EUROPEAN COURTS AND PREDICTIVE JUSTICE: A FEASIBLE SYMBIOSIS?

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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. These issues are to be considered distinguishing the use of predictive justice by the judges from its use by the parties, their lawyers and legal advisors. Particular attention is devoted to the effective mechanisms of functioning of predictive justice services 'in action', showing, through concrete examples, how one of the main European providers ('Predictice') works, analyzing and re-elaborating judicial big data. Then, the current norms, institutional statements and legislative propositions concerning predictive justice within the European common legal space are envisaged. Finally, the paper focuses on the ECtHR and on the CJEU, 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 CJEU, the variety of its competences. It is finally asserted that all practices weakening the role of the human will in the judicial decision are to be discouraged, as the full accountability of the decision-making process is fundamental to keep and consolidate the authority and the legitimacy of these supranational courts. Nevertheless, tools that merely help European judges to strengthen and make more exhaustive their knowledge of case

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Paragraphs 2, 3, 4 are written by Sirio Zolea, paragraphs 5, 6 are written by Simone Benvenuti, paragraphs 1, 7 are jointly realized

law could be much more beneficial and in compliance with the systems of the sources of law.

Indice Contributo

Keywords

1. Introduction

Predictive justice is today at the forefront of debates on the innovation of judicial systems, while legal systems are slowly yet unevenly adapting to this challenge. This article focuses on the techniques of predictive justice and their (potential) use by judges and by the parties (and their lawyers and other legal advisers), highlighting their potential benefits and dangers. It does so by paying particular attention to European supranational courts – the Court of Justice of the European Union and the European Court of Human Rights – which are still under-investigated compared to domestic courts.

In order to clarify the object of inquiry, the article first addresses the notion of predictive justice (par. 2) and provides one concrete example of predictive justice tool 'in action' analyzing big data, i.e. the one developed by one of the main European providers, 'Predictice' (par. 3). It then introduces the European approaches to predictive justice, in relation to the regulatory framework and its potential reform as well as the policies of both the EU and the Convention system (par 4). All this allows for a better understanding of the potentialities of predictive justice with respect to the European Court of Human Rights and the Court of Justice of the European Union, wondering how the introduction of Artificial Intelligence tools might affect the operations and the procedures of these courts, taking into account their peculiarities and the variety of their competences. After presenting the general features of these two Courts (par. 5), the article thus delves more specifically into the use of predictive technologies in relation to them, in terms of both feasibility and appropriateness, also providing concrete examples employing predictive justice methods to the ECtHR (par. 6). It then concludes, suggesting both the potential selective application of AI analytics to the case law of these courts and caution when it comes to their use by the judges of the two courts (par. 7).

2. What is predictive justice?[1]

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

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[1] This paragraph develops the reflections of S Zolea, 'The European courts faced with the unknowns of predictive justice', to be published among the proceedings of the special workshop "Predictive Justice: an

Weber,[2] for the stability of the legal orders in modern (capitalist) societies, because rational calculability – through clarity and coherence both in lawmaking and in case law[3] – is the necessary ground for business. Legal doctrine is aware of it for a long time now,[4] yet contemporary debate about predictive justice particularly focuses on how certain cutting-edge Artificial Intelligence technologies, such as machine learning and natural language processing,[5] 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 legal orders, traditionally based on a case-by-case inductive approach, but also the civil law legal orders, where it cannot anymore be denied the real role of case law as a substantial source of law.[6] In a few words, assuming an easy access to judicial decisions, predictive justice is an in-depth computer analysis by algorithms of a massive scale of legal precedents, an analysis aimed to calculate and preempt the probabilities of the

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Interdisciplinary Approach between Philosophy of Law, Legal Comparison and Informatics", held within the 30th Biennial World Congress of the International Association for the Philosophy of Law and Social Philosophy: "Justice, Community and Freedom", Bucharest, 7-8 July 2022.

[2] M Weber, *Economy and Society. An outline of interpretive sociology* vol. 2 (University of California Press 1978) 809 ff.

[3] N Irti, *Un diritto incalcolabile* (Giappichelli 2016) 5.

[4] Cf. OW Holmes, 'The Path of the Law' (1897) 8 Harvard L Rev 457 ff.

[5] About natural language processing and the law, see, in general, G Comandè - D Licari, 'ITALIAN-LEGAL-BERT: A Pre-trained Transformer Language Model for Italian Law', in D Symeonidou *et alii* (eds.) *CEUR workshop proceedings*, Vol-3256, *EKAW-C 2022, Companion Proceedings of the 23rd International Conference on Knowledge Engineering and Knowledge Management*, Bozen-Bolzano, Italy, September 26-29, 2022 <https://ceur-ws.org/Vol-3256> accessed 17 May 2023.

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

outcomes of present litigation[7], reducing the uncertainty of the judgement[8] (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,[9] but contemporary computer science enormously increases the opportunities for 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, even more so when the debate concerns tools available to use by judicial and police authorities (or even 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 difficulty 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 weigh

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[7] See also the definitions of A Garapon – J Lassègue, *Justice digitale* (PUF 2018) 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 (ed.) 'La justice prédictive', (2018) 60 Archives de philosophie du droit Dalloz 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' (2020) 3 Stats 376 ff.

[8] B Dondero, 'Justice prédictive: la fin de l'aléa judiciaire? (2017) 10 Recueil Dalloz 532 ff.; Y Gaudemet, 'La justice à l'heure des algorithmes. À propos de justice prédictive' (2018) 3 Revue du droit public et de la science politique en France et à l'étranger 651 ff.

[9] See for ex. L Loevinger, 'Jurimetrics: The Next Step Forward' (1949) 5 Minnesota Law Review 455 ff.; E Barbin - Y Marec, 'Les recherches sur la probabilité des jugements de Simon-Denis Poisson' (1987) 2 Histoire & Mesure 39 ff.

[10] G Noto La Diega, 'Against the Dehumanisation of Decision-Making' (2018) 4 JIPITEC 4.

decisions of judges of different levels of jurisdiction?) of the relevant precedents;[11] the possibilities of computer errors and 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: the black box problem not only arises from the intentional lack of transparency of the designer[14] and from intellectual property rights,[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 simply legal precedents or 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

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

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

[13] G Noto La Diega (n 10) 33. See also G. Resta 'Governare l'innovazione tecnologica: decisioni algoritmiche, diritti digitali e principio di uguaglianza' (2019) 2 Politica del diritto 199 ff.

[14] A M Carlson, 'The Need for Transparency in the Age of Predictive Sentencing Algorithms' (2017) 103 Iowa Law Review 303 ff.

[15] Cf. the reflections of G Noto La Diega - C Sappa, 'The Internet of Things at the Intersection of Data Protection and Trade Secrets. Non-Conventional Paths to Counter Data Appropriation and Empower Consumers' (2020) 3 European Journal of Consumer Law 419 ff.

[16] M Oswald - J Grace - S Urwin - G C Barnes, 'Algorithmic Risk Assessment Policing Models: lessons from the Durham HART model and "Experimental" proportionality' (2018) 2 Information and Communications Technology Law 233-234. More in general, see H Shah, 'Algorithmic Accountability' (2018) Philosophical Transactions A 376; F Pasquale, *The Black Box Society. The Secret Algorithms That Control Money and Information* (Harvard University Press 2015).

[17] A Harkens, 'The Ghost in the Legal Machine: Algorithmic Governmentality, Economy, and the Practice of Law', (2018) 16 Journal of Information, Communication & Ethics in Society 16 ff.

[18] See M Luciani, 'La decisione giudiziaria robotica' (2018) 3 Rivista AIC 890.

[19] A Garapon - J Lassègue (n 7) 221-226, 230-231.

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] 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 supplemented by the ability of the judge to interpret the 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]

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[20] R Bichi, 'Intelligenza Artificiale tra "calcolabilità" del diritto e tutela dei diritti' (2017) 7 Giurisprudenza italiana 1777-1778.

[21] A Garapon - J Lassègue (n 7) 214-218; Y Meneceur - C Barbaro, 'Artificial Intelligence and the judicial memory: the great misunderstanding' (2022) 2 AI and Ethics 269-275.

[22] B Dondero (n 8) 537-538; E Battelli (n 11) 62.

[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 (ed.), *La decisione nel prisma dell'intelligenza artificiale* (CEDAM 2020) 200.

[24] D Abu-Elyounes, 'Contextual fairness: a legal and policy analysis of algorithmic fairness' (2020) 1 Illinois Journal of Law, Technology and Policy 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 17 May 2023 , art. 1.

worries among authors and judicial institutions concern inequalities,[26] personal data protection[27] (requiring a more or less intense anonymization of the decisions[28] also to comply with the European GDPR), 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]

Neither the real potential advantages of predictive justice, providing legal actors, including judges, with a more complete knowledge of precedents and perhaps reducing 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 legislators forget the advantages and introduce irrational, hasty and exorbitant prohibition rules, as it 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 scholars criticize such an untransparent choice,[33] in contrast to the general French tendency towards the

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[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: A Garapon - J Lassègue (n 7) 243.

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

[28] O Cachard, 'Aux grands arrêts, les juristes reconnaissants… Brefs propos sur l'« anonymisation » des décisions de justice' (2004) Recueil Dalloz 429 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' (2021) 1 Légipresse (hors série : Le cours de la justice et la liberté de l'information: comment concilier des impératifs contradictoires, proceedings of the forum of 9/12/2020) 71 ff.

[29] Y Gaudemet (n 8) 651 ff.

[30] P Deumier, 'L'open data des magistrats: une petite histoire législative' (2019) RTDciv 72 ff.

[31] Cf. R Susskind, *Tomorrow's Lawyers. An Introduction to your future* (Oxford University Press 2nd ed. 2017). See also A Santosuosso - OR Goodenough - M Tomasi (eds.), *The Challenge of Innovation in Law. The Impact of Technology and Science on Legal Studies and Practice* (Pavia University Press 2015); KD Ashley, *Artificial Intelligence and Legal Analytics: New Tools for Law Practice in the Digital Age* (Cambridge University Press 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'(*Le blog de Jus Politicum*, 11 March 2019) <https://blog.juspoliticum.com/2019/03/11/lanonymisation-des-decisions-de-

open data in the field of justice.[34] Some authors note that the risk of forum shopping is overestimated in relation to the existing processual rules on competence.[35] The next paragraph will give more insight about the services of predictive justice available on the French market, which elicited this worried response of the lawmaker.

3. Predictive justice in action: the example of Predictice in France

Many legal systems witness the actual application of AI tools affecting the operation of courts. To name just a few most important cases, the Chinese judicial system largely and increasingly uses predictive and other AI tools, arousing the interest of legal doctrine,[36] while in some States of the USA[37] and in the UK,[38] frequent utilizations of predictive algorithms by judicial and police authorities have been severely criticized by practitioners and scholars as relevantly biased. Some EU countries are experimenting similar technologies in their tribunals too.[39]

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justice-est-elle-constitutionnelle-pour-la-consecration-dun-principe-fondamental-reconnu-par-les-lois-de-la-republique-de-publicite-de-la-justice/> accessed 17 May 2023 ; W Zagorski, 'Law as a Set of Decisions. On merits and dangers of legal realism through the prism of big data', in E Calzolaio (n 23) 181; L Janicot, 'L'anonymisation du juge', in P Bourdon (ed.), *La communication des décisions du juge administratif* (LexisNexis 2020) 85-87.

[34] About this tendency, see L Cadiet (ed.), *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*, November 2017.

[35] See F Alhama, 'Vers une plus grande accessibilité des décisions rendues par les juridictions administratives' (2019) RFDA 703.

[36] See J Peng - W Xiang, 'The Rise of Smart Courts in China: Opportunities and Challenges to the Judiciary in a Digital Age' (2019) 9 Nordic Journal of Law and Social Research 345 ff.; C Yadong, *Artificial Intelligence and Judicial Modernization* (Springer 2020); RE Stern - BL Liebman - ME Roberts - AZ Wang, 'Automatic Fairness? Artificial Intelligence in the Chinese Courts' (2021) Columbia Journal of Transnational Law 515 ff.; C Shi - T Sourdin - B Li, 'The Smart Court – A New Pathway to Justice in China?' (2021) 1 International Journal for Court Administration 1.

[37] See R Courtland, 'Bias detectives: the researchers striving to make algorithms fair' (2018) 558 Nature 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' (2018) 1 Law, Probability and Risk 45 ff.; 'Partnership on AI, Report on Algorithmic Risk Assessment Tools in the U.S. Criminal Justice System, 2019' <https://partnershiponai.org/paper/report-on-machine-learning-in-risk-assessment-tools-in-the-u-s-criminal-justice-system/> accessed 17 May 2023; D Abu-Elyounes (n 24) 1 ff.; K Hartmann - G Wenzelburger, 'Uncertainty, risk and the use of algorithms in policy decision: a case study on criminal justice in the USA' (2021) 2 Policy Sciences 269 ff.; F Lagioia - R Rovatti - G Sartor, 'Algorithmic fairness through group parities? The case of COMPAS-SAPMOC' (2022) 28 AI & SOCIETY 459.

[38] M Oswald - J Grace - S Urwin - G C Barnes (n 16) 223 ff. About the legislative proposal for a new statutory procedure for certain criminal cases to be dealt with via an automated online process, see G Cowie et alii, *Judicial Review and Courts Bill 2021-22* (House of Commons Library 2021) 33 ff.

[39] 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' (2020) ERA Forum 299 ff.

Services of predictive justice are offered for a few years now to legal practitioners also in European civil law countries such as France, Spain[40] and now in Italy too,[41] legal orders where the precedents, even those of the supreme courts, are traditionally supposed not to be binding. In this paragraph, we take into account the case of France,[42] in order to show some examples of predictive justice actually in action. Having a more practical comprehension of the predictive tools will help understand if and to what extent such mechanisms (or similar ones) might effectively be applied to the decisions of the European judges. Thanks to the courtesy of Predictice[43] (enterprise currently operating in France and Luxembourg), one of the very first European predictive justice LegalTechs, it is possible, in the present paper, to show some examples of how, concretely, predictive justice services work – considering and elaborating a huge number of decisions – and what services are proposed to their clients.

To choose a meaningful example, through the jurisprudential research engine of Predictice, we can select an object of frequent litigation, such as the dismissal of a worker.

However, in France, according to art. 47 of the law n. 78-17 of 6 January 1978, in its current version, no judicial decision implying an assessment on the behavior of a person can be based on automatic processing of personal data aiming to appreciate some aspects of his personality.

[40] Wolters Kluwer, Jurimetría <https://jurimetria.laleynext.es/content/Inicio.aspx> accessed 17 May 2023.

[41] Wolters Kluwer, Giurimetria <https://www.wolterskluwer.com/it-it/solutions/one/onelegale/giurimetria> accessed 17 May 2023 ; see also the software ReMIDA, offered on the market for utilizations in fields such as bodily harm (<https://shop.giuffre.it/070002098-remida-danno-alla-persona> accessed 17 May 2023) and maintenance allowance (<https://www.remidafamiglia.com> accessed 17 May 2023).

[42] Cf., in addition to the French articles already mentioned, Y Meneceur, 'Quel avenir pour la « justice prédictive » ? Enjeux et limites des algorithmes d'anticipation des décisions de justice' (2018) JCP étude 190; S-M Ferrié, 'Les algorithmes à l'épreuve du droit au procès équitable' (2018) JCP étude 197; F Guéranger, 'Réflexions sur la justice prédictive' (2018) 13 Gazette du Palais 15 ff.; *Livre blanc Les enjeux éthiques de la justice prédictive* (Sciences Po – Predictice - Wolters Kluwer 2019); M Gaye-Palettes, 'Le développement des outils algorithmiques prédictifs à l'épreuve de la question prioritaire de constitutionnalité' (2020) 35 *Annuaire international de justice constitutionnelle* 637-657; C Bordere, 'La justice prédictive: analyse critique et comparée d'un rejet doctrinal' (2021) 1 Revue internationale de droit comparé 7-25.
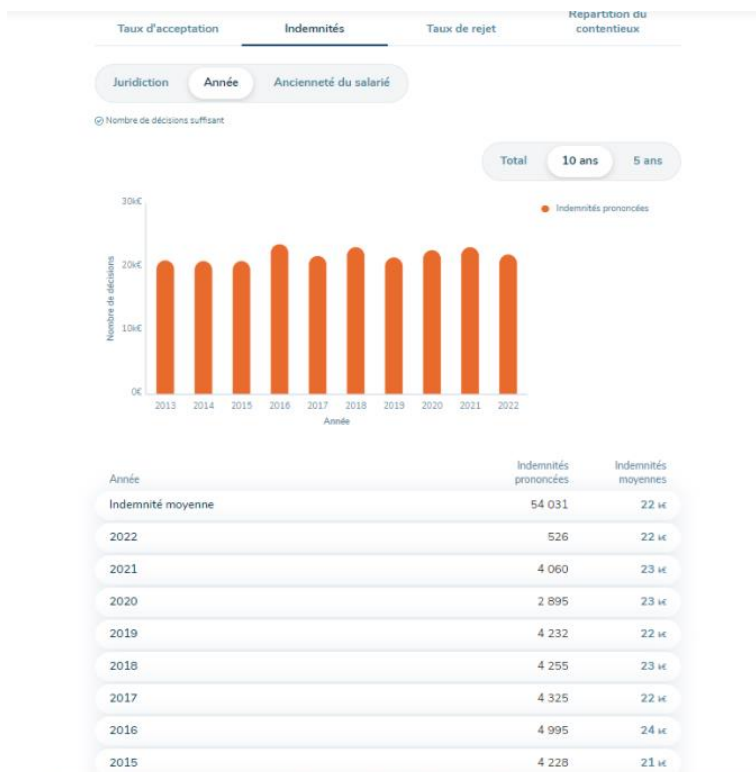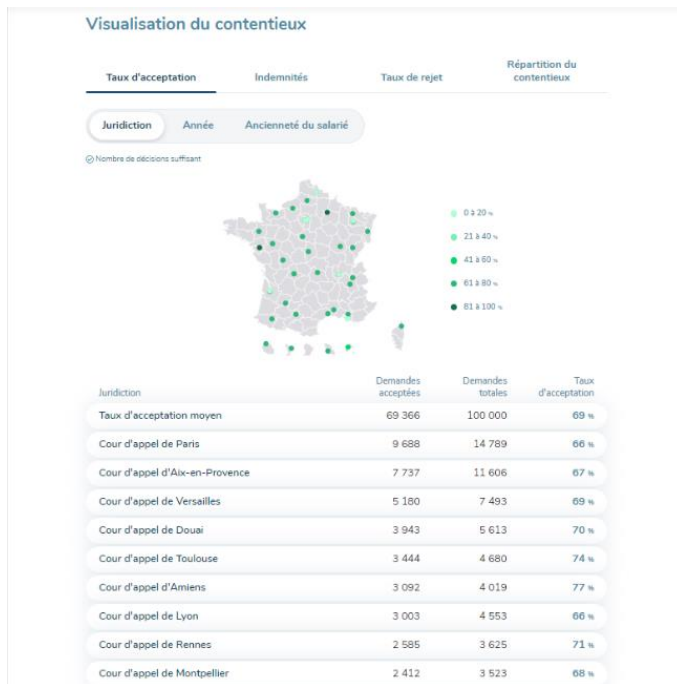
[43] <https://predictice.com/> accessed 17 May 2023; the check on this search engine of predictive justice was carried out in February 2022.

Then, selecting the data analysis function, the website offers a selection of more precise claim issues related to the wider subject of dismissal, for example: severance payment, dismissal without a real and serious cause, compensation in lieu of notice, vacation pay, back pay, dismissal for gross misconduct, unfair dismissal, etc. We can decide to go more in depth, for example about dismissal without a real and serious cause, which is one of the most recurring issues (more than 100000 decisions envisaged). First of all, general information about this issue is provided in an initial synthesis: the average amount of compensation for this claim is 22000€; the average length of the procedure (first degree jurisdiction and appeal) is 2 years and 2 months. It is also indicated that other issues often associated with this one are: dismissal for a real and serious cause, severance payment and compensation in lieu of notice. The acceptance rate is high (about 93000 claims out of 130000).

Subsequently, more information concerning the average length of the procedure is offered (1 year and 8 months between the appeal level and the last degree of the *Cour de cassation*). Some examples of reference texts of decisions, acceptances and refusals of the claims, are proposed, selected on the base of several parameters, including: the level of the jurisdiction, the date of the decision, as to whether it has been published or commented, and the presence of specific keywords relevant in relation to the research made. Finally, more detailed information is offered about four issues: acceptance rate, amount of compensation, refusal rate, distribution of litigation, and three sub-issues: competent French judge, decisions per year and seniority of the worker. These analyses are displayed with graphic supports: diagrams, tables and interactive maps of France indicating the different appellate circuits. The issues and sub-issues can variously be combined by the user, in order to obtain the more relevant pieces of information for his own case.

Visualisation du contentieux

| Taux d'acceptation | Indemnités | Taux de rejet | Répartition du contentieux |

Juridiction Année Ancienneté du salarié

⊘ Nombre de décisions suffisant

Juridiction	Demandes acceptées	Demandes totales	Taux d'acceptation
Taux d'acceptation moyen	69 366	100 000	69 %
Cour d'appel de Paris	9 688	14 789	66 %
Cour d'appel d'Aix-en-Provence	7 737	11 606	67 %
Cour d'appel de Versailles	5 180	7 493	69 %
Cour d'appel de Douai	3 943	5 613	70 %
Cour d'appel de Toulouse	3 444	4 680	74 %
Cour d'appel d'Amiens	3 092	4 019	77 %
Cour d'appel de Lyon	3 003	4 553	66 %
Cour d'appel de Rennes	2 585	3 625	71 %
Cour d'appel de Montpellier	2 412	3 523	68 %

| Taux d'acceptation | Indemnités | Taux de rejet | Répartition du contentieux |

Juridiction Année Ancienneté du salarié

⊘ Nombre de décisions suffisant

Année	Indemnités prononcées	Indemnités moyennes
Indemnité moyenne	54 031	22 k€
2022	526	22 k€
2021	4 060	23 k€
2020	2 895	23 k€
2019	4 232	22 k€
2018	4 255	23 k€
2017	4 325	22 k€
2016	4 995	24 k€
2015	4 228	21 k€

Visualisation du contentieux

			Répartition du contentieux
Taux d'acceptation	Indemnités	Taux de rejet	

Juridiction	Année	Ancienneté du salarié

⊘ Nombre de décisions suffisant

Ancienneté du salarié	Décisions
Nombre total de décisions	72 601
0 an à 2 ans	15 564
2 ans à 3 ans	8 254
3 ans à 6 ans	15 410
6 ans à 12 ans	15 557
12 ans à 29 ans	14 459
29 ans à 39 ans	2 673
Plus de 39 ans	684

Calculé avec les décisions disponibles sur Predictice au 11 février 2022

Predictice also offers further complex functions, for example analyzing the case law with reference to a certain issue in order to determine which reasonings and arguments, in this respect, might be more useful to support the position of a disputing party.

4. Predictive justice within the European legal space: norms, statements and propositions

The European legal space (EU and Council of Europe) is confronted with the issues of predictive justice too, and several European institutions are putting in place norms, plans and strategies in order to manage this technological challenge. According to the European Convention of Human Rights (art. 6), everyone, in the determination of his civil rights and obligations or of any criminal charge against him, is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law and judgment shall be pronounced publicly. It has been observed that "in order for AI to work in accordance with Article 6 of the ECHR,

this also means the following. It has long been known that bad data, such as legally incorrect decisions, reduce the quality of the AI result. But correct data is not enough. Text recognition with natural language processing, in which the text-driven behavior of lawyers and judges is calculated from an external perspective, can recognize patterns. Patterns such as statistical relations are not enough to substantiate a judgment. For the AI to be able to process and understand legal information, that information needs to be enriched: structured and provided with legal meaning. At present, this structuring and meaning must be added to judgments (text documents) after they have been written. AI can be used much more effectively once legal information such as court decisions is made machine-processable before publication with textual readability, document structures, identification codes and metadata all available".[44]

In the European Union, according to its Charter of Fundamental Rights (art. 47), everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal previously established by law and everyone shall have the possibility of being advised, defended and represented. According to the General Data Protection Regulation of 2016 (art. 23), the protection of judicial independence and judicial proceedings is among the reasons authorizing restrictions by the EU or member states legislations to the scope of some obligations and rights of the Regulation,[45] when such a restriction respects the essence of the fundamental rights and freedoms and is a necessary and proportionate safeguard measure in a democratic society.

In 3-4 December 2018, at its 31st plenary meeting, the European Commission for the Efficiency of Justice (CEPEJ) of the Council of Europe adopted a European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment.[46] The Charter was intended for public and private stakeholders

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[44] AD Reiling, 'Courts and Artificial Intelligence' (2020) 2 International Journal for Court Administration 7-8.

[45] In particular, restrictions to artt. 12 to 22, concerning the rights of the data subject, art. 34, concerning communication of a personal data breach to the data subject, art. 5, concerning principles relating to processing of personal data, in so far as its provisions correspond to the rights and obligations provided for in artt. 12 to 22.

[46] European Commission for the Efficiency of Justice, *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment*, 3-4 December 2018 <https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c> accessed 17 May 2023.

responsible for the design and deployment of Artificial Intelligence tools and services that involve the processing of judicial decisions and data (machine learning or any other method deriving from data science), and also concerned public decision-makers in charge of the legislative or regulatory framework, of the development, audit or use of such tools and services. It was observed in this document that, in 2018, the use of AI algorithms in European judicial systems remained primarily a private-sector commercial initiative aimed at insurance companies, legal departments, lawyers and individuals, while the use of AI in the judicial field already appeared to be quite popular in the United States, which had invested in these tools in a fairly uncomplicated way, both in civil and criminal matters. It was noted that the use of such tools and services in judicial systems seeks to improve the efficiency and quality of justice, and should be encouraged, but also be carried out responsibly, with due regard for the conventional European frameworks about human rights and protection of personal data. As reported in the Charter, judicial decision processing by Artificial Intelligence, according to their developers, is likely, in civil, commercial and administrative matters, to help improve the predictability of the application of the law and consistency of court decisions, while, in criminal matters, their use must be considered with the greatest reservations, in order to prevent discrimination based on sensitive data and grant a fair trial. Whether designed with the aim of assisting in the provision of legal advice, helping in drafting or in the decision-making process, or advising the user, it is essential that processing is carried out with transparency, impartiality and equity, certified by an external and independent expert assessment. The Charter established five principles:

- Principle of respect for fundamental rights: ensure that the design and implementation of Artificial Intelligence tools and services are compatible with fundamental rights.

- Principle of non-discrimination: specifically prevent the development or intensification of any discrimination between individuals or groups of individuals.

- Principle of quality and security: with regard to the processing of judicial decisions and data, use certified sources and intangible data with models elaborated in a multi-disciplinary manner, in a secure technological environment.

- Principle of transparency, impartiality and fairness: make data processing methods accessible and understandable, authorize external audits.

- Principle "under user control": preclude a prescriptive approach and ensure that users are informed actors and in control of the choices they made.

Finally, in the Charter, possible uses of AI in European judicial systems were classified into a number of different groups: to be encouraged (case-law enhancement, access to law, creation of new strategic tools); requiring considerable methodological precautions (help in the drawing up of scales in certain civil disputes, support for alternative dispute settlement measures in civil matters, online dispute resolution, use of algorithms in criminal investigation in order to identify where criminal offences are being committed); to be considered following additional scientific studies (judge profiling, anticipating court decisions); to be considered with the most extreme reservations (use of algorithms in criminal matters, in order to profile individuals, and the idea of quantity-based norm, which means providing each judge with the content of the decisions produced by all the other judges and claiming to lock his future choice into the mass of these "precedents", actually adding to or acting in place of the law). A more recent study of the CEPEJ concerns the possible introduction of a mechanism for certifying Artificial Intelligence tools and services in the sphere of justice and the judiciary: an objective, neutral certification aiming at upholding fundamental rights and freedoms.[47]

The European Network of Councils for the Judiciary (ENCJ, which unites the national institutions of the member states of the European Union which are independent from the executive and legislative powers, and which are responsible for the support of the judiciaries in the independent delivery of justice), in the framework of its project about digital justice, showed interest for the issues of predictive justice in its meetings of Amsterdam (2018), where the debate dealt with the relationship

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[47] European Commission for the Efficiency of Justice, *Possible introduction of a mechanism for certifying artificial intelligence tools and services in the sphere of justice and the judiciary*, 8 December 2020, CEPEJ(2020)15Rev. The certification of Artificial Intelligence systems in the judicial sphere could also make it possible to support private and public projects and to establish standards that reach beyond Europe, justifying, for example, the development of international mechanisms for the recognition and enforcement of foreign decisions or arbitral awards made by or with the assistance of Artificial Intelligence.

between prediction and due process in compliance with art. 6 ECHR,[48] and Lisbon (2019), where it was stated that AI is, at this point, a fact of life. We need to address the risks, but also to address how it could be used in the judicial sector, as it is not always incompatible with judicial reasoning. In the Lisbon meeting,[49] it was also noted that the benefits of AI need further scrutiny. Predictive justice based on judges´ own data on decisions could be interesting to assist judges dealing with large numbers of similar cases and machines might be useful for standardized cases that normally would be settled before they go to court. In countries where there is pressure on judges, profiling them could be a danger. In criminal cases, a system capable of assisting in having more uniform sentences might eventually strengthen the trust in the judiciary and its position in society. These judges finally wonder if predictive justice should be left to private commercial providers, or public authorities should use it and, in the latter case, if there are dangers.

According to the EU 2019-2023 Strategy on e-Justice, "legal tech domains such as Artificial Intelligence (AI), blockchain technology, e-Translation or virtual reality, for example, should be closely monitored, in order to identify and seize opportunities with a potential positive impact on e-Justice. In particular, Artificial Intelligence (AI) and blockchain technology could have a positive impact on e-Justice, for example by increasing efficiency and trust. Any future development and deployment of such technologies must take risks and challenges into account, in particular in relation to data protection and ethics".[50] Furthermore, there are several references to using AI in the EU 2019-2023 Action Plan European e-Justice too.[51] It is observed in this plan that interlinked legal data allows users to find relevant information in a fast and reliable way. Legal data can be used in open data format to help citizens, businesses and judicial authorities study and collate data, in order to analyze it and contribute to

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[48] ENCJ*, Report: Digital Justice, forum founding meeting and first annual seminar*, Amsterdam, 4 May 2018 <https://pgwrk-websitemedia.s3.eu-west-1.amazonaws.com/production/pwk-web-encj2017-p/GA%2018/Report%20ENCJ%20Digital%20Justice%20Forum%20Amsterdam%202018.pdf> accessed 17 May 2023; cf. A Santosuosso, *Intelligenza artificiale e diritto. Perché le tecnologie di IA sono una grande opportunità per il diritto* (Mondadori 2020) 83 ff.

[49] ENCJ*, Report: Digital Justice, forum seminar*, Lisbon, 29 March 2019 <https://pgwrk-websitemedia.s3.eu-west-1.amazonaws.com/production/pwk-web-encj2017-p/Projects/digital/ENCJ%20DJF%202019%20report.pdf> accessed 17 May 2023.

[50] 2019/C 96/04, nn. 30-31 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0313(01)&from=ES> accessed 17 May 2023.

[51] 2019/C 96/05, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0313(02)&rid=6> accessed 17 May 2023.

applications using this data, including by taking advantage of AI. Artificial Intelligence is envisaged in the plan as one of the major developments in information and communication technologies in recent years, to be further developed in the coming years. Its implications in the field of e-Justice need to be further defined. Two projects specifically concern AI: Artificial Intelligence for Justice, aiming to define the role which AI might play in the justice field and to develop an AI tool for analysis of court decision, and ChatBot for the e-Justice Portal, aiming to develop a ChatBot that would assist the user and direct him to the information he is looking for. It is also indicated to develop tools using AI technology to automatically anonymize or pseudonymize court decisions for open data reuse. Finally, as for semantic interoperability (facilitating communication between systems by aligning terms used in metadata and standards, also to reduce the impact of language differences by providing automatic translation), it is indicated that the processing of data and discoverability of information can be further enhanced and rendered more efficient by using controlled vocabularies (lists of terms used to index contents and make it easier to retrieve information), identifiers such as European Legislation Identifier or European Case Law Identifier, AI and analysis of legal open data and big data.

Finally, in the Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on Artificial Intelligence,[52] "AI systems intended to assist a judicial authority in researching and interpreting facts and the law and in applying the law to a concrete set of facts" are classified, in the Annex III, as high-risk AI systems, which must necessarily comply with several requirements,[53] concerning: risk management system, data and data governance, technical documentation, record keeping, transparency and provision of information to users, human oversight, accuracy, robustness, and cybersecurity.

5. General comparative overview of the ECtHR and the CJEU

In this paragraph, we analyze whether there are prospects of employment of predictive justice tools before the European Court of Human Rights and the Court

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[52] COM/2021/206 final <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0206&from=IT> accessed 17 May 2023.
[53] Artt. 8 ff.

of Justice of the European Union, consistently with the institutional role of these two supranational courts. The most apparent feature of the ECtHR and the CJEU, compared to other courts and tribunals that are mostly the object of study in relation to predictive justice, is indeed their supranational nature. This has some consequences on their decision-making.

For instance, supranational courts are by definition at the crossroads of different legal cultures in stark contrast with the naturally homogeneous legal culture within national courts.[54] Thus, the profile of deciding judges can possibly determine the outcome of an individual case. Furthermore, supranational courts' legitimacy is in principle weaker compared to domestic courts, since they are not part of a State system based on democratic sovereignty while they have to accommodate pervasive national interests. As a consequence, supranational courts are intrinsically more permeable to political considerations.[55]

That said, it is important to underline the differences among the two courts, that might bring to different conclusions in relation to the use of predictive justice tools. These concern the legal framework on whose basis decisions are taken and the broader context in which courts operate (which affect their legitimacy), the courts' jurisdiction and procedures, aspects related to decision-making such as rules about deliberation (collegiality of decisions) or the content of decisions (knowability of dissenting or concurring judges, style of drafting), the types of cases (by subject matter), etc.

It is therefore appropriate at first to highlight the specificity of these courts. Then, in the next paragraph the case for predictive justice will be considered.

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[54] This is reflected for example in Rule 25 para 2 of the Rules of Court providing for the sections of the Court to be «geographically and gender balanced and […] reflect the different legal systems among the Contracting Parties». In supranational courts, the difference in the national legal cultures might be in turn exacerbated by linguistic difference or by the variety of professional background of judges, A Nussberger, *The European Court of Human Rights* (Oxford University Press 2020) 45 f. As to language, see C Schönberger, '«Mi attendu, mi dissertation». Le style des décisions de la Cour de justice de l'Union européenne' (2015) 3 Droit et société 505-519. To be sure, this does not entail that supranational courts are not able to build up their own homogeneous legal culture. This indeed happens through internal socialization, yet the situation is more blurred compared to national courts.

[55] Even though it might be interesting to compare supranational courts to domestic constitutional courts.

a) The ECtHR

The ECtHR aims to ensure the observance of Member States' engagements under the European Convention of Human Rights and its protocols, with jurisdiction extended to all matters concerning their interpretation and application.[56] The Court may receive applications,[57] for breach of its provisions, after 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.[58] Clearly enough, individual complaints, which are by far the majority of applications,[59] aim primarily at satisfying individual justice, while inter-State procedures (and advisory opinions) have the more general and abstract objective of clarifying 'the law'.[60] The ECtHR is thus a judge of last instance yet with a larger scope than an ordinary international judge only accessible by States to settle their disputes.

In the ECHR context, the applicable law is framed within the human rights paradigm. The Court's bulk of decisions relate to the right to a fair trial, the prohibition of torture and inhuman or degrading treatment, the right to liberty and security, while the remaining cases concern the right to respect for private life, the protection of property, the right to life and other violations of human rights.[61] In its activity, the Court thus applies punctual norms but also general principles that are however operationalized more clearly and specified in the Court's elaborate case law.[62] For

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[56] Art. 32 of ECHR.

[57] Artt. 33 ff.

[58] Individual complaints (Article 34 ECHR) and Inter-State complaints (Article 33 ECHR) are integrated by advisory opinions on request by the Committee of Ministers (Article 47 ECHR) and by Member States (Protocol 16). See A Nussberger (n 54) 51 f.

[59] European Court of Human Rights, *Overview ECHR 1959-2021* (2022) <https://www.echr.coe.int/Documents/Overview_19592021_ENG.pdf> accessed 17 May 2023.

[60] *Inter-State cases under the European Convention of Human Rights*, Proceedings of the Conference organised under the aegis of the German Presidency of the Committee of Ministers (Berlin, 12 – 13 April 2021), Council of Europe, March 2022 <https://rm.coe.int/interstate-cases-under-the-echr/1680a5e82c> accessed 17 May 2023.

[61] European Court of Human Rights, *The ECHR in Facts and figures 2021* (February 2022) <https://www.echr.coe.int/Documents/Facts_Figures_2021_ENG.pdf> accessed 17 May 2023; European Court of Human Rights (n 59).

[62] It is important to stress that, while not being bound by previous legal decisions - *stare decisis* is not a legal principle as such - yet the Court tends to follow the rationale of previous decisions in the name of legal certainty, so that a «good reason» (a «motif valable») is needed to derail from it as the Court's Grand Chamber acknowledged on different occasions.

instance, between 1951 and 2021, the Court found 5480 violations of the right to fair trial ex article 6 of the Convention, and 4496 violations of the right to liberty and security ex article 5 of the Convention. Sure enough, in relation to other subject matters the Court's case law is less developed, as for the Freedom of thought, conscience and religion ex article 8 of the Convention, with 95 violations found in the same period.

Leaving aside decisions on admissibility of individual complaints that are taken by a single judge, it is important to stress that an internal distinction is made in the Court among cases decided by panels of three judges, the bulk of cases the five chambers are responsible of, and cases decided by the Grand Chamber (about twenty-five judgments per year). The difference lies in the importance of the case. Three-judge panels decide on so-called 'well-established case-law' (WECL) cases, i.e. «clear-cut repetitive cases», even though after 2018 more complex cases (so-called 'broader WECL' cases) are assigned to these panels.[63] On the opposite, the Grand Chamber decides upon the most legally controversial or politically salient cases.[64] Otherwise, as mentioned the majority of cases lies in between these two poles and is decided in the five chambers that deliberate every week and adjudicate about 1,000 cases per year.

Decisions by the ECtHR are thus collegially taken in chambers, but the possibility for separate opinions is foreseen, and therefore knowability of judges' stance and arguments. Existing studies show that the practice of separate opinions is common. However, the style of drafting is different from that found in other Courts where separate opinions exists, being mid-way between the «highly individualistic» approach of the British Supreme Court and the «comprehensive and theory-oriented» approach of the German Federal Constitutional Court.[65]

Finally, as for other supranational courts, the ECtHR's political legitimacy is intrinsically fragile, as it does not stem from the democratic sovereignty of a State and it is not part of an established system of separation of powers, at least in the traditional

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[63] Until 2018 the rule was established to bring case to the Chamber, while committee decisions were the exception; after 2018 this picture has been reversed.

[64] The composition of the Grand Chamber can obviously be controversial. Normally, apart from ex officio members judges are selected by drawing lot with a mechanism ensuring regional representation. It has been observed that, due to the changing composition, it is difficult for the Grand Chamber to develop its own "stable" culture, differently from other chambers.

[65] A Nussberger (n 54) 68.

sense.[66] As a consequence, the authority of the Court tends to be much more sensitive to political events, to policy-driven arguments and to the evolution of the diplomatic relationships among Member States.[67] This is particularly true for the ECtHR, by reason of the highly political subject matters treated, or the relatively high number of Member States, whose heterogeneity might be an element to take into account in order to decide on a specific outcome. Considering 2021, for instance, nearly half of the judgments concerned Russia, Turkey and Romania (around one quarter concerning Russia).[68] If so, the only way to strengthen the Court's position is not *ratione auctoritatis*, but *auctoritate rationis*, through the quality, the fairness and the transparence of its procedures and of its decisions.[69]

b) The CJEU

Compared to the ECtHR, the CJEU presents a larger variety of competences, which should be taken in account, in order to assess how predictive technologies might be used in the framework of its activities. Some of its tasks, for instance, resemble the usual tasks of a national administrative court, judging about claims against the EU institutions for annulment[70] and for failure to act,[71] brought by the Member States, the institutions themselves or any natural or legal person if the actions relate to a measure addressed to them. This partly applies to infringement procedures against a national government for failing to comply with EU law, started by the European

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[66] About the independence, accountability, transparency and legitimacy issues of the ECtHR, cf. B Çalı - S Cunningham, 'Judicial Self Government and the Sui Generis Case of the European Court of Human Rights' (2018) 7 German Law Journal 1977 ff.

[67] MR Madsen, 'The Protracted Institutionalization of the Strasbourg Court: From Legal Diplomacy to Integrationist Jurisprudence', in J Christoffersen – MR Madsen, *The European Court of Human Rights between Law and Politics* (Oxford University Press 2011) 43-60. The outcome of cases could therefore be dependent upon the Member States involved, while statistics show that complaint concern a relatively small group of countries (in 2018, over three-fourths of the complaints came from eight Member States).

[68] Since its establishment the Court delivered around 24000 judgments, more than one third of them concerning Turkey, Russia and Italy, European Court of Human Rights (n 59).

[69] Cf. S Dothan, 'Judicial Tactics in the European Court of Human Rights' (2011) 1 Chicago Journal of International Law 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.

[70] Artt. 263-264 TFEU.

[71] Art. 265 TFEU.

Commission or another Member State[72]. In these procedures, the undeniable importance of case law coherence should not let us 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.[73]

One should also 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 whom such a question is raised considers that a decision on the question is necessary to enable him to give a judgment, compulsorily if it is a court or tribunal of a Member State against whose decisions there is no judicial remedy under national law.[74]

The CJEU decides less than 1000 case per year, with Preliminary rulings constituting the bulk of its activity. Thus, in the last year there have been 547 decisions following a preliminary reference, and only 30 decisions on direct actions for failure to fulfill States' obligations (while 183 are appeals against the General Court's decisions following claims against the EU institutions).

Within these procedures, the CJEU operates within an articulate legal compound resulting from an incremental process and inspired by different, if not conflicting rationales: the main cleavage being the market-oriented and the fundamental rights rationales. Furthermore, the CJEU often applies general principles more than punctual norms, even though this might differ according to the relevant area of law. Thus, a decision in the area of competition law tends to be more technical than a decision of the respect of the rule of law. Clearly, as for the ECtHR, the activity of the Court varies very much according to the subject matter upon which it decides. For instance, in 2021 the majority of decisions touched upon state aid and competition and the Area of freedom, security and justice (respectively, 115 and 136 decision). The remaining part of decisions concerned the areas of taxation (80), freedom of movement and establishment and internal market (77), social law (64),

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[72] Artt. 258 ff. TFEU.

[73] In particular, highlighting the low rate of success of such actions: R Mańko, EPRS (European Parliamentary Research Service), 'Action for damages against the EU, December' 2018, 8 <https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/630333/EPRS_BRI(2018)630333_EN.pdf> accessed 17 May 2023.

[74] Art. 267 TFEU. The bulk of decisions CJEU are preliminary references.

consumer protection (63) transport law (61), intellectual property (49), environment (45), agriculture (24) and customs union (17). Furthermore, some of these areas might entail heterogeneous legal issues.

After the 2004/2007 enlargement, CJEU judges decide in five-judge chambers or, in most important cases, in a Grand Chamber composed by fifteen-judges. A further, rather apparent difference compared to the ECtHR, is collegiality and impersonality of CJEU judgments. These impact the style of drafting, which has been defined «concise or even reductionist»,[75] since it tends to minimize the space devoted in the text to the detailed analysis of the facts (particularly in preliminary references), generally making it more difficult to fully understand judges' reasoning. The style is less cryptic than usual French style and notably that of the *Conseil d'Etat* (it has been defined «un style mixte mi attendu, mi dissertation»),[76] yet plain and impersonal. Also, the "forced" collegial nature of decision-making entails the need for broader compromise compared to the ECtHR, making it harder to grasp the underlying motivation of the reasoning.[77] However, one should not forget the possibility to rely on the detailed and more factual and properly reasoned conclusions of the Advocate-General in this regard.

Thus, the CJEU plays different roles within the system and complicatedly justifies its decisions on the cumulative basis of purposive, systemic and literal arguments. Therefore, the coherence of case law is fundamental to ensure a certain degree of legal certainty in the EU law and to foster Member States' compliance. This is why the Court tends to frequently refer to its precedents and to rarely explicitly change in its previous case law, adopting a high degree of formal standardization of its decisions, potentially suitable for the application of predictive technologies.

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[75] A Nussberger (n 54) 68.

[76] The comparison with the French *Conseil d'État* – an institution that originally served as a template for the Court of Justice and is based on a homogenous and soundly established judicial culture – is particularly meaningful. The European Court lacks indeed of such highly institutionalized tradition and needs – for reasons of compliance among else – to put greater emphasis on the motivation. This explain why its style quickly departed from it inspiring institution characterized by extreme conciseness and hermetic character.

[77] Compared to the ECtHR, the CJEU motivation is still limited in its extent and based on undemonstrated assumptions (defined as «une série d'énoncés ex cathedra») and repetitions. Apparently, standardization of the style is due to its ability to both facilitate compromise among judges from different legal cultures (this would also explain the teleological approach to interpretation) and, more prosaically, to simplify translation tasks, C Schönberger (n 54).

However, some cases under the jurisdiction of the Court – for instance, with regard to the uncertain line between the competences of the Union and Member States, in the context of the recent tensions between the institutions of the EU and countries such as Hungary and Poland – require particularly strong policy considerations and mediation. Indeed, 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. 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. Hence, in many situations, the (political) substance tends to prevail over the standardized form, making it difficult to predict the decision through big data analytics, abstracting from the concrete political background of the case.

Finally, while being a supranational court based on an International Treaty, the CJEU operates in a different context than the ECtHR. This has to do, compared to the Convention system, with the higher degree of institutionalization[78] of the EU system and the Court itself within it, with the lower number of Member States and subsequent greater homogeneity of the relevant legal environment (or culture), etc. Therefore, CJEU's legitimacy is stronger in principle and such Court has to worry less about Member States' compliance and its decisions' *auctoritas rationis*. As a consequence, the relationship between this Court and political events, policy-driven arguments and the evolution of the diplomatic relationships among the Member States is still present but hidden.[79]

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[78] Understood as the process regulating behaviour within organizations.

[79] See for ex., as a preliminary rule, Joined Cases C-508/18 and C-82/19 PPU, *Minister for Justice and Equality v. OG e PI*, judgment of 27 May 2019, about a European arrest warrant issued by a public prosecutor's office of a member state (Germany).

6. Prospects of employment of predictive justice before the ECtHR and the CJEU

It is not possible to draw general conclusions on the use of predictive technologies related to the two Courts. AI encompasses indeed a variety of tools and techniques,[80] which might serve different purposes. Therefore, it would be appropriate first to identify such purposes and tools. That said, some observations can be made in relation to the prospects of employment, and the appropriateness thereof, of what have been called «third wave of computable law» (TWCL)[81] machine learning tools through big data.

a) General observations on the potential use of predictive tools related to the ECtHR and the CJEU

In terms of feasibility, TWCL indeed needs a statistically significant amount of data: in fact, the key to establishing reliable probability calculations is to quantify an important and homogenous number of judgments to obtain a sufficiently refined analysis of the initial input.[82] The available amount of these data naturally varies very much in relation to the Courts' types of procedure, the subject matter and the types of cases (more or less political) decided upon by the Courts.

When it comes to procedures, we showed in the previous paragraph that ECtHR individual complaints and CJEU's preliminary reference procedures encompass the majority of cases decided by the two courts, and this holds especially in relation to a set of limited subject matters (as we said, respectively article 5 right to liberty cases and article 6 fair trial cases, and state aid and competition cases). If it is to assess the

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[80] F Bell *et al.*, *AI Decision-Making and the Courts. A guide for Judges, Tribunal Members and Court Administrators*, (Australasian Institute of Judicial Administration 2022) 7 ff.

[81] G Contissa – G Sartor, How the Law Has Become Computable, in G Contissa et al. (eds), *Effective Protection of the Rights of the Accused in the EU Directives: A Computable Approach to Criminal Procedure Law* (Brill 2022) 35.

[82] G Contissa, 'AI: which uses for judges and legal professionals? A historical overview', Speech at the Conference Artificial intelligence at the service of the judiciary, Ministry of Justice, Riga, 27 September 2018 <https://www.coe.int/en/web/artificial-intelligence/-/conference-artificial-intelligence-at-the-service-of-the-judiciary-> accessed 17 May 2023.

feasibility of predictive justice tools, it is therefore reasonable to look at these procedures and areas first.

On the contrary, the scarcity of actions for damages caused by its institutions or by its servants in the performance of their duties ex articles 268 and 340 TFEU makes these procedures unsuitable for big data analytics. The same holds for those procedures where that Court resembles very much to a national administrative court, such as those ex article 270 TFEU on the CJEU jurisdiction in any dispute between the Union and its servants,[83] whose characters – the less political appearance of the relevant disputes and their more concrete nature – would otherwise possibly make them an area for potential use of AI technologies by firms having an experience in this kind of disputes.

However, when it comes to the CJEU, the peculiarities of the preliminary reference as a quasi-constitutional procedure, 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 European judges – and to 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[84] aiming at a uniform interpretation of the EU law,[85] and, as a consequence, a good knowledge of the precedents is paramount for all the actors involved in the procedure.

In any case, due to the high number of cases decided by the ECtHR, this would definitely be the best candidate to test such tools[86]. It is not maybe by chance that the

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[83] See *supra*.

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

[85] See E Calzolaio, 'Il valore di precedente delle sentenze della Corte di giustizia' (2009) 1 Rivista critica del diritto privato 41 ff.

[86] For instance, the ECtHR delivered 871 judgments in 2020 (71% by three-judge panels) and 1105 judgments in 2021 (67% by three-judge panels), European Court of Human Rights, Analysis of Statistics (2021),

very first studies on the use of AI in supranational courts concern the ECtHR rather than the CJEU. These examples will be recalled below.

There might be more reasons making the ECtHR, due to the overall features of its decisions, more suitable for the use of AI predictive justice technologies. For instance, predictive justice can rely on strictly speaking legally relevant elements of cases, such as facts or the legal arguments and motivation, but also on non-legally relevant elements such as the identity deciding judges and their opinions, or the parties involved. In this regard, it has been acknowledged that «[c]ompared to legally relevant features such as case facts, it is technically more straightforward to extract information pertaining to characteristics such as the identity of the judge and lawyers involved in a case and use this to predict judicial outcomes».[87]

However, the more articulate style of the ECtHR can have opposite effects. It has been observed that although AI technologies' accuracy increased substantially, «their efficiency over time and their capacity to encompass "abnormal" circumstances still remains questionable. Whereas binary outcomes are usually consistent, complex issues or technically-nuanced positions of common law courts seem to be more difficult to grasp in algorithmic terms; current general models do not seem to reach a judge's expectations, beyond given levels of complexity as they remain unable to assess all factual elements of a given context».[88]

Also, compared to the CJEU, where the conflicting rationales of the system entail in principle more unpredictable outcomes, also in consideration of the abstract type of review (whereas ECtHR individual complaints are more factual), the ECtHR is embedded in a rather consistent system – the human right paradigm. To be sure, consistency can be lost in the more fragmented and less institutionalized nature of the Convention system. As mentioned, the resulting (greater) legitimacy deficit and the greater need for compliance makes the Convention Court more porous to external pressures (which does not necessarily mean more politicized).

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https://www.echr.coe.int/sites/search_eng/pages/search.aspx#{%22sort%22:[%22createdAsDate%20Descending%22],%22Title%22:[%22\%22analysis%20of%20statistics\%22%22],%22contentlanguage%22:[%22ENG%22]} accessed 17 May 2023. For the sake of comparison, see the number of cases decided by the CJEU per subject matter, Court of Justice of the European Union, *Annual Reports - Judicial Activity*, <https://curia.europa.eu/jcms/jcms/Jo2_11035/rapports-annuels> accessed 17 May 2023.

[87] F Bell *et al*. (n 80) 21.
[88] G Contissa (n 82).

b) Two examples of the use of predictive tools related to the ECtHR

It is at this point 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. To our knowledge, there is no specific study concerning the CJEU, except for a publication on claim detection in its judgments.[89]

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 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[90]) and of the applications lodged with the Court and/or briefs submitted by parties for pending cases[91]. 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 the latters. Their model resulted to be able to predict the decisions of the

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[89] M Lippi, 'Claim Detection in Judgments of the EU Court of Justice', in U Pagallo et alii (eds.), *AI Approaches to the Complexity of Legal Systems*, AICOL International Workshops 2015-2017 (Springer 2018), 513 ff.

[90] See, in particular, N Aletras et al., 'Predicting judicial decisions of the Europen Court of Human Rights: a Natural Language Processing perspective' (2016) 4 PeerJ Computer Science 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".

[91] ibid 4-6.

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'[92] 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"[93].

A more recent study showed the results 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' part, which sometimes explicitly mentions the verdict): the final score of the predictions was similar to the other study (77% vs 79%)[94]. 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%)[95].

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 possibly prioritize the decision process

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[92] About predictive justice and legal realism theories, cf. W Zagorski (n 33) 175 ff.

[93] N Aletras et al. (n 90) 2, 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, 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".

[94] M Medvedeva - M Vols - M Wieling, 'Using machine learning to predict decisions of the European Court of Human Rights' (2020) 28 237-266.

[95] ibid 257-259, 259-262.

on cases where violation seems very likely, potentially reducing the significant delays of the Court[96].

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 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, both of civil law and common law – the matter is probably more sensitive and must be addressed very cautiously. This is true in general, as we already mentioned, but even more if we bear in mind the function of the European Court of Human Rights. 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[97] implying a certain doctrine of precedent[98] – strengthened by the amendments of 2004 to the

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[96] N Aletras et al. (n 90) 3.

[97] 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 1999) 304-305: "les effets des arrêts de la CourEDH 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 »"; 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".

[98] E Calzolaio, 'La Giurisprudenza della Corte Europea dei Diritti dell'Uomo nella prospettiva della comparazione giuridica' (2015) 4 Rivista critica del diritto privato 633-634. About the precedent in the

Convention[99] – which is applied by carefully using the techniques of distinguishing and openly departing from earlier decisions for significantly relevant reasons.[100] 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.[101] But, on the other hand, tools more actively susceptible to influence 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 to weaken the prestige of the Court among the member states and their citizens, and consequently the compliance of the states towards its decisions, should

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ECtHR, see also, ex ceteris, K Lucas-Alberni - F Sudre, *Le revirement de jurisprudence de la Cour européenne des droits de l'homme* (Bruylant 2009).

[99] 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 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".

[100] For instance, reflecting societal changes: see L Wildhaber, 'Precedent in the European Court of Human Rights', in P. Mahoney *et alii* (eds.), *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 2000) 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 E Calzolaio (n 98) 631-632; see also J Mowbray, 'An Examination of the European Court of Human Rights' Approach to Overruling its Previous cases' (2009) 2 Human Rights Law Review 179 ff., 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.

[101] E Calzolaio (n 98) 630-631.

hopefully be avoided. In any case, relevant procedural innovations, potentially affecting the substantive law 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.

7. Conclusions

In this article, we have shown some examples of the practical functioning of predictive justice services, taken from the French legal landscape, in order to integrate the theoretical reflections on predictive justice in general, but also to pragmatically highlight the importance of a large amount of big data to make judicial algorithms work. The European courts cannot rely on the same number of legal precedents of their domestic counterparts, and, especially in some fields, case law is very scarce. Also, there are peculiarities of the European courts that might not favor the use of AI tools – e.g. ECtHR's articulate style or CJEU's hiding the stance of individual judges.[102] Thus, this analysis suggests further caution when speaking about predictive justice in relation to the Strasbourg and the Luxembourg Courts.

By contrast, the homogeneity of the main topics of the ECtHR and, to a lesser extent, of some recurring topics of the CJEU tends to create a quite predictable framework, which can be potentially favorable for targeted applications of AI analytics to the case law on such subjects. We mentioned in particular article 5 right to liberty cases and article 6 fair trial cases for the ECtHR, and state aid and competition cases for the CJEU. As to the latter, article 270 TFEU disputes between the Union and its servants have intrinsic potentialities for AI use, but again, the problem lies in the (still) low number. In any case, to our knowledge there are few examples of uses (by researchers) of AI tools for these courts.

In relation to the European courts of Luxembourg and of Strasbourg, we specifically focused on some of the potentialities and of the limits of the AI technologies. These are undoubtedly useful to the parties in order to optimize their processual decisions,

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[102] Yet, some research is going on the possible use of AI tools to identify authorship of individual paragraphs of CJEU's decisions, notably a (unpublished) paper on this topic has been presented at Brno Judicial Studies Institute on May 2022 by Michal Ovádek.

and useful – but merely in terms of supporting human decision-making – when used by judges, whose role is not one of merely automatic application of legal provisions and precedents, but of their critical evaluation and interpretation. The assistance of AI tools might be particularly beneficial considering the non-necessarily specialization of CJEU judges against the highly specialized characters of some EU matters (e.g. competition law),[103] or the overburden and workload of ECtHR judges. Yet, for fundamental reasons of respect of human rights and human dignity, the role of the machines should remain auxiliary to the activity of the human judge: empowering, but not replacing, him.[104]

In any case, as a general observation, utilization of predictive justice by judges must – before every implementation – be the result of a serious debate within the legal doctrine, the community of legal professionals and 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 implicated, particularly relevant as policy and teleological arguments play an important part in the reasoning of these courts (particularly the CJEU). In any case, any project entailing implementation of algorithmic tools by European judges must consider 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.

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[103] M Jacobs – M Münder – B Richter, 'Subject Matter Specialization of European Union Jurisdiction in the Preliminary Rulings Procedure' (2019) 20 German Law Journal 1221.
[104] U Ruffolo, 'Machina iuris-dicere potest?' (2021) 2 BioLaw Journal - Rivista di BioDiritto 409-410.