

AI or more? A risk-based approach to a technology based society

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“The question of whether AI is “good” or “bad” or “neutral” is a hard philosophical question that will likely never be resolved to a significant degree. It is far more useful to think about questions like “How do we measure AI quality” and “What criteria should we use to evaluate AI quality” in the context of the specific problem you’re facing (e.g., “how do we evaluate the performance of a chess computer?”)

At the point of AI entering the scene, we’re in a bit of a gray area. It will be important to figure out how to make best use of that fact, and avoid some of the downsides of AI (we can’t say without knowing it in advance what they are, and it’s not a matter of “good” or “bad”, but of how we want to allocate the cognitive load).¹

Introduction

A lot has already been said about the EU draft regulation for Artificial Intelligence (the “Regulation”), published by the European Commission on 21 April 2021. However, none of those practical summaries, short comments or presentations have dealt with the fundamental issue at stake: regulating an unspecified object (AI). What started out as a simple discussion on how to improve the current (in our opinion: poorly chosen) definition of “AI” in the Regulation, has resulted in this article, in which we come to the conclusion that there might actually be a better way of “shaping Europe’s digital future”. In this article, we will look more closely at the subject matter at hand, and provide a practical solution to dealing with future proof regulations for unspecified technology-based objects.

We acknowledge that possible harmful effects of use of AI not only occur when decisions with a legal effect are taken, but very often at much earlier stages: when data is generated, observed, recorded, labelled, selected or interpreted. For the purpose of this article, however, we have limited ourselves to the problem of defining AI for regulatory purposes. We therefore have not addressed any objections there might be for using AI from a legal perspective.

AI Regulation (draft): scope and applicability

Article 3, sub 1, of the AI Regulation defines “AI” by referring to software systems generating outputs for human-defined objectives:

¹ This passage was generated by AI (GPT2) on basis of the title of this essay via the website <https://bellard.org/textsynth/>.

“Artificial intelligence system’ (AI system) means software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with.”

Looking at Annex I, we learn that the European Commission (“EC”) captures virtually every modern technique currently known, as it includes:

*“(a) Machine learning approaches, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning;
(b) Logic- and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems;
(c) Statistical approaches, Bayesian estimation, search and optimization methods.”*

Although most individuals (including legal professionals) will have a clear (conceptual) understanding of what should and should not qualify as “AI”, it seems the EC has struggled with a clear definition thereof. Assuming that it was the intention to capture all techniques, approaches and software that might now or in the future qualify as “AI” (note: a unambiguous explanation for this broad scope was not provided), one could, at first glance, understand why the techniques and approaches are formulated in such a broad way. However, looking at the definition from a purely legal point of view, **it certainly does not seem desirable to introduce legislation that deals with a very broad and at the same time very unspecified object.**

The EC has tried to mitigate this (legal) uncertainty by introducing a further threshold to the legal requirements imposed by the Regulation. Indeed, the Regulation introduces a risk-based approach, meaning that only those “AI” systems that pose a high or moderate risk to the fundamental rights and freedom of European citizens fall under the categories affected by the Regulation. In other words: only certain high or moderate risk systems are actually captured by the Regulation and need to comply with its requirements.

While we fully support this forward thinking, practical approach of looking at risks rather than the techniques and systems, we must not forget that this line of reasoning is not in line with what can (and should) be expected from a diligent legislator. From a legal acceptability and legal certainty point of view, it is far from ideal to introduce a Regulation that: i) contains an incorrect definition of “AI”; and ii) creates uncertainty as to what should and should not fall under its scope. **Moreover, due to the fact that the Regulation is – indeed - a EU wide regulation and contains an extremely broad scope, member states will essentially be banned from enacting further (national) rules and regulations pertaining to virtually any kind of software.** The authors doubt whether this was the intention of the EU, and whether member states are already aware of this.

At first glance, tweaking the definition of “AI” might seem to solve the above issues. We could, indeed, try to come up with a more precise definition of “AI”, although we also note that it might be an issue to come up with a definition that is and will remain future-proof. We therefore believe that a more suitable approach would be to assess the Regulation from a practical point of view, in order to distill what we are actually trying to capture, and how can we do that in a future-proof manner.

Technique vs. AI

Looking at the setup of the Regulation and the very broad definition of AI included in Article 3, it seems that what the EC is (rightly so) trying to capture are risky *techniques*, rather than its sub-category named “AI”. Indeed, the definition is broad enough to capture virtually all techniques known to modern man (including rather basic and far from cutting edge techniques such as calculators or decision trees), so why limit the fundamentals of the Regulation to “AI” only? With all the definition struggles of the GDPR in mind, we find it hard to understand why the EC again opted for a poorly defined term as the main object of the Regulation. Moreover, for the world’s very first legislation on AI coming from a legislative body, a proper and thorough AI Regulation would be a perfect way to demonstrate Europe’s robustness and readiness for the new digital age. However, instead of well considered legislation, we now run the risk of being the world’s laughing stock: passing calculators off as AI and (possibly) making it harder for current software vendors to enter the European market.

So how can we do it differently? We propose to look at the essence of the regulation: future-proofing Europe and protecting ourselves from harmful inventions that could pose a threat to our fundamental rights, whilst at the same time avoid becoming a bottleneck for innovation. Introducing a risk-based approach in European legislation therefore makes sense, as that immediately creates leeway for inventions that are cutting-edge but cannot be considered harmful. However, if we indeed want to prepare ourselves for a digital future, then wouldn’t it make sense to also try and capture other digital techniques currently not yet known, instead of already limiting ourselves to AI only? This not only provides a robust system for inventions going forward, but immediately also tackles the most frequently posed objection against the current draft Regulation, e.g. its incorrect definition of “AI”. **We therefore propose to further broaden the scope of the Regulation, having it apply to all (digital) technology, whilst at the same time keeping the risk-based approach in place to ensure innovation is dealt with in a practical manner.**

Moreover, such risk-based Technology Regulation would be more in line with the solid legislation that can be expected from a European legislator, enhancing people’s readiness to accept the Regulation (as it would not already at its base be flawed), create and protect legal certainty and eliminate different legal regimes, jurisdictions and legislation that might apply to certain technological inventions or techniques.

Back to the drawing table?

Critics might ask if we propose to throw away all the years of thought that have gone into the current draft AI Regulation, by sending the European Commission back to the drawing table and running the risk of being stuck with “*bad technology*” in the meantime? Our short response would simply be: no. Indeed, at first glance it seems we suggest to introduce an entirely new regulation altogether (capturing “technology” instead of “AI” only), but if we look at the current scope and definition already included in the draft Regulation, it seems “technology” is already somewhat captured. We would therefore assume that it would be more a matter of further refining the current draft, by eliminating references to the narrow (and at the same time: extremely broad) sub-category of “AI” and opting for its header (“technology”) instead. This would then ensure that Europe is, indeed, ready for the new digital age, and prevent the AI Regulation (and ourselves) to be exposed to new risky technological advancements.

As an added bonus, the Regulation would also cover non-digital technologies that may pose a threat to our fundamental rights, such as certain bio-technologies.

Conclusion

In summary, we therefore propose to show the (draft) AI Regulation's true colors and to rename it the "Technology Regulation", having it apply to all current and future technology. With the risk-based approach in place, this would in our view not hinder innovation, but create a practical and forward-thinking framework that is fit for Europe's digital future. Technology is here to stay, so should a Regulation!

Join the discussion

We would love to hear your thoughts. Please join the discussion in comments below, or by reaching out to the authors via LinkedIn or NVvIR.