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THE EUROPEAN COURTS FACED WITH THE UNKNOWNS OF PREDICTIVE JUSTICE[**]

ABSTRACT. *First of all, this paper considers the notion of predictive justice, assessing the new possibilities it opens up and, at the same time, the potential dangers associated to the application of algorithmic computer tools to the legal field: especially, upheaval of the system and hierarchy of the sources of law, algorithmic bias and the black box problem. These issues must be considered distinguishing the use of predictive justice by the judges from its use by the parties, their lawyers and legal advisors. Then, the paper focuses on the European Court of Human Rights and on the Court of Justice of the European Union, wondering how the introduction of Artificial Intelligence tools could affect the operations and the procedures of such judges, taking in account their peculiarities and, as for the EU Court, the variety of its competences.*

CONTENT. 1. What is predictive justice? – 2. Prospects of employment of predictive justice before the European Court of Human Rights – 3. Prospects of employment of predictive justice before the Court of Justice of the European Union

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IN THE RIVERS north of the future
I cast the net, that you
hesitantly burden
with stone-written
shadows.
(Paul Celan, from *Breathturn*)

1. What is predictive justice?

The capability to grant a certain degree of rational predictability is paramount for the success and the effectiveness of every legal order and, particularly, as pointed out by Weber[1], for the stability of the legal orders that accompany modern (capitalist) societies, because rational calculability – through clarity and coherence both in lawmaking and in case law[2] – is the necessary ground for business. Legal doctrine is aware of it for a long time now[3], and contemporary debate about predictive justice particularly focuses on how certain cutting-edge Artificial Intelligence technologies, such as machine learning and natural language processing, analyze through complex algorithms a large number of judicial decisions, in order to make probabilistic projections on the outcome of new legal cases and help the parties and even the judge make the (allegedly) best choices. According to the most radical views, algorithmic decisions, realized through these and other AI technologies, should even replace the role of the judge, or a part of it. These are developments not only concerning the common law world, traditionally based on a case-by-case inductive approach, but also the civil law legal orders, where the real role of case law as a substantial source of law cannot anymore be denied[4]. In a few words, assuming an easy accessibility of the judicial decisions, predictive justice is an in-depth computer analysis by algorithms of a massive

[1] M. Weber, *Economy and Society: an outline of interpretive sociology*, vol. 2, University of California Press, Berkeley 1978, pp. 809 ff.

[2] N. Irti, *Un diritto incalcolabile*, Giappichelli, Torino 2016, p. 5.

[3] Cf. O.W. Holmes, *The Path of the Law*, in «Harvard Law Review», vol. 10, n. 8, 1897, pp. 457 ff.

[4] E. Calzolaio, *Il ruolo della giurisprudenza come fonte normativa tra* civil law *e* common law, in Liber amicorum *Luigi Moccia*, Roma Tre Press, Roma 2021, pp. 175 ff.

scale of legal precedents, an analysis aimed to calculate and preempt the probabilities of the outcomes of present litigation[5], reducing the uncertainty of the judgement[6] (and possibly avoiding and preventing the judgment itself).

The idea of using mathematical models and calculation methods to compute the probability of different possible outcomes of litigation was not previously unknown[7], but contemporary computer science enormously increases the opportunities of calculation at accessible costs, offering legal actors an appearance of restored certainty in the middle of a confusing time of multiplication and overlapping of the formal and of the *de facto* (national, transboundary, global, hard law, soft law, etc.) sources of law. Predictive justice poses several ethical and regulatory problems, more serious when the debate concerns tools available to use by judicial[8] and police[9] authorities (or even

[5] See also the definition of A. Garapon, J. Lassègue, *Justice digitale*, PUF, Paris 2018, p. 219: «La justice prédictive désigne *stricto sensu* la capacité prêtée aux machines de mobiliser rapidement en langage naturel le droit pertinent pour traiter une affaire, de le mettre en contexte en fonction de ses caractéristiques propres (lieu, personnalité des juges, des cabinets d'avocats, etc.) et d'anticiper la probabilité des décisions qui pourraient intervenir. L'expression est devenue générique en renvoyant à toutes les innovations numériques dans le domaine du droit»; S. Lebreton-Derrien, *La justice prédictive. Introduction à une justice «simplement» virtuelle*, in R. Sève (editor), *La justice prédictive*, in «Archives de philosophie du droit», t. 60, Dalloz, Paris 2018, pp. 4-5: «la notion de justice prédictive qui s'est imposée, mais qui reste diversement définie, est toujours consubstantielle de celle d'algorithme, tout aussi nouvellement entrée dans notre quotidien et définie comme une suite finie et non ambiguë d'instructions permettant d'aboutir à un résultat à partir de données fournies en entrée, soit par un développement humain, soit par la machine elle-même pour l'algorithme d'apprentissage. Pour fonctionner, l'algorithme doit donc être exprimé dans un langage informatique, transcrit en un programme et exécuté dans un logiciel ou compilé sous la forme d'une application. Algorithmique, cette justice prédictive semble faire appel tantôt aux statistiques, tantôt aux équations mathématiques»; cf. A. Santosuosso, G. Pinotti, *Bottleneck or Crossroad? Problems of Legal Sources Annotation and Some Theoretical Thoughts,* in «Stats», vol. 3, n. 3, 2020, pp. 376 ff.

[6] See B. Dondero, *Justice prédictive: la fin de l'aléa judiciaire?,* in «Recueil Dalloz», n. 10, 2017, pp. 532 ff.; Y. Gaudemet, *La justice à l'heure des algorithmes. À propos de justice prédictive*, in «Revue du droit public et de la science politique en France et à l'étranger», n. 3, 2018, pp. 651 ff.; see also A. Santosuosso, G. Sartor, *La giustizia predittiva: una visione realistica*, in «Giurisprudenza Italiana», n. 7, 2022, pp. 1760 ff.

[7] See for ex. L. Loevinger, *Jurimetrics: the Next Step Forward*, in «Minnesota Law Review», vol. 33, n. 5, 1949, pp. 455 ff.; E. Barbin, Y. Marec, *Les recherches sur la probabilité des jugements de Simon-Denis Poisson*, in «Histoire & Mesure», vol. 2, n. 2, 1987, pp. 39 ff.

[8] About the USA, see R. Courtland, *Bias Detectives: the researchers striving to make algorithms fair*, in «Nature», vol. 558, n. 7710, 2018, pp. 357-360; I. De Miguel Beriaìn, *Does the Use of Risk Assessments in Sentences Respect the Right to Due Process? A critical analysis of the Wisconsin v. Loomis ruling*, in «Law, Probability and Risk», vol. 17, n. 1, 2018, pp. 45 ff.; G. Resta, *Governare l'innovazione tecnologica: decisioni algoritmiche, diritti digitali e principio di uguaglianza*, in «Politica del diritto», n. 2, 2019, pp. 199 ff.; D. Abu-Elyounes, *Contextual Fairness: a legal and*

replacing them), particularly in the criminal law field, where the fundamental liberties of the individual are implied. In fact, the main worries concerning the replacement (in whole or in part) of the self-critical judgements of reason by the algorithmic rules of rationality[10] are about: the difficulties in the selection (e.g., include or not to include old and very old cases? And cases judged before the advent of the democratic regimes? And the concurring and dissenting opinions? etc.) and in the hierarchy (how to weight decisions of judges of different levels of jurisdiction?) of the relevant precedents[11]; the margin of error and the possibility of cyber-attacks[12]; the falseness of the idea that non-human AI agents are not affected by passions and ideologies, while algorithms are as biased as the people who trained them, but in a less transparent and accountable way[13]; the opacity in the functioning of the algorithms[14]: the black box problem not only arises

policy analysis of algorithmic fairness, in «Illinois Journal of Law, Technology and Policy», n. 1, 2020, pp. 1 ff.; K. Hartmann, G. Wenzelburger, *Uncertainty, Risk and the Use of Algorithms in Policy Decisions: a case study on criminal justice in the USA*, in «Policy Sciences», vol. 54, n. 2, 2021, pp. 269 ff.; F. Lagioia, R. Rovatti, G. Sartor, *Algorithmic Fairness through Group Parities? The case of COMPAS-SAPMOC*, in «AI & SOCIETY», 2022; about China, see D. Todaro, *Efficienza e controllo: l'uso della tecnologia nei tribunali cinesi*, in «Mondo cinese: rivista di studi sulla Cina contemporanea della Fondazione Italia Cina», n. 167: year XLVII, n. 1, «Codice cinese: Xi e il governo della legge», 2019, pp. 67 ff.; J. Peng, W. Xiang, *The Rise of Smart Courts in China: Opportunities and Challenges to the Judiciary in a Digital Age*, in «Nordic Journal of Law and Social Research», n. 9, 2019, pp. 345 ff.; R.E. Stern *et al.*, *Automatic Fairness? Artificial Intelligence in the Chinese Courts*, in «Columbia Journal of Transnational Law», 2021, pp. 515 ff.; about the French project DataJust, aiming to elaborate a jurisprudential database serving as point of reference for judges, lawyers and other legal professionals on the amount of compensations for bodily harm, see F. G'sell, *Les progrès à petits pas de la «justice prédictive» en France*, in «ERA Forum», 2020, pp. 299 ff.; about the legislative proposal for a new statutory procedure for certain criminal cases to be dealt with via an automated online process, in England, see G. Cowie *et al.*, *Judicial Review and Courts Bill 2021-22*, House of Commons Library 2021, pp. 33 ff.

[9] About the English legal order, see M. Oswald *et al.*, *Algorithmic Risk Assessment Policing Models: lessons from the Durham HART model and "Experimental" proportionality*, in «Information and Communications Technology Law», n. 2, 2018, pp. 223 ff.

[10] G. Noto La Diega, *Against the Dehumanisation of Decision-Making*, in «JIPITEC», n. 1, 2018, p. 4.

[11] E. Battelli, *La decisión robótica: algoritmos, interpretación y justicia predictiva*, in «Revista de derecho privado», n. 38, 2020, pp. 61-62; R. Mattera, *Decisione negoziale e giudiziale: quale spazio per la robotica?*, in «La nuova giurisprudenza civile commentata», n. 1, 2019, p. 207.

[12] É. Filiol, *Les risques concernant l'utilisation des algorithmes dits prédictifs dans le domaine sensible de la justice*, in R. Sève (editor), *La justice prédictive*, in *Archives de philosophie du droit*, t. 60, Dalloz, Paris 2018, pp. 150-151.

[13] Noto La Diega, *Against the Dehumanisation of Decision-Making*, cit., p. 33.

[14] G. Fioriglio, *La Società algoritmica fra opacità e spiegabilità: profili informatico-giuridici*, in «Ars Interpretandi»,

from the intentional lack of transparency of the designer[15], but also from the objective complexity of these mechanisms for the public of non-computer scientists[16], leading people to a 'blind deference' to the machine's decision, believing its answer as a transcendental truth, instead of a subjective one[17]; the fact that the judge, mostly in the civil law world, has to apply not only punctual norms, but also more discretionary legislative principles and general clauses[18]; the fact that algorithms tend to equate several kinds of factual inputs (legal norms, precedents, facts and other elements of the folder, temperament of the judge, etc.) obtained from the mass of jurisprudential big data, associating all these elements in mathematical correlations stranger to the legal concept of causal link and to the legal hierarchy of the sources of law[19]; the social legitimacy of the judicial decision, product of the wisdom and the experience of the judge, who must justify the reasons of it, which, at a later time, might be evaluated by a higher judge[20]; and the democratic legitimacy of the judicial decision, challenged by the threat of a solely technical legitimacy[21]; finally, how to face the existing contradictions in case-law and how to avoid to stop any possible evolution and democratic pluralism of the jurisprudence through the creation of an indissoluble bond to the previous decisions?[22]

n. 1, 2021, pp. 53-67.

[15] A.M. Carlson, *The Need for Transparency in the Age of Predictive Sentencing Algorithms*, in «Iowa Law Review», vol. 103, 2017, pp. 303 ff.

[16] Oswald *et al.*, *Algorithmic Risk Assessment Policing Models: lessons from the Durham HART model and "Experimental" proportionality*, cit., pp. 233-234; D.R. Desai, J.A. Kroll, *Trust but Verify: a guide to Algorithms and the Law*, in «Harvard Journal of Law and Technology», vol. 31, n. 1, 2018, pp. 7 ff. More in general, see H. Shah, *Algorithmic Accountability*, in «Philosophical Transactions A», 2018, 376; F. Pasquale, *The Black Box Society. The Secret Algorithms That Control Money and Information*, Harvard University Press, Cambridge (Massachusetts) and London 2015.

[17] A. Harkens, *The Ghost in the Legal Machine: Algorithmic Governmentality, Economy, and the Practice of Law*, in «Journal of Information, Communication & Ethics in Society», vol. 16, issue 1, 2018, pp. 16 ff.

[18] M. Luciani, *La decisione giudiziaria robotica*, in «Rivista AIC», n. 3, 2018, p. 890.

[19] Garapon, Lassègue, *Justice digitale*, cit., pp. 230-231.

[20] R. Bichi, *Intelligenza Artificiale tra "calcolabilità" del diritto e tutela dei diritti*, in «Giurisprudenza italiana», n. 7, 2019, pp. 1777-1778.

[21] Garapon, Lassègue, *Justice digitale*, cit., pp. 214-218; Y. Meneceur, C. Barbaro, *Artificial Intelligence and the judicial memory: the great misunderstanding*, in «AI and Ethics», vol. 2, issue 2, 2022, pp. 269-275.

[22] Dondero, *Justice prédictive: la fin de l'aléa judiciaire?*, cit., pp. 537-538; Battelli, *La decisión robótica: algoritmos, interpretación y justicia predictiva*, cit., p. 62.

And could not, through such AI proceedings, a misinterpretation (or, in any case, a disputable interpretation) of one or more judges become more authoritative than the law itself, contradicting even the fundamentals of the *État de droit*? It is important to remember that «the scientific and legal knowledge, the capacity to collect, classify and compare data, are important skills for solving the case, but they need to be accompanied by the ability of the judge to interpret law. This is a human ability, as it needs awareness of the contextual dimension of law; in other words, it needs humanity: a free will that impacts with the concrete facts of the case together with the responsibility to seek justice for that case»[23]. In any case, a fundamental innovation in the system of the sources of law should pass through the constitutional democratic mechanisms and should not be introduced in the judicial procedure as a neutral, impersonal, objective product of technological innovation. In fact, «AI algorithms cannot replace social or legal reforms that need to be made in order to cultivate a more just society, but collaboration between all actors in the field can at least ensure that we are on the right path»[24].

Utilizations of predictive algorithms by the parties (and their lawyers and other legal advisers) involve less critical issues, as calculators just make more precise and 'scientific' something that has always, empirically, been the work of experienced legal professionals. Nevertheless, in countries where such kind of services are already being offered to the public by the so-called LegalTechs (legal technology start-ups[25]), worries among authors and judicial institutions concern inequalities[26], personal data protection (requiring a more or less intense anonymization of the decisions[27] also to comply with

[23] L. Vagni, *The Role of Human Judge in Judicial Decisions: preliminary remarks on legal interpretation in the age of Artificial Intelligence*, in E. Calzolaio (editor), *La decisione nel prisma dell'intelligenza artificiale*, CEDAM, Padova 2020, p. 200.

[24] Abu-Elyounes, *Contextual Fairness: a legal and policy analysis of algorithmic fairness*, cit., p. 54.

[25] For this notion, see, more in depth, the *Charte Éthique pour un marché du droit en ligne et ses acteurs*, 2017, <https://www.charteethique.legal/charte-ethique>, accessed 22/12/2022, art. 1.

[26] Because, at least in the next future, predictive justice services are likely to be accessible and affordable only for the wealthiest legal actors on the market: Garapon, Lassègue, *Justice digitale*, cit., p. 243.

[27] O. Cachard, *Aux grands arrêts, les juristes reconnaissants… Brefs propos sur l'«anonymisation» des décisions de justice*, in «Recueil Dalloz», 2004, pp. 29 ff.; C. Bigot, *Anonymisation, données sensibles et droit à l'information: à la recherche d'un équilibre entre la protection des données personnelles et la liberté de l'information dans le domaine judiciaire*, in «Légipresse (hors série), Le cours de la justice et la liberté de l'information: comment concilier des impératifs contradic-

the European GDPR)[28], the lack of regulation and control of the reliability and of the neutrality of the AI-based algorithms offered to the legal professionals[29], and opportunistic behaviors of forum shopping based on systematically profiling the judges[30]. One may wonder how the implementation in the market of legal services of these technologies, implying both sustaining and disruptive functions for the lawyers, will defy and change the legal professions and their ethics[31]. In fact, neither the real potential advantages of predictive justice, providing legal actors, including the judges, with a more complete knowledge of the precedents and perhaps reducing the judicial litigation, should make legislators forget the hazards and the desirable limits of the utilization of such algorithms in the legal field – as their responsible utilization is paramount – nor such hazards should make the legislators forget the advantages and introduce irrational, hasty and exorbitant prohibition rules, as it currently seems to be the case of France. Indeed, in this country, the law[32] currently prohibits and punishes as a criminal offence any activity of profiling and classifying judges and chancellor's officers, through data elaborations aiming to evaluate, analyze, compare or predict their professional conduct, real or presumed. Several authors criticize such an untransparent choice[33], in contrast to the general French tendency towards the open data in the field

toires», proceedings of the forum of 9/12/2020, 2021-1, 2021, pp. 71 ff.

[28] See É. Buat-Ménard, P. Giambiasi, *La mémoire numérique des décisions judiciaires*, in «Recueil Dalloz», n. 26, 2017, p. 1485; G. Grasso, *Il trattamento dei dati di carattere personale e la riproduzione dei provvedimenti giudiziari: dal Codice della privacy all'attuale disciplina*, in «Foro italiano», V, 2018, pp. 349-353.

[29] Gaudemet, *La justice à l'heure des algorithmes. À propos de justice prédictive*, cit., pp. 651 ff.

[30] P. Deumier, *L'*open data *des magistrats: une petite histoire législative*, in «RTDciv.», 2019, pp. 72 ff.

[31] Cf. R. Susskind, *Tomorrow's Lawyers: an introduction to your future*, Oxford University Press, Oxford 2017; see also A. Santosuosso, O.R. Goodenough, M. Tomasi (editors), *The Challenge of Innovation in Law: the impact of technology and science on legal studies and practice*, Pavia University Press, Pavia 2015; K.D. Ashley, *Artificial Intelligence and Legal Analytics: new tools for law practice in the digital age*, Cambridge University Press, Cambridge 2017.

[32] Art. 33 of the law n. 2019-222 of 23 Mars 2019 reforming the justice.

[33] T. Perroud, *L'anonymisation des décisions de justice est-elle constitutionnelle? Pour la consecration d'un principe fondamental reconnu par les lois de la République de publicité de la justice*, in «Le blog de Jus Politicum», <https://blog.juspoliticum.com/2019/03/11/lanonymisation-des-decisions-de-justice-est-elle-constitutionnelle-pour-la-consecration-dun-principe-fondamental-reconnu-par-les-lois-de-la-republique-de-publicite-de-la-justice/>, 2019, accessed 22/12/2022; W. Zagorski, *Law as a Set of Decisions: on merits and dangers of legal realism through the prism of big data*, in E. Calzolaio (editor), *La decisione nel prisma dell'intelligenza artificiale*, CEDAM, Padova 2020, p. 181; L.

of justice[34], and they note that the risk of forum shopping is overestimated in relation to the existing processual rules on competence[35].

2. Prospects of employment of predictive justice before the European Court of Human Rights

In this paragraph and in the next one, it will be analyzed whether there are prospects of employment of predictive justice tools before the European Court of Human Rights and the Court of Justice of the European Union, consistently with the institutional role of these two supranational courts. First of all, it is important to report an experiment of predicting judicial decisions of the European Court of Human Rights through natural language processing, whose results were published in 2016. This Court aims to ensure the observance of the engagements undertaken by the member states of the European Convention of Human Rights and its protocols, with jurisdiction extended to all matters concerning their interpretation and application[36]. The Court may receive applications[37], for breach of its provisions, after all domestic remedies have been exhausted, by another member state, or, what is more innovative in relation to international law, from any person, nongovernmental organization or group of individuals claiming to be the victim of a violation by a member state. Applying predictive algorithms to the case law of such particular judge, the researchers aimed to predict whether a particular article of the Convention had been violated, given textual evidence extracted from a case, which comprises of specific parts pertaining to the facts, the relevant applicable law and the arguments presented by the parties involved. In this

JANICOT, *L'anonymisation du juge*, in P. Bourdon (editor), *La communication des décisions du juge administratif*, LexisNexis, Paris 2020, pp. 85-87.

[34] About this tendency, see L. CADIET (editor), Report to the Justice Department, *L'*open data *des décisions de justice. Mission d'étude et de préfiguration sur l'ouverture au public des décisions de justice*, 2017.

[35] F. ALHAMA, *Vers une plus grande accessibilité des décisions rendues par les juridictions administratives*, in «RFDA», 2019, p. 703.

[36] Art. 32 of the Convention.

[37] Artt. 33 ff.

way, they wanted to corroborate their hypothesis that the textual content and the different parts of a case are important factors that influence the outcome reached by the Court, on the assumption that there is enough similarity between certain chunks of the texts of the published judgments (in particular, the procedure; the facts: circumstances of the case and relevant law other than articles of the Convention; the law: the alleged violation of an article of the Convention, comprising parties' submissions and legal reasons that purport to justify the specific outcome reached by the Court; the outcome of the case: a decision to the effect that a violation of a Convention article either did or did not take place[38] and of the applications lodged with the Court and/or briefs submitted by parties for pending cases[39]. Predictive tasks were concretely based on the text of published judgments rather than lodged applications or briefs simply because the researchers did not have access to those documents. Their model resulted to be able to predict the decisions of the Court with an accuracy of 79% on average (75% for cases based on art. 3 of the Convention, about prohibition of torture; 84% on art. 6, about right to a fair trial; 78% on art. 8, about right to respect for private and family life): the authors also interpreted their results in the sense that «the 'facts' section of a case best predicts the actual court's decision, which is more consistent with legal realists'[40] insights about judicial decision-making. We also observe that the topical content of a case is an important indicator whether there is a violation of a given Article of the Convention or not»[41]. A more recent study showed the results

[38] See, in particular, N. Aletras *et al.*, *Predicting Judicial Decisions of the European Court of Human Rights: a natural language processing perspective*, in «PeerJ Computer Science», October 2016, p. 4: «The judgments of the Court have a distinctive structure, which makes them particularly suitable for a text-based analysis. According to Rule 74 of the Rules of the Court, a judgment contains (among other things) an account of the procedure followed on the national level, the facts of the case, a summary of the submissions of the parties, which comprise their main legal arguments, the reasons in point of law articulated by the Court and the operative provisions. Judgments are clearly divided into different sections covering these contents, which allows straightforward standardisation of the text and consequently renders possible text-based analysis».

[39] *Ivi*, p. 2, pp. 4-6.

[40] About predictive justice and legal realism theories, cf. Zagorski, *Law as a Set of Decisions: on merits and dangers of legal realism through the prism of big data*, cit., pp. 175 ff.

[41] Aletras *et al.*, *Predicting Judicial Decisions of the European Court of Human Rights: a natural language processing perspective*, cit., p. 2; see also p. 11: «The consistently more robust predictive accuracy of the "Circumstances" subsection suggests a strong correlation between the facts of a case, as these are formulated by the Court in this subsection,

of another experiment of text-based approach and language analysis of the judgments of the Court, treated as quantitative data. It was realized increasing the number of the envisaged articles of the Convention (nine instead of three) and of the cases considered per article, and submitting to machine learning parts of the case different from the first paper (in particular, excluding the 'law' section, which sometimes explicitly mentions the verdict): the final score of the predictions was similar to the other study (77% vs 79%)[42]. In addition, interestingly, in this paper, predictions were also made, about future cases, on the base of the past cases, resulting in a lower classification performance (from 58% to 68%, depending on the gap between the training and testing data), and other predictions of outcomes were made, only based on the names of the judges who decide the cases, achieving a relatively high classification performance (average accuracy of these predictions: 65%)[43].

It is the opinion of the authors of the paper of 2016 that building a more complete text-based predictive system of judicial decisions could offer lawyers and judges a useful assisting tool, in order to identify cases and extract patterns that correlate with certain outcomes and to develop prior indicators for diagnosing potential violations of specific articles in lodged applications and eventually prioritize the decision process on cases where violation seems very likely, potentially reducing the significant delays of the Court[44]. Their viewpoint should be accurately evaluated, particularly in the light of the supranational institutional function of the Court. As for the lawyers and other professionals offering legal advice to potential claimants, the support of computer predictive systems, elaborated on the base of a full database of the past decisions of the Strasbourg Court, could actually be a precious tool to calculate in advance the chances

and the decisions made by judges. The relatively lower predictive accuracy of the "Law" subsection could also be an indicator of the fact that legal reasons and arguments of a case have a weaker correlation with decisions made by the Court. However, this last remark should be seriously mitigated since, as we have already observed, many inadmissibility cases do not contain a separate "Law" subsection».

[42] M. Medvedeva, M. Vols, M. Wieling, *Using Machine Learning to Predict Decisions of the European Court of Human Rights*, in «Artificial Intelligence and Law», vol. 28, 2020, pp. 237-266.

[43] *Ivi*, pp. 257-259, 259-262.

[44] Aletras *et al.*, *Predicting Judicial Decisions of the European Court of Human Rights: a natural language processing perspective*, cit., p. 3.

of success of a claim in front of the judge and help the client decide whether or not to go ahead with a lawsuit which might cost him much time and economic effort.

With regard to the side of the judges of this Court – who, of course, come from different legal orders, of civil law and common law – the matter is probably more sensitive and must be addressed very cautiously. This is true in general, as already mentioned, but even more if we bear in mind the function of the European Court of Human Rights. In fact, it has last instance jurisdiction, originating from the Convention of 1950, but with a larger scope than an ordinary international judge only accessible by states to settle their disputes. The Strasbourg Court, though, is directly accessible to the individuals, allegedly victims of violations from a member state of the treaty, but its political legitimacy is fragile, as it does not descend from the democratic sovereignty of a state and it is not part of a system of separation of powers, at least in the traditional sense[45]. Thus, based on an international treaty, the authority of the Court is much sensitive to political events, to policy-driven arguments and to the evolution of the diplomatic relationships among the member states, and the only way it has to solidify its position is not *ratione auctoritatis*, but *auctoritate rationis*, through the quality, the fairness and the transparence of its procedures and of its decisions[46]. This is why every proposition of innovations in the procedures of the Court that aims to increase the utilization of technologies often criticized for the black box problem, for the risks of excessive deference of the judges towards the precedents, for the algorithmic bias, etc., should be very attentively assessed and tested before implementation, adopting, meanwhile, an approach of self-restraint. The current attitude of the Court in respect of its own case law is a delicate and pragmatic compromise between civil law and common law cultures[47] implying a certain doctrine of precedent[48] (strengthened by the

[45] About the independence, accountability, transparency and legitimacy issues of the ECHR, cf. B. Çali, S. Cunningham, *Judicial Self Government and the Sui Generis Case of the European Court of Human Rights*, in *German Law Journal*, vol. 19, n. 7, 2018, pp. 1977 ff.

[46] Cf. S. Dothan, *Judicial Tactics in the European Court of Human Rights*, in «Chicago Journal of International Law», vol. 12, n. 1, 2011, pp. 115-142; M. Demetriou QC, *Does the CJEU Need a New Judicial Approach for the 21st Century? A CJEU User's Perspective*, paper presented at the conference *A More Literal and Predictable Approach for the Court of Justice of the EU?*, organized by the Bingham Centre for the Rule of Law, 2 November 2015.

[47] Cf. E. Lambert, *Les effets des arrêts de la Cour européenne des droits de l'homme. Contribution à une approche pluraliste du droit européen des droits de l'homme*, Bruylant, Bruxelles 1999, pp. 304-305: «les effets des arrêts de la CourEDH

amendments of 2004 to the Convention) which is applied by carefully using the techniques of distinguishing and openly departing from earlier decisions for significantly relevant reasons[49]. On the one hand, computer algorithmic tools merely facilitating a better knowledge and classification of the case law by the judges of Strasbourg seem to be advisable to improve the speed, the quality and the coherence of their judicial activities and decisions, whose 'bureaucratic' style has been accentuated by the increase in number of cases[50]. But, on the other hand, tools more actively susceptible to influence

ne peuvent pas relever du schéma classique obligatoire/non obligatoire. Cette vision, critiquée pour sa simplicité et sa radicalité, ne correspond plus à l'analyse pluraliste des rapports entre l'ordre européen et les ordres internes. Il faut lui substituer le concept d'autorité, susceptible de gradation. Cette gradation dépend de plusieurs facteurs comme la qualité intrinsèque de la décision et l'existence d'une "jurisprudence constante"»; p. 398: «la Cour EDH […] ne s'estime pas liée par ses propres jugements et elle recourt librement aux revirements de jurisprudence. Cette affirmation doit être immédiatement nuancée; la CourEDH recourt très largement à la technique de l'auto-référence, laquelle comprend des réalités diverses qu'il faudra distinguer».

[48] E. Calzolaio, *La Giurisprudenza della Corte Europea dei Diritti dell'Uomo nella prospettiva della comparazione giuridic*a, in «Rivista critica del diritto privato», n. 4, 2015, pp. 633-634; about the precedent in the ECHR, see also, *ex ceteris*, K. Lucas-Alberni, F. Sudre, *Le revirement de jurisprudence de la Cour européenne des droits de l'homme*, Bruylant, Bruxelles 2009.

[49] For instance, reflecting societal changes: see L. Wildhaber, *Precedent in the European Court of Human Rights*, in P. Mahoney *et al.* (editors), *Protection des droits de l'homme: la perspective européenne / Protecting Human Rights: The European Perspective: mélanges à la mémoire de/studies in memory of Rolv Ryssdal*, Heymanns, Köln 2000, pp. 1530-1531; but also to surmount uncertainties of interpretation in the case law of the Court and to meet the need to satisfy the increasing litigation on a key issue: see Calzolaio, *La Giurisprudenza della Corte Europea dei Diritti dell'Uomo nella prospettiva della comparazione giuridic*a, cit., pp. 631-632; see also J. Mowbray, *An Examination of the European Court of Human Rights' Approach to Overruling its Previous Cases*, in «Human Rights Law Review», 2009, pp. 179 ff., n. 2, focusing on the Court's reluctance to expressly acknowledge that it is overruling established case law and on its failure to always provide adequate justifications of the social or scientific developments underpinning its revised jurisprudence.

[50] Calzolaio, *La Giurisprudenza della Corte Europea dei Diritti dell'Uomo nella prospettiva della comparazione giuridic*a, cit., pp. 630-631. The modification of 2004 of the procedural rules established in the Convention lets the Court focus on the most relevant and the less obvious cases, relying on single-judge formations (which may declare inadmissible or strike out of the Court's list of cases an application, where such a decision can be taken without further examination, art. 27 of the Convention) and three-judges committees to filter and to decide the rest of them. About these committees, see art. 28: «Competence of Committees. 1. In respect of an application submitted under Article 34, a committee may, by a unanimous vote, […] (b) declare it admissible and render at the same time a judgment on the merits, if the underlying question in the case, concerning the interpretation or the application of the Convention or the Protocols thereto, is already the subject of well-established case-law of the Court»; cf. *Protocol No. 14 to the Convention for the Protection of Human Rights and Fundamental Freedoms, amending the control system of the Convention - Explanatory Report - [2004] COETSER 1 (13 May 2004)*: «Paragraphs 1 and 2 of the amended Article 28 extend the powers of three-judge committees. Hitherto, these committees could, unanimously, declare

the attitude of the Court, radically changing its approach towards case law or even potentially weakening the independence and the transparency of the trial, and thus risking weakening the prestige of the Court among the member states and their citizens, and consequently the compliance of the states towards its decisions, should hopefully be avoided. In any case, relevant procedural innovations, potentially affecting the substance of the rights granted by the Convention and its protocols, should be subject to the greatest debate, not only involving professionals and legal doctrine, but also the diplomacies of the member states, in order to be fully accepted by all parties involved.

3. Prospects of employment of predictive justice before the Court of Justice of the European Union

With regard to the Court of Justice of the European Union[51], the collegiality and the impersonality of its judgements tend to minimize the space devoted in the text to the detailed analysis of the facts, generally making it more difficult to fully understand the reasonings of the judges[52] and probably, in particular, also to apply predictive algorithms to the case law[53]. The variety of the most important competences of the

applications inadmissible. Under the new paragraph 1.b of Article 28, they may now also, in a joint decision, declare individual applications admissible and decide on their merits, when the questions they raise concerning the interpretation or application of the Convention are covered by well-established case-law of the Court. Well-established case-law normally means case-law which has been consistently applied by a Chamber. Exceptionally, however, it is conceivable that a single judgment on a question of principle may constitute well-established case-law, particularly when the Grand Chamber has rendered it. This applies, in particular, to repetitive cases, which account for a significant proportion of the Court's judgments (in 2003, approximately 60%). Parties may, of course, contest the well-established character of case-law before the committee».

[51] Cf. the experiment related in M. Lippi *et al.*, *Claim Detection in Judgments of the EU Court of Justice*, in U. Pagallo *et al.* (editors), *AI Approaches to the Complexity of Legal Systems, AICOL International Workshops 2015-2017*, Springer, Cham 2018, pp. 513 ff.

[52] See Calzolaio, *Il valore di precedente delle sentenze della Corte di giustizia*, in «Rivista critica del diritto privato», n. 1, 2009, pp. 41 ff.

[53] Predictive tools applied to the decisions of the CJEU should also, in any case, possibly take in account the opinions of the Advocate general, because of their importance in the decision-making process of the Court and because of their greater clarity.

CJEU should be taken in account, in order to assess how predictive technologies might be used in the framework of the activities of the Court. Some of its tasks, for instance, resemble, at the European level, the usual tasks of a national administrative court, judging about claims against the EU institutions for annulment[54] and for failure to act[55], brought by the member states, the institutions themselves or any natural or legal person if the actions relate to a measure addressed to them. Thus, the utilization of predictive tools by the potential claimants (legal services of the states and of the EU institutions) and by law firms specialized in European law could help improve their services, even though, when considered by institutional actors, the effective decision to challenge the validity of the act or ask to make take an act is fundamentally a political decision. Predictive justice could also improve the services of legal firms with experience on disputes between the Union and its servants[56]. From the side of the judges, these issues are similar to the issues already analyzed speaking of the Strasbourg Court: it is important to look for a good equilibrium point between the wish to improve the knowledge of the precedents and the risk to surreptitiously introduce bias, opacities and to stop the evolution of the case law by crystallizing it. This same reasoning applies with even more necessary prudence for infringement procedures, against a national government for failing to comply with EU law, started by the European Commission or another member state[57]: in these procedures, the reasoning about the undeniable importance of case law coherence should not make forget the eminent importance of the specificities and of the context of the case, especially in the most delicate questions, for which the role of the European judge as political and diplomatic engineer of the single situation is paramount. As for actions for damages from any person or company who has had their interests harmed as a result of the action or inaction of the EU or its staff[58], the scarce number of claims makes it difficult to envisage them under the form

[54] Artt. 263-264 TFEU.

[55] Art. 265 TFEU.

[56] Art. 270 TFEU.

[57] Artt. 258 ff. TFEU.

[58] Artt. 268, 340 TFEU.

of big data analytics, while doing statistics seems to be quite easy through more traditional methods[59]. Finally, we should consider the judgments concerning reference for preliminary rulings about the interpretation of the Treaties, and the validity and interpretation of the European acts, when the national judge before which such a question is raised considers that a decision on the question is necessary to enable him/her to give judgment, compulsorily if it is a court or tribunal of a member state against whose decisions there is no judicial remedy under national law[60]. The peculiarities of this (para-constitutional) competence of the Court, resulting in a judgment where the interests of the parties of the judgment *a quo* are only indirectly involved and envisaged, could limit the economic attractiveness for the parties of the utilization of predictive tools. Furthermore, by its very nature, the subject of the judgment is more complex than the mere prevalence of a party over another, making it difficult, at least in some cases, to approach the question through an abrupt, univocal prediction. However, more precise knowledge of the precedents might give some help to the European judges – and to the national judges in their dialogue with the CJEU – through the development and implementation of computer tools optimizing the precision of case law search engines and their standards of categorization. In fact, also for preliminary rulings the Court tends to respect its own precedents[61], aiming at a uniform interpretation of the EU law[62], and, as a consequence, a good knowledge of the precedents is paramount for all the actors involved in the procedure.

More in general, perhaps more important than the procedural distinction among the different competences of the Court, we should envisage the variable weight of the political factor from one case to another, which do not necessarily only characterize infringement procedures[63]. In fact, the Court of Justice of the European

[59] In particular, highlighting the low rate of success of such actions: R. Mańko, EPRS (European Parliamentary Research Service), *Action for damages against the EU*, <https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/630333/EPRS_BRI(2018)630333_EN.pdf>, 2018, accessed 22/12/2022, p. 8.

[60] Art. 267 TFEU.

[61] Cf. art. 99 of the Rules of Procedure of the CJEU.

[62] See Calzolaio, *Il valore di precedente delle sentenze della Corte di giustizia*, cit., pp. 41 ff.

[63] See for ex., as a preliminary rule, CJEU, Joined Cases C-508/18 and C-82/19 PPU, judgment of 27 May 2019, about a European arrest warrant issued by a public prosecutor's office of a member state (Germany).

Union often applies general principles more than punctual norms, and it complicatedly justifies its decisions on the cumulative basis of purposive, systemic and literal arguments[64]. Therefore, the coherence of case law is fundamental to ensure a certain degree of legal certainty in the EU law and to foster the compliance of the states[65]. This is why the Court tends to frequently refer to its precedents and to rarely explicitly change its previous case law[66], adopting a high degree of formal standardization of its decisions[67], potentially suitable for the application of predictive technologies. However, some cases under the jurisdiction of the Court – for instance, with regard to the uncertain line between the competences of the Union and of the states, in the context of the recent tensions between the institutions of the EU and countries such as Hungary and Poland – require particularly strong considerations and mediations of policy, as, since the beginning of the European construction, the Court plays a cardinal – autonomously political – role in the establishment and evolution of the European political integration, as a pro-federalist policy-making, often beyond the limits of an explicit normative or even political mandate[68]. Furthermore, in order to render such decisions acceptable to the national level, the style of the Court is much focused on the importance of persuasion in the judicial discourse[69]. Hence, in many situations, the (political) substance tends to prevail over the standardized form, making it difficult to

[64] G. Beck, *The Legal Reasoning of the Court of Justice of the EU*, Hart Publishing, Oxford and Portland (Oregon), 2013.

[65] Cf. M. Cappelletti, D. Golay, *Judicial Branch in the Federal and Transnsational Union*, in M. Cappelletti, M. Seccombe, J.H. Weiler, *Integration through Law: Europe and the American federal experience*, vol. 1, book 2, De Gruyter, Berlin and New York 1986, p. 333: «unlike the American Supreme Court and the European Constitutional Courts, the Court of Justice has almost no powers that are not ultimately derived from its own prestige, intellectual and moral force of its opinions».

[66] J. Komárek, *Judicial Lawmaking and Precedent in Supreme Courts*, in «LSE Working Papers», 4/2011, 2011, p. 33.

[67] J. Komárek, *Legal Reasoning in EU Law*, in D. Chalmers, A. Arnull, *The Oxford Handbook of European Union Law*, Oxford University Press, Oxford 2015, pp. 49-50.

[68] Cf. H. Rasmussen, *On Law and Policy in the European Court of Justice: a comparative study in judicial policymaking*, Nijhoff, Dordrecht, 1986.

[69] O. Pollicino, *Legal Reasoning of the Court of Justice in the Context of the Principle of Equality between Judicial Activism and Self-Restraint*, in «German Law Journal», vol. 5, n. 3, 2004, p. 317.

predict the decision through big data analytics, abstracting from the concrete political background of the case.

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In conclusion, this paper has shown, in relation to the European courts of Luxembourg and of Strasbourg, some of the potentialities and of the limits of the AI technologies: undoubtedly useful to the parties to optimize their processual decisions, useful but at the same time dangerous when used by the judges, in any case carrying the risk to burden the net of the future choices through the heavy stone-written shadows of the past[70]. This is why the modalities of utilization of predictive justice by judges must – before every implementation – be the result of a serious debate within the legal doctrine, within the whole civil society, and, with regard to the supranational courts, among the representatives of the countries involved. A debate which should not only take in account the technical computer issues, but also the ethical and the political issues implied, particularly relevant as policy arguments play an important part in the reasoning of these courts. In any case, all projects of implementation of algorithmic tools by European judges must take in account the peculiarities of the functions and of the functioning of these courts, which should avoid the mistake to weaken and delegitimize themselves through too hurried innovations, which might make them more opaque or incapable of evolution of case law.

[70] Cf. the poem of Paul Celan quoted at the beginning of this paper.