



Committee on the Environment, Public Health and Food Safety

2018/2088(INI)

21.11.2018

OPINION

of the Committee on the Environment, Public Health and Food Safety

for the Committee on Industry, Research and Energy

on a comprehensive European industrial policy on artificial intelligence and robotics
(2018/2088(INI))

Rapporteur: Bolesław G. Piecha

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SUGGESTIONS

The Committee on the Environment, Public Health and Food Safety calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

- A. whereas artificial intelligence (AI) will become a technological, economic, social and psychological revolution, with obvious ethical repercussions, not only in Europe but also all over the world;
- B. whereas the increasing integration of robotics in human systems requires strong policy guidance on how to maximise the benefits and minimise the risks for society and ensure a safe, equitable development of artificial intelligence;
- C. whereas the market maturity of artificial intelligence represents, ethically and morally, the biggest revolution since the steam engine and the computer, one which needs to be discussed in depth at a social level;
- D. whereas, in industry and services associated with high technology, AI is key to turning Europe into a ‘start-up continent’ by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, treatment of chronic diseases, and medical imaging and records, as well as securing a sustainable environment and safe food production; whereas Europe is currently lagging behind North America and Asia in terms of research and patents in the field of artificial intelligence;
- E. whereas the development of AI technologies may help to improve the lives of people with chronic illnesses and disabilities and address social challenges such as our ageing population by making health technology more precise and effective in providing healthcare;
- F. whereas there is a broad catalogue of possible applications of AI and robotics in medical care, such as: managing medical records and data, performing repetitive jobs (analysing tests, X-rays, CT scans, data entry), treatment design, digital consultation (such as medical consultation based on personal medical history and common medical knowledge), virtual nurses, medication management, drug creation, precision medicine (as genetics and genomics look for mutations and links to disease from the information in DNA), health monitoring, healthcare system analysis, etc.;
- G. whereas accessibility does not mean the same services and appliances for all; whereas the accessibility of AI and robotics is based on inclusive planning and design; whereas the user’s needs, wishes and experiences need to be the starting point of the design;
- H. whereas there are strong ethical, psychological and legal concerns about the autonomy of robots, their obvious lack of human empathy and their impact on the doctor-patient relationship which have not yet been properly addressed at EU level, in particular as regards the protection of patients’ personal data, liability, and the new economic and employment relationships that will be brought about; whereas ‘autonomy’ as such can only be fully attributed to human beings; whereas there is a need for a robust legal and

ethical framework for artificial intelligence;

- I. whereas the introduction of artificial intelligence in the area of health in particular must always be based on the ‘man operates machine’ principle of responsibility;
- J. whereas the risks of AI have not been studied enough;
- 1. Underlines that any revolutionary technological progress, particularly in the field of AI and robotics, should serve human wellbeing;
- 2. Stresses that AI systems and robots are innovative technological means to improve people’s lives, grow the economy, and address challenges pertaining to health, the environment, climate change and food safety, among many other aspects, with a human agent always being responsible for their use;
- 3. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’ to fully exploit socio-economic development opportunities while thoroughly addressing issues of safety, security, prevention of harm and mitigation of risks, human moral responsibility, governance and regulation of AI and robots, environmental sustainability, and disposal of AI devices¹; stresses that this ‘ecosystem’ should be open to the needs of very small enterprises (VSEs) and small and medium-sized enterprises (SMEs) and established in association with all relevant stakeholders, in particular patient groups, but also taking into account the concerns of other groups such as welfare associations, churches and faculties of philosophy;
- 4. Special attention should be paid to the use of ‘big data’ in health with the aim of maximising the opportunities it can bring – such as improving the health of individual patients as well as the performance of Member States’ public health systems – without lowering ethical standards and without threatening the privacy or safety of citizens;
- 5. Warns strongly against any attempt to equip machines employing artificial intelligence with some kind of ‘personality’, thereby exonerating producers and the people who operate them from responsibility;
- 6. Stresses, however, that the existing system for the approval of medical devices may not be adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory framework if necessary in order to establish the framework for determining the respective liability of the user (doctor/professional), the producer of the technological solution, and the healthcare facility offering the treatment; points out that legal liability for damage is a central issue in the health sector where the use of AI is concerned; stresses the need therefore to ensure that users will not be led invariably to back the diagnostic solution or treatment suggested by a technological instrument for fear of being sued for damages if, on the basis of their informed professional judgement, they were to reach conclusions that diverged even in part;

¹ See in particular the European Group on Ethics in Science and New Technologies statement on Artificial Intelligence, Robotics and ‘Autonomous’ Systems of March 2018.

7. Calls on the Commission and the Member States to allocate greater funding to AI and robotic research and encourage AI experts and European and non-European companies to create innovative jobs enhancing research on public health issues; maintains, however, that an overall employment strategy needs to go hand in hand with the advance of AI in the professional healthcare context;
8. Calls on the Commission and the Member States to foster talent in the fields of artificial intelligence and robotics by taking practical measures (for example, setting up incubators and supporting start-ups) to increase the number of trained personnel, giving particular attention to the presence of women and to attracting students from other disciplines;
9. Calls on the Council and the Commission to take all legal measures necessary to prohibit methods of euthanasia and selection by means of the increasing use of optimising human-machine interfaces in the human body;
10. Calls on the Commission to allow access to grants under EU framework programmes and other forms of funding for research into AI;
11. Calls on the Commission and the Member States to draw up far-reaching plans aimed at attracting key stakeholders and main players from the fields of IT, mathematics, physics, medical information technology, clinical psychology, bioengineering and pharmaceutics to open AI biomedical and bionic research centres all across Europe; calls on the Commission and the Member States, however, to take the risks of AI (such as their impact on the doctor-patient relationship and the dehumanisation of medical care) seriously and to support research into the risks and ethical concerns related to AI, which could help to determine whether and under what conditions the use of a given technological solution might be considered appropriate and in accordance with the fundamental principles of human dignity and equality and could hence be authorised;
12. Calls on the Member States and the Commission to increase funding in health-related AI technologies in the public and private sectors; welcomes, in this context, the declaration of cooperation signed by 24 EU Member States and Norway with a view to boosting the impact of investments in AI at European level; calls on the Member States and the Commission to consider whether training programmes for medical and healthcare personnel should be updated and standardised on a Europe-wide basis so as to ensure high levels of expertise and a level playing field in the Member States as regards knowledge and use of the most advanced technological instruments in robotic surgery, biomedicine, and artificial intelligence-based biomedical imaging.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	20.11.2018
Result of final vote	+: 48 -: 2 0: 0
Members present for the final vote	Marco Affronte, Pilar Ayuso, Zoltán Balczó, Catherine Bearder, Ivo Belet, Biljana Borzan, Paul Brannen, Nessa Childers, Birgit Collin-Langen, Seb Dance, Mark Demesmaeker, Bas Eickhout, Francesc Gambús, Gerben-Jan Gerbrandy, Jens Gieseke, Julie Girling, Sylvie Goddyn, Françoise Grossetête, Benedek Jávor, Karin Kadenbach, Urszula Krupa, Giovanni La Via, Jo Leinen, Peter Liese, Valentinas Mazuronis, Susanne Melior, Miroslav Mikolášik, Massimo Paolucci, Gilles Pargneaux, Bolesław G. Piecha, John Procter, Julia Reid, Frédérique Ries, Annie Schreijer-Pierik, Adina-Ioana Vălean, Jadwiga Wiśniewska
Substitutes present for the final vote	Cristian-Silviu Buşoi, Nicola Caputo, Michel Dantin, Martin Häusling, Esther Herranz García, Gesine Meissner, Tilly Metz, Ulrike Müller, Sirpa Pietikäinen, Carlos Zorrinho
Substitutes under Rule 200(2) present for the final vote	Mercedes Bresso, Innocenzo Leontini, Olle Ludvigsson, Ana Miranda

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

48	+
ALDE	Catherine Bearder, Gerben Jan Gerbrandy, Valentinas Mazuronis, Gesine Meissner, Ulrike Müller, Frédérique Ries
ECR	Mark Demesmaeker, Urszula Krupa, Bolesław G. Piecha, John Procter, Jadwiga Wiśniewska
EFDD	Sylvie Goddyn
NI	Zoltán Balczó
PPE	Pilar Ayuso, Ivo Belet, Cristian-Silviu Bușoi, Birgit Collin-Langen, Michel Dantin, Francesc Gambús, Jens Gieseke, Françoise Grossetête, Esther Herranz García, Giovanni La Via, Innocenzo Leontini, Peter Liese, Miroslav Mikolášik, Sirpa Pietikäinen, Annie Schreijer-Pierik, Adina-Ioana Vălean
S&D	Biljana Borzan, Paul Brannen, Mercedes Bresso, Nicola Caputo, Nessa Childers, Seb Dance, Karin Kadenbach, Jo Leinen, Olle Ludvigsson, Susanne Melior, Massimo Paolucci, Gilles Pargneaux, Carlos Zorrinho
VERTS/ALE	Marco Affronte, Bas Eickhout, Martin Häusling, Benedek Jávor, Tilly Metz, Ana Miranda

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EFDD	Julia Reid
PPE	Julie Girling

0	0

Key to symbols:

- + : in favour
- : against
- 0 : abstention