

## Notes on Recent European Commission Plans for regulation of Artificial Intelligence

**Elisabetta Azzali**

Pegaso International  
Malta

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### Abstract

*While intelligent agents are increasingly pervasive in the environment, Civil society Exige definition and regulation individual's right defence and extension. This paper contains a critical appraisal of a recent white paper published by the EU Commission. The innovation proposed and future development are exposed as "red route" for EU leadership in Artificial Intelligence.*

**Key words:** EU Region, Service Provider, Risk based approach, Internet of things, trustworthy A.I., sustainability, functional responsibility.

### BACKGROUND

On February 19, 2020 the European Commission published a white paper on Artificial Intelligence alongside its data and Digital Strategies for Europe and a report on the safety and liability implications of Artificial Intelligence, the Internet of things and robotics. The White Paper entitled "A European approach to excellence and trust "on artificial intelligence (AI) present all key elements for future developers, this Document was published in front of the Commission's Data and Digital Strategies for Europe. The Commission also published an accompanying Report on the safety and liability implications of AI, the Internet of things and robotics which was delivered to the European Parliament, the Council, and the European Economic and Social Committee, it defines the ways in which existing legislation may need to be amended to account for the specific risks presented by emerging technologies, such as the creation of increasingly complex supply chain core elements of the white paper include:

**Policy framework:** The white paper sets out a policy framework with measures designed to bring together efforts at the regional, national and international level it discusses the Commission's proposed steps toward building an "ecosystem of excellence" to support the development and adoption of AI. Across the EU Economy as well as the field of public administration, the white paper notes that a "Clear European Regulatory framework would build trust among consumers and businesses in AI, and therefore speed up the uptake of the technology". For example, some envisioned steps include focusing on working with member states to secure EU-level funding, ensuring that small and medium enterprises (SMEs) have access to AI, and establishing public- private partnership.

Key risk of AI: The white paper highlights some of the key risk presented by AI including risks to fundamental rights such as privacy, human dignity, non-discrimination, and the right of a fair trial. Part of this issue system from what is known as the “black box effect”, the opacity of certain AI algorithms that prevents the reasoning underlying an AI system’s decision-making from being verifiable. Further risks highlighted are risks to the functioning of the liability regime, where flows in AI embedded in products and services cause real world issues, the root of which cannot be traced because of the opacity of the AI system, when the root cause of such issues is unclear, this creates legal uncertainty, particularly regarding the allocation of responsibility in relation to malfunctioning systems.

**Existing legislation**, the white paper highlights that there is already an extensive body of legislation in place governing certain aspects and uses of AI, both on a sectoral and national level. This includes data specific legislation such as the General Data Protection Regulation (GDPR), as well as numerous pieces of legislation relating to equality and consumer protection. However, it is noted that effective application of existing legislation can be hindered by the lack of transparency around AI system. Therefore, the Commission considers that it may be necessary to adjust or provide clarification around certain provisions. The Commission, also, highlights limitations regarding the scope of existing legislations, as well as the challenge of regulating AI. Enabled products that may come to the market functioning in one way but adapt through machine learning to perform new tasks.

Future legislative approach: with respect to the future, the Commission proposes taking measures to deal with the Gap in existing legislation, avoiding overly prescriptive regulation by adopting **a risk based approach**. This should involve identifying “high risk” AI systems. The first relevant criterion for this categorization will be whether significant risks can be expected to arise given the nature of the sector in question (for example in healthcare or transportation).

## **DISCUSSION**

The Commission suggests that relevant sectors specifically be identified and addressed by any new regulatory framework. The second relevant criterion is whether the intended use of the AI system means that significant risks are likely to arise. This could be determined by looking at the potential impact on affected parties, such as where there is a risk of injury, death, or significant material or immaterial damage. These two criteria are proposed to be assessed cumulatively, and in theory, the mandatory requirements of any new regulatory framework would be directed at those systems that are identified as high risk. There may be instance where AI systems that do not fulfil these criteria are nonetheless considered high risk, such as where they may be used for intrusive surveillance technologies. The Commission also suggests the creation of a **voluntary labelling scheme for AI** systems, not considered high risk, where operators make themselves subject to the mandatory requirements discussed below in order to achieve a quality label in relation to their AI applications and increase trust in their use of AI.

### **Examples of mandatory legal Requirements**

The types of mandatory legal requirement propositions are: **Providing quality training data** for example ensuring that AI systems are trained on high quality data to ensure that rights are fundamentally protected during the training stage, not just during deployment, and that bias or discrimination in the AI is avoided. Keeping records and data, particularly records of the programming of the algorithm, so that problematic or unanticipated decision made by AI can be traced back to their source. Clear information provisions should be provided regarding an AI system’s capabilities and limitations including the

conditions under which AI can be expected to function as intended. **Citizens also, should be informed when they are interacting with an AI system.**

**Robustness and Accuracy** to ensure the risks of a proposed system are considered during development, and all reasonable measures are taken to minimise the risk of harm. This involves creating AI systems that are resilient to attacks, as well as attempts to manipulate the underlying data or algorithms. Human oversight, in order to ensure that human autonomy is not undermined. For example, an AI system's output should not be immediately implemented without being validated by human, or human intervention should at least be ensured following such implementation. Specific requirements for remote Biometric identification, a technology that should only be used where such use is duly justified, proportionate and subject to adequate safeguards.

**Allocation of responsibility.** When deciding how responsibility for such measures should be allocated between different actors in the AI supply chain, the commission suggests that responsibility should fall on those best equipped to address the risk in question. The Commission proposes that responsibility for use of AI. Should apply beyond EU Borders to all relevant economic operators providing AI enabled products or services in the EU whether established there or not.

**Future developments.** The Commission noted that given the nature of AI, any regulatory regime would need to be adaptive, stating “given how fast AI is evolving, the regulatory framework must leave room to cater to further developments any changes (to existing legislation) should be limited to clearly identified problems for which feasible solutions exist”

Comments are invited on the white paper and can be submitted until May 19-2020.

### **Data driven society**

Data is at the core of digital transformation. It shapes the way we produce, consume and live. Access to ever growing volume of data and the ability to use it are essential for innovation and growth. Data driven innovation can bring major and concrete benefits to the citizens through for example, personalised medicine or improved mobility, and to the European economy, from enabling better policy making to upgrading public services. The EU will create a single market for data where:

Data can flow within the EU and across sector, for the benefit of all.

European Rules, in particular privacy and data protection, as well as competition law are fully respected. The rules for access and use of data are fair, practical and clear.

The EU in this framework will become an attractive, secure and dynamic data economy by

-setting clear and fair rules on access and re-use of data.

-Investing in next generation standards, tools and infrastructures to store and process data.

Joining forces in European cloud capacity pooling European data in key sectors, with EU, wide common and interoperable data spaces.

Giving users rights, tools and skills to stay in full control of their data. Potential benefits offered by Artificial Intelligence are enormous. Examples- Real time notification of delayed trains can save 27 million working hours. This amounts to 740 million in labour costs.

-Better allocation of resources to fight malaria could save up to 5 billion in healthcare costs globally. Successful innovations in A.I. are closely related to GDPR (i.e. Deep Learning).

In EU, in order to promote high quality Data, Council Presidency releases proposed amendments to draft e-privacy Regulation. On February 21/20 the presidency of the Council of the European Union (EU Council Presidency) published a revised part of the proposed regulation concerning the respect for private life and the protection of personal data in electronic communications and repealing directive (2002/58/EC (Regulation on Privacy and electronic communications). Better known as “The draft e-Privacy Regulation”.

These revisions follow from meeting discussions of the working party on telecommunications and information society (the WP tele), the permanent Representative Committee and the transport, Telecommunications and energy Council. According to the EU Council Presidency, it became clear during these discussions that the existing proposed text of the draft privacy regulation would not be supported by the majority of the member states delegations who expressed their wish for substantial changes, in particular, the rules for the processing of metadata and use of cookies or similar technologies (i.e. Articles 6 and 8 of the draft privacy Regulation and related Recitals). Accordingly, the EU Council Presidency is proposing substantial revisions to these key provisions of the draft privacy regulations with the aim of further aligning the draft privacy regulation with the EU General Data Protection Regulation (the GDPR).

The most significant revision proposed by the EU Council Presidency is that it introduces the possibility to rely on the “Legitimate interest” ground (1) Process electronic communications”, Metadata, and (2) place cookies or similar technologies on end users’ terminals subject to specific conditions and safeguards, namely:

- **Conducting a data protection impact assessment** and, where appropriate, consulting the relevant supervisory authority;
- **Implementing appropriate security measures**
- **Providing** information end-users about the data processing activities taking place;
- **Providing** end -users with the right to object to such data processing; and
- **Refraining** from **sharing metadata** or information collected via the use of cookies or similar technologies with third- parties, unless it has been previously anonymized.

However, pursuant to the proposed revisions, the end-user’s interests will be deemed to outweigh the interests of the electronic communications network or service providers if the metadata or information collected through cookies and similar technologies is used to determine the nature and characteristics of end-users, or to build individual profiles, as well as if sensitive personal data within the meaning of the GDPR is involved. Furthermore, the end user’s interests will be deemed to override the interests of the service provider in the use of cookies or similar technologies if the end user is a child. The EU Council Presidency Revisions will be discussed at the next WP meetings on march 5 and march 12, 2020. The EU Council Presidency, also indicated that it is currently reflecting on additional revisions and intends to issue an additional document to be discussed during these meetings.

EC Commission address the assurance of safety in modern high reliability organizations through responsibility distribution in AI. Comments on white paper can be submitted by all stakeholders until May 19,2020.

At the same time in Rome, in order to promote ethics in A.I., Accademia Pontificia published a document named “Rome call for AI Ethics”, this enabled with the Microsoft Corporation ‘s collaboration dispose fundamental elements as attribute for future Algorithms. These are: Transparency, Inclusion, Responsibility; Impartiality; reliability; Security and Privacy, this are fundamental elements for good innovation (Roma 28 February 2020).

In the age of Data driven society, data is at the core of digital transformation it shapes the way we produce, consume and live access to ever growing volume of data and the ability to use it are essential for innovation and growth. Data driven innovation can bring major and concrete benefits to the citizens through for example, personalised medicine or improved mobility, and to the European economy, from enabling better policy making to upgrading public services. The EU will create a single market for data where:

Data can flow within the EU and across sectors for the benefit of all. European rules, in particular privacy and data protection, as well as competition law, are fully respected. The rules for access and use of data are fair, practical and clear. The EU will become an attractive, secure and dynamic data economy by

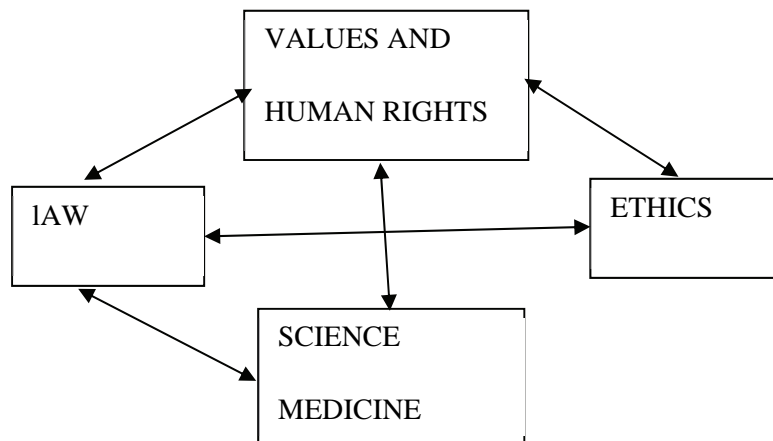
- Setting clear and fair rules on access and re-use of data
- Investing in next generation standards, tools and infrastructures to store and process data
- Joining forces in European Cloud capacity. Pooling European data in key sectors, with EU -Wide common and interoperable data spaces.
- Giving users rights, tools and skills to stay in full control of their data.

In its most familiar sense, the word morality refers to norms about right and wrong human conduct that are so widely shared that they form a stable social compact. As a social institution, morality encompasses many standards of conduct, including moral principles, rules, ideals, rights and virtues. We learn about morality as we grow up. Art. 2 TEU “The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities”. These values are common to the member states in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail.

## **Ethics**

The introduction of Intelligent systems and agents in to the public domain poses new challenges for all societal sectors new technological synergies that are powered by intelligent agents because of they will experience the exacerbation of existent ethical issues while additionally giving rise to new ones likewise this changing ethical landscape will affect the ways in which we tackle these new problems.

**Figure 1. Relationship of EU Law Ethics & Values**



Compared from an ethical point of view is the behaviour of an intelligent autonomous agent without any ethical capacity and an equivalent one with artificial morality -one may see morality as added value that may decide which robot/softbot to trust. Since the introduction of AI, this technology has become a natural part of various manufacturing processes (Naf 1999). Advancements in the fields of electronic computer science and mechatronics have made those intelligent tools abundant and robust. A similar revolution is on the way for AI that are designed for non-industrial applications. It is believed that in the next few decades, intelligent artefacts will be regularly found in private homes as well as in public spaces. Even ambient devices controlling our environments will become intelligent, adaptive, and able to communicate of all the concerns related to new technologies safety is the number one priority. Both industrial and social robotics present challenges to human safety. This has been a well-known fact for a long time industry. To address this issue, industrial robot manufacturers together with end users and other stakeholders, have established safety rules and regulations. Unfortunately, the same is not yet true for other domains. In addition, it is not straightforward to transfer the experience in industry, to address challenges in non-industrial domain. Even the field of industrial robotics is undergoing a major transformation. Today, an industrial robot is behind fences in a robot cell as it is hazardous to approach it. In the future cognitive robots will move freely and work in close interaction with humans. The onus is to shape technological advancement in such a way to mitigate any foreseeable and, as much as possible unforeseeable catastrophic events.

## **CONCLUSION**

AI is now primed to be one of our most critical advancements, as well as one of our most dangerous ones. Impending emergence and proliferation of AI into the public sphere will assure result in an encompassing revolution of sorts. One that will affect society and the ways in which both humans and non-humans work and communicate, one that promises to change out quotidian lives by relieving us of menial tasks and one that will fundamentally change. How humans perceive ourselves, others and the world, and vice-versa. AI designers have already begun in earnest to develop sophisticated systems that mimic, and in certain cases surpass human intelligence: such advancements are capable of learning, interacting with their surroundings, and making new decisions, all in autonomous manners and when faced with highly variable situations. Because of this level of intelligence, the agents do and will possess their increasing capacity to receive information about their environment, decide and act the obvious question arises: who is responsible if something goes wrong? Intentional guidance could have reduced

or eliminated unwanted consequences along with the clumsiness of deferring disaster to an individual or homogenized entity. In their ability to reason and behave using human-like logic these intelligent agents become actors, in the real world where they may interact with human agents and engage in activities they are given complete control over self-driving vehicles, military robotics, smart home devices, big data analysis use artificially intelligent processes, albeit many are currently rudimentary to afford us the opportunity to rely on robotic devices to complete tasks for users that they can't do on their own, or to afford the luxury of not having to engage in the completion of routine duties. Current trends in the development of intelligent agents illustrate not only the extent to which existing systems are autonomous but also how increased autonomy will continue to decrease the amount of human supervision necessary to their normal functioning. This abdication of certain activities along with the human like qualities AI will bring should make us feel a sense of responsibility the progression of the technology should be a call to arms to ensure that due consideration is given to their development. This becomes truer as the range of intelligent agents widens as the breadth of functional capacity grows, it becomes imperative that designers take steps to design systems that will not act dangerously or undermine stakeholders interests even if international command and control mechanism and regulations are put into practice to ensure the safe and consistent behaviour of agent multivalent and human agent level system, ethical issues associated with their design and implementation are still likely to remain complex, with additional emerging issues, sure to arise that will implicate a broad range of values, moral issues and ethical principles. Thus flexibility and prevalence during design and execution make for critical parameters of a design methodology, one that applies to AI. Keith Abney (2014) defines this problem well when he explains that when developing autonomous robotics. And it's similar for intelligent agents in general. There are three ways to define ethics (1) the ethical practices of the human creators, users, owners, customers; (2) the principles that are endowed to the robot; and (3) the transcendence of the robot to think for itself and therefore follow its own ethical framework and to take its definition of morals versus ethics are the rules for and the study of moral beliefs. Conceptual investigations involve researching and understanding specific scenarios where technologies are to be used and for as long as intelligent agents are not quite as advanced to make conscious decisions as a human would (e.g. a deliberative system) designers must consider that circumstance is an important consideration when making a choice to embed intelligent agents with moral programming. Through the tripartite methodology cannot answer the question of how to create the perfect, here meaning moral intelligent agent, it can aid in the development of the best possible most compare ensure technological. Progress that behaves in a perceptibly ethical manner research can done to assess the stakeholders involved and their expectations of morality. ethical and social implications of robotics -

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