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"BIG TECH" RESPONSIBLE BUSINESS CONDUCT

Transparency and due diligence obligations for online platforms and safer space for online users' fundamental rights, now and in the Metaverse

Abstract

Platform economy has substantially changed traditional business organization, market structure and contractual power relations. Digital platforms in fact impose their terms to all the users: no room for negotiation and reduced ability of the traders to influence the rules of the game. The positive fact is that digital platforms have strong interest in reducing risks and guaranteeing safe transactions. For such a reason the U.S. legal system - used to facilitate running business, with no overruling approach - adopted a "laissez faire" approach. European approach, on the contrary, is aimed at regulating digital markets and Artificial Intelligence ("AI"), on which relevant transactions are based. Insofar contracts are concluded in a condition of unequal contractual power to the advantage of platforms, disparities should be countered, at least to safeguard users' fundamental rights. In a marketplace governed by obscure algorithms public control is extremely difficult and, for such a reason, self-regulation becomes crucial. That applies not only to current scenario, but also to the incoming Metaverse dimensions under establishment, which offer room enough for fixing appropriate rules of engagement between digital platforms on one side and private and professional users on the other side, for the benefit of end users worldwide. Responsible Business Conduct ("RBC") is so expected to evolve also at Metaverse level, with an AI systems' structure that must comply with rule of law and respect human rights, democratic values and diversity. All that originated from OECD evidence-based international standards. Platforms are so expected to be more and more transparent and accountable and applicable regulations are increasingly focusing on good faith efforts to protect centrality of fundamental human rights vis-à-vis Big Techs. The question is if self-regulation and ethical guidelines and standards could really represent safeguard enough against bad and unproper use of AI also in the on-going Metaverse development, where fundamental human rights are and must remain central, by avoiding and sanctioning any sort of manipulation or harm. That represents a new test field for the legal community everywhere in the world, namely in terms of law enforcement, where the Metaverse has potential to provide many benefits, namely including telecommuting, matchmaking, and preservation of data, but also possibility to add new and unregulated risks.

^{*}Grande Stevens Law Firm, Turin, Italy. This manuscript is the result of a very productive meeting held in October 2022, which brought together lawyers, academics and technical partners. The consultation was held at a seminar presented by the Unione Internationale des Avocats (UIA) with the support of the Brussels Bar, in collaboration with hub.brussels, the Brussels Agency for Business Support titled "Law Versus Digital Technologies: A Necessary Alliance? Legal, Economic and Environmental Opportunities and Challenges". Some of the presented results have already been published by my colleague Jan Mulligan, at that time chair of the UIA's Health Law Commission, on her website as reported in the references, and some other data presented at that time, with reference to drug device technologies, by my colleague Eliana Silva de Moraes, current chair of the UIA's Health Law Commission. I would like to thank also to my colleague Carlos Ramirez, who completed our successful panel in Brussels.

JEL CLASSIFICATION: K20, K24

SUMMARY

1 Platform economies: the new rules of the game - 1.1 EU regulations imposing transparency and due diligence obligations for online platforms. - 1.2 Safeguard of fundamental rights and new frontiers of drug device technologies: how to combine relevant human rights and interests? - 2 Metaverse and RBC: what perspective for the safeguard of online users' fundamental rights? - 3 Conclusions

1 Platform economies: the new rules of the game

Platform economy has substantially changed traditional business organisation, market structure and contractual power relations. From a technological perspective it is mainly based on cloud computing power converted into economic tools, using algorithms; 1 from legal perspective, platforms impose their terms to all the users, without any room for negotiation and reduced ability of the traders to influence the rules of the game, by apportioning rights and establishing duties in equal manner. 2 Such process of mediation of relevant interests³ is not necessarily performed in a clear and transparent manner⁴; very often the content of the contracts is not even really known to adhering users, who merely declare to have read and accepted them, by clicking a consent icon on their smartphone or tablet.⁵ And in digital platform economy not only the conclusion of the contract changed, but also its execution, frequently done by algorithms, where interaction between users is channelled within predetermined tracks, by limiting information the users can accede or exchange. In terms of responsible business conduct an important issue is how narratives spread on social media platforms, having a great impact on how an individual may search for and encounter information. Individuals may be in fact subjected to discrimination, or have their personal data and privacy restricted. A good example is provided by the so-called "Twitter Files" that, in the interpretation provided by Elon Musk and some journalists, would prove that Twitter intentionally censored the U.S. conservatives because of their political views, invoking shadow banning. Probably an

¹ Martin Kenney and John Zysman, 'The rise of the platform economy' (2016) 32(3) Issues in science and technology 61. ² Christoph Busch, 'European Model Rules for Online Intermediary Platforms' in Uwe Blaurock, Martin Schmidt-Kessel and Katharina Erler (eds), *Plattformen Geschäftsmodelle und Verträge* (Nomos 2018) 37.

³ Christoph Busch and others 'The Rise of the Platform Economy: A New Challenge for EU Consumer Law?' (2016) 5 Journal of European Consumer and Market Law 164.

⁴ Under the newly enacted EU Digital Services Act platforms' terms have now to be presented in a clear and concise manner and to respect users' fundamental rights.

⁵ Donato Cutolo and Martin Kenney, 'Platform-dependent entrepreneurs: Power asymmetries, risks, and strategies in the platform economy' (2019) Berkeley Roundtable on the International Economy Working Paper 3/2019.

⁶ Gizem Alper, 'Contract law revisited: algorithmic pricing and the notion of contractual fairness' (2022) 47 Computer Law & Security Review (online); Maria José Schmidt-Kessen, Helen Eenmaa and Maya Mitre, 'Machines that Make and Keep Promises - Lessons for Contract Automation from Algorithmic Trading on Financial Markets' (2022) 46 Computer Law and Security Review.

⁷ Sangeet Paul Choudary, Marshall W Van Alstyne and Geoffrey G Parker, *Platform revolution: How networked markets are transforming the economy and how to make them work for you* (W W Norton & Company 2016).

exaggeration, that in all events confirm the messy business of policing a large social network, that some commenter presented as part of an ongoing battle to control the narrative about democracy in America.⁸ The challenge with figuring out the right regulatory response to social media platforms like Twitter and Facebook results from their dual role as public and private spheres. And the Twitter Files provided evidence of lack of transparency in social media, with growing concerns regarding dishonest data collection and users' privacy, which caused some social media platforms to implement explanatory tools to properly inform and empower consumers.⁹

More broadly, Big Techs governing digital online platform are "reorganizing the geography of how value is created, who captures it, and where", ¹⁰ by acquiring a great and frequently underestimated power. ¹¹ In such a context risk of imbalance to the detriment of users is even higher, ¹² and for those who are not prepared to accept said rules the only practicable exit strategy is to abandon the platform itself. In some cases dominant position could enable platforms to commit abuses against business users, and for such a reason the EU has published Regulation (EU) 2019/1150, ¹³ which provides for a more transparent and fair environment for business users that make use of digital platform services and, more generally - together with EU rules on copyright and geo-blocking - it's intended to protect consumers and, at the same time, to make European corporations more competitive in respect to the U.S. big market players.

In a marketplace governed by obscure algorithms public control is difficult and self-regulation is of essence; for such a reason the platforms, being virtual marketplaces, have strong interest in reducing risks and guaranteeing a safe market. ¹⁴ Insofar contracts are concluded in a condition of unequal contractual power to the advantage of the platforms, these disparities should be countered, at least to safeguard users' fundamental rights, by considering that in such an environment self-regulation becomes crucial. These fundamental rights are first represented by those enumerated in the Universal Declaration of Human Rights, ¹⁵ starting from rights to privacy, life and personal security, work, non-discrimination and freedom of opinion and expression. In fact, OECD works together with

⁸ Micah Sifry, 'Putting the 'Twitter Files' in Perspective' (Medium, 16 December 2022 https://micahsifry.medium.com/putting-the-twitter-files-in-perspective-f94756b051e5 accessed 19 March 2023.

⁹ Daricia Wilkinson and others, 'The Pursuit of Transparency and Control: A Classification of Ad Explanations in Social Media' [2021] Proceedings of the 54th Hawaii International Conference on System Sciences 763.

¹⁰ Mark Huberty, 'Awaiting the second big data revolution: From digital noise to value creation' (2015) 15(1) Journal of Industry, Competition and Trade 35.

¹¹ Matthew Zook and Taylor Shelton, 'Internet and global capitalism' in Douglas Richardson and others (eds), *The International Encyclopedia of Geography: People*, the Earth, Environment and Technology (John Wiley & Sons Ltd 2017) 11.

¹² Martin Kenney and John Zysman, 'The Platform Economy and Geography: Restructuring the Space of Capitalist Accumulation' (2020) 13(1) Cambridge Journal of Regions, Economy and Society 55.

¹³ European Parliament and Council Regulation (EU) 2019/1150 on promoting fairness and transparency for business users of online intermediation services [2019] OJ L 186, 57.

¹⁴ José van Dijck, Thomas Poella and Martijn de Waal, *The platform society: Public values in a connective world* (OUP 2018).

¹⁵ Universal Declaration of Human Rights (adopted 10 December 1948 UNGA Res 217 A(III) (UDHR).

governments and citizens to establish evidence-based due diligence international standards for ensuring responsible business conduct, find solutions to economic, social and environmental challenges and build better policies that implement ethical AI principles, with the aim of fostering prosperity, equality, opportunity and well-being worldwide.¹⁶

More specifically:

- All has the potential to benefit people and the planet by driving inclusive growth, sustainable development and well-being. Relevant commitments must be incorporated in product's design, sale, and use;
- Al systems' structure must comply with rule of law and respect human rights, democratic values and diversity;
- companies should be transparent and ensure that people understand AI-based outcomes/can challenge them;
- Al systems must function in a robust, secure and safe way. Companies should identify adverse impacts and take steps to mitigate, prevent and address them in their development, sale, and use;
- companies should be accountable and publicly report on due diligence efforts on a periodic basis;
- companies should provide for or cooperate with remediation mechanisms, if appropriate.

In terms of soft law also the UN Guiding Principles on Business and Human Rights¹⁷ provide for standards of due diligence, transparency and remediation that companies should implement across their polices, practices, and products, so that they can be held accountable in terms of human rights impact.

Big Techs like Meta, ¹⁸ Microsoft, ¹⁹ and Intel²⁰ have conducted independent human rights impact assessments on their platforms. All these platforms have strong interest in reducing risks and guaranteeing safe transactions: for such a reason the U.S. legal system - used to facilitate running business with no overruling approach - adopted a sort of "laissez faire" approach, with Big Techs dominating the virtual marketplaces on the Internet. The European approach, on the contrary, is aimed at regulating digital markets and Al, on which relevant transactions are based.

¹⁶ OECD responsible business conduct and human rights https://www.oecd.org/industry/inv/responsible-business-conduct-and-human-rights.htm accessed 19 March 2023.

United Nations Guiding Principles on Business and Human Rights https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf accessed 19 March 2023.

Miranda Sissons and Iain Levine, 'Meta's First Annual Human Rights Report' (14 July 2022) https://about.fb.com/news/2022/07/first-annual-human-rights-report/ accessed 19 March 2023.

¹⁹ Microsoft Global Human Rights Statement https://www.microsoft.com/en-us/corporate-responsibility/human-rights-statement?activetab=pivot_1%3aprimaryr5 accessed 19 March 2023.

²⁰ Intel Global Human Rights Principles https://www.intel.com/content/www/us/en/policy/policy-human-rights.html accessed 19 March 2023.

1.1 EU regulations imposing transparency and due diligence obligations for online platforms

Online platforms base their business model on the collection and analysis of user data. All systems work by ingesting large amounts of data, classifying it, analysing it for correlations and patterns and using these patterns to make predictions. This leads to the amplification of risks of infringing fundamental rights²¹, especially when online platforms use All systems²².

European Union legal framework for the protection of users' fundamental rights can be summarised as follows:

A) The General Data Protection Regulation EU 2016/679²³ (GDPR) protects individuals when their data is being processed by the private sector and most of the public sector.²⁴ The processing of data by the relevant authorities for law-enforcement purposes is subject to the Directive 2016/680.²⁵ Moreover, Regulation (EU) 2018/1725²⁶ protects natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, by upholding individual's fundamental rights and freedoms, especially the right to protection of personal data and the right to privacy and aligning the rules for EU institutions, bodies, offices and agencies with those of the GDPR and of Directive (EU) 2016/680.

In Italy processing data through a digital platform with algorithms has been already object of regulatory and courts' decisions, too, namely attaining use and access to digital platforms organising bike riders' food delivery:

• on 10 June 2021 Italian Privacy Authority²⁷ imposed a 2.6 million EUR fine on Foodinho, for not having informed its employees on the functioning of the

²¹ Paul C Godfrey, Craig B Merrill and Jared M Hansen, 'The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis' (2019) 30(4) Strategic Management Journal

²² Sergio Román and Pedro J Cuestas, 'The perceptions of consumers regarding online retailers' ethics and their relationship with consumers' general internet expertise and word of mouth: A preliminary analysis' (2008) 83(4) Journal of Business Ethics 641.

²³ European Parliament and Council Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ L 119 1; see in particular Article 22.

²⁴ Edoardo Celeste and Giovanni De Gregorio, 'Digital Humanism: The Constitutional Message of the GDPR' (2022) 3(1) Global Privacy Law Review 4.

²⁵ European Parliament and Council Directive (EU) 2016/680 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA, [2016] OJ L 119 89.

²⁶ European Parliament and Council Regulation (EU) 2018/1725 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC, [2018] OJ L 295 39.

²⁷ Italian Data Protection Authority 'Ordinanza ingiunzione nei confronti di Foodinho s.r.l.' (Italian Data Protection Authority, 10 June 2021) https://www.garanteprivacy.it/home/docweb/-/docweb-display/docweb/9675440 accessed 19 March 2023.

system and for not having implemented suitable safeguards to ensure accuracy and fairness of the algorithmic results that were used to rate rider's performance. The platform had no procedures in place to enforce the right to obtain human intervention, to enable the employees to contest the decision taken by way of those algorithms which caused discrimination entailing the exclusion of some riders from work assignments;

- Court of Bologna²⁸ stated that use of the algorithm used by the platform to rate and organise the working timetable of the riders is discriminatory. In such a respect there were applied principles already stated in Italian Supreme Court Decision No. 1/2020²⁹, confirming that in respect of labour cases only also personal convictions of the workers, representing pragmatic profession of an ideology different from a religious one, don't legitimate difference in treatment of the workers in having access to the digital platform.
- B) Specific resolutions regarding AI and RBC are represented by:
- 1) OECD Recommendations on artificial intelligence, adopted on May 22, 2019;³⁰
- 2) European Union Commission White paper on AI, published on February 19, 2020;³¹
- 3) European Union Parliament Resolution on a framework of ethical aspects of AI, robotics and related technologies dated October 20, 2020;³²
- 4) EU proposal for AI Regulation dated April 21, 2021,³³ intended to establish comprehensive regulatory scheme for development and use of AI, applicable to any provider of AI services in the EU market, particularly to those posing high risks.³⁴

²⁸ Filcams CGIL Bologna, NIDIL CGIL Bologna, FILT CGIL Bologna v. Deliveroo Italia s.r.l [2020] Court of Bologna, Italy, ruling 31 December 2020 (case n. r.g. 2949/2019) https://www.bollettinoadapt.it/wp-content/uploads/2021/01/Ordinanza-Bologna.pdf accessed 19 March 2023.

²⁹ Italian Supreme Court, Judgement n. 1/2020, https://www.wikilabour.it/wp-content/uploads/2021/02/Cassazione_2020_00001.pdf accessed 19 March 2023.

OECD Recommendations on artificial intelligence (22 May 2019) https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449 accessed 19 March 2023.

³¹ European Commission (EU) White Paper on Artificial Intelligence: a European approach to excellence and trust, COM/2020/65 [2020] https://commission.europa.eu/publications/white-paper-artificial-intelligence-european-approach-excellence-and-trust_en accessed 19 March 2023.

³² European Parliament (EU) Resolution of 20 October 2020, with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies, [2021] OJ C 404 107 https://www.europarl.europa.eu/doceo/document/TA-9-2020-0275_EN.html accessed 19 March 2023.

³³ European Commission (EU) 'Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts' [2021] COM/2021/206 https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai accessed 19 March 2023.

³⁴ European Commission (EU) Explanatory Memorandum to COM[2021)21 - Amendment of Directive 2014/41/EU, as regards its alignment with EU rules on the protection of personal data, SEC[2021] 167 https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-laying-down-harmonised-rules-artificial-intelligence accessed 19 March 2023.

- - C) The so-called EU Digital Package, structured by:
 - 1) Regulation (EU) 2022/2065 of 19 October 2022 on a Single Market for Digital Services, amending Directive 2000/31/EC, better known as Digital Services Act or DSA,³⁵ based on the Proposal for a regulation for digital services dated 15 December 2020³⁶ and providing for certain very large online platforms' obligations. They could be summarised as follows:
 - (i) appointment of internal compliance officers;
 - (ii) duty to mitigate risks;
 - (iii) risk assessment, including the risks of dissemination of illegal content through their online services and potential negative effects for privacy and family life, freedom of expression and information, the prohibition of discrimination and the rights of the child;
 - (iv) independent audit once a year to assess compliance;
 - (v) additional online advertising transparency.

Violations of the DSA may result in penalties of up to 6% of total worldwide annual turnover, so exceeding penalties provided under the GDPR.

DSA introduced the right as well to compensation for damage or loss suffered by users due to a provider having violated its obligations under the DSA.

2) EU Regulation 2022/1925, on contestable and fair markets in the digital sector, usually known as *Digital Markets Act* or DMA,³⁷ adopted on 14 September 2022 and based on the Proposal for a Regulation for markets in the digital sector dated 15 December 2020³⁸. The Digital Markets Act is a regulatory response to the perceived inability of competition law (and the prohibition to abuse a dominant position as per Article 102 TFEU) to tackle specific types of behaviour of Big Tech companies.

It will apply to the so-called "gatekeepers", i.e. core platform services like:

- (i) online search engines like Google;
- (ii) online intermediation services like Amazon;
- (iii) online social networking services like Facebook;
- (iv) video-sharing platform services like YouTube,

³⁵ European Parliament and Council Regulation (EU) 2022/2065 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act), [2022] OJ L 277, 1 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022R2065 accessed 19 March 2023.

³⁶ European Commission (EU) Proposal for a Regulation on a Single Market For Digital Services (Digital Services Act) and amending Directive 2000/31/EC, COM/2020/825 [2020] https://eur-lex.europa.eu/legal-content/en/ALL/?uri=COM:2020:825:FIN accessed 19 March 2023; Alexander Peukert and others, 'European Copyright Society - Comment on Copyright and the Digital Services Act Proposal' (2022) 53 IIC 358.

³⁷ European Parliament and Council (EU) Regulation 2022/1925 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act), [2022] OJ L 265 1 https://eurlex.europa.eu/eli/reg/2022/1925 accessed 19 March 2023.

³⁸ European Commission (EU) Proposal for a Regulation of the European Parliament and the Council on contestable and fair markets in the digital sector (Digital Markets Act) COM/2020/842 [2020] https://eur-lex.europa.eu/legal-content/en/TXT/?uri=COM%3A2020%3A842%3AFIN accessed 19 March 2023.

and, also, to operating systems, web browsers, cloud computing services, virtual assistants, interpersonal communications services like WhatsApp, and any and all online advertising services provided by the above-mentioned gatekeepers, insofar these gatekeepers: (a) have a significant impact on the EU market; (b) represent an important gateway for business users to reach end users and (c) enjoy an entrenched and durable position or it is foreseeable that they will enjoy such a position in the near future. For each of these qualitative criteria, the Digital Markets Act provides certain quantitative thresholds that, if met, create a presumption that the qualitative criteria are met and give rise to an obligation to notify to the European Commission. The *Digital Markets Act* also provides for an anti-circumvention clause, prohibiting undertakings from segmenting, dividing, fragmenting or splitting its core platform services to circumvent the abovementioned quantitative thresholds. The European Commission shall be in charge of designating the gatekeepers by Autumn 2023 and to guarantee the application of the relevant rules and sanctions.

3) European declaration on digital rights published on 16 November 2022,³⁹ which aims to promote European values within the digital transformation, putting people at the centre, with digital technology benefiting all individuals, businesses, and society as a whole, based on the Proposal for a Declaration on Digital rights and Principles dated 26 January 2022.⁴⁰ Based on relevant principles large online platform should support free democratic debate online. They should mitigate the risks stemming from the functioning and use of their services, including for disinformation campaigns and protect freedom of expression.

Core principles could be summarized as follows:

- (i) The system must be based on solidarity and inclusion, safety, security and empowerment of individuals, by ensuring freedom of choice online and participation to the digital public space;⁴¹
- (ii) Transparency is required in the use of algorithms and AI, so that people be properly informed when interacting with them;
- (iii) Algorithms and AI must not be used to pre-determine people choices;

³⁹ Council of the European Union (EU) Provisional agreement of Council of the EU and European Parliament on European declaration on digital rights and principles https://www.consilium.europa.eu/en/press/press-releases/2022/11/14/declaration-on-digital-rights-and-principles-eu-values-and-citizens-at-the-centre-of-digital-transformation/> accessed 19 March 2023.

⁴⁰ European Parliament (EU) European Declaration on Digital Rights and Principles for the Digital Decade, Brussels, 26.1.2022 COM [2022] 28

<https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733518/EPRS_BRI[2022)733518_EN.pdf> accessed 19 March 2023.

⁴¹ Alec Tarkowski and Paul Keller, 'Digital Public Space - A Missing Policy Frame for Shaping Europe's Digital Future' in Alexander Baratsits (Ed) *European Public Spheres*, *Digitization and Public Welfare Orientation* (iRights 2021).

- (iv) Algorithms must avoid unlawful discrimination and enable human supervision;
- (v) children rights protection must be guaranteed. Children and young people in general should be empowered to make safe and informed choices and express their creativity in the online environment.

Moreover, national regulations about internet services exist in certain European countries, like in Germany, where existing applicable regulations have been supplemented with the Network Enforcement Law (NetzDG),⁴² which requires companies to remove unlawful content and provides for substantial penalties where they fail to do so.

1.2 Safeguard of fundamental rights and new frontiers of drug-device technologies: how to combine relevant human rights and interests?

A last frontier for testing RBC principles is represented by digital pills (DP), an innovative drug-device technology that permits to combine traditional medications with a monitoring system that automatically records data about medication adherence as well as patients' physiological data. The pill chip can send information from inside the patient's body to a patch that is placed on the patient that sends the information to a smartphone app that can be accessed by doctors, patient, caregivers. It is foreseeable that many other traditional medications will be digitalised to allow a reliable monitoring of medication-taking behaviour and the collection of data concerning the patients. DPs, being regarded as pharmaceutical or medical devices, needs Marketing Authorisation Approval from regulatory bodies before assessing the market. The European Medicines Agency - EMA has recognised DP "as a qualified method for measuring adherence in clinical trials". At the end of 2017, the first DP combined with a traditional drug was granted market approval as a medication by the U.S. Food and Drug Administration (FDA).

That has significant benefits:

- improving the quality and cost of care for the millions of people suffering from uncontrolled illness;
- improving the communication and the counselling interventions of healthcare providers to the possibility of transmitting real-time reliable data about patients and their health-related behaviour

But pose some significant open questions:

⁴² Gesetz zur Verbesserung der Rechtsdurchsetzung in sozialen Netzwerken (Federal Law Gazette I, 3352 ff., 1 October 2017) https://germanlawarchive.iuscomp.org/?p=1245 accessed 19 March 2023.

⁴³ Andrea Martani and others 'Digital pills: a scoping review of the empirical literature and analysis of the ethical aspects' (2020) 21(3) BMC Med Ethics.

⁴⁴ FDA decision for approval DP (ariprazole drug) states that: "if the (...) system fails, patients will not incur additional risk; they will continue to receive the exact treatment benefits of aripiprazole tablets without tracking. If the system works as intended and the patient chooses to share the data with the HCP [health care providers], the drug ingestion data could potentially help guide the prescribing physician on treatment interventions".

- do DPs meet the legal definition of pharmaceutical or medical device is a real challenge?⁴⁵ In fact, legal qualification of new health technologies is a hard issue. It confronts sometimes a total legal vacuum;
- long-term adverse effects and issues regarding product shelf-life are currently unknown, like possible adverse effects or drug interaction reactions;
- long term use issues such as efficacy and maintenance are as well questionable;
- reimbursement system can impact the political and economic strategies for integrating innovation.

And, even more, by introducing DPs are we swallowing a spy, which might affect individuals' autonomy, representing an unpleasant form of surveillance and even impacting on doctor-patient relationship?⁴⁶

The unknown risks of digital medicines solutions lead to the mobilisation of legal norms that govern acts and activities, as well as the construction of jurisprudence to guide the balance between risks and benefits. Thinking about the security, safety, lifecycle and privacy concerns in e-health is crucial; nevertheless, principle of precaution cannot prevent the advancement of technology due to the lack of knowledge of the risk. An upto-date legal control of the risk-benefit binomial is so required, to avoid the maximum damage from health problems due to new digital health therapies.⁴⁷

2 Metaverse and RBC: what perspective for the safeguard of online users' fundamental rights?

Meta is Greek for "beyond". With historic roots in science fiction, it was first defined in this 1999 book as a virtual universe controlled and owned by a "global information monopoly that users can access via personal VR goggles." The Metaverse is now in its infancy but promises to soon become the internet of the future! There is currently no truly united place for the Metaverse to be experienced. Numerous virtual worlds exist, and technology is beginning to bring together virtual content which never existed before⁴⁹ and

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⁴⁵ The European Court of Justice has been required by the *French Conseil d'État* to assess whether a software - with at least one function that makes it possible to use patient-specific data for the purposes, inter alia, of detecting contraindications, drug interactions and excessive doses - has to be classified as a medical device under the EEC Medical Device Directive 93/42. With ruling C-329/16 ('Snitem v. Syndicat national de l'industrie des technologies médicales', published on 7 December 2017) the European Court of Justice ruled that a software constitutes a medical device for the purposes of the EE Directive 93/42 (now replaced by the EU Medical Device Regulation 745/2017), insofar it satisfies the two cumulative conditions - which must be met by any device of that nature - relating to: (i) the objective pursued and (ii) the action resulting therefrom.

⁴⁶ Lauren M Wancata and Daniel B Hinshaw, 'Rethinking autonomy: decision making between patient and surgeon in advanced illnesses' (2016) 4(4) Ann Transl Med 77.

⁴⁷ Gualberto Gussoni, 'Digital Therapeutics: an opportunity for Italy, and beyond' (2021) 4 Tendenze nuove 3.

⁴⁸ Neal Stephenson, *Snow Crash* (Random House Publishing Group 1992).

⁴⁹ Liang-Jie Zhang, 'MRA: Metaverse Reference Architecture' in Bedir Tekinerdogan, Yingwei Wang, Liang-Jie Zhang (eds.) *Internet of Things - ICIOT 2021*, (Springer International Publishing AG 2021).

creating legal challenges never before imagined⁵⁰. The goal is for the Metaverse to embody the evolution of the Internet into "a single, universal and immersive virtual world that is facilitated by the use of virtual reality (VR) and augmented reality (AR) headsets."⁵¹ It must be intended in a wider meaning, including all possible interactions of the user in a digital or hybrid environment, combining a digital lawyer with physical reality. Interfaces can also include body armour, to help one feel totally immersed in the experience: in such a manner the Metaverse promises to bring the virtual world to life. And from a technical perspective it shall represent just a sort of natural evolution from an Internet 1.0, in which we were just able to share contents, passing through an Internet 2.0 where we can pass from a passive role to an interaction which the exchanged contents. Metaverses could grow into entire societies with economies and democratic leadership. And Metaverse is by sure a big business, made of corporate metaverses, seeking to maximize monetary transactions. ⁵²⁵³

In such a new virtual reality many companies have already found creative and fruitful ways to use the Metaverse as a marketplace and to make transaction safer by trading Non-Fungible Tokens (NFTs). They are unique cryptographic tokens recorded and minted on a cryptocurrency's blockchain; they cannot be replicated, because they are assigned unique identification codes and metadata that distinguish them from other tokens. ⁵⁴ Because every NFT is unique, tokens are coded to prove ownership of user-generated content and NFT assets; that represents a real-world economic value, insofar holders of crypto tokens, avatar skins, and digital real estate can trade them, giving them real-world value. ⁵⁵

Metaverse reality and relevant use of NFTs and cryptocurrencies - together with underlying policies and regulations, risks and opportunities - represent an extremely actual and controversial subject in all jurisdictions and economies worldwide. A subject largely discussed in Parliaments and in courts and which is becoming more and more of interest for various industries, for preserving and safeguarding existing assets and looking for future business opportunities in another promising market dimension. Metaverse is in fact expected to deeply influence the real world and this influence impact particularly

⁵⁰ Yogesh K Dwivedi and others, 'Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy' (2022) 66 International Journal of Information Management. ⁵¹ Matt O'Brian and Kelvin Chan, 'EXPLAINER: What is the metaverse and how will it work?' (Los Angeles Times, 28 October 2021) https://www.latimes.com/business/story/2021-10-28/explainer-what-is-the-metaverse-and-how-will-twork accessed 19 March 2023.

⁵² In January 2022 Microsoft, which owns the Xbox video game console system, declared its intention to acquire Activision Blizzard Inc. for US\$68,7 billion, which would make it the biggest gaming industry deal in history, to play a key role in the development of metaverse platforms. Activision is the maker of popular games including Call of Duty and World of Warcraft. But in December 2022 the US Federal Trade Commission has moved to block Microsoft's takeover, citing concerns that the deal would thwart competition, by denying rivals access to popular gaming content.

⁵³ Facebook renames 'Meta' and commits US\$180 billion to develop metaverse. Mark Zuckerberg said it's a 'reasonable construct' for the metaverse to be a time, not a place.

⁵⁴ Jimmi Aky, 'Guide to tokens and NFTs: what is 'tokenization' and how does it work?' *Forkast News* (9 March 2021) https://forkast.news/tokens-nfts-tokenization/ accessed 19 March 2023.

⁵⁵ Samuel J Bolton and Joseph R Cora 'Virtual Equivalents of Real Objects (VEROs): A type of non-fungible token (NFT) that can help fund the 3D digitization of natural history collections' (2021) 6(2) Megataxa 93.

the luxury sector, by allowing multiple industries to enhance their brands and expand their business. However, the Metaverse is not a uniform entity, but a broad term applied to a range of virtual experiences. There are various platforms providers within it, some of which are owned by a single legal entity, and others run by decentralised autonomous organisations (DAOs). With blockchain technology, ownership of the metaverse is shared by its users, and DAOs put users in control of the game's future. The incoming Metaverse dimensions under establishment offer room enough for fixing appropriate rules of engagement between digital platforms on one side and private and professional users on the other side, for the benefit of end users worldwide. That, even if Metaverse, from a users' perspective, is still a matter for pioneers only, looking to the pretty low number of active users logged for instance in The Sandbox Game or in Decentraland. ⁵⁶

That shall surely require the adoption of specific regulations for digital assets and cryptocurrencies, as China already did, launching its first state backed NFT marketplace and allowing from 1 January 2023 their free trading, insofar they are kept into a wallet integrated into a digital platform named China Digital Asset Trading Platform and run - having obtained a compliance license through China Technology Exchange - by three state-owned and private entities, namely including China Technology Exchange and Art Exhibitions China, both of which are government-backed, and Huban Digital, a private company. The marketplace is built on "Wenbao Chain" (China Cultural Protection Chain), a blockchain network operated by Art Exhibition China, and will also be used to trade digital copyrights and property rights along with collectibles. And in November 2022 the Hangzhou Internet Court ruled that digital assets have similar property rights to items sold on e-commerce sites. ⁵⁷

These regulations become even more necessary after the many frauds recently occurred, starting from the Markets in Crypto-Assets (MiCA) Regulation,⁵⁸ intended to establish a harmonised set of rules for crypto-assets and related activities and services and to impose restrictions on the issuance and use of stablecoins, expected to enter into force in early 2023. Mica is part of a digital finance package, which, inter alia, also includes the Digital Operational Resilience Act⁵⁹ and the DLT Pilot Regime Regulation,⁶⁰ based on distributed ledger technology, which itself will start applying on 23 March 2023. The regime is a regulatory sandbox for facilitating the development of secondary market

⁵⁸ European Commission, 'Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937 (MiCA)' COM/2020/593 final 24 September 2020.

⁵⁶ Stefan M, 'How Many Active Users Does Decentraland Really Have?' (Nftnewstoday, 18 October 2022) https://nftnewstoday.com/2022/10/18/how-many-active-decentraland-users/ accessed 19 March 2023.

⁵⁷ Hangzhou Internet Court '拼手速抢购的"NFT数字藏品盲盒"被退款,买家索赔9万余元,法院判了 (*The "NFT Digital Collection Blind Box" that was snapped up quickly was refunded, and the buyer claimed more than 90,000 yuan, and the court ruled*) https://mp.weixin.qq.com/s/WWnZAxqiIVJ-dHO90eoBVw accessed 19 March 2023.

⁵⁹ European Commission, 'Proposal for a Regulation of the European Parliament and of the Council on digital operational resilience for the financial sector and amending Regulations (EC) No 1060/2009, (EU) No 648/2012, (EU) No 600/2014 and (EU) No 909/2014' COM(2020) 595 final, 24 September 2020.

⁶⁰ European Parliament, 'Proposal for a Regulation of the European Parliament and of the Council on a Pilot regime for market infrastructures based on distributed ledger technology' COM/2020/594 final, 24 September 2020.

infrastructure for digital securities, including both "tokenised" securities and digitally native securities.

The key questions are: how responsible business conducts shall be ensured in the Metaverse? Who will regulate this unsettled digital technology? That even more looking to recent EU rules for the digital market, which could imply a substantial change in applicable regulatory framework.

In the European Union regulations that apply to two-dimensional social media platforms also apply to the metaverse itself and the services offered therein. That even if the Digital Services Act does not specifically mention either Metaverse or virtual reality, and in 2021 the EU Commission stated that it wanted to refrain for the time being from creating any regulations for the metaverse launched by Meta Group. But additionally, we will have to consider all the offences, having sometimes also criminal relevance, which could concern our avatar when moving inside the Metaverse dimension.

RBC is expected to evolve also at Metaverse level, and the potential benefits of Metaverse will arise only insofar issues around its ethical and accountable use are effectively resolve, 61 with an AI systems' structure that must comply with rule of law and respect human rights, democratic values and diversity. That means to incorporate relevant commitments in the design of this new virtual dimension and of relevant products' design, sale and use and, more generally, to allow sustainable development. Basic requirements are that AI systems must function in a robust, secure and safe way and companies dealing online ensure that people fully understand AI-based outcomes and may challenge them, if required; and the general cybersecurity and data protection risks on the internet obviously also apply. Platforms are so required to identify adverse impacts and take steps to mitigate, prevent and address them.

Platforms are so expected to be more and more transparent and accountable, by publicly reporting on their due diligence efforts and providing for appropriate remediation mechanisms, if appropriate. Big Techs like Meta, Microsoft and Intel are periodically conducting independent human rights impact assessments on their platforms and a similar effort shall be even more required in a context of virtual and augmented reality like Metaverse, in terms of respect and true enforcement of applicable rights and regulations.

Far from being a mere gadget for gamers only, according to technology research firm Gartner, by 2026 one out of four individuals worldwide is expected to spend at least one hour a day in the Metaverse to work, study, shop and socialize⁶². The new technologies have the potential to bring positive impact and effects in various key areas, like life sciences, medicine and educations, and these are the reasons for massive investments by Big Tech in recent years. But these entities must be the first to ensure that profits are not

Muhammad Anshari and others, 'Ethical Responsibility and Sustainability (ERS) Development in a Metaverse Business Model' (2022) 14(23) Sustainability (n. 15805).
 Pankaj Prasad, Padraig Byrne and Gregg Siegfried 'Market Guide for AIOps Platforms' (Gartner, 30 May 2022)

https://www.ibm.com/downloads/cas/AXO20DXM> accessed 19 March 2023.

put before legitimate users' interest, namely avoiding massive data collection and their improper use, in a global scenario where also crime is gradually moving digital. If the borders of our real world are melting into the digital universe, there is an emerging need of protecting citizens and ensuring the rule of law also in this new dimension.

The question is if, in the on-going Metaverse development, self-regulation and ethical guidelines and standards could really represent safeguard enough against bad and improper use of AI, where fundamental human rights are and must remain central. And where the International Principles on the Application of Human Rights to Communications Surveillance must be constantly adjourned and even more enacted, so that users' data are treated in the legitimate interest of their proprietary owners and for the benefit of the community, by avoiding and sanctioning any sort of manipulation or harm. That represents a new test field for the legal community everywhere in the world, not only in terms of enacting new laws and regulations and adopting smart contracts, but also in terms of law enforcement, where the Metaverse could provide many benefits, including telecommuting, matchmaking, collection and preservation of crime scene evidence. That was recently shown at INTERPOL's 90th General Assembly in New Delhi, where the global police organization unveiled the first-ever Metaverse specifically designed for law enforcement agencies around the world, allowing registered users to receive immersive training in forensic investigations and other policing capabilities.⁶³

In the United States they adopted a pragmatic approach in ensuring Responsible Business Conduct, articulated into:

- recourse to smart contracts, represented by programmed digital codes that run on the blockchain, automate operations, and ensure that trading and transactions are done according to the predetermined rules. They are not legally binding contracts, but a mere set of rules that control the use of specific NFTs, and later purchasers may not realise that a smart contract does not necessarily provide same benefits as it did to original owner. They can be programmed to automatically pay royalties, buy and sell NFTs, make donations and more, by granting speed and efficiency: no paperwork to process required. Moreover, trust and transparency are ensured, being they hard to hack. But these systems are not infallible: crash and mistakes in coding are still made; 66
- technology solutions: for instance, due to allegations of asserted harassment,
 Meta now gives all virtual reality ("VR") participants a two-foot 'personal boundary' by default, blocking wayward hands from drawing too close. The force

⁶³ INTERPOL 'INTERPOL launches first global police Metaverse' (INTERPOL, 20 October 2022) https://www.interpol.int/News-and-Events/News/2022/INTERPOL-launches-first-global-police-Metaverse accessed 19 March 2023.

⁶⁴ Riccardo de Caria, 'Definitions of Smart Contracts: Between Law and Code' in Larry DiMatteo, Michel Cannarsa and Cristina Poncibò (eds), *The Cambridge Handbook of Smart Contracts*, *Blockchain Technology and Digital Platforms* (CUP 2019) 19.

⁶⁵ Peter G L Hunn, 'Smart Contracts as Techno-Legal Regulation (2019) 7(3) Journal of ICT Standardization 269.

⁶⁶ James Grimmelmann, 'All Smart Contracts are ambiguous' (2019) 2(1) Journal of law and innovation 2.

field-style safety mechanism has been rolled out across Meta platforms, limiting interactions between avatars, and creating an invisible virtual barrier all around, preventing other people from getting too close;⁶⁷

- crypto tokens (like ERC-20) built into existing blockchains as corporate governance mechanism. 68 Some crypto tokens represent tangible assets such as real estate or art and others represent intangible assets such as governance voting rights on the platform. In decentralised platforms, crypto tokens can also be used as a governance mechanism for decisions that dictate future direction of various blockchain projects. Decentralised governance is still evolving, but key processes are being standardised and implemented so that protocols can be equitably enforced. No such self-governance is promised, for the time being, 69 under corporate Metaverse (such as Microsoft or Meta/Facebook);
- licensing virtual goods. For instance, Nike filed multiple applications seeking U.S. trademark protection for virtual goods. The applications are on an intent-to-use basis, so they won't be finalised until they're in commercial use. The new trademarks provide Nike extra protection in the event others attempt to use the brand in an unlicensed way.

In the United States a huge challenge is represented by the fact that federal laws often defer to individual state laws, which are fractured and inconsistent. With no national privacy laws and pending a proposal for a Federal American Data Privacy and Protection Act,⁷⁰ the State of California is currently the gold standard on U.S. privacy laws. If passed, the Federal American Data Privacy Protection Act would limit data collection and allow for enforcement by the U.S. Federal Trade Commission, although, as it is currently written, it is more limited than California's privacy laws. Government regulators and court decisions shall have to rely on the applicable existing U.S. federal laws covering:

- Cybersecurity
- Antitrust
- Unfair trade practices
- Intellectual Property (trademarks, copyrights)
- Securities/Banking
- Gambling/ Lottery laws
- Currency
- · Protection of Children and disabilities.

⁶⁷ Jan Mulligan, 'Metaverse: What Regulation? U.S. Laws... Regulation by Speculation' [2022] Mulligan Law - Blog https://www.janmulligan.com/metaverse-what-regulation-u-s-laws-regulation-by-speculation/ accessed 29 March 2023.

⁶⁸ Philipp Hacker and others, 'Regulating blockchain: techno-social and legal challenges' (OUP 2019) 311.

⁶⁹ Melanie Swan, 'Blockchain. Blueprint For a New Economy' (O'Reilly 2015).

⁷⁰ Introduced in Congress in June 2022, having Rep Frank Pallone Jr as sponsor, reported (amended) by the Committee on Energy and Commerce and placed by the House of Representatives on 30 December 2022 on the Union Calendar (Calendar 488) https://www.congress.gov/congressional-report/117th-congress/house-report/669> accessed 19 March 2023.

Existing laws are in many respects inadequate for novel issues, such as the scope of the right to use content held by an NFT owner. New laws are needed, but U.S. federal regulators are usually slow, preferring to take a "wait and see" attitude. And there will be problem with enforcement because of lack of borders/jurisdiction in digital disputes.

Some U.S. states are considering enacting laws that regulate social media platforms and up to now Florida and Texas have passed such laws, by limiting the power of the largest social media platforms to moderate and curate speech and requiring those companies to disclose certain information to the public. Two trade organisations representing the social media companies challenged both laws, allegedly seeking protection under the U.S. Constitution guaranteeing freedom of speech. Federal district courts enjoined each law, holding that the companies were likely to succeed on their First Amendment challenges, and the cases were appealed.

The Florida law is known as the Stop Social Media Censorship Act. It was proposed shortly after former President Donald Trump, following the January 6 insurrection at the U.S. Capitol, was suspended from Twitter and other social-media platforms. Among other things, the law bars social-media platforms from banning political candidates and journalistic enterprises. On 23 May 2022, in the *Moody v. NetChoice* case, the Eleventh Circuit struck down the part of the Florida law that limits the power of social media platforms to moderate and curate content but upheld the law's disclosure provisions. The U.S. Court of Appeals for the 11th Circuit blocked Florida from enforcing most of the law's provisions, prompting the State to come to the Supreme Court in September 2022.

The Texas law is known as House Bill 20. It sought to prohibit social media companies from banning users over their viewpoints, even if their rhetoric was offensive or erroneous. The law also sought to require the corporations to explain and disclose reasons for any individual to be banned from the website, which would be cumbersome. If the Texas law was upheld, corporate governance over such issues is severely limited. In a close 5-4 decision, the High Court blocked the law from taking effect. However, that was only a temporary ruling that was overturned by the Supreme Court in May 2022. On appeal⁷³, NetChoice argued that prohibition on viewpoint-based censorship was unconstitutional, but the Fifth Circuit rejected these arguments, considering platforms as "common carriers". On the contrary, platforms argue they are more similar to newspapers. After the U.S. Court of Appeals for the 5th Circuit ruled for the State, the tech companies

⁷¹ Sofia Andrade, 'Florida's New Pro-Disney, Anti-Facebook and Twitter Law' (Future Tense, 25 May 2021) https://slate.com/technology/2021/05/florida-stop-social-media-censorship-act-disney.html accessed 19 March 2023.

⁷² NetChoice, LLC v Attorney General, State of Florida [2022] US District Court for the US Court of Appeals for the Eleventh Circuit) Opinion of the Court (May 23, 2022) https://clearinghouse.net/doc/134778/ accessed 19 March 2023.

⁷³ NetChoice, LLC v Ken Paxton, in his official capacity as Attorney General of Texas Appeal from the United States District Court for the Western District of Texas [2022] U.S. Court of Appeals for the Fifth Circuit No. 21-51178, USDC No. 1:21-cv-840 https://www.ca5.uscourts.gov/opinions/pub/21/21-51178-CV1.pdf> accessed 19 March 2023.

returned to the Supreme Court in December 2022, asking the justices to take up their challenge. Texas Solicitor General Judd Stone agreed with NetChoice that review should be granted and urged the justices to consider both the Texas law and the Florida law at the same time. Rather than granting or denying review, the court opted to seek the views of the Biden administration. As a result, even if the justices ultimately decide to grant review, they almost certainly will not hear oral argument until next term, with a decision to follow sometime in 2024.⁷⁴ Until then, both States' laws will remain on hold and whether a social media platform's content moderation policies constitute speech protected by the First Amendment shall surely continue to carry serious implications for the future of online discourse.

3 Conclusions

Digital platforms are changing their skin, name, terms and conditions of access (not necessarily free of charge, even for socials) and sometimes even their ultimate owner, like already occurred for Twitter. Metaverse shall represent an unavoidable area of their expansion, not just for gaming applications, but even more for business purposes, through the recourse to NFTs and cryptocurrencies. In a proprietary virtual 3D space, a person will take the form of an avatar and move freely to do much of what one does in the "real" world: shop, take classes, attend meetings and concerts, exercise, compete in sporting activities, own virtual and physical assets, and make creative and financial investments that the individual can own, control and sell. Instead of looking at a screen, the feeling is to become part of connected virtual world. In such a context to delegate responsible business conducts of the digital platforms to self-regulation only shall be probably not enough. Platforms are so expected to be more and more transparent and accountable and applicable regulations are increasingly focusing on good faith efforts to protect centrality of fundamental human rights vis-à-vis Big Techs. Digital platforms shall have surely to implement and constantly improve robust and bullet proof procedures, insofar they do not want to be overwhelmed by class actions that would necessarily lead them not only to massive sanctions and loss of image, but even more could induce courts all over the world to cause them to disclose and make public their core assets, i.e. the algorithms representing the founding basis of their own business.

Responsible Business Conduct will no longer be for digital platforms operating in that 3D environment a mere nice to have, and a true self-government of the platforms shall necessarily require clear and effective regulations, enforceable not only within our European Union boundaries, but also in common law jurisdictions.

⁷⁴ Amy Howe, 'Justices request federal government's views on Texas and Florida social-media laws' (23 January 2023) https://www.scotusblog.com/2023/01/justices-request-federal-governments-views-on-texas-and-florida-social-media-laws/>.

Therefore, the Metaverse represents a great opportunity, also from a regulatory perspective, by allowing to relevant jurisdictions to play no longer the role of followers in remedying lack of transparency for social media and online services, and in anticipating at their outset the occurrence of all the "improper occurrences" that have characterised the Internet and 2D age. That namely includes violation of privacy, unauthorised transfer of personal data to third parties and other conducts that could facilitate ID thefts, discrimination among the users, shadow banning and account freezing. It would be a serious mistake to think that the Metaverse is just an invention or a passing trend and not a logical evolutionary stage of our digital interaction with third parties. And States and Parliaments should not lose the opportunity to regulate risks and opportunities that the Metaverse and relevant communication and trading tools will unavoidably entail.