Artificial Intelligence in the audiovisual industry

Summary of the workshop

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Summary of the workshop

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Introduction

From the era of the Industrial Revolution, up until recent years, human intelligence has been at the centre of every creation and innovation. While listing the greatest inventions of human intelligence, it seems indisputable that the invention of some kind of intelligence, although artificial, stands out because of its singularity. A long time ago, robotics used to belong to science fiction, although more to fiction than to science. However, with Artificial Intelligence (AI), and the ability of machines to create and innovate, many industries, including the media, have entered a new era.

Defining the concept of AI remains subject to discussions, among lawmakers and even among scientists themselves. It is therefore safer to adopt a wider understanding of AI, as outlined in the Council of Europe Commissioner for Human Rights definition.[2]

In terms of future prospects, AI has created high expectations; it is anticipated that by 2030 it could potentially stimulate an average growth rate of 20% in terms of European economic activity.[3] AI is expected to lay the foundation for a higher quality of life, new employment opportunities, better services and new and more sustainable business models. In the media industries, AI tools are used in different fields, including content analysis, creation, dissemination, promotion, prediction, and even compliance and enforcement. Its use is not limited to the entertainment industries, but encompasses a much wider range of media, such as journalism, advertising and telecommunications; it is fundamentally transforming the entire value chain.

Yet, the introduction of AI has quite naturally raised several challenges from scientific, economic, ethical, social and legal perspectives. Fears of a negative impact on democracy, competition, fundamental rights and freedoms and the rule of law have started to emerge progressively. Potential risks have alerted policy-makers and other stakeholders to the importance of taking concrete and quick steps to look into suitable legal responses to complement already existing initiatives by the industry and civil society.

To better understand the challenges at stake and stimulate discussion on best practices and approaches, the European Audiovisual Observatory organised a workshop which gathered together different categories of stakeholders, taking into account the global dimension of AI and its wide-ranging influence on audiovisual industries in Europe. The workshop was structured as follows:

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[2] An AI-system is a machine-based system that makes recommendations, predictions or decisions for a given set of objectives. It does so by: (i) utilising machine and/or human-based inputs to perceive real and/or virtual environments; (ii) abstracting such perceptions into models manually or automatically; and (iii) deriving outcomes from these models, whether by human or automated means, in the form of recommendations, predictions or decisions.
"Unboxing Artificial Intelligence: 10 steps to protect Human Rights", Recommendation by the Council of Europe Commissioner for Human Rights, May 2019, https://rm.coe.int/unboxing-artificial-intelligence-10-steps-to-protect-human-rights-reco/1680946e64.
[3] High-Level Expert Group on AI (AI HLEG) Policy and Investment Recommendations, 8 April 2019, https://ec.europa.eu/digital-single-market/en/news/policy-and-investment-recommendations-trustworthy-artificial-intelligence.

- The first session of the workshop aimed at setting the scene, with an overview of the different fields of application of AI in the media sector.

- The second session addressed the potential impact of AI on news production and distribution, as news providers are also using AI capabilities for journalistic purposes, including the automatic writing of news articles, the fact-checking of information and for monitoring, content filtering and moderation, etc.

- The third session explored the potential impact of AI on the production and distribution of works of fiction, as AI intervenes not only in the process of decision-making for content production but also as a creative and artistic tool (scriptwriting, computer-generated imagery and editing, etc), as well as being used for content distribution through recommendation systems.

- The fourth session, World Café, allowed participants to take part in a brainstorming exercise and to share their final thoughts on potential initiatives and their expectations from other stakeholders.

Opening of the workshop

Rui Gomes, Programme and Training Administrator at the Council of Europe's (CoE) Directorate Youth and Sports, welcomed everybody and thanked the European Audiovisual Observatory for organising such an event. He presented the European Youth Centre, which is mainly, but not only, a laboratory for youth participation since it hosts activities aimed at promoting youth engagement, promoting and revitalising democracy. Indeed, the EYC also hosts activities which are pertinent to the work of the Council of Europe. Some of the latest events hosted by the EYC include the Seminar on Artificial Intelligence and its impact on young people and 128 days for Human Rights Education.

Susanne Nikoltchev, Executive Director of the European Audiovisual Observatory (EAO), welcomed the participants and highlighted the relevance of AI to the Council of Europe's agenda for promoting democracy and human rights. She briefly presented the EAO, its structure within the Council of Europe and the role it plays in providing data on the European audiovisual industries.

Maja Cappello, Head of the Department for legal information (EAO), introduced the topic and explained the purpose of the workshop, which was designed to take the form of an informal and active conversation, with a multi-stakeholder approach to learn more about the opportunities but also to address the challenges raised by the use of AI.

Session 1 – Setting the scene

The first session of the workshop was chaired by Sophie Valais, Senior Analyst at the Department for legal information (EAO). Its aim was to discuss some concrete examples of AI tools, the current path of technology and the kind of developments that could be expected in the near future, as well as the impact of AI on the value chain and on consumers.

Right from the very beginning, the complexity of AI has lain in determining how to properly define it. Indeed, the considerable misunderstanding and numerous myths surrounding AI started long before it actually entered our modern, everyday lives through science fiction films. Later on, the idea of AI replacing the human workforce started to spread, generating excitement, but also scepticism and irrational fear within the public opinion. Additionally, there is no common or clear definition of AI among experts and lawmakers, but rather a tacit agreement on a set of properties, as highlighted in numerous working papers, including at EU and CoE levels.

In practice, AI covers different sets of technologies and has witnessed many developments in recent years. It has the potential to increase efficiency while reducing costs and efforts, which has led to its implementation by major telecommunications and media outlets. It can be used in multiple activities such as content production and moderation, information-checking, robot journalism, and image and video editing, among others.

The latest advances in AI have been mainly data mining[4] and machine learning (or deep learning)[5], which allow machines to imitate human behaviour or to resolve complex problems efficiently and independently. These technologies are mostly based on the use of algorithms, which enables machines to make automated decisions and to predict results.

1.1. AI in content production and distribution

Josh Korn, Innovation and Technology Policy at Netflix, presented the use of AI by Netflix, particularly for content recommendations. He first introduced his company's global business model: an on-demand, subscription-based service, accessible from multiple devices, with no third-party advertising, which allows users to customise their experience. Netflix's global aspect is illustrated by its fully curated content library which reaches audiences from all around the world. It enables local stories to be released for audiences domestic and abroad.

The main area where AI is used by Netflix for content recommendations:

- **Content recommendation** – AI has shown itself to be useful for content recommendation, as such a feature requires the processing of massive quantities of

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[4] Cambridge online dictionary, https://dictionary.cambridge.org/dictionary/english/data-mining.
[5] IBM, https://www.ibm.com/topics/machine-learning.

information for a huge number of users. The ingredients used in recommendations include interactions with the service (such as viewing history and how a member rated other titles), other members with similar tastes and preferences on the service, and information about the titles, such as their genre, categories, actors, release year, etc). Assigning tags to each individual title is done by humans. Tags (genre, themes, awards, rating, origin, language, etc.) are also used to associate/match content based on similarity.

Netflix recommendations focus on content and viewing rather than attributes related to users, such as race, gender or ethnicity, which Netflix does not consider to be relevant indicators of a user's taste and therefore does not collect. Such insight was proven right by the way in which certain stories were able to "transcend borders", as observed through Netflix's success in reaching wide audiences around the globe with content from all over the world.

With regard to concerns about recommendation systems potentially leading to a bubble effect, that is, users watching mainly the same type of works, Netflix's representatives asserted that, based on the company's experience, it seemed clear that offering diversified content was the best way to meet viewers' expectations and consequently retain viewers and attract new ones. Netflix has found that individual tastes are diverse and varied and so affirmatively work to ensure diversity.

- **Experience customisation** – Netflix also provides tools to enable users to discover content beyond recommendations and control their experience. Such tools include an internal search engine and the ability to browse by genre. Netflix also allows members to hide previously watched content from impacting their recommendations. The service also offers the possibility of setting a user profile designed for kids to ensure an experience with curated age-appropriate content.

When it comes to audiovisual production, Netflix does not use AI to create content or replace creative decision making. AI technologies can be assistive to creatives just as any other software, such as:

- **Editing assistance** – Netflix developed an application that helps editors creating trailers by basically cutting each title into individual clips. Delegating such a time-consuming task to an automated system allows editors to dedicate more of their time and effort to the artistic creation aspect of video-editing.

- **Special Effects** – In Martin Scorsese's *The Irishman*, AI was used to "de-age" actor Robert De Niro by superimposing extracted images from older films featuring a younger De Niro on images shot during the making of the film.

1.2. AI in the newsroom

Niamh McCole, Broadcast Compliance Editor for the Irish public broadcaster RTÉ, presented the different uses of AI tools for achieving editorial and regulatory compliance objectives. The presentation included demonstrations of the following tools:

- **Measuring the speaking time of political candidates during electoral periods** – Under the Broadcasting Authority of Ireland's (BAI) strict regulation on television broadcasting during electoral periods, broadcasters are required to ensure fairness, impartiality and objectivity during political debates, which includes measuring candidates' speaking time. Initially, this could be achieved "manually" by a dedicated production assistant in charge of monitoring the speaking time for each candidate. The limitations of this manual approach are obviously its lack of precision and consistency, and the risk of bias. However, thanks to AI, RTÉ has developed a multi-timer tool that is trained to analyse face and voice recognition in order to measures candidates' speaking time and tackle broadcasting bias.

- **Metadata enrichment** – Contextualised metadata can provide valuable data for anchors and journalists in a short timeframe. In a project involving RTÉ, Al-Jazeera, IBC and the Associated Press, an AI tool was developed to help verify and monitor high volumes of aired content. This happens to be very useful, particularly in the case of Al-Jazeera's multiple channels which are broadcast in five different languages and are under the supervision of several regulatory authorities. Building on the ability to recognise faces and to caption speeches, AI was used to extract context from content and evaluate coverage and editorial bias within a single piece of content or across multiple pieces within a defined period of time. The tool includes different features that allow the extraction of text from textual graphics on-screen as well as speech-to-text conversion through language processing.

- **Regulatory compliance** – natural language processing and the detection of bias were used to develop a prototype of a compliance portal which indexes audiovisual content against the requirements of regulatory guidelines (those of Ireland's BAI and the UK's Ofcom). The tool flags up potential regulatory breaches, which allows producers and editors to take subsequent action. The tool, which takes its references from the online fact-checking portal PolitiFact, includes a real-time fact-checking feature.

1.3. Policy and regulatory trends on AI in the media

Oliver Gerber, Media Lawyer at the Federal Office of Communications of Switzerland (OFCOM) and Vice-Chair of the European Platform of Regulatory Authorities (EPRA), presented the main regulatory challenges raised by AI in the audiovisual sector. The presentation focused on possible fields of regulation along with potential risks, and three case studies on Germany, France and the United Kingdom.

Although there is a lack of empirical evidence regarding the potential risks posed by the inappropriate or unlawful use of AI in audiovisual media, and despite conflicting opinions among researches on AI's contribution to enhancing pluralism by creating or reinforcing Filter bubbles and Echo chambers, the following chilling effects remain less contested:

- information manipulation, through Bots,[6] Astroturfing[7] or Deepfake[8] content, which could cause or amplify information disorder[9] and hate speech;

- the deliberate bias of programming data that are used to train AI tools, potentially leading to distorted outcomes and systematic imbalances, with significant consequences for certain audience groups.

Based on the abovementioned risks, different fields for regulatory intervention may be identified. To ensure fairness as well as user empowerment and awareness, transparency and the obligatory labelling of the use of AI may be required. However, media providers are likely to be reluctant to disclose their algorithms. Additionally, the complex nature and functioning of AI mechanisms would make it complicated for users to digest. Potential cases of distortion (due to bias or lack of precision) could also be subjected to an evaluation in order to determine appropriate actions and remedies. Consequently, persons affected by such distorsions would then be granted the right to correct or to challenge the contested outcome. However, the way in which such a mechanism would operate is still subject to discussions. Another approach to addressing bias could be to use AI to promote pluralism and the findability of content that is desirable for society and relevant for democracy.

Currently, there are only a few examples of national policies addressing the use of AI and algorithms:

- In Germany, the Interstate Media Treaty[10] includes transparency requirements for media intermediaries who have over one million users. They will be required to make the principles and key criteria used for content selection easily recognisable and directly available on a permanent basis. It will also require providers of

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[6] Bot is derived from the word "Robot" and refers to a computer program that performs tasks automatically and autonomously, including searching for and publishing information on the Internet. See Cambridge and Collins online dictionaries.

[7] Astroturfing is a deceptive practice that consists in creating positive or negative comments on a particular topic, made by actors or using fake accounts, that are displayed in such a way that they appear to be spontaneous or to come from ordinary members of the public. See Cambridge and Collins online dictionaries.
For more information, see: Adam Bienkov, The Guardian (online), Astroturfing: what is it and why does it matter?, 8 February 2012, https://www.theguardian.com/commentisfree/2012/feb/08/what-is-astroturfing.

[8] Deepfake is a technique based on Deep learning by which a digital image or video can be superimposed onto another to create a new synthetic model which maintains the appearance of an unedited image or video. See Collins online dictionary.
For more information, see: Robert Anzalone, AI Altered Video Is A Threat To Society. How Do We Stop The Harm Deepfakes Can Cause?, Forbes, 1 November 2019, https://www.forbes.com/sites/robertanzalone/2019/11/01/ai-altered-video-is-a-threat-to-society--how-do-we-stop-the-harm-deepfakes-can-cause/#2d6844511f1d.

[9] Three forms of information disorder may be identified using the following three notions: misinformation, disinformation and mal-information.
Claire Wardle, PhD, and Hossein Derakhshan, Information Disorder: Toward an interdisciplinary framework for research and policy making, Council of Europe, DGI(2017)09, 27 September 2017, Strasbourg, https://rm.coe.int/information-disorder-toward-an-interdisciplinary-framework-for-researc/168076277c.

[10] Medienstaatsvertrag (English: Interstate Media Treaty), 5 December 2019, https://www.rlp.de/de/regierung/staatskanzlei/medienpolitik/medienstaatsvertrag/der-medienstaatsvertrag/.
It is due to come into force in the Autumn of 2020, replacing the Interstate Broadcasting Treaty.

electronic information and communication services available via the Internet to make information concerning the automatic generation of content transparent.

- In France, the revised law on fighting false information[11] imposes transparency requirements on the use of algorithms by social networks and introduces an obligation to inform users of the type, origin and transmission modalities of content.

- In the United Kingdom, the White paper on Online Harms[12] proposes to oblige intermediaries to cooperate with the regulator for a better understanding of the platforms' mechanics and to provide explanations, at the regulator's request, on how algorithms operate.

1.4. Discussions

The discussions addressed the different types of data that exist, how they are exploited and the strategic rationale behind their exploitation, as well as some of the challenges arising from and the limits observed in the use of AI systems.

1.4.1. Types of data and forms of exploitation

The type of data processed depends on the activity in which AI is used as well as on the objectives pursued. Different types of data emerged from the presentations:

- User-related data: personal data[13] and data on activities and behaviour (viewing, classification and rating by users),

- Content-related data: metadata and general information (title, genre, plot, language, cast, etc.); the content itself, including the different elements which constitute the content (script, transcript, graphic elements, soundtracks, etc.); external and background material (data used for fact-checking, legal information used for regulation, etc.); as well as other types of data related to production, distribution and performance (market, awards, screenings).

Several questions arose regarding data processing and data sharing with third parties. Participants shared that personal data is processed with due respect to the European Union's General Data Protection Regulation (GDPR) and that not all services carry (targeted) advertising,

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[11] Loi n° 2018-1202 du 22 décembre 2018 relative à la lutte contre la manipulation de l'information (English: Law on combatting information manipulation), 23 December 2018,
https://www.legifrance.gouv.fr/eli/loi/2018/12/22/MICX1808389L/jo/texte.
[12] Online Harms White Paper, UK Government, April 2019,
https://www.gov.uk/government/consultations/online-harms-white-paper.
[13] European Commission, What is personal data?, https://ec.europa.eu/info/law/law-topic/data-protection/reform/what-personal-data_en.

User's viewing data can be used for content recommendations. In some cases, recommendation systems use information such as viewing history, classifications, and content ratings, which are more illustrative of the users' taste than personal sociodemographic data.

1.4.2.   Filter bubbles between hype and reality

One of the feared effects of recommendation systems is the so-called Filter bubble effect, which was discussed from different angles.

Participants from the private sector, especially VOD services, clarified the strategic importance of content diversity in attracting and keeping viewers. This approach comes from the observation that viewers consume different types of content depending on their mood and on recommendations made by other people.

Participants from public service media (PSM) highlighted the role their institutions play in promoting diversity within society as part of their programmes but also in ensuring some balance to counter/reduce the effects of Filter bubbles that might occur elsewhere.

Other participants even questioned the hype and attention around the Filter bubble phenomenon, pointing to the overabundance of content as proof that diversified content is very likely reaching users. Supporters of this theory identify Filter clash[14] as the real phenomenon that deserves more attention, while arguing that Filter bubbles can easily burst under the flood of information in intensively connected environments.

1.4.3.   Reliability of AI mechanisms

The accuracy and effectiveness of AI tools rely on both the quality and the quantity of the data used to train the system or used as references for checking or monitoring purposes.

While certain participants expressed their concerns over the limitations of such mechanisms dependent on the availability of data, the potential bias in defining reference datasets, the constant need for regular updating and corrections, and the proper indexation and classification of content, others argued that such limitations remain relevant, regardless of whether verification- and analysis-related tasks are done by a human or by a machine. It is up to human executives to evaluate the potential risks of bias or dysfunctioning and to make appropriate decisions with regard to the use, or not, of AI technology.

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[14] A Filter clash is when extremely different perceptions and worldviews collide in digital networks, sometimes regardless of their accuracy and quality.
Bernhard Pörksen, Die Theorie der Filterblasen ist nicht länger haltbar – Wir leiden bereits unter dem Filter-Clash, Neue Zürcher Zeitung, 12 July 2018, https://www.nzz.ch/feuilleton/die-theorie-der-filterblasen-ist-nicht-laenger-haltbar-denn-wir-leiden-bereits-unter-dem-filter-clash-ld.1402553.

Session 2 – The potential impact of AI on news production and distribution

The second session of the workshop was chaired and introduced by Francisco Cabrera, Senior Analyst of the Department for legal information (EAO), and focused on the potential impact of AI on news production and distribution.

By observing the current media landscape, it is fair to say that the number of media outlets (TV channels, newspapers, etc.) has multiplied exponentially. The shift in the media landscape, growing both horizontally and vertically, has resulted in the multiplication of content. Content distribution has also evolved, being more accessible thanks to connected electronic devices. The Internet has also transformed passive audiences into active users, thus fostering free speech and widening the path for more creativity and content. Having said that, two questions need to guide ongoing reflections:

Firstly, the volume of information on offer is so overwhelming that many people cannot deal with it and turn to services which provide the "personalisation" of news based on the user's personal viewing or reading history. The downside: Filter bubbles and Echo chambers.

Secondly, social networks and online video-sharing platforms have transformed the Internet into an online forum for expressing opinions and created opportunities for free speech, which can, however, be abused to spread misinformation. It is, of course, debatable whether it is better to allow a robust, unfettered exchange of ideas, allowing thereby factual inaccuracies (whether intentional or not) to slip into the debate, or whether we would rather have some kind of *ex ante* filter in place so that fake news does not reach the public.

2.1. Legal issues around the use of AI in the field of journalism

Atte Jääskeläinen, Professor of Practice at LUT University and visiting senior fellow at LSE, spoke about AI and news journalism. He shared some of the main findings of the EBU's 2019 report,[15] which features 30 cases of successful projects in the area of news journalism. The report also addresses the following question: how can public service news create value in the digital world in a way that is sustainable?

The way the media targets its audience has evolved to become more focused on the individual: from targeting the masses, to targeting audience segments and finally to targeting individuals, as is the case with interactive and social media. From a PSM perspective, the digital era has been quite challenging: how do you make PSM fit for the new world while respecting public service values? On the one hand, PSM need to evolve

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[15] Atte Jääskeläinen and Maike Olij The next newsroom: unlocking the power of AI for public service journalism, EBU, Geneva (CH), 2019, https://www.ebu.ch/publications/news-report-2019.

and to keep up with current digital developments, where they have been lagging behind. On the other hand, as a public service, PSM are meant to carry out their mission and deliver content that is relevant to the public interest. However, the core idea of mass communication does not seem to fit the current era, which is orientated towards a more personalised experience. As a matter of fact, PSM news content is mostly consumed offline. With a 10% share of the audience, the BBC (UK) is the only PSM with a significant online-only audience, while all other broadcasters range below 5%.

In order to create value, and since such technologies require substantial investments, PSM need to adopt a strategic approach and look for more sustainable solutions that can be used in multiple projects, as well as being cost effective. Also, it should be kept in mind that strategic value creation is achieved by using technologies that are valuable, rare and difficult to copy or imitate. As experience shows, initiatives taken by "early digital movers" are more likely to deliver huge advantages in addition to making it easier to adapt to market changes.

What makes the situation more challenging is the imbalanced state of competition in the market, where PSM are competing with global giant media outlets with far greater research and development resources. In this regard, collaboration between PSM organisations could be a strategic approach.

The report identifies different sets of solutions that could help PSM create value, including:

- **Operational use of AI** – can increase efficiency in news production. However, it does not address the fundamental strategic challenges regarding value-creation for news organisations. Moreover, since most of these technologies are developed by third-party companies, their availability leaves little room for PSM newsrooms to stand out from other media.

- **Content distribution** – content personalisation and targeting can enhance the value of public service journalism and provide access to quality content. However, such use has to be in line with the public service mandate and values and must avoid potential bias. Nevertheless, recommendation systems cannot be effective without quality content being created in the first place to match the expectations of the audience.

- **Content creation** – AI can contribute significantly to creating distinctive content in an area such as investigative journalism. It can also be used, along with human intervention, to verify information more effectively and to scrutinise algorithmic decision-making for bias.

- **Content translation** – automated language technologies can help break down linguistic borders in a culturally diverse Europe, and in particular the use of automatic translation (along with other established technologies such as voice recognition and voice and text generation). The H2020 EU-funded project "SUMMA", involving the BBC (UK) and Deutsche Welle (DE), was given as an example of how translation can be significantly improved.

2.2. Legal issues around news personalisation

Sarah Eskens, PhD Candidate at the University of Amsterdam, discussed legal issues around news personalisation from the angles of data protection and media freedom.

Given the implication of technology in news media, in particular in content personalisation, and the increasing number of ways to access online news, experimentations in the field of AI are likely to increase. Consequently, this will impact users' rights and public information policy, raising many legal issues.[16]

In terms of privacy, the main issue concerns the use, by online platforms and intermediaries, of individual user data, reading behaviour, interests, preferences and other data. The Council of Europe's Convention 108+[17] foresees, under its Article 11(1)(b), exceptions to the rules on data protection for "*the protection of data subjects and the rights and fundamental freedoms of others, notably freedom of expression*". At EU level, Article 85 of the GDPR,[18] also called the "*special purposes provision*", gives member states the responsibility of providing exemptions for data processing carried out for journalistic purposes. However, data processing for news personalisation does not fall under the exception foreseen by the GDPR. Indeed, this exception concerns the use of personal data for storytelling purposes, not for content dissemination. This means that news organisations are fully bound by transparency and accountability obligations, and that users are protected by the provisions on users' right of access and rectification and right to be forgotten. However, it remains unclear how the "special purposes provision", which provides an exemption that allows for data processing for journalistic purposes (that is, for content creation to tell a story), would apply to personalised content creation,[19] which is rather about content dissemination.

With regard to media freedom, a wide interpretation of Article 10 of the European Convention on Human Rights (ECHR)[20] gives news organisations the freedom to use AI for the purpose of producing, generating and disseminating content.[21] Nevertheless, just as the article provides media organisations with the right to freedom of expression, it also implies

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[16] Many new applications are entering the market (for example, News360) along with the existing news outlets that are engaging in content personalisation (for example, the BBC's iPlayer and the Wall Street Journal's MyWSJ). With few exceptions, figures show an increase in the number of people using social media, search engines and aggregators to access news-related content.

[17] Council of Europe, Modernised Convention for the Protection of Individuals with Regard to the Processing of Personal Data, 128th Session of the Committee of Ministers, Elsinore (DK), May 2018, https://search.coe.int/cm/Pages/result_details.aspx?ObjectId=09000016807c65bf.

[18] https://ec.europa.eu/info/law/law-topic/data-protection_en.

[19] Such as robot journalism being used for personalising headlines; in such cases, the data would be used for purposes of content creation.

[20] Council of Europe, European Convention on Human Rights,
https://www.echr.coe.int/Documents/Convention_ENG.pdf.

[21] Article 10 protects "not only the substance of the ideas and information expressed, but also the form in which they are conveyed" (Case *Oberschlick v. Austria)* and the means of dissemination or reception of communication, "since any restriction imposed on the means necessarily interferes with the right to receive and impart information" (*Autronic AG v. Switzerland*).
Oberschlick v. Austria, 1 July 1997, section 34, http://hudoc.echr.coe.int/eng?i=001-58044.
Autronic AG v. Switzerland, 22 May 1990, section 47, http://hudoc.echr.coe.int/eng?i=001-57630.

carrying out the duties and responsibilities consequent to the exercise of this right (formalities, conditions and, in case of breach, restrictions or penalties). Media outlets are therefore required to operate according to applicable laws and self-regulation rules, that is, acting in good faith and with due respect to those journalistic ethics which may be outlined in codes of ethics. However, in certain cases, such codes are not adapted to the challenges of the digital era, especially with regard to transparency, use of personal data and accountability for automated editorial choices. This lack of provisions highlights the need to develop journalistic ethics to reflect new developments such as AI and the use of algorithms. The automatisation of news content creation, that is, robot journalism, has led to pushing towards further reflection in the matter: are freedom of expression and freedom of information relevant to robot journalism? The question was addressed by the European Parliament in a series of recommendations to the Commission on Civil Law Rules on Robotics, which go beyond intellectual property law.[22]

Meanwhile, preserving media pluralism and diversity is the responsibility of the member states, being "*the ultimate guarantor for pluralism*", as confirmed by the ECHR.[23] Speaking of positive regulatory approaches, the role of the state may be achieved by encouraging the industry to optimise algorithms for the purpose of promoting diversity and pluralism. In addition to the diversity of sources, the diversity of exposure is also a point worth addressing and developing. This, in practice, can be achievable since digitisation allows the measurement of exposure and diversity.

2.3. AI-generated news and misinformation during election periods

Paige Morrow, Senior Legal Officer at ARTICLE 19, a global organisation which promotes freedom of expression, spoke about AI-generated news and misinformation during election periods.

The presentation started with further examples of the use of AI for the purpose of content creation in the news field, including (alongside fact-checking, which was discussed in the first session[24]):

- **Investigative journalism** – as journalists frequently work with large sets of materials, AI can be used to identify patterns with the aim of matching, sorting and assembling information as well as to detect anomalies; for example, the *New York Times* used image recognition to cover the activities of US Congress members;

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[22] Motion for a European Parliament resolution with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), https://www.europarl.europa.eu/doceo/document/A-8-2017-0005_EN.html?redirect.

[23] *Informationsverein Lentia and Others v. Austria*, 24 November 1993, section 38, http://hudoc.echr.coe.int/eng?i=001-57854.

[24] See AI in the newsroom.

- **Automated reporting** – AI can be used for the real-time prediction of election results during live news coverage, which is what *The Washington Post* did while covering the 2016 US presidential election results; and

- **Back-end use of AI** – such as moderating comments, advertising and content distribution; an example of this is the geographic-targeting used to promote articles with a local orientation among readers in specific regions.

From civil society's point of view, the use of AI triggers two main issues related to human rights and to freedom of expression. The first concerns bias, which may occur because the data used are not representative of broader society. The second is uncertainty, which may arise while fact-checking, as algorithms may overlook certain information due to the rhetorical style used or the lack of identifiable patterns of information, such as statistics or concrete factual references.

Yet, society's main concern remains the unlawful use of AI, including fake news and deepfakes. To illustrate this, an experiment carried out by Cornell University found that AI-generated texts received a credibility score of 6.91/10.[25] This shows how dangerous such tools could be if used for unlawful purposes. Deepfake technologies have the potential to be particularly harmful; that is why the US State of California has introduced a ban on deceptive image and audio manipulation, with exceptions being granted for satire, parody or content featuring a disclaimer. It is interesting to note here that most deepfakes, around 96%, are of pornographic nature – meaning that the amount of content of political significance remains relatively marginal.[26] In the same way, statistics show that despite filter bubbles and misinformation, users are still likely to receive the correct information, whether on the same online platform or elsewhere.[27] This might be influenced by factors such as the fear of being tricked by fake news pushing people to fact-check stories.

In terms of regulatory responses, and in addition to what was mentioned in an earlier presentation, two multilateral initiatives were cited: the EU Code of Practice on Disinformation[28] and the International Grand Committee on Disinformation and "Fake News":[29]

- The EU's Code of Practice was established in 2018 as a non-binding agreement between several major tech companies and various trade associations in order to

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[25] Liam Tung, Zdnet, OpenAI's "dangerous" AI text generator is out: People find GPT-2's words "convincing", 6 November 2019, https://www.zdnet.com/article/openais-dangerous-ai-text-generator-is-out-people-find-gpt-2s-words-convincing/.

[26] Henry Ajder, Giorgio Patrini, Francesco Cavalli & Laurence Cullen, The state of Deepfakes, Deeptrace, September 2019, https://regmedia.co.uk/2019/10/08/deepfake_report.pdf

[27] Elizabeth Dubois and Grant Blank, The echo chamber is overstated: the moderating effect of political interest and diverse media, 2018, https://www.researchgate.net/publication/322776235_The_echo_chamber_is_overstated_the_moderating_effect_of_political_interest_and_diverse_media.

[28] Code of Practice on Disinformation, European Commission, 26 September 2018, https://ec.europa.eu/digital-single-market/en/news/code-practice-disinformation.

[29] International Grand Committee on Disinformation and 'Fake News', Dublin, Ireland, 25 October 2019, https://www.oireachtas.ie/en/press-centre/press-releases/20191025-international-grand-committee-on-disinformation-and-fake-news-dublin-ireland-wednesday-6th-and-thursday-7th-november-2019/.

identify relevant actions and to address the challenges raised by disinformation online.

- The Grand Committee is composed of international lawmakers investigating the amount spent by big tech companies on online disinformation and "fake news" and its influence on elections and culture.

With growing scepticism over recent legal initiatives aimed at tackling disinformation, which, above all, raised fears of "ministries of truth" being established and negative consequences for freedom of expression, NGOs are leaning towards a structural regulatory approach, that is, by promoting pluralism and quality content. In this regard, two areas of reflection were identified to find potential solutions to address the issue of access to information online. The first to be mentioned was regulated pluralism and the feasibility of introducing an obligation on dominant platforms to deliver public service content and/or content of general interest, in a similar way to the "must-carry" obligation imposed on AVMS providers. The second, which touches upon the GDPR as it involves the transfer of data, is to functionally separate content-hosting from content moderation activities.

2.4. Discussions

The discussions addressed the importance of diversity and plurality in tackling disinformation, the challenges posed by new media and how to assess liability.

2.4.1. Diversity from a European perspective in a US-dominated online industry

Participants discussed the notions of diversity and exposure to information. Taking politics as an example, the question was raised of whether diversity necessarily means consuming or being exposed to an equal amount of different contrasting opinions. In this regard, positions on diversity vary depending on each individual's understanding of democracy. Diversity can be understood in the sense of confronting opposed views in order to stimulate public debate, and in such cases, diversity would mean consuming different opinions. In other cases, diversity would require restricting certain views that are feared to be affecting harmony within society, and even affecting diversity itself.

Some noted that the complexity posed by the diversity of opinions in the digital era originates from the very concept of freedom of expression as implemented by online platforms. From the very beginning, online platforms have adopted the US concept of freedom of expression, which would supposedly allow more leeway for the spreading of questionable (and sometimes even false) claims. However, according to one participant, this approach would not fit into the European concept of media law.

2.4.2. Regulating media plurality

Certain voices questioned the relevance of focusing on pluralism while addressing the issue of disinformation. They referred to the abundance of diverse information and opinions to prove the existence of a pluralistic society.

In answer to this claim, some participants argued that, regardless of the amount of information available, and given market realities where certain players enjoy a quasi-dominant position which impacts access to content, pluralism remains threatened by disinformation. It is thus necessary to ensure that both users and content creators are able to fully exploit such platforms in terms of content distribution (providers) and diversity of content (users). This argument justifies the rationale behind initiatives to regulate user interfaces, media platforms and intermediaries.

At European level, media pluralism is one of the main objectives of the AVMS Directive. The European Commission will be closely monitoring the implementation of the Directive by member states.

2.4.3. Traditional v. new media

Participants mostly agreed on the importance of distinguishing between multi-sided platforms and simple publishers. Some regretted that the absence of a level playing field would ultimately come at the expense of traditional media. While both traditional media and online platforms are bound by legal and ethical obligations, the latter benefit from their limited liability regime. Furthermore, while the reputation of traditional media is more vulnerable, online platforms can plead their non-responsibility to avoid negative audience perception (since the content is uploaded by users).

At the same time, online platforms still profit from user-generated content, regardless of its lawfulness, while benefitting from the limited liability regime.

2.4.4. AI technologies: towards a new liability regime?

Despite the autonomous aspect of AI-piloted systems, human involvement is required throughout the different steps of the creation, maintenance and supervision of AI-generated content. In all matters, and since robots do not have a defined legal status, liability would be borne by human agents, thus following a classical regime of legal liability: ultimately, it is the person behind editorial decision-making in the case of audiovisual and online media services.

Some participants argued that existing legal frameworks already provide a solid background for regulating the use of AI. Determining liability would follow the same "linear chain of responsibility" logic used in consumer law, for example. In that regard, AI does not seem very different from other tools or services used in the production chain. Nevertheless, the complexity of certain AI systems, the way they are built, might add confusion to the

process of determining ultimate liability. This last point was put forward by the Council of Europe's (CoE) Ad Hoc Committee on AI[30] (CAHAI) and highlighted in a CoE study on AI and responsibility, published in 2019.

Reflecting on the situation in Switzerland, the Swiss regulator Ofcom approached the topic of robot journalism and related issues such as transparency and responsibility during an exchange of view with the Swiss public broadcaster and in particular by a recent Swiss government report on "Artificial Intelligence, Media and Public sphere".[31] According to the current state of the art, legal liability lies with the content editor, regardless of the content creation process.

In the end, participants agreed that any liability regime must be in line with the interests of citizens, without closing the door to the possibility of creating a special status for robot systems, in light of the legal person status for companies.

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[30] The aim of this committee, set up in September 2019, is to assess the state of play on the basis of broad multi-stakeholder consultations and to examine the legal framework for the development, design and application of artificial intelligence based on the Council of Europe's standards on human rights, democracy and the rule of law, https://www.coe.int/en/web/artificial-intelligence/cahai.

[31] This report, dated 16 August 2019, formed part of the Swiss government's larger transversal report on artificial intelligence, which identifies the challenges in 17 thematic and policy areas of the Swiss Confederation, https://www.sbfi.admin.ch/dam/sbfi/fr/dokumente/2019/12/k-i_m-o.pdf.download.pdf/k-i_m-o_d.pdf.

Session 3 – The potential impact of AI on the production and distribution of works of fiction

The third session of the workshop was chaired and introduced by Julio Talavera, Senior Analyst at the Department for Legal Information (EAO).

AI has been depicted in the cinema since the very early stages of the film industry, usually in a dystopian background (from *Metropolis* by Fritz Lang, to *2001, A Space Odyssey* by Stanley Kubrick). Technophobia — fear of technology — is nothing new; historically, any new technology has always triggered fears and opposition and required a period of adjustment. For instance, when photography was invented, some predicted the end of painting, as no painter would be able to achieve the accuracy of the new technology. However, what happened in the end is that painting evolved towards a less figurative, more abstract representation.

AI has several fields of application for cinematographic and audiovisual production, for instance, prediction tools for marketing and recommendation purposes; project assessment tools; age rating; script co-writing; and computer-generated imagery (CGI).

All of these uses have various legal implications. What are the potential effects on diversity at the billboard and in the catalogues? Would AI's high cost affect concentration and competition, and marginalise smaller companies? Who would be responsible for works created using AI? In short, do computer-generated actors dream of electric awards?

3.1. Artificially intelligent script analysis and box office forecasting

Ide Claessen is Chief Commercial Officer at Scriptbook,[32] an artificially intelligent platform for script analysis and financial forecasting for theatrical movies to inform decision-making.

Scriptbook's objective is to assist and improve the creative process, not to replace human beings nor to predict future trends. The company offers tools for script analysis and script co-writing.

The script analysis tool provides various sets of analysis which can help executives, commissioners or funders to forecast costs, performance, potential audiences, etc., based on the final draft of the script, hence assisting them in deciding whether to go into production. The analysis covers:

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[32] https://www.scriptbook.io/#!/scriptbook.

- **Script DNA** – which is based on 20 000 open source final scripts in combination with financing data, all open source, from blockbusters to niche movies, covering a large period from the Seventies until 2018,[33] and it is constantly updated. It also provides scene and character analysis, providing an overview of actions and emotions, all divided into different categories. The Bechdel test,[34] which measures women's representation in fiction films, has been integrated into the system. Comments from the industry helped improve the different features of this tool.

- **Financial forecasting** – production budget and box office returns (EU, US and world-wide).

- **Audience** – satisfaction, the film's market positioning, target demographics and age groups.

According to Ide Claessen, the assessment of the AI tool shows an 80% accuracy rate regarding predictions compared to only 40% for human accuracy.

The second tool presented by the company was an AI story generator, designed to help writers develop their scripts (the tool is not commercially used at the moment). It generates automatically formatted lines based on initial lines provided by the users.

3.2. Legal issues concerning the use of AI in fiction

Francisco Cabrera, Senior legal analyst at the Department for Legal Information of the European Audiovisual Observatory, presented legal issues concerning the use of AI in fiction.

The presentation first focused on applying copyright law to works created by AI machines, taking the example of famous deceased composers such as Gustav Mahler and Giacomo Puccini, whose works were later completed *post mortem*. The initial compositions are currently in the public domain, while the subsequent segments are still copyright protected. In the case of Ludwig van Beethoven, who also died before completing his 10th symphony, there is an initiative by an international group of AI experts who are working on its completion.[35] What would be the legal status of an AI-generated work which completed an original work started in 1827 – would it be copyrighted? Can a machine be a copyright holder, and can a person or a company hold the rights to a work created by a machine? In legal doctrine, in order to be protected by copyright, a work must be original and bear the mark of its author's personality. Would this apply to computers, which have no personality and rely on inputs from already pre-existing content, or could it be argued that creativity is an illusion and that creations are no more than a recombination of pre-existing content and ideas?

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[33] At the time of the workshop.

[34] A simple test which names the following three criteria: (1) it has to have at least two women in it, who (2) talk to each other, about (3) something besides a man. For more information: https://bechdeltest.com/.

[35] Wesley Rahn, Algorithm to complete Beethoven's unfinished symphony, Deutsche Welle, 8 December 2019, https://www.dw.com/en/algorithm-to-complete-beethovens-unfinished-symphony/a-51577665.

AI also raises several questions regarding image and personality rights when it comes to visual editing and CGI actors replacing human ones, or to exploiting images of dead actors. In the United States, the New York State Assembly considered introducing a bill restricting the creation of "digital replicas" of individuals without their permission.[36] The bill came under criticism from the industry, which feared it would undermine "the right and ability of companies like ours to tell stories about real people and events," and that it could even be unconstitutional.

As mentioned previously, online viewing services such as VOD use AI for content recommendation. What would be the impact of algorithm-based content recommendation on cultural diversity? And what about the prominence obligation foreseen by Article 13 of the Audiovisual Media Services (AVMS) Directive? The text of the Directive does not say a word about algorithms with regard to cultural diversity. Not even in the recitals of the Directive. Will any of the EU member states impose diversity obligations on algorithms in their transposition of the Directive?

3.3. AI-created works of fiction, copyright protection and enforcement

Giancarlo Frosio, Associate Professor at the Centre for International Intellectual Property Studies (CEIPI) of the University of Strasbourg, focused his presentation on the legal background behind the processes of learning and creation by AI systems, as well as on the use of AI for law enforcement purposes.

The process of learning relies on text and data mining. Articles 3 and 4 of the Directive on Copyright and Related Rights in the Digital Single Market[37] provide an exception to copyright for the purpose of text and data mining, as long as rightsholders decide not to opt out. This exception puts the European Union at a similar level of legal certainty as the United States, which has an exception under the fair use principle, and it would allow Europe to fully exploit the potential of text and data mining.

AI softwares enjoy protection under copyright law, but they can also be protected as a patentable subject matter or a computer-implemented invention, and this has been established in both European and US laws. In the case of created content, the question of machine authorship builds on other similar cases, like the selfie monkey case,[38] where a US court ruled that only humans could be copyright owners. This conclusion was clarified and

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[36] Bill number A08155, State of New York, 31 May 2017,

https://nyassembly.gov/leg/?default_fld=&leg_video=&bn=A08155&term=2017&Summary=Y&Text=Y.

[37] Directive on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC of 17 April 2019, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019L0790&from=EN.

[38] Andres Guadamuz, Can the monkey selfie case teach us anything about copyright law?, WIPO Magazine, February 2018, https://www.wipo.int/wipo_magazine/en/2018/01/article_0007.html.

reinforced by the US Copyright Office and by the Berne Convention,[39] as well as other national legal references.

Qualifying for copyright protection requires an element of originality and the expression of the author's personality, as previously mentioned, which has also been affirmed by court decisions.[40] This requirement would therefore bar the way for AI machines to be considered as copyright owners. In the United Kingdom, there have been efforts to cast the authorship of works created by AI to human agents, under Article 9(3) of the Copyright, Designs and Patents Act (CPDA).[41] This tendency shows that determining the right policy needs to strike a balance between ethical and creative/innovative considerations and hints at no potential possibility of awarding machines the ownership of created work.

The use of AI in law enforcement was subject to debate and witnessed divergent opinions. AI has been used for a long time by intermediaries and online platforms, on a voluntary basis, to help enforce the general terms of use and community standards, including for filtering content and the demotion[42] of content, among other things. The revision of EU copyright law, and in particular the liability regime under Article 17 of the Copyright Directive,[43] introduced proactive obligations on online content-sharing platforms, making them directly liable for acts of communication to the public. Failing to secure exploitation rights would therefore engage their responsibility, lest they demonstrate best efforts in securing a licence; ensure the unavailability of protected content; take expeditious and appropriate actions concerning reporting; and prevent future uploads. Such a fundamental development is implicitly moving the industry towards the use of algorithms in law enforcement online in order to fulfil the proactive engagement obligations under this Directive – that is, to monitor, take-down, filter and block infringing content. The Directive also includes measures to safeguard the public interest.

3.4. Discussions

The discussions focused on AI's abilities and limits in terms of decision-making, creativity and law enforcement. Participants also touched upon the topics of copyright, the ownership of AI-created content and the level of protection of data used by AI systems.

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[39] Berne Convention, https://www.wipo.int/treaties/en/ip/berne/.
[40] CJEU (Third Chamber), Case C-145/10, *Eva-Maria Painer v. Standard VerlagsGmbH and Others*, 7 March 2013, http://curia.europa.eu/juris/liste.jsf?language=en&num=C-145/10%20REC.
[41] Article 9(3) of the Copyright, Designs and Patents Act 1988, http://www.legislation.gov.uk/ukpga/1988/48/section/9.
[42] Also known as negative ranking.
[43] Op. Cit. Directive on copyright and related rights in the Digital Single Market.

3.4.1. AI and decision-making

Decision-making was one of the debated topics. Representatives of film producers showed enthusiasm regarding the use of AI in forecasting the success of films. While it seemed unrealistic to predict *The Joker's* box-office success, data analysis by AI systems could be in a position to provide a realistic prediction.

Another example of AI decision-making is content recommendation, used by VOD services. The aim is to provide a greater user experience and to guide viewers through usually huge catalogues containing thousands of titles. Recommendations are based on ratings and on similarities between works in terms of genre, topics, titles, etc.

Nevertheless, AI is not used to select the content of AI catalogues (although it could potentially be used to inform these decisions), as representatives from the VOD sector value human decision-making for choosing the titles to be added to their catalogues.

With regard to the use of AI in creating fiction content, some participants cast doubts on the ability of AI systems to create new creative content, since it relies on pre-existing content.

3.4.2. The use of AI in compliance and enforcement

The use of AI in law enforcement has driven serious concerns and raised questions on the ability of machines to comply with fundamental rights. As emerging from previous CJEU decisions Scarlet[44] and Netlog,[45] the adoption of algorithmic enforcement would not balance with fundamental rights and freedoms. At this stage of development, AI would be incapable of considering exceptions and limitations or judging content whose public status is hard to define.

This issue is central to media regulators, who seek to determine editorial responsibility before taking appropriate actions. Casting civil liability on machines is inconceivable, although it can fall on the manufacturer, provided there is a responsibility in a potential breach of the law. This would not apply in the case of neural networks for example, since making mistakes is one of their characteristic features.

Certain rightsholders put in perspective initiatives and actions implemented to counter the chilling effects resulting from the use of AI in copyright enforcement. One of the notable initiatives is the stakeholder dialogue, organised by the European Commission to discuss best practices for cooperation between online content-sharing service providers and copyright rightsholders.[46] Participants emphasised the role of human review, along with

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[44] Judgement of the CJEU (Third Chamber), Case C-70/10, *Scarlet v. Sabam*, 24 November 2011, http://curia.europa.eu/juris/document/document.jsf?docid=115202&doclang=en.
[45] Judgement of the CJEU (Third Chamber), Case C-360/10, *Sabam v. Netlog*, 16 February 2012, http://curia.europa.eu/juris/document/document.jsf?docid=119512&doclang=EN.
[46] Stakeholder dialogue on the application of Article 17 of the Directive on Copyright in the Digital Single Market, https://ec.europa.eu/digital-single-market/en/stakeholder-dialogue-application-article-17-directive-copyright-digital-single-market.

any available mechanisms which enable the abusive use of content moderation to be contested. One of the widely discussed ideas to help make copyright enforcement more effective is the creation of a content ID, which would engage both rightsholders and online platforms.

The use of algorithms by VOD services' recommendation systems prompted questions on its potential utility for the promotion of European works on VOD services. Participants inquired about the absence of any reference to the use of algorithms in the revision of the AVMS Directive. A regulator explained that introducing an obligation of means would go beyond the media regulation mission, arguing that regulators should focus on results and on *ex-post* assessment rather than on which means are applied to those ends.

3.4.3. AI and content ownership

Academic experts reflected on the content ownership of AI-created works. As highlighted in the presentations of this third session, machines cannot be granted the authorship of AI-created content. This would, in the meantime, suggest that such works would fall into the public domain, unless the human subjects behind the algorithms claim authorship for themselves.

In response to the difficulty of fitting AI into the current legal framework, certain academics raised the idea of finding a new intellectual property (IP) right that would be suitable for AI-generated works. Such an IP right would not be based on creativity but on investment protection. Specific rights already exist in neighbouring rights, sui-generis rights or rights applicable to databases. In all cases, it is vital to adapt the legal framework in order to favour creativity and innovation.

3.4.4. Data exploitation in a competitive market

As previously mentioned, AI tools rely on data entries which are then processed by the systems to deliver results, which has implications for copyright and creativity.

Participants were concerned about the level of protection awarded to data provided by rightsholders, including script data. In a very competitive film market, many people would rather keep such valuable information secret. In answer to this, Scriptbook claimed that the company operates under very strict copyright rules which make data protection a top priority, meaning that users would only be granted access to data on their own works.

Session 4 - World café

Maja Cappello, Head of the Department for legal information (EAO), as Chair of this panel, invited the participants to engage in group discussions inspired by a "world café" approach. Groups were organised as follows:

Creative industries	**Table host**: Alejandra Panighi **Brainstormers**: Ide Claessen, Giancarlo Frosio, Thierry Hugot, Christina Mercuriadi, Basil Philipp.
Institutions/ Academia/ NGOs	**Table host**: Christophe Geiger **Brainstormers**: Sarah Eskens, Atte Jääskeläinen, Yannick Meneceur, Paige Morrow, Susan Newman.
AVMS providers	**Table host**: Giacomo Mazzone **Brainstormers**: Giorgio Dimino, Niamh McCole, Grégoire Ryckmans, Emmanuel Suard, Mónika Magyar.
Media regulators	**Table host**: Oli Bird **Brainstormers**: Géraldine Denis, Oliver Gerber, Emmanuelle Machet, Peter Matzneller, Carla Osman.

At the end of the brainstorming session, the table host for each group summarised the main points of discussion.

The following table provides an idea of the main tools and remedies that exist and that were identified during the discussion and a record of what each stakeholder who participated in the brainstorming exercise deems possible for them to do (the blue cells with "Can/Cannot") and what they expect from each of the others (the white cells – to be read horizontally):

	(1) Creative industries	(2) Institutions/ Academia/ NGOs	(3) AVMS providers	(4) Media regulators
(1) Creative industries	**Can do** In general, eliminate the fear around AI and try to get people involved. Be less defensive and more open to AI without fear. Adopt a less dystopian approach and focus on short-term approaches since AI evolves very quickly. Integrate AI and help people eliminate fear. Avoid formatted and sceptical views on AI. Participants remain divided over the impact of AI on the diversity of content, as both positive and negative impacts exist. Some questions need in-depth reflections, such as the copyright status of works produced by AI which are based on other works by	**Expectations** Institutions should talk more to people working with AI with an open mind. Avoid complexity and anticipated actions which could restrict creativity. Academics and experts, like the EAO, should explore AI-related issues.	**Expectations** Request for transparency and accountability.	**Expectations** To protect against but also to avoid the abuse of over-regulation, as its threatens creativity. To monitor, keeping an eye on the big monsters, such as the owners of the algorithms. To prevent a monopoly position, whether it concerns AI software developers or the big companies using them. Impose a transparency obligation on parties using AI.

	(1) Creative industries	(2) Institutions/ Academia/ NGOs	(3) AVMS providers	(4) Media regulators
	humans. Should they be copyright protected? **Cannot do** Stop the industry's evolution towards AI solutions. Rely completely on AI, a technology which still depends on humans.			
(2) Institutions/ Academia/ NGOs	**Expectations** Data to be made available by stakeholders: need stakeholders to provide data (cannot be forced to disclose their data). Perhaps create a platform for sharing data and make relevant data transparent and usable for research purposes. Enter into dialogue with academics.	**Can do** Academia Reflect on existing questions such as the need for a new special legal framework for AI. How does it interfere with ones that already exist (liability, privacy, copyright, human rights…)? Carry out comparative case studies since some jurisdictions have already introduced legal measures addressing AI. Collaborate with institutions such as OBS to carry out legal studies. Institutions	**Expectations** Data to be made available by stakeholders: need stakeholders to provide data (cannot be forced to disclose their data). Perhaps create a platform for sharing data and make relevant data transparent and usable for researching purposes. Enter into dialogue with academics.	**Expectations** N.A.

	(1) Creative industries	(2) Institutions/ Academia/ NGOs	(3) AVMS providers	(4) Media regulators
		Foster dialogue on AI not only from a legal perspective but also from an interdisciplinary standpoint involving various actors (economists, media management and researchers). Foster academic research. NGO Raise awareness, not only for legislators and citizens, but also amongst stakeholders, about the legal issues and social impact related to AI. Be involved in dialogue; applying research and providing case studies. Different groups could work together, elaborate recommendations and provide expertise to legislators (EU, national, international). **Cannot do** Fund the studies due to lack of financing and resources. The EU can be a driving force in order to foster independent studies.		

	(1) Creative industries	(2) Institutions/ Academia/ NGOs	(3) AVMS providers	(4) Media regulators
		Dialogue with stakeholders also has its limits as it cannot guide the research.		
(3) AVMS providers	**Expectations** N.A.	**Expectations** Civil society shall monitor, stimulate better behaviours and inspire better models. Academia can work well once they are made transparent.	**Can do** Be transparent on the use of robots. Not be afraid of being slow, media are reliable. Promote media literacy on AI internally. All tools that help to detect fake news are beneficial. Engage in creativity with the creative sector. AI can help to create content despite the fact that the results, at this stage, are not fully satisfactory Gender equality Use algorithms to foster gender equality, through data measurement, for example. Robot journalism Improve algorithms to avoid bias in information processing. Empower journalists.	**Expectations** Impose the accessibility and transparency of algorithms. Algorithms tend to repeat the same mistakes. It is well known that this is a weakness that can be exploited. Regulators should intervene on this, algorithms should be transparent.

	(1) Creative industries	(2) Institutions/ Academia/ NGOs	(3) AVMS providers	(4) Media regulators
			Reach younger generation users.	
			Be more transparent in distinguishing curated content from factual reporting.	
			AI could be used to do dirty jobs and therefore save time and effort for more stimulating activities.	
			Be conscious, however, that at the end of the day, responsibility remains with human agents.	
			Be flexible and engaged, as algorithms tend to repeat the same mistakes and humans are expected to intervene and fix such malfunctions.	
			Diversity in general	
			Conduct experiments to detect better language to reach teenagers and be more effective.	
			Empower and improve the capacity of audience groups that are kept away from information.	

	(1) Creative industries	(2) Institutions/ Academia/ NGOs	(3) AVMS providers	(4) Media regulators
			Cannot do Auto-censorship of AI-created works.	
(4) Media regulators	**Expectations** Engage in the AI ethics framework prior to developing solutions. Understand the implications of their use of AI.	**Expectations** Provide and collaborate on research that is policy focused and designed to tackle real issues.	**Expectations** Engage in the AI ethics framework prior to developing solutions. Understand the implications of their use of AI. Be transparent in the use of AI. Platforms need to engage both in finding best practices and in self-regulation.	**Can do** There are core regulatory objectives, including plurality, public discourse, consumers and accessibility. Explore further potential areas for regulation. Engage in consumer-focused research in order to understand how users perceive AI and are impacted by it. Build internal expertise to be better equipped to face the constant developments in the AI sector. Engage in digital and media literacy with regard to AI. **Cannot do** Solve all existing problems, given the scale of the

	(1) Creative industries	(2) Institutions/ Academia/ NGOs	(3) AVMS providers	(4) Media regulators
				challenges, in a way that would fully satisfy all stakeholders. Understanding the regulatory limits of finding balanced solutions is quite important.

5. Closing of the workshop

Maja Cappello, Head of the Department for Legal Information (EAO), thanked the participants for their detailed presentations and stimulating discussions. She insisted on the importance of closely following the ongoing developments regarding AI, and of maintaining the dynamics generated by this workshop by sharing relevant material, in particular the observations and suggestions addressed to the EAO, which will be thoroughly assessed and considered as part of the discussions of the EAO's next Action Plan.

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