Comparative Law Review

2024 - Special Issue

Incontro di Studi dei Giovani Comparatisti

Le declinazioni della Giustizia

Università La Sapienza
Roma 2/3 febbraio 2023

ISSN:2983 - 8993

COMPARATIVE LAW REVIEW
The Comparative Law Review is a biannual journal published by the
I. A. C. L. under the auspices and the hosting of the University of Perugia Department of Law.

Office address and contact details:
Department of Law - University of Perugia
Via Pascoli, 33 - 06123 Perugia (PG) - Telephone 075.5852437
Email: complawreview@gmail.com

Comparative Law Review is registered at the Courthouse of Monza (Italy) - Nr. 1988 - May, 10th 2010.

COMPARATIVE
LAW
REVIEW
SPECIAL ISSUE VOL. 15/1

Le declinazioni della Giustizia

PREDICTIVE JUSTICE IN CRIMINAL MATTERS: TRUE "JUSTICE"?*

Marco Edgardo Florio

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The aim of the article is to examine whether predictive justice (applied as a substitute or auxiliary to human justice in criminal matters), can be considered true 'justice'. In doing so, the article will take as its starting point the idea that the answer cannot be obtained either by looking at 'technical' or 'positive law' constraints but must instead be investigated from a pre-positive point of view. By ideally bringing into dialogue the two opposing positions expressed by Pastor and Greco, without forgetting the model of 'poetic justice' outlined by Nussbaum, arguments will be provided in support of the idea that justice, if it is to be defined as such, must remain something intrinsically human.

Keywords: Predictive Justice; Justice; Criminal Law; Judicial Creationism; Algorithms

I. THE 'SHORT-CIRCUIT' OF CRIMINAL JUSTICE AND THE MIRAGE OF DECISIONAL 'PREDICTIVITY': FROM THE CONSTRAINT OF PRECEDENT TO PREDICTIVE JUSTICE

Criminal justice, in almost all countries of the world, is experiencing a situation of serious and overt 'crisis'. There are so many reasons for this, and such are the points of tangency, that to give an adequate account of it one would necessarily have to think of a 'treatise' work.

Criminal justice is now inefficient, crushed under the weight of an overcrowding of 'clients' that, well before 'prisons', already affects all those courts that are called upon to administer it on a daily basis[1]. Courts in which, moreover, every day is staged, almost like a play, the 'decline of criminal legality' and the 'government of judges'. Every major criminal law principle, in fact, has experienced moments of 'pathology' in recent decades, but that of legality (at least as we have known it to date in *civil law* legal systems), of all of them, perhaps seems to be the one most at risk of a definitive and premature 'capitulation'.

The overflowing of the decisional power of judges in continental legal systems, which have always been less accustomed to the idea of a law of jurisprudential creation and have not grown up with the cultural embankment of the binding nature of precedents, has produced a 'chaotic' and unstable situation in which every kind of aberration seems in fact possible: analogies *in malam partem*; incriminating provisions of jurisprudential creation; overruling so frequent as to make the '(re)cognizability' of precepts (often, as mentioned, created directly in courtrooms)[2] a real 'chimera' for citizens.

Faced with this situation – paradoxically facilitated by the legislator himself, who, like a

* The paper is part of the Research Project of Significant National Interest 2017 "Massimario penale e conoscibilità del diritto: la costruzione del precedente nello spazio giuridico europeo".

[1] Cf. S. Gaboriau, *Éclairage sur la justice en France*, in *questionegiustizia.it*, 2/12/2022, p. 3 ff.

[2] Against the phenomenon of 'judicial creationism', as we know, had already programmatically taken sides L. Ferrajoli, *Contro il creazionismo giudiziario*, Modena, 2017.

modern Macbeth, became the bearer of his own misfortune[3] – the spontaneous reaction was obviously the beginning of an anxious and still unexhausted search for 'corrective measures' capable of 'reinforcing' the principle of legality, giving greater 'efficiency' to the system and, above all, stemming the unpredictability that criminal law of jurisprudential matrix notoriously presents[4].

Precisely from this last point of view, it is not surprising that many of the doctrinal reflections carried out in modern continental legal systems have, at least in recent decades, gone in the direction of a possible valorisation of the doctrine of *stare decisis* (notoriously accepted by *common law* systems), with the hope of distilling at least a little more certainty from systems that, although still *civil law* on paper, are now de facto 'governed by judges'[5]. Along this 'ridge', however, the typical tools of 'predictive justice', being able to 'deepen' to the extreme the fascination with precedents[6] if applied at the decision-making stage, seem to go further, promising «to replace this disorder – or, if you prefer, this complex and precarious order – with a linear landscape» that re-proposes «the typically Enlightenment-positivist idea of a perfectly 'calculable' law» [7], as Beccaria predicted in his time[8].

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[3] On the 'corrosion' of legality favoured by the legislator himself, who is increasingly inclined to 'give birth' to a magmatic hotchpotch of provisions, see the reflections of F. Palazzo, *Scienza della legislazione e buone intenzioni legislative*, in *Dir. pen. e proc.*, 2021, p. 285 ff. To illustrate the regulatory chaos of our time we could make an endless series of quotations, from Ferrajoli to Maier, but it is probably sufficient to resort to the 'telegraphic' image that M. Alizart, *Criptocomunismo*, Buenos Aires, 2020, p. 14, offered of the modern state as a «rampant bureaucracy, with swarms of officials and law books thicker than the dictionary and the telephone directory combined».

[4] There are several recent studies on the subject: A. Santangelo, *Precedente e prevedibilità. Profili di deontologia ermeneutica nell'era del diritto penale giurisprudenziale*, Torino, 2022, p. 371 ff.; F.M. Damosso, *Il vincolo al precedente tra sentenza di legittimità e massimazione*, Torino, 2022, *passim*; P. Scevi, *Prevedibilità e legalità nel diritto penale: alternativa o binomio garantistico?*, in *lalegislazionepenale.eu*, 2020, p. 49; Id., *La prevedibilità della norma penale tra* legislatio *e* iurisdictio, Torino, 2022, p. 173 ff.; A. Galante, *Legalità e mutamenti giurisprudenziali nel diritto penale. Fondamento e limiti del divieto di retroattività dei mutamenti giurisprudenziali sfavorevoli*, Firenze, 2021, p. 207 ff.; D. Perrone, Nullum crimen sine iure. *Il diritto penale giurisprudenziale tra dinamiche interpretative in* malam partem *e nuove istanze di garanzia*, Torino, 2019, p. 290 ff.; M. Caterini, *L'interpretazione favorevole come limite all'arbitrio giudiziale. Crisi della legalità e interpretazione creativa nel sistema postdemocratico dell'oligarchia giudiziaria*, in P.B. Helzel, A.J. Katolo (eds.), *Autorità e crisi dei poteri*, Padova, 2012, p. 99 ff.

[5] It is not for nothing that our age is referred to as the "age of jurisdiction", G. Fiandaca, *Crisi della riserva di legge e disegno della democrazia rappresentativa nell'età del protagonismo giurisdizionale*, in *Criminalia*, 2011, p. 79 ff. On the subject cf. more recently also S. Cassese, *Il governo dei giudici*, Bari-Roma, 2022, *passim*.

[6] Algorithms, in fact, do not seek the applicable rule according to the traditional vocation of *iura novit curia* and do not provide the precise explanation of the hermeneutic choice, but exhaust the 'judging' in recourse to mere conforming precedents [as noted by M. Papa, *Future crimes: intelligenza artificiale e rinnovamento del diritto penale*, in *Criminalia*, 2019, p. 502, «in law, A.I. will never be able to live in the present. It will always attribute meaning to the historical happening according to a mechanism of reminiscence»]. Rather, decisional 'prediction' is based on correlations between huge masses of judicial decisions, which are not obtained by trying to reproduce the judges' thinking, i.e., by 'modelling' their reasoning in computer terms. One is confronted, in short, with «systems based on case-based reasoning, which are characterised by the fact that new problems are solved on the basis of generalisations of solutions given in the past to similar problems» [as is well illustrated by R.E. Kostoris, *Predizione decisoria, diversion processuale e archiviazione*, in *Sist. pen.*, 2021, p. 6 ff.; J.G. Corvalán, *Presentación. Inteligencia artificial. Automatización y predicciones en el derecho*, in D. Dupuy, J.G. Corvalán (eds.), *Cibercrimen III. Inteligencia Artificial. Automatización, algoritmos y predicciones en el Derecho penal y procesal penal*, Buenos Aires, 2022, 44].

[7] Thus Kostoris, *supra* fn. 6, at p. 5. However, a "digital neo-positivism" was already being spoken of in W. Hoffmann-Riem, *Verhaltenssteuerung durch Algorithmen*, in *Archiv des öffentliches Recht*, 142, 2017, p. 17 ff.

[8] Beccaria, as is known, would have wanted to prohibit judicial interpretation, reducing it to a purely logical-syllogistic operation. In § 4 of *Dei delitti e delle pene* one can indeed find the famous programmatic statements, with which the author intended to «impose a kind of *interpretatio sine applicatione*: the possibility of a true interpretation regardless of the cases that occur in social life, as if law were not a living being, but a premise of formal logic» [commenting on this thought, see M. Donini, *Lettura di C. Beccaria, Dei delitti e delle pene (1764),*

Albeit with some substantial differences from the Enlightenment ideal, the decision-making algorithms do in fact promise to realise precisely that syllogistic 'certainty' dreamt of by Beccaria. A 'certainty' that would, however, be paid «at the price of a tendency to flatten future decisions to those of the past», in a «process of self-fulfilling» that – even in the softest models of predictive justice (those, that is, not based on a radical alternation between man and machine) – would make it difficult (if not impossible) for judges to read «social change in order to adapt the interpretation of legal rules», making the activity of *ius dicere* an operation already flattened on substantially preformed outcomes.
Since we are dealing with an 'horizon' that is anything but imaginary, but already in the midst of becoming[9], one must therefore ask oneself to what extent such an 'arrangement' can be said to be worthy of the appellation of 'justice' that is often attached to it. An answer that can probably never be obtained by continuing to look only at: (a) either the mere technical 'feasibility' of a 'justice' administered in whole or in part by machines (i.e., with their help or directly by them); (b) or at its compatibility with positive law.

II. Predictive justice: true justice? The impossibility of finding an answer by looking at 'technical' or 'positive law' constraints.

From a strictly technical point of view, indeed, it seems (unfortunately) necessary to recognise that a human-machine alternation in the assumption of judging functions is not only technically 'feasible' (and if it is not now, it almost certainly will be in the future), but also has a good chance of delivering exactly what it promises: 'good decisions'; decisions that are surely more certain, predictable and probably less biased than those currently offered by human judges[10].
As far as positive norms are concerned, on the other hand, there is nothing to prevent that even legislation that currently seems to 'bar the door' to the introduction of a 'robot judge' may in the future change to make its entry into the legal system possible (if not as a substitute for the human judge, at least as his auxiliary). An obstacle to such a change, indeed, would only be conceivable if one could see, in the very possibility of hypothesising such an introduction, a blatant violation of certain supranational or superordinate norms, such as the Constitutional ones, which make the judge subject to the law, or identify the latter with parliamentary law alone. But such a conclusion would be difficult to sustain with reference to all existing systems (even if we were to limit the discourse to *civil law* systems, without considering *common law* systems, in which grafting would perhaps meet with less resistance)[11]. Indeed, the constitutional and European norms that are currently applied in civil law systems do not seem able to definitively 'bar the doors' to a use of the typical instruments of 'predictive justice', even if only 'auxiliary', which could, however, turn out to be no less inadvisable on balance. To realise this, it is sufficient to examine some reflections that have been made with reference to the German and Brazilian legal systems by one of the most influential authors of the new German penal doctrine: Luís Greco.
While it is usually stated in Italy that the «introduction of substitute predictive justice»

§ 4: "Interpretazione delle leggi", in *Diritto pen. XXI Secolo*, 2014, p. 245 ff.; A. Cadoppi, *Giurisprudenza e diritto penale*, in *Studi in onore di M. Ronco*, Torino, 2017, p. 33 ff.; V. Maiello, *Legge e interpretazione nel "sistema" di Beccaria*, Napoli, 2021, *passim*].

[9] Cf. S. Barona Vilar, *Algoritmización del derecho y de la justicia. De la Inteligencia Artificial a la Smart Justice*, Valencia, 2021, p. 646 ff.

[10] Cf. D. Kahneman, O. Sibony, C.R. Sunstein, *Rumore. Un difetto del ragionamento umano*, Torino, 2021, p. 144 ff., 150 ff.

[11] For the observation that the use of adjudicative AI «may find less resistance in common law systems» cf. M. Caterini, *Il giudice penale robot*, in *lalegislazionepenale.eu*, 2021, p. 12.

would result in a blatant conflict with «half a dozen constitutional principles» (Articles 25, 101 and 102 of the Constitution, to name but a few)[12], similarly, with reference to the German constitutional system (which is closely related to ours), it is pointed out that only a human judge could be called upon to administer justice under Art. 101 GG, because only a human being could be considered a 'natural judge' (*gesetzlicher Richter*) within the meaning of that provision (an objection that could, however, also be raised identically on the basis of the Brazilian constitution, which has similar principles)[13].

How far these observations are cogent and capable of preventing a future reform aimed at introducing the 'robot-judge' (here as elsewhere), however, remains to be seen. With reference to the critical remark raised by Enders with reference to the German legal system, e.g., it was not wrongly observed that, presented in this way, the argument ends up being reduced «to little more than a baseless assertion or a petition of principle»: it is said that «the robot-judge would be inadmissible, because the 'judge', according to constitutional law, would only be a human being», without, moreover, «any reason being offered for using this term in such a narrow sense, which disregards the historical and temporal contingency for which, at the time the constitutional charters were written, the robot-judge was not even conceivable» in theory[14]. Obviously, however, this reply could also be reiterated in respect of those Italian authors who consider that a substitute 'predictive justice' would in fact give rise to a conflict with Article 102 of the Constitution or with the principle of the 'natural judge' pre-established by law pursuant to Article 25 of the Constitution (norms that unfortunately do not seem able to definitively bar the way to future reforms oriented in this direction).

More pregnant is undoubtedly the observation – attributable to several of our interpreters – that substitute 'predictive justice' would undermine the judge's subjection to the law alone under Article 101 of the Constitution. Too bad, however, that even this provision has over the years shown various 'creaks'[15] and is nowadays mostly interpreted, 'evolutionarily', as the judge's subjection to 'right' rather than to 'law' (a notion, this one, precisely including those precedents that the algorithm should use to decide *pro futuro*)[16].

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[12] Thus M. Barberis, *Giustizia predittiva: ausiliare e sostitutiva. Un approccio evolutivo*, in *Milan Law Review*, 3, 2022, p. 10-11; F. Donati, *Intelligenza artificiale e giustizia*, in *Rivista AIC*, 1, 2020, p. 429.

[13] For the objection raised with reference to the German system see P. Enders, *Einsatz künstlicher Intelligenz bei der juristischen Entscheidungsfindung*, in *Juristische Arbeitsblàtter*, 2018, p. 723: «it is clear that the natural judge within the meaning of this provision is a natural person». The observation concerning the Brazilian legal system is instead taken from L. Greco, *Poder de julgar sem responsabilidade de julgador: a impossibilidade jurídica do juiz-robô*, São Paulo, 2020, p. 41 (where it is also added that with reference to the German system the objection against substitute 'predictive justice' could also be made by reference to Art. 92 GG).

[14] Thus Greco, *supra* fn. 13, at p. 41.

[15] Thus, e.g., G. Zaccaria, *Una "nuova" legalità penale tra testo e interpretazione*, in *Sist. pen.*, 12, 2022, p. 21, observes that although «it is true that according to Article 101, paragraph 2 of the Constitution 'judges are subject only to the law' (and that this article is linked to Article 111 of the Constitution), [...] it is equally true that this just request for the judge's independence from other powers must now be declined in the light of the Constitution and its principles, which within the normative material with which the judge is required to measure himself assume a pre-eminent weight. The judge is therefore subject to the Constitution rather than to the law». Cf. then R. Orlandi, *Nuova legalità penale, diritto giurisprudenziale e funzioni attuali della Corte di Cassazione*, *ivi*, p. 145, nt. 32.

[16] As observed by F. Giunta, *Ghiribizzi penalistici per colpevoli. Legalità, "malalegalità", dintorni*, Pisa, 2019, p. 54, «according to the prevailing interpretation, in subjecting the judge to the law, art. 101, paragraph 2, Const. uses the term 'law' as a synonym of 'right', including the jurisprudential elaboration». According to many, indeed, the concept of 'law' should be replaced with that of 'living law', both in art. 101, paragraph 2, Const. and (it would seem) in art. 25, paragraph 2, Const. [cfr. F. Mazzacuva, *Le pene nascoste. Topografia delle sanzioni punitive e modulazioni dello statuto garantistico*, Torino, 2017, p. 237; with reference to art. 101 Cost., D. Bifulco, *Il giudice è soggetto soltanto al "diritto". Contributo allo studio dell'art. 101, comma 2 della Costituzione italiana*, Napoli, 2008, *passim*].

Probably the most significant barrier, at least in our system, is given by the principle of legality *ex* art. 25, para. 2, of the Constitution (in and of itself considered), since – as has been said – with such an implementation of 'predictive justice' the algorithm would be assigned a «normative» role, according to the code-is-law principle, which would prevent full compliance with the imperative according to which «no one can be punished except by virtue of a law that came into force before the act committed»[17].

It is true, however, that even this provision does not seem to close every applicative 'chink' for algorithmic 'justice' (at least not in our system), because: (a) the 'reservation of the law' concerns more and more only incriminating rules[18]; (b) it cannot be ruled out that this provision may not be 'evolutionarily' reinterpreted in the future to include the algorithmic 'law'[19]; (c) it is at least doubtful that where the 'robot-judge' would be introduced 'by law', in order to 'decide' on the basis of precedents that other judges have already formed by interpreting provisions, one might not, sooner or later, end up considering the subject punished by the algorithm as a subject «punished [...] by virtue of a law»[20]; (d) Article 25, para. 2, of the Constitution, however, would certainly not bar the door – as already mentioned – to a merely 'auxiliary' use of the algorithm, which, indeed, already seems to have been authorised by law in several jurisdictions.

Indeed, without wishing to discomfort here with the already well-known and often commented upon US ruling in the Loomis case, it should be noted that the possibility of making auxiliary use of algorithms is mostly welcomed at the doctrinal level[21] and has now found a significant legislative endorsement even in a European legal system culturally close to us (Spain), through the recent *Ley Orgánica* no. 7/2021. As has been observed, in fact, this law, far from introducing «a ban on the implementation of robot judges» (as some think), has merely provided, in Article 14, that the automation of decisions must always remain under the final control of a human user[22].

A 'futuristic' solution, moreover, does not seem to face absolute preclusion by EU law either. Articles 22 GDPR and 11 of Directive No. 680/2016, often called into question in this matter, indeed, do not seem to pose insurmountable obstacles along the 'evolutionary ridge' that sooner or later could lead to a total automation of the criminal justice system[23].

If one hopes to give a meaningful answer to the question posed in the title (whether a 'justice' wholly or partly administered by 'robots' can really be considered as such), i.e. an answer that can have a general dignity, irrespective of the positive norms that this or that system might adopt in the future, as well as from what advances in 'technology' might one day make possible, it then becomes clear how the question must be examined (also and perhaps to a greater extent) from a pre-positive point of view, looking at what 'justice' is,

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[17] Cf. V. Manes, *L'oracolo algoritmico e la giustizia penale: al bivio tra tecnologia e tecnocrazia*, in U. Ruffolo (ed.), *Intelligenza Artificiale. Il diritto, i diritti, l'etica*, Milano, 2020, p. 558.

[18] So much so that there has already been no failure to advocate a use of technology and precedent in favour of the defendant; «a sort of 'generation' of law through judicial precedent if it is *in bonam partem*» [cf. M. Caterini, *supra* fn. 11, at p. 18; Id., *Effettività e tecniche di tutela nel diritto penale dell'ambiente*, Napoli, 2017, p. 277 ff.].

[19] That it can be held, that is, not only that 'code is law', but also that 'law is code': cf. S. Hassan, P. De Filippi, *The expansion of algorithmic governance: From code is law to law is code*, in *Field Actions Science Report*, 17, 2017, p. 89.

[20] Cf. the aforementioned paper by F. Mazzacuva, *supra* fn. 16, at p. 237, for the «reconciliation of 'living law' with the concept of 'law'».

[21] Cf. R. Borges Blázquez, *Inteligenica artifical y proceso penal*, Pamplona, 2021, p. 199 ff.; J.-M. Brigant, *Les risques accentués d'une justice pénale prédictive*, in *Arch. phil. droit*, 60, 2018, p. 251.

[22] For more on this, see D.R. Pastor, *¿Sueña el sistema penal con jueces electrónicos?*, in E. Demetrio Crespo (ed.), *Derecho penal y comportamiento humano. Avances desde la neurociencia y la inteligencia artificial*, Valencia, 2022, p. 538 ff.

[23] Cf. Greco, *supra* fn. 13, at p. 42.

and what we might actually accept as such.
Only in this way will it be possible to truly understand whether 'predictive' justice, beyond the appellation that often accompanies it, is true 'justice'.

III. EVEN JURISTS DREAM OF 'ROBOT-JUDGES': PASTOR AND HIS (NOT TOO NEW) IDEA OF 'JUSTICE'

The administration of criminal justice since antiquity has always followed certain patterns, certain rituals. As has been observed, criminal justice «has basically been the same since the time of Socrates»; ever since, in 399 BC, the wise Greek thinker was accused of disrespecting the gods and corrupting the youth, tried by a jury of five hundred of his peers and sentenced to death by a greater majority of votes than had led to the first guilty verdict[24]. The 'justice' with which «from antiquity until today» we have always been satisfied, is a 'justice' that appears «on average and at least in part» intrinsically imperfect: that is, «rather discretionary, abulic and capricious», as it was in Socrates' time, «despite" all the «principles, rights and guarantees» grafted onto the system in order to reduce, at least in part, its «arbitrariness». A justice, in short, imperfect by its very nature, as is the humanity that conceived it and the judges who administer it daily[25].
This being the case, there are two options: (a) either we are content with this imperfect 'justice' that we have been able to benefit from so far, and we accept it as it is; (b) or we project ourselves towards a new 'justice', embracing whatever technological innovations show themselves capable of creating a new and perhaps less arbitrary way of 'telling the law'.
Well, it is precisely in this second direction that the reflections developed by Daniel R. Pastor, a well-known Argentinean professor, seem to have moved in some of his most recent writings.
Starting from the statement made by the American philosopher and technologist David Weinberger on the fact that «artificial intelligence» (hereinafter A.I.) should force us «to review our idea of justice», Pastor has indeed not failed to observe how the question to be understood today is not so much that of understanding «whether it is possible, thanks to A.I., to do justice as usual, but better» (where «doing justice» in Pastor's discourse means the «resolution of judicial disputes in a materially correct and formally unexceptionable manner, through a plausible application of the law with respect to the factual assertions that have been verified in the trial»), but rather whether it is possible to «try to» create a new model of «justice» that, while being «indeed of superior quality», is also «in a completely different way» from the past[26].
For Pastor, in essence, the question we have been asking since the title (whether the algorithmic 'justice' on the horizon can be considered true 'justice') makes little sense, as it is the result of the same short-sightedness that would prevent primitive men from properly exploiting modern agricultural tools, hypothetically sent to them in the past via a 'time machine'[27].

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[24] The original text on this judgement is, of course, Plato's Apology of Socrates (of uncertain date around 400 BC). A very suggestive reflection on the subject is that of I. Stone, *The Trial of Socrates*, New York, 1989, *passim*.
[25] As has not failed to be observed, in fact, «the judge has always been and still is a disturbing figure because of his function, characterised by a natural arrogance [...]. That of a subject who, as a system, gives and takes away the reason of others, which means that he always and on principle has it. Moreover, it administers it in a regime of inevitable, sometimes enormous, discretion» [cf. P. Andrés Ibáñez, *Tercero en discordia. Jurisdicción y juez del estado constitucional*, Madrid, 2015, p. 346].
[26] Cf. in particular the reflections of Pastor, *supra* fn. 22, at p. 536 ff.
[27] These would probably not know what to do with modern machinery, continuing to use it for the purposes already known to them.

What motivates scepticism and guides the reflections on the subject – in the author's opinion – is, in short, laziness and the mental "inability» of contemporary interpreters to look beyond their 'noses', «an understandable prejudice towards the preservation of what we know and control, of what we have always known, of what gives us a living, together with an unjustified fear of the unknown», which still prevents us from conceiving a definitive alternation between man and machine in the administration of justice[28]. To borrow Goleman's words, we would be reluctant to innovate because it is «pleasant for us to remain in a familiar and profitable habit», because taking the first step into new territory» would force us to «abandon placid routine and fight inertia»[29].

Also all criticism of the possibility of algorithms being applied in the decision-making phase[30] would be for the author nothing more than the fruit of this shared 'blindness', which has so far improperly led to the 'new' being brought back into consolidated schemes, whereas it would perhaps have been more appropriate to do the opposite, adapting everything that did not fit in with the limitations of the machine (which for some could be considered 'merits') to make possible the implementation of a true 'robot judge'. Thus, e.g., the author considers the shared *cliché* that algorithms are unable to interpret laws in all their subtlest nuances (an obvious limitation of algorithms at present)[31], should not be read as an obstacle, but as a spur to rethink the model of 'justice' still implemented today, which sees in the interpretation of provisions still an essential moment of the activity of 'judging'[32].

In the words of the author, in substance, «to start the revolution, we» should not «think of applying A.I. to the judicial interpretation of laws». What we should «do is to stop devising different semantics for a rule, depending on the case», seeking instead to «achieve, through A.I.» and the construction of written laws «with algorithmic reasoning», something «better than the interpretation of laws: a regime of judicial dispute resolution that, without deciphering the rules, does a better job than the models that» have hitherto functioned «by looking for the best explanation» [33] within an infinite horizon of interpretative possibilities, which in fact makes all kinds of arbitrariness conceivable[34].

The question we posed earlier, from this point of view, could (and above all should), therefore, receive an undoubtedly positive answer: 'predictive justice' should be considered true 'justice', because it is 'justice' itself that should be rethought in the future

[28] Cf. Pastor, *supra* fn. 22, at p. 542.

[29] Cf. D. Goleman, *Focus³*, Buenos Aires, 2018, p. 277.

[30] See R. Susskind, *Online Courts and the Future of Justice*, Oxford, 2019, p. 277 ff.

[31] Cf. J. Corvalán, *Inteligencia Artificial GPT-3, PretorlA y oráculos algorítmicos en el Derecho,* in 1 *Int. J. Digit. L.*, 2020, p. 11 ff.

[32] Cf. Pastor, *supra* fn. 22, at p. 543: «another frequent objection states that a computer programme, with its binary structure of everything (1) or nothing (0), is unable to find, in the abstract language of rules, the interpretation that gives the exact nuance for their appropriate application to a specific case. This objection is, yet, impossible for machines to overcome. But the interpretation of rules is. The reason to abolish deciphering the rules of law is that technology would not be able to interpret them; therefore, if the mountain does not go to Muhammad…».

[33] Thus Pastor, *supra* fn. 22, at p. 543.

[34] As noted by Pastor, *supra* fn. 22, at p. 543, «after more than two centuries of deciphering legal norms, mankind has learned that any text allows anything if one has the power to impose a narrative as the word of law». Indeed, the author seems to be moved by a lively aversion to this «judicial decisionism that has transformed caprice into a plausible application of legal norms» [Pastor, *supra* fn. 22, at p. 544]. What he ultimately dreams of is to put an end to this relentless «path of discretionary decoding of the deep and real meaning of normative writings» that has been «called 'interpretivism' by some, to denote its pathological roots and to distinguish it from the discursive constructions that in a normal way enact the meaning of laws when they apply them, without inventing them, without judges acting as toga-like legislators» [cf. A. Rosler, *La ley es la ley*, Buenos Aires, 2019, *passim*].

in radically 'innovative' terms. The one proposed by Pastor, in effect, is a true paradigm shift (in which, however, seems to conceal more of a net 'return to the past'), in which the use of algorithms should in fact promote a different 'justice', but also for this (at least on paper) 'better'[35].

Predictive 'justice' would be different, of course, because it would be administered through 'mechanical' instruments and because it would be based on a radically new paradigm of process[36], but for this reason it would also be 'better', since 'better' is after all considered by Pastor to be the traditional view of the judge as *bouche de la loi*, of Enlightenment matrix. What is in fact made evident by the circumstance that he – rhetorically asking himself whether it is not «perhaps a blessing, rather than a deficit, to stop decoding the rules», and «whether a system free from interpretation and its distortions would not" after all be considered "more rational and legitimate» – ends up ultimately seeing (a) in the AI's inability to interpret an opportunity to be grasped, rather than an element of concern; (b) in the Enlightenment dream of the 'judge-automata' «a fantasy reasonably shelved since then, not because it was a bad idea, but because» it was at the time "impracticable" (whereas today it probably is no longer so)[37].

IV. GRECO'S SCEPTICISM: THE 'ROBOT-JUDGE' AND THE NIGHTMARE OF A JUDGE 'WITHOUT RESPONSIBILITY'

This vision, however, is ideally contrasted by the opinion put forward by Greco, in the paper already cited, where we find some considerations worthy of appreciation and that seem to render the solution outlined by Pastor completely 'unserviceable'. The Brazilian author, indeed, moving from the assumption that a «robot-judge" is not only "technically" feasible and potentially able to give rise to "good decisions"» [38], but also introducible into the system (as there are no particular 'positive law' barriers)[39], points out that «the heart of the matter» lies «in the fact that the use of robots in justice» would deny a «fundamental dimension of what we understand by law: the dimension of responsibility».

For the author, in fact, «the idea of responsibility» should be considered «intimately linked to what we mean by law» [40]. Greco considers not without foundation (resorting to an extensive literature) that precisely here lies «the decisive and insurmountable barrier for the robot judge: unlike the human judge, the robot is not responsible for what it decides,

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35 Thus Pastor, *supra* fn. 22, at p. 545-546: «digital courts that do justice better than people are something to do not because it is easy, but because it is hard, as President Kennedy said in 1962 about putting a human being on the moon and bringing him home safely. For even our ambition to be realised, it is of course necessary to get rid of the lingering burden of thinking and acting in accordance with the power of old, sad habits».

36 As observed by J. Corvalán, *supra* fn. 31, 11 ff., we move «from an iterated, sequential and fragmented process to a simultaneous, instantaneous and collaborative one».

37 In general, on digital courts as machines that should make the Enlightenment 'dream' finally realisable, cf. Pastor, *supra* fn. 22, at p. 543 ff.; M. Haissiner, D.R. Pastor, *Neurociencias, tecnologías disruptivasy tribunales digitales*[2], Buenos Aires, 2019, p. 101 ff.

38 Cf. the "intermediate conclusions" reached by Greco, *supra* fn. 13, at 37: «there are no insurmountable barriers to the feasibility of the robot-judge. There are no reasons to show that it is not or will not be feasible from a factual point of view to use it for good judicial decisions. All objections raised so far prove to be technically surmountable or can be addressed with even greater emphasis for human beings. The introduction of a robot-judge is feasible from a physical point of view».

39 Cf. Greco, *supra* fn. 13, at p. 40 ff.

40 For these thoughts cf. Greco, *supra* fn. 13, at p. 43 ff., where he observes that «the link between power and responsibility seems to correspond to the structure of moral reality, since it presents itself far beyond the law. This is echoed in the problem of theodicy, which is nothing other than the question of why omnipotence, unlimited power, does not generate unlimited responsibility; and at the same time explains the solution embodied in Christian doctrine, which is the transformation of divinity into a human being: it is only from this shared experience that the assumption of responsibility becomes credible».

because this, strictly speaking, does not exist. The robot is not responsible for its decision, even less for its reasons. It cannot look into the eyes of those who are affected by the exercise of its power, it cannot engage in any human dialogue with them, nor can it understand them, because the machine does not understand anything, nor is it» able «to show it respect, but only» to «simulate all these attitudes, because the black box (3.O.?) is not only opaque, but empty».

In philosophical discussions on whether computers can think or understand, whether they are conscious or not, one relevant fact has in fact almost always ended up being overlooked: not only that the machine knows nothing and thinks and feels nothing, but above all that the machine, unlike the human being, does not know that it is mortal, ephemeral, and vulnerable[41]. The "robot-judge" – who "would literally have no idea what it means to live" – would be "always" and only "a stranger before the citizen"[42]. How could it then "decide on someone's life" if it is unable to understand its real meaning?

Obviously, certain objections could theoretically be made to this line of thought. The author does not fail to grasp two of them, taking care, however, to debunk their significance: (a) the first objection aimed at questioning the very premise from which he moves, i.e. that if a robot-judge were left to decide on the responsibility of others, one would find oneself in a situation in which no one would be responsible for the judgement rendered (as Greco observes, someone might indeed manage to unearth somewhere "a responsible subject, whom his anti-technological crusade would have forgotten to consider"); (b) the second, on the other hand, tending, on a more fundamentally philosophical level, to alternatively question now the very postulate of "human responsibility" (in an ethical-ontological perspective), now "central aspects of the alleged connection" adumbrated by the author "between power and responsibility" (from a more strictly legal-political perspective).

On the one hand, indeed, one might think: (a) either of holding other subjects responsible, such as the programmer, the company, or the individual himself, who voluntarily submits to the machine's judgement in preference to the human one[43]; (b) or, alternatively, to invoke the argument – which has often emerged doctrinally in recent years – of the responsibility of machines.

On the other hand, then, one might even think of subjecting to critical review the very two assumptions on which the author's reasoning is ultimately based, namely: (a) that of

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41 In a similar vein see also S. Turkle, *Alone Together. Why We Expect More from Technology and Less from Each Other*³, New York, 2017, p. 85 ff. (on the fundamental importance of the 'gaze' as a creator of symmetrical relations), p. 286 (for the observation that the knowledge of one's own death and the experience of the life cycle are the characteristics that make us uniquely human). Note that the aforementioned characteristics are missing from the long list of properties examined by A. Turing, *Computing Machinery and Intelligence*, in *Mind*, LIX, 236, 1950, p. 443 ff., in his reflection on the question of whether machines 'think'. Differently, N. Bostrom, *Die Zukunft der Menschheit*, Frankfurt a.M, 2018, p. 183, mentions them briefly, arguing, without even sketching a reason for it, however, that «even a post-human being» could «be vulnerable, dependent and limited». On the special vulnerability of the human being cf. also A. Werkmeister, *Straftheorien im Völkerstrafrecht*, Baden Baden, 2015, p. 94 ff. (with further references).

42 In this regard, in addition to Greco, *supra* fn. 13, at p. 46-47, also express themselves J. Weizenbaum, *Die Macht der Computer und die Ohnmacht der Vernunft*, Frankfurt a.M., 1994, p. 282; Turkle, *supra* fn. 41, at p. 85 ff.

43 As Greco, *supra* fn. 13, at p. 51 ff., asks: «what can we say, however, if the affected person consents? Can we attribute to him/her the responsibility that has escaped us so far? It is possible to object to the considerations developed so far that they would be based on an idealised image of a generous, patient, understanding judge, willing to listen and dialogue, leaving out the sad reality that, for many, the justice of human beings is far worse than that of a machine. The member of an oppressed minority may also see the robot judge as his only chance for an impartial decision. Can this individual be denied the hope of an equal treatment, just because it would be provided by a machine, as if the alternative, being discriminated against by a human being, were something better?».

the responsibility of the judge as belonging to the category of human beings, as ontologically "responsible" beings; b) the personalistic-individualistic conception of power and responsibility that the author accepts, which «would bring [...] with it medieval dust; it would go hand in hand with Plato's *Politikos* or with the charismatic model of domination devised by Max Weber, betting on the virtue or goodness of an individual» and «ignoring», instead, «the solution of modern liberalism, which consists in betting» everything «on good institutions».

Possible criticisms of course (perhaps not even the only ones conceivable in the abstract), but which do not seem to ultimately undermine the validity and clarity of the overall reasoning of the author. So much so that Greco himself, after all, seems to provide more than satisfactory replies to each of the remarks.

The fact that one might, e.g., hold that the responsibility of the human being, the responsible self, is an 'illusion' would not compromise the reasoning followed by Greco: «free will is not», in fact, «a necessary premise of the argument» he presents, which «is based, on the contrary, on the very experience of vulnerability, which is understood as a constitutive datum of the *conditio humana* and, as such, something that the person must have in common with his judge, in order for the latter to credibly assume responsibility for what he decides»[44].

Even the purported goodness of institutions, which could ideally make up for the deficits presented by the robot judge, would not seem to be able to 'defuse' the seriousness of the criticism levelled at the latter: one cannot «be satisfied with pointing to institutions as the ultimate source of responsibility»; the «state, like any legally recognised associative entity, is not legitimised by itself, by an original right, but derivatively, by a right granted by responsible individuals», and «this is precisely where the fundamental problem of robot judges lies», which «represent a dissociation between the exercise of power and individual responsibility» hitherto inconceivable[45].

The search for further responsible subjects then proves to be entirely vain, as neither the developer[46], nor the company that owns the algorithm[47], nor even the subject himself, who, hypothetically preferring to submit himself to the judgement of a machine (for fear of discrimination), expressly consents to it[48], could be institutionally suitable candidates to make up for the deficit of 'responsibility' that ontologically afflicts the machine.

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[44] Cf. Greco, *supra* fn. 13, at p. 60.

[45] Cf. Greco, *supra* fn. 13, at p. 61-62.

[46] The idea that the programmer might be the person 'liable' here ignores, from a factual point of view, the fact that complex computer programmes are not the work of a single technician, but of teams, whose composition often fluctuates. The consequence is that there is probably no one who has a truly global view of the programme and can fully understand it [as already noted by Weizenbaum, *supra* fn. 42, at p. 63, p. 306 ff.]. Today, the problem is perhaps even exacerbated by the spread of programmes that can learn autonomously, so much so that they become unpredictable for their own creators [J. Reichwald, D. Pfisterer, *Autonomie und Intelligenz im Internet der Dinge*, in *Computer & Recht*, 2016, p. 208 ff.; S. Fan, *Will AI Replace Us? A Primer for the 21st Century*, London, 2019, p. 70 ff.]. Even if this were not the case, in any case, it would be legally impossible to consider the programmer as the real 'judge'. Otherwise, a single person, even if he actually is a 'judge-programmer' (as the person responsible for the programme on the basis of which the entire justice system of a state is administered), would have a power that is, to say the least, so disproportionate to prevent him from being called 'natural', as required by the Constitutions of almost all countries in the world [cf. Greco, *supra* fn. 13, at p. 48].

[47] For the precise reasons highlighted by Greco, *supra* fn. 13, at p. 48-51.

[48] Cf. Greco, *supra* fn. 13, at 51-54, where he observes that it is not so much consent (in fact 'extorted' from the subject) that would legitimise the robot-judge here, but possibly considerations closer to those behind the state of necessity that would legitimise it. Hence, the robot-judge, like all solutions based on the state of necessity, should remain nothing more than a plan B, a motive for resignation and sadness, which should certainly not be institutionalised, at the risk of losing sight of plan A, i.e., what should really have been realised from the outset.

The doctrinal reconstructions that want machines to be 'responsible'[49] or 'bearers of rights'[50], in fact, as the author not wrongly observes, «can only be defended seriously» – that is, as something more than a mere «provocation for debate» – by accepting «the *sacrificium intellectus* of humanity itself». Because, in truth, «the idea of a responsible, guilty, rights-bearing machine is not so much an argument about machines as it is about us human beings»[51]. In the sense that «behind the idea that machines can be responsible lies» in reality «a reductionist and profoundly impoverished vision of human beings», a «vision that, strictly speaking, has accompanied the A.I. movement from its very beginnings», leading to its detractors being accused of being "carbon chauvinists", to be "ridiculed" as adherents of a "bio-conservatism" or even a "fundamentalist humanism" of impossible reception[52].

It is precisely the so-called 'post-humanists' who seem to fall into error. As Weizenbaum observes, "the fact that the A.I. elite believe that feelings such as love, worry, joy, sadness, that everything that makes the human soul overflow with sentiment and emotion, can be transferred, without any loss, to a mechanical artefact with a computerised brain, testifies […] to a contempt for life, a denial of the human experience itself" that is difficult to 'digest'[53]. Behind the idea of the responsibility of machines lies nothing less than a genocidal attitude – which has perhaps not yet been fully understood by the proponents of this idea on the ground of law, but which has certainly been perceived by computer

[49] On the culpability of machines E. Hilgendorf, *Kõnnen Roboter schuldhaft handeln?*, in S. Beck (ed.), *Jenseits von Mensch und Maschine*, Baden Baden, 2012, p. 119 ff., p. 128 ff.; J.C. Schuhr, *Willensfreiheit, Roboier und Auswahlaxiom*, *ivi*, p. 43 ff.; as well as M. Simmler, N. Markwalder, *Roboter in der Veranlwortung? - Zur Neuauflage der Debatte um den funktionalen Schuldbegriff*, in *ZStW* 129, 2017, p. 20 ff., p. 41 ff.; J. Hage, *Theoretical Foundations for the Responsibility of Autonomous Agents*, in *Artificial Intelligence and Law*, 25, 2017, p. 255 ff., p. 261 ff.; K. Gaede, *Künstliche Intelligenz - Rechte und Strafen für Roboter?*, Baden Baden, 2019, p. 64 ff.; G. Hallevy, *The Criminal Liability of Articial Intelligence Entities. From Science Fiction to Legal Social Control*, in *Akron. Intell. Prop.J.*, 2010, p. 171 ff. Even the philosopher D.C. Dennett, *From Bacteria to Bach and Back*, New York, 2017, p. 397, believes that machine responsibility is possible. For further references cf. C. Roxin. L. Greco, *Strafrecht. AT*, München, 2020, I, § 8, rn. 66f ff.

[50] In this sense, e.g., K. Warwick, *Artificial Intelligence. The Basics*, London, 2012, p. 143; N. Bostrom, E. Yudkowsky, *The Ethics of Artificial Intelligence*, in K. Frankish, W.M. Ramsey (eds.), *The Cambridge Handbook of Artificial Intelligence*, Cambridge, 2014, p. 320 ss; Bostrom, *supra* fn. 41, at p. 99 ss; K. Gaede, *supra* fn. 49, at p. 42 ff. (for a "self-aware artificial intelligence").

[51] Thus Greco, *supra* fn. 13, at p. 54 ff. (with further references).

[52] E.g., Minsky, a pioneer at MIT, is credited with depicting the human being as a "machine made of meat" [as noted by Weizenbaum, *supra* fn. 42, at 98]. Moravec and Kurzweil, the two alleged visionaries of 'post-humanism' [often confused with 'transhumanism': on both movements cf. J. Loh, *Trans- und Posthumanismus. Zur Einführung*, Hamburg, 2019, *passim*], dream of a world in which human beings back up and upload themselves, as if our lives were a hard drive [H. Moravec, *Mind Children. The Future of Robot and Human Intelligence*, Cambridge, 1988, p. 108 ff.; R. Kurzweil, *The Singularity is Near. When Humans Transcend Biology*, New York, 2006, p. 198 ff., p. 383 ff.]. It is argued that our «true nature» is «a sequence of information». If the human being is nothing but information, we end up dissociating the human being from his corporeity, his biology and, with that, from life itself: the difference between our body and synthetic prostheses ceases to exist, «software-based human beings» become conceivable, since the body is «mere jelly» [R. Kurzweil, *supra* fn. 52, at p. 203, 257, 325-330, 386; H. Moravec, *supra* fn. 52, at p. 117; but see also D. Hofstadter, *I Am a Strange Loop*, New York, 2007, p. 257 ff., p. 288].

[53] Cf. J. Weizenbaum, *Computermacht und Gesellschaft*, Frankfurt a.M., 2001, p. 42, p. 52 ff. Harshly critical is also H. Welzer, *Die smarte Diktatur*, Frankfurt a.M., 2018, p. 181. Similarly, G. Liebig, *The Cult of Artificial Intelligence vs. the Creativity of the Human Mind*, in *Fidelio*, 10, 1, 2001, p. 6, calls the one proposed by Kurzweil a «crazy idea», «as anti-human as it is anti-progress» and «grotesque»; J. Lanier, *You Are Not a Gadget: A Manifesto*, London, 2010, p. 29 ff.; in J. Nida-Rümelin, N. Weidenfeld, *Digitaler Humanismus*[3], Berlin, 2018, p. 28, it is then observed that only in philosophy seminars or in some pamphlets and AI circles is it possible to affirm the impossibility of distinguishing human beings from machines. See also critically R.M. Geraci, *Apocalyptic AI: Visions of Heaven in Robotics, Artificial Intelligence, And Virtual Reality*, Oxford, 2010, *passim*.

scientists and philosophers hailing the advent of the era in which we will finally all 'become software'[54].

In short, as Greco rightly concludes, «a machine that does not know what it is like to feel pain, that cannot understand what it is like to spend irretrievable years inside a prison», that «will never experience the disappointment of defeat», that does not fully understand «how bitter defeat can be when it occurs in a situation where one believed to be right», can never consider itself fit to judge the responsibility of others, because it lacks "responsibility"; «to hold such a machine responsible» would be to adhere to «a diluted and blunt understanding of responsibility», lacking any «point of contact with everything we associate with this word and assume as obvious in the human judge»[55].

The criticism expressed by the author, moreover, does not even focus only on the possible and predicted alternation between man and machine in the 'judging' functions, but also on the very possibility of using machines even as mere auxiliaries of the human judge in the decision-making phase. This second hypothesis, in fact, which even at first sight would appear to be unaffected by the reasoning put forward by the author (after all, there would be a formally 'responsible' subject here: the judge who 'ratifies' the activity performed by the machine), would in all probability end up – given the amount of information that the machines are able to 'metabolise' and 'process', as well as the aura of claimed 'infallibility' that characterises them in the eyes of the 'layman' – to generate «an almost irresistible temptation of uncritical acceptance of the work performed» by them as work that is already in all respects 'definitive'.

A temptation that would gradually become 'greater' as the machines improved further in the performance of their tasks, soon leading the 'robot-assistant' to play the role of the 'Trojan horse' that would lead to the introduction of the robot-judge *tout court*. This would lead to the definitive demise of all that can be identified as 'justice', «because a justice that judges 280 cases with the click of a computer, that is, that possibly decides the fate of 280 lives» in this way, «acts as an administration», and probably has really nothing more to do with justice in the proper sense of the word[56].

V. CONCLUSIONS.

As it is easy to understand in the light of the considerations just set out, the answer to the question of whether the so-called 'algorithmisation' of justice is a path to be pursued or a spectre to be feared, whether or not 'predictive justice' can be considered true 'justice', inevitably passes through a classical and almost Manichaean opposition between two different ideal conceptions of 'justice' (understood not as a 'virtue', but as the way in which any judgement should be carried out in the field of law): (a) one that sees in justice, in the activity of 'judging', a merely deliberative activity, which could also be reduced to a mere 'calculation'; (b) the other that instead sees in it something more, and greater affinities also with things like 'literature' and 'poetry'.

Now, in our opinion, only a totally 'impoverished' vision of 'humankind' and 'justice'

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[54] Thus Greco, *supra* fn. 13, at p. 57 ff.; cf. also Borges Blázquez, *supra* fn. 21, at p. 44.

[55] These are the conclusions reached by Greco, *supra* fn. 13, at p. 58 ff. (particularly in debt to those already offered by Weizenbaum). The author points out, moreover, how the argumentation developed does not end with offering the pejorative "disability argument" [Warwick, *supra* fn. 50, at p. 84 ff.]; it is rather an argument about the human condition, from which machines differ substantially. An "argument" that «will remain valid, even if research into so-called machine consciousness» one day «gives the impression that machines can think», or if «efforts towards the so-called embodiment» [W. Wallach, C. Allen, *Moral Machines. Teaching Robots Right from Wrong*, Oxford, 2009, p. 68] «will come to equip the machines with (five or more) senses» [Warwick, *supra* fn. 50, at 146 ff.], since «anything that can be 'backed up' will never» have «reason to fear for its – unique, unrepeatable – existence».

[56] Thus Greco, *supra* fn. 13, at p. 51, 63 e 66

could advise introducing robot-judges (even if only as auxiliaries of the judge, given the risks that lurk in this soft introduction). This is not the place to return to the arguments already examined by Greco (which are shared here almost in their entirety), but it is perhaps appropriate to further emphasise the position expressed by another influent philosophers of our century (Martha Nussbaum), who recently underlined how the 'art' (not by chance defined as such) of judging also requires 'imagination', 'sympathy', 'fantasy' and 'emotion', not just 'cold' and 'arid' calculations[57].

The «figure of the poet judge» coined by Nussbaum (but with echoes dating back to the works of Hesiod)[58] frontally opposes the «figure of the robot judge». It represents a kind of 'counterbalance' to 'predictive justice', distancing itself «from the mechanistic, impersonal and inhuman character of calculative rationality, and from the economic utilitarianism that» the latter «underlies»[59]. Nussbaum shows the merits of 'poetic' justice; Delmas-Marty explains its reasons: «from the desire for rationality to logical delirium, slippages are always to be feared and formal validity can often serve as an alibi for the worst abuses»[60]. The possibility of abuses, in fact, in a system that would orient itself, in a predictive justice perspective, towards a kind of *stare decisis* unmitigated by the possibility of 'overruling'[61], would be just around the corner.

The truth, in short, is that, by coming to adopt (wholly or partly) 'predictive' models of justice, we would inevitably end up sacrificing on the altar of efficiency and of a misunderstood form of impartiality (in the progress of time) all those characteristics of 'humanity' and 'flexibility' that any conceivable and acceptable model of criminal 'justice' should necessarily continue to present (now and in the future). All this just to obtain a little more certainty, which would however be paid at the high price of a substantial transformation of 'law' into an essentially immutable datum.

A path that does not convince us at all[62]. Not that 'human' justice cannot still be improved to some extent (indeed, there is plenty of room for improvement)[63]. This does not mean, however, that one should agree with the idea that the time has come to definitively send the good old human judge 'into the attic', and to adopt a 'rigid' system, in which any possibility of 'adaptation' would in fact be precluded, since: (a) man himself (with all his

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[57] See M.C. Nussbaum, *Giustizia poetica. Immaginazione letteraria e vita civile*, Milano, 2012, *passim*. On the importance of emotions in judgement (of which the machine is devoid), however, also insist A. Punzi, *Difettività e giustizia aumentata. L'esperienza giuridica e la sfida dell'umanesimo digitale*, in *Ars interpretandi*, 2021, p. 121, Kostoris, *Predizione*, *supra* fn. 6, at p. 8-9; J. Nieva-Fenoll, *Intelligenza artificiale e processo*, Torino, 2019, p. 19; O. Barral, *L'émotion du juge*, in *Les cahiers de la justice*, 2014, p. 73-77.

[58] Cf. F. Di Marzio, *Giudici divoratori di doni. Esiodo, alle origini del diritto*, Milano, 2021, p. 177 ff.

[59] Cf. J.-P. Pierron, *De l'urgence de la poésie en droit ou pourquoi ne peut-on pas robotiser la justice? Le juge-poète, une lecture de Martha Nussbaum*, in *Les cahiers de la justice*, 2018, p. 378.

[60] See M. Delmas-Marty, J.-F. Coste, *Logiques non-standard et droit: l'exemple des droits de l'homme*, in *Séminaire de Philosophie et Mathématiques*, 5, 1994, p. 12.

[61] That the use of algorithms would prevent any possibility of overruling is well emphasised by A. Jean, *Les algorithms font-ils la loi?*, Paris, 2022, p. 174.

[62] And to tell the truth, it does not seem to convince even some experts in the field, as A. Jean, *Les algorithms*, *supra* fn. 61, p. 166, 176 ff., whose conclusions seem to acquire even more relevance as they come not from a jurist, but from one of the leading experts in algorithmic science. In a similar vein cf. also A. Christin, *Metrics at Work. Journalism and the Contested Meaning of Algorithms*, Princeton, 2020.

[63] Cf. M.C. Nussbaum, *supra* fn. 57, at p. 278, notes, e.g., that judges «must improve not only their technical skills, but also their skills as human beings». Similarly, cf. O. Barral, *supra* fn. 57, at p. 77. The book of D. Kahneman, O. Sibony, C.R. Sunstein, *supra* fn. 10, at p. 433 ff., then, provide multiple suggestions for better and less 'noisy' human decision-making. To give more coherence and stability to jurisprudence (at least in civil law system), and to prevent the generation of frequent overruling *in malam partem* (and perhaps even *in bonam partem*), one could finally think of enhancing incisive forms of binding judicial precedents (cf. the literature cited in fn. 5). In short, there seems to be no shortage of room for improvement, while remaining firmly anchored to an intrinsically 'human' justice.

innate characteristics of fragility, humanity, imagination and empathy) still seems to be the only suitable candidate for judging the responsibilities of his fellow human beings (especially when it comes to criminal matters)[64]; (b) the ability of a system to adapt to the specifics of the concrete case (without giving rise to an arbitrary application of the laws) gives a measure of the rate of 'humanity' and 'equity' that can really be attributed to it.
Humans undoubtedly still have much to offer to criminal justice, and it would be totally unwise to even encourage the creation of those conditions that might in the future easily lead to their ultimate 'capitulation'[65].

[64] In addition to Greco's cited paper, cf.: B. Barraud, *Un algorithme capable de prédire les décisions des juges: vers une robotisation de la justice?*, in *Les cahiers de la justice*, 2017, p. 134; P. Lumborso, *Je réclame justice! Plaidoyer pour une justice humaine*, Paris, 2022, p. 141 s.; P. Enders, *Einsatz*, *supra* fn. 13, at p. 723; S. Barona Vilar, *Algoritmización*, *supra* fn. 9, at p. 652 ff., p. 662.

[65] We therefore share the idea expressed by Greco, *supra* fn. 13, at p. 51, 63 e 66, that even a merely 'auxiliary' use of 'algorithmic' tools (at least to decide) should hopefully be avoided. After all, as has also been observed recently, «the brain is like a muscle: it needs to be exercised. Either you use it, or you lose it». The risk we run by relying on algorithms to make judicial decisions (even if we limit ourselves only to the most 'trivial' ones, because when faced with 'difficult', 'exceptional' cases, human intelligence still seems to have something to say, even when compared with A.I.), we seriously risk losing essential brain capacities for the future, as is already happening with 'spatial reasoning', which is seriously compromised by the use of GPS that we all do on a daily basis [cf. G. Gigerenzer, *Perché l'intelligenza umana batte ancora gli algoritmi*, Milano, 2023, p. 272-275]. From there, the step to entirely devolving the task of 'judging' to the machine would become dangerously short.