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AI ACT AND INTELLECTUAL PROPERTY IN THE DIGITAL TRANSITION

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PROLOGUE

GUSTAVO GHIDINI⁽¹⁾

“The pace of progress in artificial intelligence is incredibly fast. It is growing at a pace close to exponential”. This popular quote of Elon Musk on the futurology site Edge.org really fits to the genesis of this Volume, which has its roots in the Conference on AI and its legal and regulatory implications held in October 2022. There was at that time a clear perception of the relevance of the AI as disrupting technology, since it was capable of replicating (and even passing) human abilities, but it was only one month later, in November 2022, with the launch of Chat GPT that a widely accessible Generative AI tool has changed the scenario and made everyone understand how crucial was a collective research in this area of the law. Just one month and the “pace of progress” has imposed to re-think the analysis on AI and its legal implications. This Volume essentially tries to offer a large-spectrum analysis of many legal issues related to AI and Generative AI, from antitrust to consumer laws, from privacy to fundamental rights, from product safety to intellectual property.

And of course, a big role is played by the regulatory aspects, which is by the way invoked by many of the most enthusiast promoters of the AI revolution. Just to mention again Elon Musk: *“I’m increasingly inclined to think that there should be some regulatory oversight, maybe at the national and international level, just to make sure that we don’t do something*

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very foolish” but also Sam Altman, the 38-year-old Stanford University dropout and tech entrepreneur founder of OpenAI said during his testimony before the US Congress that: *“If this technology goes wrong, it can go quite wrong. And we want to be vocal about that. We want to work with the government to prevent that from happening”*. Regulators are engaged in the attempt to govern the AI phenomenon but the approaches – and the degree of engagement – are different. The European Union is going to approve in early 2024 a EU AI Act, that represents a prescriptive legislative framework based on the EU model for product safety legislation, whose provisions will take likely effect within two years from publication (even before for those provisions on prohibited AI systems and on transparency obligations for Generative AI). It imposes legislative obligations at all stages of the lifecycle of an AI system, from: training, testing and validation; to conformity assessments; risk management systems; and post-market monitoring.

The UK approach focuses on guidance for specific sectors and risks. Such approach outlines 5 principles that UK regulators should consider to best facilitate the safe and innovative use of AI in the industries they monitor: (1) safety, security and robustness; (2) transparency and explainability; (3) fairness; (4) accountability and governance; and (5) contestability and redress. These principles are based on the OECD’s AI principles (Organisation for Economic Co-operation and Development). Instead of assigning responsibility for AI governance to a new single regulator, the UK Government is empowering existing regulators to come up with tailored approaches for specific sectors.

On 30th October 2023 US President Biden issued an Executive Order – as such addressed to the US Federal Agencies (thus, with no direct effect for companies and individuals) to ensure that America leads the way in seizing the promise and managing the risks of artificial intelligence (AI). The Executive Order establishes new standards for AI safety and security, protects Americans’ privacy, advances equity and civil rights, stands up for consumers and workers, promotes innovation and competition, advances American leadership around the world.

China’s three most concrete and impactful regulations on algorithms and AI are its 2021 regulation on recommendation algorithms, the 2022 rules for deep synthesis (synthetically generated content),

and the 2023 draft rules on safety requirements for generative AI. Information control is a central goal of all three measures, but they also contain many other notable provisions. The rules for recommendation algorithms bar excessive price discrimination and protect the rights of workers subject to algorithmic scheduling. The deep synthesis regulation requires conspicuous labels be placed on synthetically generated content. And the draft generative AI regulation requires both the training data and model outputs to be “true and accurate”.

In order to better understand AI we cannot focus just on the legal side: a prior in-depth appraisal is crucial of what stands behind the label of an “intelligence” which is “artificial”. Hence this Volume opens with the contributions of technicians, computer scientists, tech philosophers, economists who help us understanding this new technology. What we will discover could be a bit surprising. The AI is not so (so far...) “intelligent”, at least as a human can be, since it is able to build efficient probabilistic schemes starting from the training on large amounts of data, so as to offer answers that are perceived similar to those generated by human beings. The AI can analyze in a very short timeframe huge amounts of data and use them to take decisions based on probability. But of course, errors and bias can be caused by the training or by the data themselves. “Datum” is past participle, so, while society is evolving, data just reflect schemes from the past. So, robots’ ‘creativity’ is however depending (so far...) from prior human experience(s).

The Generative AI (GenAI) is capable, yes, of creating a variety of contents (as well as other forms of expression, such as the software source code) but in the absence of an apparent predominant human contribution such contents are generally deemed as unable to enjoy IP protection – which of course doesn’t at all mean that they cannot be lawfully exploited.

Take e.g. a case concerning dedicated to IP protection of GenAI’s visual art work (*Thaler vs Perlmutter*, decided by the United States District Court for the District of Columbia on 18th August 2023). Stephen Thaler owns a computer system called the “Creativity Machine”, which he claims generated a piece of visual art of its own accord. He sought to register the work for a copyright in the US, listing

the computer system as the author and explaining that the copyright should transfer to him as the owner of the machine. The US Copyright Office denied the application on the grounds that the work lacked human authorship. The District Court confirmed the decision of the US Copyright Office. Nonetheless, the District Court recognizes that the attenuation of human creativity from the actual generation of the final work via AI will prompt challenging questions regarding how much human input is necessary to qualify the user of an AI system as an “author” of a generated work but such issue couldn’t be addressed in the context of the “Creativity Machine” case, since the plaintiff decided to go through an application for copyright registration alleging that the artwork was autonomously generated by AI and thus requiring the Court to rule only on the question of whether a work generated autonomously by a computer system is eligible for copyright.

In another case, the Italian Supreme Court (Court of Cassation, Civil Section I, order 1107 of 16th January 2023) did not exclude the possibility of copyright protection for machine learning generated works with an adequate level of involvement of a human author and with a factual scrutiny to be conducted on the merits.

In this perspective, an adequate valorization of the argument of copyright protection for AI outputs depending on the level of human involvement led a Chinese Court to a ruling in favor of copyright protection. In *Shenzhen Tencent v. Shanghai Yingxun* (Nanshan District People’s Court, Shenzhen, Guangdong Province on December 24, 2019), the Court found that the content generated by the Dreamwriter AI software constituted a written work, since the work at stake was generated by the creative team of the plaintiff Shenzhen Tencent using the Dreamwriter AI software; more in detail the arrangement and selection of the creative team in terms of data input, trigger condition setting, template and corpus style choices are intellectual activities that have a direct connection with the specific expression of the article involved.

On patent side, it is worth mentioning the DABUS case and some interesting evolutions in the approach in patenting AI software. DABUS is an AI machine developed by a team of scientists, which has a system of many neural networks that generate new ideas by altering the network interconnections and is able to operate autonomously to

create inventions. DABUS generated output that became the basis for two patent applications. The patent applications indicating the robot as inventor were rejected on the basis that the inventor was not a natural person. More in detail, the Boards of Appeal of the EPO confirmed the decision of the Receiving Section of the EPO to refuse the application in which the AI system DABUS was designated as inventor in the application form. The Boards of Appeal dismissed the application based on its interpretation of Article 81 EPC and defined the inventor as a natural person with legal capacity. As a matter of fact, indeed, the procedural rules on patent applications require the indication of the person who created the invention. The misunderstanding of these positions lies first of all in not taking into account that tens of thousands of patents have already been granted around the world on algorithmic ideas. The patentability of software has been accepted for decades, as ‘software patents’ (what is AI if not software?!), under the general condition that they produce a “technical effect” beyond the mere interaction with the hardware’s electric circuits.

Anyway, there are recent signs of an evolution in favor of patents on AI’s ‘products’.

The Court of Appeal of England and Wales (Court of Appeal of England and Wales, Civ 1374, 21 September 2021) held unanimously that only a natural person could be considered an inventor in the meaning of the Patents Act 1977, and, therefore, concluded that DABUS has no right to be called an inventor under the current legislation. Nevertheless, the Judges disagreed regarding the issue of whether an honest subjective belief in the identification of the inventor and the applicant’s derivation of title from the inventor was sufficient to satisfy the requirements of Section 13(2) of the Patent Act. Birss LJ explained that he finds it surprising that an invention was denied a patent when the applicant in good faith was unable to identify an inventor with a valid explanation. According to Birss LJ, Section 13.2 requires the applicant to disclose who they genuinely believe the inventor to be; in a case where this can be done in a satisfying way, such as explaining that there is no inventor under the meaning of current patent law since the invention was generated by an AI, no further obligation should be enforced.

Also, the German Federal Patent Court (Federal Patent Court, Case 11 W (pat) 5/21, 11 November 2021) decided that it is not allowed to designate an AI as the inventor for a national German patent application. Nevertheless, the Court held that the catalogue of information items required under the German Patent Ordinance to be submitted within the inventor designation is non exhaustive and permits indicating additional information regarding the genesis of an invention. Accordingly, the Court allowed a designation of inventor where the applicant had designated himself, with an addition that he has caused the AI system DABUS to generate the invention.

Moreover, since the ability of the AI to decide or to generate is based on the training data, a lot of discussions are still on going on the transparency of the training of the most famous Generative AI tools and a lot of voices are arising regarding the fact that such training was based on an unauthorized exploitation of copyrighted contents.

In the US, two class actions were filed against OpenAI, one mainly focused on alleged data breach and based only on alleged copyright infringements. But other class actions were directed against Google for Bard and Gemini and against Meta for LLaMA. To complete this picture, we need to consider that in the US the US Federal Trade Commission (“FTC”) has opened an investigation into OpenAI aimed at verifying whether it has violated US consumer protection law. In the UK the High Court of Justice of England and Wales is dealing with a copyright case between *Getty Images (US) Inc. and others vs Stability AI Ltd.* It is likely that some answers to the regulatory needs on AI (and especially on GenAI) will arrive from the outcomes of such civil or administrative actions.

Thus, there is a significant friction between the existence of exclusive rights on data, sets and data and works that can be used by AI systems, and their typical (technical) “mode of production”. In fact, the owners of prior IP rights on those, could “throw sand into the AI engine”, acting on the basis of their exclusive/exclusionary rights, thereby asking for the blocking and/or removal of the protected works they created: precisely because, to function, that engine requires the widest and most as quickly as possible to enormous quantities of data and works – amongst which there is inevitably a number of IP protected ones.

Hence the proposal *de lege ferenda* (but based on a positive law model, albeit of restricted object) I submitted in my recent article “What IP owes to antitrust—and which IP paradigm is required to foster innovation and creativity in the digital era”, in *Queen Mary Journal of Intellectual Property*, vol. 13, n. 4 (2023) pp. 1-7. It’s the proposal to adopt a normative model based on third parties’ *right of open paying (FRAND) access*. A model that might reconcile GenAI’s production necessities with the legitimate interests of IP-entitled authors of (utilitarian or ‘intellectual’) digital works to an adequate compensation from AI entrepreneurs.

Maybe you will not find in this Volume all the answers to the many legal issues that the AI is determining but for sure the number of contributions and the expertise of the many Authors will guide you in a better understanding of the impacts of the AI.