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Artificial Intelligence as an undue influence in criminal trials: Issuing the use of algorithms under the principle of independence of judges in Europe.

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Abstract:

This paper will focus its approach on the extent under which the use of A.I based algorithms in criminal courts could be qualified as an undue influence under European human rights law. However, this paper will also point at some leading evolution that could render a compatibility between the principle of independence and the use of algorithms as legitimate influences within the criminal trial. It will focus on the following question: *At what extent the use of A.I can be qualified as an undue influence under European human rights law?*

Introduction

The principle of independence stands at the crossway of the Criminal Trial and the guarantees of the Rule of Law, its main aim is to render Justice through a neutral, law-based and fact-based decision without any interference from other branches of power nor from any other undue influence and interference[2]. This paper would thus aim at investigating the impact and the challenges of the use of such advanced technology on the principle of independence of the Judiciary as a cardinal principle of the Rule of Law and criminal Justice

Firstly, this paper will focus on the question of what an undue influence under European human rights law is, and to what extent such notion would reach. This qualification would be made through the common work of both the European Court on Human rights and the European Court of Justice. This approach would lead to assess the common features of the courts toward identifying an undue influence, but also where divergences can be found, especially when focusing on the *rationae personae* extent of the notion. This work would also be led with the textual materials on the principle of independence in Europe such as the consultative council of judges or the Venise commission; in order to better grasp the notion of undue influence under European human rights law.

Secondly, this paper will focus on whether such algorithms would meet this qualification while referencing what type of algorithms exist in such trials nowadays (Reoffending probabilities, Analytic Justice…). This part will be divided in two questions. To what extent the algorithm constitutes an influence to the Judge, as a direct influencer (The outcome of the algorithm to the Judge) and as an indirect influencer (The developer of the technology to the Judge). And the second question would focus on the extent of the "undue" character of the algorithm especially in cases where the variables of the algorithm are weighted in a manner that could alter direly the decision of the Judge if followed.

Third and finally, this paper will focus on the emerging legislative solutions that could render the A.I based algorithm as a legitimate interference in the criminal trial, on the use of such technology but also regarding the legislative framework. These solutions would be divided between the technology itself, the developers of such technology and the involved actors, and finally the attitude of the judge toward the use of such technology. More than these *rationae personae* approach of regulations, this paper will also focus on the overall legislative framework needed to both guarantee the effectiveness of the technology while preserving judges from being submitted to an undue influence under European human rights law.

This paper would thus serve as a better understanding of the potential threats of the use of such technology in the criminal trials in Europe but also the benefits such technology could

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[2] Cox A. *The Independence of the Judiciary: History and Purposes* (1996) 21 U Dayton L Rev 565, pp565-583, p566.

bring in these trials without however undermining the principle of independence of the judiciary by incorporating an undue influence within the criminal administration of Justice.

I. Framing the notion of undue influence under European human rights law

The use of A.I in criminal trials represents a revolution in the judicial decision-making. Such technology, as developed today, could be an asset in helping the judge assessing a decision. The most prominent for of advises given by such a technology lies in the prediction whether a given person is likely to reoffend[3]. Such a use however poses major challenges under the principle of independence of the judiciary, one of the major cornerstones of the rule of law in Europe. Indeed, the use of A.I could pose a challenge, especially in the case of protecting judges against undue influences. The protection against undue influences is one of the four aspects of the principle of independence. However, it remains a blurry notion and its framework of application remains unsure. As such, this section of the paper would focus on framing the concept of "Undue influence" in Europe. It will first demonstrate that both the E.U and the Council of Europe are relevant in order to assess such notion, especially in assessing whether A.I could qualify as one in criminal trials (A). Then, this section will focus of what kind of influences are permitted and which ones are not under European Law (B). Finally, it will be necessary to assess what would characterize an "undue" influence *per se* (C).

A. The Council of Europe and the European Union as fundamental basis on the principle of independence.

The regime of protection of the independence of the Council of Europe is mainly embodied in Article 6 of the European Convention on Human Rights[4]. Thus, in order to assess the relevance of such protection, it is necessary to assess the protection of Human rights in the Convention framework as a whole. Under Article 1 of the ECHR, it is provided that "The High Contracting Parties shall secure to everyone within their jurisdiction the rights and freedoms defined in Section I of this Convention"[5]. Then, the application of human rights under such a framework is conditioned under the jurisdiction notion. Through the

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[3] OSWALD M., GRACE J, URWIN S & BARNES Geoffrey C, Alg*orithmic risk assessment policing models: lessons from the Durham HART model and 'Experimental' proportionality,* (2018), , Information & Communications Technology Law, 27:2, 223-250; Committee on legal affairs and Human rights, 'Justice by algorithm – The role of artificial intelligence in policing and criminal justice systems' (2020), (Provisional version), p8 and p10.

[4] Council of Europe, European Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by protocols Nos. 11 and 14, adopted on 4 November 1950, ETS 5, Article 6(1).

[5] Council of Europe, European Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by protocols Nos. 11 and 14, adopted on 4 November 1950, ETS 5, Article 1.

interpretation of the case-law of the European Court on Human Rights (ECtHR), one can see that the notion of jurisdiction is deeply linked with the territorial approach of responsibility. This means that States must ensure Human rights within their territory, or any other area they have an effective and direct control upon[6]. Hence the approach of the ECHR is of a general application of human rights of persons, pending that States have jurisdiction on them.

The protection of the independence in the EU and the application of human rights in general is more complex than the ECHR one. Indeed, the protection of independence of the judiciary is enshrined at article 47 of the Charter of the Fundamental Rights of the European Union[7]. However, the conditional application of human rights is found at Article 51 that provides "The provisions of this Charter are addressed to the institutions and bodies of the Union with due regard for the principle of subsidiarity and to the Member States **only when they are implementing Union law**"[8]. When it comes to the Member States insurance of human rights, one can see it is only of a conditional approach of implementing E.U law. In this perspective, it thus represents a special framework of Law compared to the ECHR one. Thus, the question lies: Is the use of A.I as part of criminal trials part of the implementation of E.U law? This answer is twofold.

First of all, the General Data Protection Regulation oversees the regulation of "Automated decision making"[9] under which A.I is one of the many aspects through the working of algorithms[10]. Moreover, the will of the E.U to directly regulate A.I can be demonstrated through the project of regulation of A.I by the Commission as a special regulation of this technology, directly mentioning the use of A.I as a criminal trial tool[11]. Secondly, under Article 288 of the TFEU, regulations are of direct effects on Member States[12]. This means that both the GDPR and the proposition of regulation by the Commission is and will be of direct effect, thus giving way for the application of the Human rights provisions of

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[6] *Al-Skeini and Others v United Kingdom*, [2011], ECtHR, No 55721/07, para 131, *Soering v United Kingdom*, [1989], ECtHR, No 14038/88, para 86

[7] European Union, Charter of Fundamental Rights of the European Union, 2000/C 364/01, adopted on 18 December 2000, Article 47.

[8] European Union, Charter of Fundamental Rights of the European Union, 2000/C 364/01, adopted on 18 December 2000, Article 51.

[9] European Parliament and Council, *General Data Protection Regulation,* Regulation (EU) 2016/679 of 27 April 2016, Article 22.

[10] Article 29 Data protection working party, 'Guidelines on Automated individual decision-making and profiling for the purposes of Regulation 2016/679, adopted on 3 October 2017, p8.

[11] The European Parliament and the Council of the European Union, *Draft Regulation on a European approach for Artificial Intelligence,* published on 21st April 2021, Recital 6

[12] European Union, Consolidated Version of the Treaty on European Union and the Treaty on the functioning of the European Union, signed on 13 December 2007, 2008/C115/01, Article 288.

the CFEU. And by extension, this means that the principle of independence would apply in such a context.

Hence, even if the framework of the E.U is of a special one, it would apply in such a context of A.I in the criminal trials frame. In this perspective, both the ECHR and the CFEU would be relevant in order to concretely determine what an undue influence is.

B. What types of influences threaten the principle of independence?

The question of undue influence ultimately target what influences can threaten the principle of independence. If some influences are regarded as legitimate (Experts for instance) some are regarded as non-legitimate in the criminal trial. The question thus lies, what is the extent of influences that would be regarded as non-legitimate under European Law. This thus lead to assess what point of origins of the influence would not be compatible with the principle of independence. In order to answer such a question, it would be necessary to assess such an extent under both European frameworks and to draw whether they share the same approach of what would constitute an illegitimate influence.

The Council of Europe has developed two main approaches under the qualification of what an influence under the principle of independence would entail. Through the work of the organs of the Council of Europe, by recommendations and non-binding instruments; but also, through the work of the European Court of Human rights when interpreting Article 6 of the Convention.

Regarding the textual basis of the Council of Europe, one can see that most of the texts regarding the point of origins of the influence in a broad manner. Indeed, this approach does not pose any limit to where this influence may come from and depart away from the separation of powers approach[13]. This "Extensive" approach, also shared by the work of Tescher, seem to encompass all kind of influences possible stemming from States and private companies alike[14]. Moreover, this approach is the most enshrined at the Council of Europe level. This leads to assess that under this non-binding approach of European Law, the priority is given to an extensive approach of the influence.

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[13] European Commission for Democracy Through Law: European standards on the independence of the judiciary; Rule of Law Checklist, 2016 (Vienna). Consultative council of the European Judges, Opinion N°1. Consultative Council of European Judges, Magna Carta of Judges (2010). Consultative Council of European Judges, opinion N°18/2015: Special text regarding other branches but still extensive and similar to previous texts.; European Charter on the Statutes for Judges (1998); Committee of Ministers, Judges, Independence, Efficiency and responsibility (2010).

[14] TRECHSEL S, *Human Rights in Criminal Proceedings*, (2005), Academy of European Law, European University Institute, Oxford University Press, p 54.

However, the challenge also lies in the case-law of the ECtHR, the main adjudication body of the Council of Europe. The view of such body is less clear than the textual approach. Indeed, considering the extensive case-law of the ECtHR on what would constitute an illegitimate influence over a trial it had a long-term approach of the principle. This case law is of an irregular one, focusing on a plural approach of influences but not sticking to one approach in particular, rending the overall cases confusing as to defining the scope. In defining the extent of the influence, the latest ECtHR case law varies in four different approaches: Either it approaches illegitimate interferences from the Executive and Legislative[15]; from the parties to the case[16]; from "Other entities"[17] (The press was considered as such an entity); or does not specify the point of origin of an illegitimate influence[18]. These different approaches taken by the ECtHR is rather confusing, for it seems to be of an irregular approach and there are no explicit reasons for using one specific terminology. This leads to a certain confusion when it comes to analyze if the ECtHR sees the notion as an extensive one or rather stuck to the principle of separation of powers. However, due to the consideration the ECtHR has for the protection of human rights against non-state entities[19], it could be led to assess that the protection against undue influence by non-state entities could be protected in two ways. Firstly, by the positive obligations framework of States when they have to "Secure" human rights in their jurisdictions as a preventive measure but also concerning investigative measures after the violation was committed[20]. Hence, one could see that under such a framework, non-state entities could be regarded as potential illegitimate influencers. However, apart from the influence of medias on a case, there are no concrete cases of non-state entities influencing the outcome of a judgement under ECtHR law[21]. It thus appears that the Council of Europe approach is neither regular nor clear when it comes to assess the illegitimate influence notion.

The European Union approach of the notion is different from the Council of Europe one, however. For decades, the E.U had taken a similar approach as the CoE departing from the *Johnston* case, where it assimilated the right to fair trial as a general principle of E.U Law

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[15] *Beg S.P.A v Italy*, [2021], ECtHR, 5312/11, para 128; *Guðmundur Andri Ástráðsson v Iceland*, [2020], ECtHR, 26374/18, para 219.

[16] *Anzelika v Lithuania,* [2020], ECtHR, 36093/13, para 78.

[17] *Khrykin v Russia, [2011], ECtHR, 33186/08, para 28.*

[18] *Industrial Financial consortium investment Metallurigcal union v Ukraine,* [2018], ECtHR, 10640/05, para 148.

[19] AKANDKI-KOMBE JF, '*Positive Obligations under the European Convention on Human Rights: A Guide to the Implementation of the European Convention on Human Rights'* (2007) Human Rights Handbook, Volume 7, p5. WILDHABER L, '*The European Court of Human Rights in Action*' (2004) Ritsumeikan Law Review pp83- 92, p84

[20] STOYANOV V, *Fault, Knowledge and Risk within the framework of positive obligations under the European Convention on Human Rights'* (2020), Leiden Journal of International Law, Volume 33 pp601-620, p606

[21] *Paulikas v Lithuania,* [2017], ECtHR, 57435/09, para 62 ; *Craxi v Italy,* [2002], ECtHR, 34896/97, para 104 ; G.C.P v Romania, 20899/03, para 48.

referencing to the case law of the ECtHR on the matter[22]. Hence, there was a certain uniformity in both jurisdictions. However, as it seems that the European Union built its own approach of Human rights through their own textual instrument, the interpretation of the principle of independence had also evolved. From a general principle of E.U law, it became Primary Law with the enactment of the Lisbon Treaty and became a milestone in the values of the E.U. Since such enactment, the CJEU has held its own approach of the principle of independence and by extension, the notion of undue influence. The CJEU has thus held that the principle of independence should be erected against those influences no matter where they come from, either direct or indirect, that can alter a judge decision and threaten the autonomy of the judicial decision[23]. In its latest case law, the CJEU has maintained a robust and continuous approach of the principle of independence[24]. In this perspective any external or internal influence whether direct or indirect that could alter a judge decision should be regarded as illegitimate[25]. In this perspective, one could see that this constitutes a clearer approach than the ECtHR but also more extensive in its mechanisms. This approach tends to maximize the reach and extent of the application of the protection against any undue influence, one can see that the CJEU decided to focus on a consequence approach of the influence, since it does not matter where it comes from, but such an influence must not alter a judge decision and threaten its decisional autonomy.

One can see that the overall European approach of what is an illegitimate influence is not clear, whereas the E.U system seems to have established a robust and continuous approach, the Council of Europe approach is still fragmented on such a complex notion between extensive and restrictive approach, between the ECtHR and the non-binding instrument. However, more than approaching the question of the influence; it is necessary to assess what constitutes an undue influence under European Law.

C. The paradigm of qualifying an influence as undue.

If the question of the influence focus on the point of origin of the influence, meaning an illegitimate actor of the judiciary decision-making, one also has to focus on the "undue" character of an influence in order to grasp the full understanding of the notion. For non-judiciary actors can actually participate at some extent in the decision making (Medical experts, psychological experts…) and influence the judge on the decision that should be

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[22] *Johnston v Chief constable of the Royla Ulster Constabulary, [1986],* ECJ, 222/84, para 18.

[23] *A.K v Krajowa Rada Sądownictwa, and CP and DO v Sąd Najwyższy,* [2019], CJEU, C-585/18 C-624/18 C-625/18,* para

[24] *Banco de Santander SA,* [2020], CJEU C-274/15 para 57 ; *Associação Sindical dos Juízes Portugueses v Tribunal of Contas,* [2018], CJEU, C-64/16, para 41.

[25] *European Commission v Republic of Poland,* [2019], CJEU, C-619/18, para 112.

taken[26]. But what if the decision reached by these non-judicial actors was inappropriate? Or completely irrelevant to the case at hand? Could it be qualified as a legitimate influence on one hand, but of an undue character?

Through the case-law of both jurisdictions and the non-binding instruments, one could grasp the meaning of what undue is. The European Union through the case law of the CJEU seems to have approached the undue influence by a purposive goal. Meaning that the influence in order to be undue must have had for purpose to "Alter" the Judge decision having for effect to rip the judge of its "Autonomy" during the judicial decision-making[27]. In this approach then, it is the effect of the influence that will render it undue, because it strikes the judge in the core of its functions, the judicial decision making, by making lose to the judge the power to judge. This approach would aim at preserving the core function of the judge, but one might ask what of the influences that would not take away the autonomy of the Judge? It seems that the European Union approach thus embrace a comprehensive approach with these influences that could help a judge reaching a decision as long as it does not make lose the judge its autonomy in the decision-making.

The CoE approach of what is an undue influence is however more complex, fragmented between the textual approach and the ECtHR. Under the textual approach, it seems that the main approach aims at protecting any influences deemed as "Inappropriate"[28]. But the question lies, what would inappropriate entail under the human rights regime? Pursuant to the Oxford dictionary definition of appropriate, the definition aims at encompassing something that would be "suitable, correct or acceptable"[29] depending on the circumstances of the event at hand; something inappropriate would thus be the opposite of such a definition. But how to adapt such a definition to the human rights regime. Such an inappropriateness could thus take the form of an influence whose content would have a discriminatory component for instance or that would undermine other human rights in a disproportionate way. This could lead to believe that any influence that would undermine the protection of another human rights during the criminal trial could be inappropriate? This approach is however non-satisfactory as to the psychological expertise for instance, that may constitute a breach of privacy under Article 8 but would still be appropriate at some extent due to the limitative regime found in paragraph 2 of the same provision. Thus, is the undue character of an influence submitted to the same derogatory regime than the human rights general framework? This answer is not answered under the

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[26] *Constantinides v Greece*, [2016], ECtHR, 76438/12, para 41; *Muller v Germany,* [2014], ECtHR, 54963/08, paras 51-52

[27] *European Commission v Republic of Poland,* [2019], CJEU, C-619/18, para 112.

[28] *Ibid* footnote 11.

[29] Oxford Dictionary, *Appropriate*, accessed on 8th November 2021, available at: https://www.oxfordlearnersdictionaries.com/definition/english/appropriate_1 .

CoE framework but leads to think about the extent of the inappropriateness of an influence and whether it would have been qualified as undue.

The ECtHR approach is however silent on the issue of what an undue could be qualified like. But hints of what it is framing upon can be determined. Indeed, one of the few times where the ECtHR had to assess on whether an "external undue influence"[30] was found in the case; it was cases implying media influence on the case that could have led to an undermining of the presumption of innocence of the person on trial[31]. The fact that such an influence could have undermined such protection might have been the reason why it was called "undue", for many media can comment on a case without however been qualified as undue. Therefore, one could assess that more than the point of origin of the influence, it is the potential undermining of another human right protection could make an influence undue.

Therefore, to the question of what constitutes an undue influence under European Human rights law, this paper would adopt the approach of: Firstly, an influence that it deemed illegitimate for the judicial decision making, meaning an actor that can actually influence a decision; Secondly, it would be the capacity to undermine the autonomy of the judge decision when it is deciding upon both the culpability and the sentence of an individual.

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[30] See footnote 20

[31] *Ibidem*.

II. Artificial intelligence in criminal trials as an undue influence? Identifying the major points of tensions between such use and the principle of independence under European Law

As above-mentioned, an undue influence must have the capacity to influence a decision in an undue manner, thus the question lies: At what extent can we qualify A.I in criminal trials as potential undue influence?

Artificial intelligence can represent an asset for the Judge when deciding a case. However, as above-mentioned, such technology should not influence the judge in an "undue" manner. The question thus lies, what components would qualify A.I as such? In order to assess this question, it will be necessary to approach it with two major axes. The first axe will focus on the influence paradigm that the technology brings, in both direct and indirect means (A). It will then focus on the "Undue" potential aspect of the A.I and assess what components of the technology could qualify it as such (B).

A. Artificial intelligence as an influencer on the judicial decision-making

The potential influence of an A.I can be established through two different vectors. Firstly, through the direct working of the algorithm that provides for an outcome to a legal issue (For instance the probability of reoffending of an individual), and the extent under which this would constitute an influence on the Judge. Secondly, more of an indirect influence, from the developers of the A.I to the Judge, where A.I is perceived a mere token of the developers reasoning and values.

The algorithmic technology can be one that can directly influence the decision of the judge. However, it is necessary to assess these different vectors of influences to better determine whether such technology could be qualified as undue influence. One could see that there are three different ways under which such technology can directly influence the judge. These influences however share a certain degree of extent on its reach on the judge.

The influencing process known as technological Anchoring is of a major importance when considering a use by the judge of the A.I technology during the decision making phase. This term reflects upon two features. The anchoring effect and the high level of technology of the A.I., the anchoring effect is a decision process under which a person would likely be anchored by one piece of information over others[32]. In the judicial decision making, it was demonstrated that a Judge would likely be anchored regarding the first piece of evidence

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[32] GLODSZLAGIER J, *L'effet d'ancrage ou l'apport de la psychologie cognitive à l'étude de la décision judiciaire*, Les cahiers de la Justice, (2015), p19.

held for or against an individual[33]; the judge decision would likely be anchored from it. This means that the Judge decision would start from this piece, and it would be hard for the Judge to go against the mindset the first piece of evidence created. However, the technological anchoring is based not on the chronology of the evidence, but on the argument that such technology is designed and promoted as being a highly precise and expert technology in its functioning[34]. This component of high technology leads to assess that decision makers can let themselves influenced more easily than if it was a less advanced mean of advising. Hence the technological anchoring could be a direct influencer in such a way, where the algorithm because of its functioning could lead to subconsciously influence the judge and it would be hard for the judge to depart from the result of the algorithm.

The Glistening Simulacrum is the pervasive effect of the A.I., it is the capacity of the technology to best or to fool humans in the decision-making process[35]. In this perspective it could influence the judge to take a decision that would be unethical or totally disproportionate to the situation at hand.

The "sheep effect" is one that poses a major challenge to the independence of the judges[36]. Indeed, this type of influence is one that transforms the judge from an actual decision-maker to a token of the algorithm outcome[37]. This means that the Judge is only applying what the algorithm found without necessarily explaining the reason for such decision. In this case, the algorithm implicitly takes over the decision process, which represents a real danger for the principle of judicial independence in European human rights law.

One can see that the judge could thus be influenced at different extent by the use of the algorithm. Such direct influence poses vital issues to the principle of independence, especially in cases where the Judge would not dare go against the recommendations of the

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[33] TVERSKY A, KAHNEMAN D, *Judgment under Uncertainty*: Heuristics and Biases , Science, 1974, 185, pp. 1124-1131 ; KAHNEMAN D, TVERSKY A, *Subjective probability: A judgment of representativeness*, Cognitive Psychology, 1972, 3, pp. 430- 454 ; *On the psychology of prediction*, Psychological Review, 1973, 80, pp. 237-251.

[34] KITCHIN R, '*thinking critically about researching algorithms*', Information, Communication and Society, (2017), p14; WESSLEN R, SANTHAMAN S, KARDUNI A, CHO I, SHAIKH S, DOU W, '*Anchored in a Data Storm; How Anchoring Bias can affect user strategy, confidence, and decisions in visual analytics*' (2018), University of North Carolina, p2.

[35]. Spaulding N.W , '*Is Human judgement necessary? : Artificial Intelligence, Algorithmic governance, and the Law*' (2020), The Oxford Handbook of Ethics of AI, pp 375-407, p377.

[36] GARAPON A., *Le numérique est un remède à la lenteur de la Justice*, published on 4 mai 2018, accessed on 8th November 2021, available at : <https://www.dalloz-actualite.fr/interview/antoine-garapon-numerique-est-un-remede-lenteur-de-justice#.YYjmCWDMJPY>

[37] Article 29 Data protection working party, 'Guidelines on Automated individual decision-making and profiling for the purposes of Regulation 2016/679, adopted on 3 October 2017, p21.

algorithm. In order to lesser such an influence, it would be necessary to make such an algorithm better explainable and transparent as it will be demonstrated in part III.

More than a direct influence, A.I could also represent an indirect mean for illegitimate actors to play a role in the development of the A.I. As such, A.I could represent a conduit of their values and reasoning that could influence the judge on the judicial decision making[38]. The challenge would regard both traditional actors of the principle of independence, such as the Executive, but also "Legal Techs", private entities that have the potential to interfere directly with the judicial decision making. Indeed, despite the name, artificial intelligence does not act like a real intelligence, it is submitted to the programming of its developers and the data it is fed with[39]. In this perspective, the judgement of the developers to consider some variables instead of others is displaced to the algorithm. Under such a theory, the algorithm would only be the extension of the developers way of thinking and judgement.

The public actors, meaning the Executive, may use such algorithms as a conduit of their own values and influence the outcome of a trial. Whereas under European law, the Executive is forbidden to do so, whether through direct or indirect means[40], such algorithms could be another mean for the Executive to threaten judicial independence; for these algorithms are often developed by private companies and deployed under Executive monitoring[41].

The private actors, meaning the Legal techs also represent an indirect threat to the judicial independence through the use of algorithms. This challenge emerges as more and more of private companies are being delegated public powers and services by the State, such as military and security for instance[42]. However, the power to render Justice has always been perceived as one that is non-delegable[43]. The fact that algorithms developed by these private entities and use by the Judge in criminal trials can however lead to tremendous consequences on the rendering of criminal justice. These algorithms are indeed developed and built by these private companies; but even if the private sector can be hired to develop

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[38] CONTINI F, '*L'intelligence artificielle : Un nouveau cheval de Troie pour influencer de manière abusive le système judiciaire* ?' (2016) ONUDC, accessible à < https://www.unodc.org/dohadeclaration/fr/news/2019/06/artificial-intelligence_-a-new-trojan-horse-for-undueinfluence-on-judiciaries.html> [accédé le 6 septembre 2021]

[39] KATSUYA ES, "*Technological Opacity & Procedural Injustice,*" Boston College Law Review 59 (2018): 851–857

[40] *Agrokomplex v Ukraine,* [2011], ECtHR, 23465/03, paras 135-141 ; *European Commission v Republic of Poland,* [2019], CJEU, C-619/18, para 112.

[41] LEROUX O, *Justice pénale et algorithme, Le Juge et l'algorithme* : Juges augmentés ou justice diminuée, (2019), pp55-74, p 58 and p 68.

[42] KRENT H.J, '*The private performing the Public: Delimiting delegations to private parties' (*2011), University of Miami Law review, Volume 65, pp507-565, P 523; CRAWFORD J, '*Organs and entities exercising governmental authority* (2013), State Responsibility: General part, Cambridge University Press, pp113-140, p129

[43] EMMERSON B, ASHWORTH A, MACDONALD A, CHOO A, SUMMERS M, 'Human Rights and Criminal Justice' (2012), 3rd Edition, London Sweet and Maxwell.

products that would help the judicial sector, these products were targeting only ancillary activities of the judicial power that did not have an impact on the core decision as to alter the judgement outcome. Such new product however would target the core of the judicial decision, by advising the judge on a potential outcome concerning an individual during the criminal trial. As above-mentioned, the judge can suffer from the sheep effect, meaning turning into a mere token of the algorithm outcome, this would mean that the developers are indirectly the one deciding on a judicial decision. This process of influence is dire when it comes to saving judicial autonomy from undue influence.

B. Defining the undue in the Artificial intelligence influence on the Judge.

Moreover, even if the Judge is somehow free from the influence of the A.I, such an A.I should not be built in a way that would render it an "Undue influence". As above-mentioned, what constitutes the undue component of an influence could be the content of such an influence. In this instance, it is vital for the algorithm upon which the A.I is built to not contain any variables that could lead the Judge to an inappropriate decision. Here two main approaches lie: The first is the choice of variables and data would be important in order to avoid any discriminatory outcome from the algorithm. Secondly, the very functioning of the algorithm and the fact that it is shrouded in a "Black Box" could lead to qualify it as an undue influence.

What would make an A.I undue in the criminal trial? This question lies at the very core functioning of the A.I. One potential lead to answer this question would be the question of the variables, meaning the data by which the processing would lead the algorithm to provide a solution[44].However, one has to be careful with the choice of these data, under many considerations:

Firstly, the choice of some data that are biased from the start. Indeed, it was demonstrated that some of these algorithms used in criminal trials relied upon data gathered by the State and especially from the police forces[45]. However, for some of these algorithms it was demonstrated that the data were biased as they were collected, thus when the normal functioning of the algorithm, by processing these data, was already biased from the start and led to discriminatory outcome as the bias were perpetuated and repeated[46].

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[44] BERK R, '*An impact assessment of machine learning risk forecasts on parole board decision and recidivism*' (2016), Department of Criminology and Statistics, University of Pennsylvania, p 4-5; BENSOUSSAN A et BENSOUSSAN J, I.A justice robot et droit, Lexing technologies avancées et droit, (2019) édition Brulyant, p102.
[45] RHUE L, '*Anchored to Bias: How AI-Human scoring can induce and reduce bias due to the anchoring effect*' (2019) University of Maryland
[46] BARABAAS C, '*Beyond bias: "Ethical AI" in Criminal Law,* The Oxford Handbook of Ethics and AI*,* (2020), pp 737-758, pp-745-758.

Secondly, the challenge lies on what kind of data can be setup in the algorithm and are adapted to the programming of this algorithm. However, when one takes into account too much data or irrelevant data, this might create a disparate outcome, as irrelevant factors are taken into account to provide a solution. This was established through the working of the COMPAS algorithm that was taking too many factors into account, leading to give discriminatory outcomes on Afro-American population[47].

Thirdly data that can indirectly lead to a discriminatory outcome. These are data that as such are not discriminatory (Family name, Residential city..), but taken together as a group of data the algorithm would deduce that a certain person belongs to a certain minority and as a result, might take a decision that would lead to a discriminatory outcome for these minorities[48].

The functioning of the A.I can also be a source of undue influence under European Law. More than the data it is using, one should also focus on the functioning of the algorithm, meaning how does the algorithm comes to an outcome, from the data to the solution. Such undue character can be exposed in two different approaches, firstly through the weight of the variables when the functioning is known: and secondly through the "Black box" paradigm.

It was demonstrated through the use of certain algorithms, that some of the calculations made by it could be flawed and disproportionate. It is the case of the HART algorithm, that was deployed in England as a mean for the local police to assess whether a person would be likely to reoffend. Individuals were then categorized as a high probability reoffender, medium probability and low probability[49]. This outcome is determined through a weight of the different variables that were installed during the development phase. However, it was demonstrated that the algorithm was developed in a way that was minimizing the threat posed by individuals. In order to do so, the algorithm overestimated the risk of some individuals in order to incapacitate threats more effectively[50]. However, such overestimation could lead to decide a unbased harsher sentence on an individual due to an overestimation of a risk by the algorithm. This sentence, based only on the theory of

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[47] ANGWIN J. LARSON J, MATTU S and KIRCHNER L, *Machine bias: there's software used across the country to predict future criminals. And it's biased against blacks,* Propublica, published on 23 May 2016, accessed on 8th November 2021, available at: < https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>.

[48] OSWALD M, Grace J, Urwin S and Barnes G.C , *Algorithmic risk assessment policing models: lessons from the Durham HART model and 'Experimental' proportionality*, (2018), , Information & Communications Technology Law, 27:2, 223-250, p 228.

[49] *Ibidem* p227.

[50] *Ibidem* p 236.

incapacitation and without concrete basis other than overestimated an individual could be qualified as undue.

However, most of the time, the algorithmic process is not known to the user or the individual whom the decision will concern; and sometimes to the developers themselves t is called the "Black Box"[51]. In this perspective the user, meaning the judge, would not know the process under which the algorithm would decide of a solution; adding to this the paradigm of the direct influence it can create on the Judge, would create a decision that can be based on a technology that is not transparent thus based on information not available[52]. Thus, considering the independence of the judge, how can one judge explain the decision if the reasoning of one of his means is unknown to him and the developers.

Hence the functioning of the algorithm could be qualified as undue, because of the high potential of bias it can create but also through its unknown functioning that could lead to a disproportionate sentence without the individual to know what led the algorithm to decide so.

III. The necessity of drawing a compatibility scheme between the principle of independence and the use of algorithm in criminal trials.

Artificial intelligence thus can be qualified as an undue influence under European law if no guarantees or principles are applied to its inner working and its use by the Judge. In this perspective, if a use of A.I is tented to be generalized in some legal systems, then this technology would have to be adapted to the principle of independence. In this perspective, it will be necessary to assess such compatibility under two perspectives, one considering the technology itself (A); while the other would focus on the legal framework that would render the use of such technology compatible under European law (B).

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[51] YEUNG K, '*Algorithmic regulation: a critical interrogation' (2018), Centre for technology, ethics, Law & society (TELOS)*, The Dickson Poon School of Law, King's college London, pp502-523, p516.
[52] European Commission for the efficiency of Justice, European ethical charter on the use of Artificial intelligence in judicial systems and their environment, adopted on 3-4 December 2018, paras 137, 159 and 160.

A. Addressing the unveiling of the undue character of artificial intelligence in criminal trials through governing principles.

The principle of transparency is one that is often promoted by human rights bodies as part of the principle governing a trustworthy A.I.[53] Such a principle expects the algorithm to unveil the inner working of its functioning, from the data used, to the model developed and what happens between the introduction of data and the outcome of the algorithmic solution. This publicity would allow for more clearance in the path of the algorithm solution and witness what path he did take in order to reach its conclusion. However, such a transparency is problematic considering the proprietary nature of the algorithm as a private company product and thus leading to be protected under intellectual property law[54]. Such an issue has already been presented in front of U.S courts in the cases of *Kansas v Walls* and *Loomis v Wisconsin* where the intellectual property was confronted to due process rights[55]. Such intellectual property protection is also recognized in the GDPR recital 61, where it is provided forth that intellectual property law should not be breached considering the publicity of the algorithms[56]. Such provision was also held in the Loomis case and prevented any disclosure of the inner working of the algorithm; however, the Walls case have also presented an exception to this rule, if the algorithm is the sole piece of evidence under which the judge gives a decision, then the intellectual property of the algorithm cannot be invoked, and the algorithm must be disclosed to the defendant[57]. Such transparency thus remains vital in order to make sure that no undue functioning could have influenced the judge in its decision.

However, the complexity of the algorithm and its functioning requires more than transparency. Indeed, judges are no computer scientist, and even if the algorithm is transparent to them, there will be an issue on how to explain the outcome of the algorithm[58]. The reasoning of the judge can represent an assurance against a potential undue influence, for the reasoning explain the reason of the decision. However, if a judge based a decision

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[53] European Commission for the efficiency of Justice, European ethical charter on the use of Artificial intelligence in judicial systems and their environment, adopted on 3-4 December 2018, principle 4; Council of Europe's Ad Hoc committee on Artificial intelligence, Artificial intelligence, Human rights democracy and the Rule of Law a primer, *The Alan Turing Institute,* p21.

[54] YEUNG K, HOWES A, and POGREBNA Ganna, *AI governance by Human rights centered design, deliberation and oversight: An end to Ethics washing*, pp77-108; p100

[55] *Loomis v Wisconsin,* [2016], Wisconsin Supreme Court, N° 16-6387; *Kansas v Walls* [2017], Court of Appeal of the State of Kansas, N°116,027

[56] European Parliament and Council, *General Data Protection Regulation,* Regulation (EU) 2016/679 of 27 April 2016, Recital 61.

[57] *Kansas v Walls* [2017], Court of Appeal of the State of Kansas, N°116,027; Aleš Završnik, *Criminal Justice, Artificial intelligence systems, and human rights,* Academy of European Law, (2020), pp567-583, p574.

[58] BODDINGTON P, *Normative modes: Codes and Standards*, The Oxford Handbook of Ethics of AI, (2020), pp 125-142, p135.

upon the algorithm outcome but cannot explain neither the reason it relied upon it nor how the algorithm came to such a conclusion, this could represent a problem of assurances against undue influence. Then, more than transparency such algorithms should answer to the principle of explainability in order to unveil the inner functioning and to assess whether such algorithm reasoning was tainted in an undue manner[59]. It could also lead to judge to intervene and not consider the algorithm if it did act in such a manner. Therefore, taken together the principle of transparency and explainability could represent a barrier to the undue character of the influence in order to preserve the integrity of the principle of independence against such influences. Such publicity in both the knowledge and the understanding of the functioning would be the first step toward building trustworthy algorithm, upon which the E.U has planned its strategy for such technology[60]. Indeed, the knowledge and understanding of such technology would lead to assess what data might cause an undue component in the influence scheme. The irrelevant and not necessary data could thus be corrected in further implementation of the algorithm.

Thus, these two principles remain essential in order to build fair algorithms and for safekeeping the protection of the judge against undue influences under European Law; nevertheless, in order to further protect such vital component of the Rule of Law, not only it is essential to limit the undue; but also, the influence.

B. What extent of the influence of artificial intelligence in the criminal trials: Drawing a European perspective?

In order to ass the influence of A.I regulation under the principle of independence in Europe, one could see that two sorts of frameworks can aim to regulate such influence. The first one would be the general framework of protection of human rights adapted to this paradigm; the second one would be the specialized framework specifically adapted to the undue influence paradigm.

The general framework of protection of human rights and A.I offers the ground basis protection that can adapt to the undue influence paradigm. In this approach one has to focus on two different approaches these regimes aim to target: The State and the developers.

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[59] Dignum V, *Responsibility and Artificial intelligence*, The Oxford Handbook of Ethics of AI, (*2020),* pp216-232, p225; Council of Europe's Ad Hoc committee on Artificial intelligence, Artificial intelligence, Human rights democracy and the Rule of Law a primer, *The Alan Turing Institute,* p37.

[60] High-level expert group on Artificial intelligence set up by the European Commission, , Ethic Guidelines for Trustworthy AI, European commission, published on 8 April 2019; The European Parliament and the Council of the European Union, *Draft Regulation on a European approach for Artificial Intelligence,* published on 21st April 2021, p1.

In the general framework of human rights, states hold positive obligations in order to "secure" human rights in their jurisdictions[61]. In the matter of new technology, it was held that States hold a "special responsibility" when they introduce new technology that have the potential to harm human rights in their criminal justice system[62]. Therefore, when introducing such a technology one could see that States would have to provide for special guarantees in order to limit the harm to human rights. From this general perspective, comes another regime of human rights obligations for States: The positive obligations. Whereas the traditional perspective of human rights protection focused on a negative approach of protection; meaning that States should not harm their citizens human rights (A vertical protection of human rights from the State to the citizen) the perspective of positive obligations tend to not only provide a vertical protection but also the obligation for States to use the means at disposal in order to secure them in a horizontal perspective (From citizens to citizens)[63]. These two sets of obligations aim at providing a general protection of human rights in the jurisdictions of States. One could ask however, what is the material scope of such positive obligations under the principle of independence in Europe. The European courts have yet to statute on such topic as only a negative aspect has been witnessed in the case-law, due to the State interfering in the principle of independence; and even in cases where non-states actor could have had an influence over the criminal trial (Press and Media), the ECtHR only assessed that : Judges being professional have a presumption against such influences; and that since courts have given reasoned decision, it is enough to affirm that judges were not influenced[64]. However, the ECtHR did not undergo any positive obligations for the State. One could theorize that States have to take the guarantees in order not to let any undue influences affect criminal justice by adopting a legal framework capable of protecting judges, through continuous training of judges and satisfactory legal safeguards by criminalizing behavior that could undermine such independence. But on the specific topic of A.I, it is more complex. For a criminal intent on the A.I would be difficult to demonstrate in cases where it would exercise an influence on the judge; the question lies whether the developers could be held criminally liable by negligence in cases where data infused in the algorithm lead to a discrimination of the individual concerned. This remains purely hypothetical at the moment, however. Therefore, the challenge of A.I as an undue influence would also lie in the context where it could thrive in a legal void where an undue influence could occur without criminal intent.

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[61] *Cevrioğlu v. Turkey*, [2016] ECtHR, 69546, para 50 ; *Assanidze v Georgia*, [2004], ECtHR, No 71503/01 para 144; AKKANDI-KOMBR JF, '*Positive Obligations under the European Convention on Human Rights: A Guide to the Implementation of the European Convention on Human Rights*' (2007) Human Rights Handbook, Volume 7, p5.

[62] *Marper v The United Kingdom*, [2008] ECtHR, 30562/04 and 30566/04 para 112.

[63] *Ireland v United Kingdom*, [1978], ECtHR, No 530/71, para 239.

[64] See footnote 20

The specialized framework directly targeting the elimination of undue influence can be deduced from both the principle of independence regime and the regulation regarding algorithm and A.I.

Indeed, under these two regimes it seems that A.I would be deployed on the first instance of criminal trials. Two arguments can be held to demonstrate such point; firstly under the principle of independence, in order to guarantee that judge were not influenced in a undue manner there should be a control of higher courts on lower courts as to assess whether the principle of independence was secured[65]; secondly under the GDPR and the regulation of automated data processing under which algorithms thrive, individuals have the right to appeal the algorithmic decision to a human controller[66]. So, one could see that under these two regimes, it is necessary to have a control over the decision of whether lower court or the algorithm, in order to secure the independence or individuals rights. Hence in the case where algorithms are implemented in the criminal justice system only in first instance, this would allow for higher courts to both control whether the algorithm did influence the judge in an undue manner and could also exercise its scrutiny on the decision.

Moreover, the question lies on the extent of the place of the algorithm in the criminal trial. One could see that there seems to be a common extent between numerous legal systems under which the algorithm cannot be used as the sole basis for the judicial decision. In order to demonstrate such extent, the French, the U.S and the European framework would be studied.

The U.S system is relevant for this study as algorithms are incorporated in the criminal justice system for some years and has revealed the flaws of such use. Two cases demonstrate such extent of the use of the algorithm; *Loomis v Wisconcin* demonstrated that the algorithm did not have to be disclosed to the parties of the proceedings as long as other materials supported the judge decision[67]; on the opposite *Kansas v Walls* demonstrated that when the algorithm is the main or sole piece under which the judge took its decision, it must be disclosed[68]. One could argue that the extent under which the algorithm is used as part of larger materials and support these materials could lead to believe that the Judge did not face an undue influence. Whereas when it was the sole material that led to the decision, the disclosing must be effective in order to: Firstly, allow the defendant to respond to the argument and secondly to make sure whether the algorithm did not unduly influence the Judge, through its functioning.

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[65] *Gatt v Malta,* [2019], ECtHR, 46466/16, para 88.

[66] European Parliament and Council, *General Data Protection Regulation,* Regulation (EU) 2016/679 of 27 April 2016, Article 22(3).

[67] *Loomis v Wisconsin,* [2016], Wisconsin Supreme Court, N° 16-6387.

[68] *Kansas v Walls* [2017], Court of Appeal of the State of Kansas, N°116,027.

The European way focuses too on such extent, especially with the current regulation contained in the GDPR in Article 22; under such provision the an individual cannot solely be subjected to an automated decision making that would have legal effects on this individual[69]; the project of regulation of A.I by the Parliament and the council also focuses on an A.I as an assistant and on the danger of over-reliance of A.I as a decision helper[70]. Therefore, this European approach of the A.I leads to assess that even though it has a clear positive side on using it for criminal justice, it should not take an overreached place in the decision making. Such approach is also shared in the French system, where expert reports that could influence the sentencing of an individual (Psychiatric, Risk…) cannot be the sole basis on which the decision is made[71].

Hence, one can see that the place of the algorithm could be one among other materials, but not a sole decider. This would prevent any "token" approach of the relationship between the algorithm and the judge and limit the extent of the influence in order for the judge to consider the A.I as a piece that would provide guidance for the decision, rather than taking over the decision of the judge.

IV.   Conclusion

One could see that Artificial intelligence could pose a dire challenge to the principle of independence in criminal trials. The developing, the functioning and the influence it could have on the judge can qualify it as undue if no proper safeguards are taken in order to prevent a "Algorithmic justice". Such safeguards must however be weighted considering other relevant features such as intellectual property and the transparency of the algorithm. In order for justice to remain independent, such algorithms must however comply with the principles that have already been erected in the field of independence; but also, on the emerging principles for a trustworthy A.I focusing on the necessity of transparency and explainability in order for A.I to become a legitimate influence in the field of criminal trials.

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[69] European Parliament and Council, *General Data Protection Regulation,* Regulation (EU) 2016/679 of 27 April 2016, Article 22.

[70] The European Parliament and the Council of the European Union, *Draft Regulation on a European approach for Artificial Intelligence,* published on 21st April 2021, Recital 40.

[71] Cour de cassation, 2ème chambre civile, arrêt du 13 avril 2008, n° 07-16824 ; Cour de cassation, 2ème chambre civile, arrêt du 8 septembre 2011, n° 19919 ; Cour de cassation, 2ème chambre civile arrêt du 7 septembre 2017, n°16-15531.

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