer Protection in improving the functioning of the Digital Single Market and developing European digital policies.

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## [The impact of the General Data Protection Regulation on artificial intelligence](#)

*Study coordinated by Mihalis Kritikos, June 2020*

This study addresses the relationship between the General Data Protection Regulation (GDPR) and AI, focussing on the application of AI to personal data. It provides an analysis of how AI is regulated in the GDPR and discusses the tensions and connections between AI and data protection principles. It also examines the legal bases for AI applications to personal data, and considers duties of information concerning AI systems.

## [Artificial intelligence: New developments and innovations applied to e-commerce – Challenges to the functioning of the Internal Market](#)

*In-depth analysis coordinated by Mariusz Maciejewski and Christina Ratcliff, May 2020*

This in-depth analysis discusses the opportunities and challenges brought by the recent and the foreseeable developments of artificial intelligence into online platforms and marketplaces. It advocates the importance to support trustworthy, explainable AI (in order to fight discrimination and manipulation, and empower citizens), and societal-aware AI (in order to fight polarisation, monopolistic concentration and excessive inequality, and pursue diversity and openness).

## [The use of artificial intelligence in the cultural and creative sectors](#)

### [The use of artificial intelligence in the audiovisual sector](#)

### [The use of artificial intelligence in education](#)

*Research project coordinated by Katarzyna Anna Iskra and Pierre Heriard, May 2020*

This research project provides a synthesis of the state-of-the-art knowledge on the impact of artificial intelligence on education, the audiovisual, cultural and creative sectors, and a presentation of the current issues and potential challenges. It proposes concrete recommendations on how the EU could shape appropriate policies in these fields.

## [New aspects and challenges in consumer protection – Digital services and artificial intelligence](#)

*Study coordinated by Mariusz Maciejewski and Christina Ratcliff, April 2020*

The study addresses the new challenges and opportunities for digital services that are provided by artificial intelligence, in particular with regard to consumer protection, data protection, and providers' liability. The way in which digital services rely on AI for processing consumer data and for targeting consumers with ads and other messages is looked into. Also addressed is the relevance of AI for the liability of service providers in case of unlawful and harmful content.

## [Education and employment of women in science, technology and the digital economy, including artificial intelligence, and its influence on gender equality](#)

*Study coordinated by Martina Schonard, April 2020*

This study provides evidence that there is still gender bias and inequality in STEM (Science, Technology, Engineering and Mathematics) fields and the digital sector. It provides an up-to-date literature review on the status of women's education and employment in STEM fields and the digital sector, identifying obstacles and bottlenecks that prevent gender parity. Suggestions for future research, initiatives and policies are also made.

## [The ethics of artificial intelligence: Issues and initiatives](#)

*Study coordinated by Mihalis Kritikos, March 2020*

This study reviews the ethical implications and moral questions that arise from the development and use of AI, as well as the guidelines and frameworks which have been created to address them. It presents a comparison between several frameworks and identifies gaps in fair benefit-sharing; assigning of responsibility; exploitation of workers; environmental impacts; and human relationships.

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## [The mental health of workers in the digital era](#)

*Briefing coordinated by Stefan Schulz, January 2020*

This briefing aims to bring insight into how recent technical innovation and its pace affect the mental well-being of workers. Taken collectively there is clear evidence for adverse psycho-social effects arising from the use of new technologies in the workplace. The term 'technostress' provides a useful umbrella term, but another common psycho-social effect is work-life balance, raising concerns regarding the blurring of boundaries between work and non-work.

## [EU guidelines on ethics in artificial intelligence: Context and implementation](#)

*Briefing by Tambiama Madiaga, September 2019*

This paper provides an overview of the EU human-centric approach and the ethical rules that are now recommended when designing, developing, deploying, implementing or using AI products and services in the EU. Moreover, it identifies some implementation challenges and presents possible further EU action ranging from soft law guidance to standardisation to legislation in the field of ethics and AI.

## [Economic impacts of artificial intelligence](#) (also available as a [podcast](#))

*Briefing by Marcin Szczepanski, July 2019*

AI can increase efficiency, improve decision-making processes and spawn the creation of new products and services, markets and industries. However, AI may also widen the gap between developed and developing countries, increase inequality, push down wages and shrink the tax base. However, these effects are not a given, and carefully designed policy could foster the development of AI while keeping its negative effects in check.

## [Cost of non-Europe in robotics and artificial intelligence](#)

*Study coordinated by Elodie Thirion, June 2019*

A harmonised EU regulatory framework for liability and insurance regarding robotics and AI specifically could provide greater legal certainty and promote trust. It could also stimulate greater research and development activity by producers and increase the speed of uptake of these two new emerging technologies by consumers, resulting in a possible positive impact in terms of gross domestic product. Research suggests that, by 2030, EU GDP could be 0.04 % higher than it would otherwise be under the current regulatory framework.

## [A governance framework for algorithmic accountability & transparency](#)

*Study coordinated by Mihalios Kritikos, April 2019*

This study develops policy options for the governance of algorithmic transparency and accountability, which could promote fairer algorithmic decisions by providing the foundations for obtaining recourse to meaningful explanation, correction, or compensation. The authors propose policy options addressing awareness raising; accountability in public sector applications; regulatory oversight and legal liability; and global coordination.

## [Artificial intelligence ante portas: Legal & ethical reflections](#)

*Briefing by Mihalios Kritikos, March 2019*

This briefing provides accessible introductions to some of the major legal, regulatory and ethical debates surrounding the deployment and use of AI systems. By providing an analysis of the key legal initiatives in this field in Europe, the briefing aims to equip the reader with the understanding they need to engage in clear-headed reflection about AI's legal and socio-ethical challenges, and meaningful debates about how the current EU *acquis* may need to be adjusted to the new technological realities.

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## [Regulating disinformation with artificial intelligence](#)

*Study coordinated by Mihalis Kritikos, March 2019*

This study examines the consequences of the increasingly prevalent use of AI disinformation initiatives upon freedom of expression, pluralism and the functioning of a democratic polity. The study examines the trade-offs in using automated technology to limit the spread of disinformation online. It presents options (from self-regulatory to legislative) to regulate automated content recognition (ACR) technologies in this context.

## [Artificial intelligence in transport: Current and future developments, opportunities and challenges](#)

*Briefing by Maria Niestadt, March 2019*

AI is already applied in numerous transport modes and can make them safer, cleaner, smarter and more efficient. However, with these opportunities come real challenges, including unintended consequences and misuse such as cyber-attacks and biased decisions about transport. There are also ramifications for employment, and ethical questions regarding liability for the decisions taken by AI in the place of humans. This briefing sets out EU action to support innovation and adapt the regulatory framework to ensure respect for fundamental values and rights.

## [Artificial intelligence and civil law: liability rules for drones](#)

*Study coordinated by Giorgio Mussa, November 2018*

This study analyses existing European and national legislation on the regulation of drones for civil use, discussing how they are defined and classified, whether certification and registration is required, how liability is apportioned between the subjects involved, and if compulsory insurance is provided for. It also elaborates recommendations for future policy formulation.

## [Should we fear artificial intelligence?](#)

*In-depth analysis coordinated by Philip Boucher, March 2018*

For better or worse, AI is predicted to have a huge impact on the future of humanity. As new promises and concerns increasingly reach mainstream audiences, the debate is starting to capture the public imagination. In this publication, four opinion pieces each respond to the question: Should we fear AI? The four authors come from different disciplinary backgrounds and present diverging perspectives on whether we should fear the future of AI, and how we should proceed with its development.

## [Artificial intelligence: Potential benefits and ethical considerations](#)

*Briefing by Francesca Rossi, October 2016*

The briefing gives a definition of the term 'artificial intelligence' and looks at the impact of AI systems in our lives, their possible uses, and the ethical principles, moral values, professional codes, and social norms that come into play. It stresses that research and educational efforts, and carefully designed regulations must be put in place in order to reap the societal benefits of AI systems.

### **Further online resources**

EPRS podcasts: [What if we could fight coronavirus with artificial intelligence?](#), [What if AI could advance the science surrounding dementia?](#), [What if artificial intelligence made work obsolete?](#).

European Science-Media Hub (ESMH): [AI in journalism: with power come responsibilities; further ESMH articles on AI.](#)

What Europe does for me: [People interested in artificial intelligence](#)

You can access this Topical Digest at [http://www.europarl.europa.eu/EPRS/TD\\_AIDA\\_2020\\_final.pdf](http://www.europarl.europa.eu/EPRS/TD_AIDA_2020_final.pdf)  
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