AI AND ADMINISTRATION OF JUSTICE: PREDICTIVE POLICING, PREDICTIVE JUSTICE AND EVIDENCE LAW

BELGIAN REPORT (for the 3th SECTION OF IAPL)

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O. General comparative introduction.

Before we discuss the different problems, we briefly discuss the Belgian legal framework wherein the practices evolve.[2]

In Belgium three languages are recognized, French, Dutch, and German. Universities (with their law faculties) use one of those languages. Literature can be found in both languages and sometimes in English. Statute law and case law of the supreme courts written in French or Dutch is translated in the other language, sometimes also in German. Regional differences can sometimes appear, but it also creates diversity in opinions and sources. Although Belgium is a relatively small country with a limited number of people (around 11 million), this diversity creates debate but also richness. For example, many textbooks pay attention to criminal procedure.

Belgium is a federal state where the main legislative powers regarding criminal law and criminal procedure remain in the hands of the federal legislators. The regions have (limited) powers to punish the violation of statute laws they are responsible for. For this report, regional legislation can mostly be disregarded. The criminal procedure is still englobed in the French Code d'instruction Criminelle of 1808 (in Dutch *Wetboek van Strafvordering*) although large parts have been modernized. One of the characteristics of this code remains that what is evident should not be noted. It looks therefore that many subjects of criminal procedure are not developed in detail or even not all in the Code. Large parts were thus left open for judge-made law and specially to adapt the law to new problems. This has of course its limits. Another important characteristic of Belgian law is that the work of the police is barely governed by the Code. However, a complex piecemeal of statutes has been developed over the last thirty years to fill this gap. The use of the French criminal procedure code follows that the procedure is still typically a strong inquisitorial one (although this has changed in many aspects in recent years, not only due to the influence of the fair trial model promoted by the ECtHR). There have also been other influences (the trial procedure before the Court of Assizes (*Court d'assises/ Hof van Assisen*) is inspired by English law) and as a country, in the centre of Europe, the influences of other countries and their law tradition can be perceived.

The two main supreme courts in criminal matters are the constitutional court (*Conseil constitutionnel/ Grondwettelijk Hof*) and the supreme court (*Cour de Cassation/ Hof van Cassatie*). It should be noted that a growing part of the criminal procedure is shaped by the constitutional court. Old and new laws are tested for conformity with the Constitution and to human rights enlisted in European treaties. This has brought major developments to the law and were some new policies in the field of criminal law were brought to a halt.

The Police consist first, of the general police services, the Federal Police on the national level, and the Local Police per Police Zones (most of the time 2 or more counties). Next to this exist a high number of agencies and services with police powers. Most of the time the members of these services are no police

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[2] See also F. Verbruggen, "Belgium", in F. Verbruggen and V. Fransen (ed.), *International Encyclopaedia for Criminal Law,* Wolters Kluwer, 1993.

officers, but civil servants with police powers or "administrative powers". Through the organization of the Police, lies the traditional distinction between the function of judicial and administrative police. The first is focused on the research of suspects and evidence when an offense has been committed. The second is preventive and focuses on maintaining public order. These functions can however be combined in one person. So judicial police don't correspond with a certain organization or service. All Federal police officers have tasks of the administrative and judicial police. Some specialized services can of course focus more on one function than the other.

The literature in the field of criminal procedure, justice, and litigation is very developed and comprehensive. In recent years more attention was paid to criminal evidence while police law and administration of justice remain a bit under the light. AI is of course amongst scholars in Belgium, just as in many countries, a 'hot topic'. Still much must be researched and written. This can also be explained by the relatively limited use in the practice of AI. Much is still in the phase of development and policy proposals.

These introductory remarks are the starting point for our report where we provide a survey of the use of AI in the Belgian criminal justice system. On the topics of predictive policing, predictive justice, and evidence law we will provide an insight into practices and legal framework, but also on the debates regarding the use of AI.

I. Predictive policing[3]

1. Definitions and practices

1.1. Definition

It should first be noted that predictive policing is certainly the most referred technique linking AI and modern police work. However, there are also other techniques known (and sometimes applied in Belgium) where the use of AI in police work is applied. First, we can think like J. Chan about automation of police work (crime reporting e.g.), the use of autonomous vehicles (including drones) for mobile patrols and, automated investigative techniques (speech and image recognition software e.g.).[4] This falls out of the scope of this report. We can further think of surveillance, profiling, and identification with the help of intelligent or ANPR[5] camera's (static, mobile, on drones,…), the use of automatic web crawlers searching the internet, dark web, or social media, the use of cyber agents[6] developed or even controlled by AI.[7] Finally, there is predictive policing or the use of "*machine learning to predict the times/places of crime occurrence and identify suspects*".[8] In this report, we will limit ourselves in this section to this. Only if the previously mentioned techniques can be used for purposes of predictive policing, we will include them in this section of the report.

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[3] The text was completed in January of 2022 with the then available sources.

[4] J. Chan, "The future of AI in policing. Exploring the sociotechnical imaginaries", in J.L.M. McDaniel and K.G. Pease (eds.), *Predictive Policing and Artificial Intelligence,* Routledge Frontiers of Criminal Justice, Routledge, London, Kindle ed., 2021, 48.

[5] ANPR: automatic number plate recognition.

[6] Sweetie 2.0, a by AI created fictious child (in reality a chatbot) has been used to get in touch independently with pedophiles or users of child pornography and has in Belgium led to some successful convictions (S. Royer, C. Conings & G. Marlier, 'Substantive and Procedural Legislation in Belgium to Combat Webcam-Related Sexual Child Abuse', in S. van der Hof, I. Georgieva, B.W. Schermer & B.J. Koops (eds.), *Sweetie 2.0. Using artificial intelligence to fight webcam child sex tourism*, *Information technology & law series* nr. 31 The Hague: Asser Press/Springer Press 2019, 183-242).

[7] See for the Netherlands B.H.M. Custers, "Artificiële intelligentie in het strafrecht. Een overzicht van actuele ontwikkelingen", *Computerrecht* 2021, n° 157, 330 et seq.

[8] J. Chan, 2021, 48.

But what is predictive policing? There is in Belgium no specific legal or scientific definition of predictive policing. There isn't any legal text what uses the term and in policy documents, the term is sometimes used but mostly without any definition. Many Belgian scholars use definitions from abroad.[9] Some Belgian scholars seem to prefer the term "pre-emptive surveillance"[10] or "algorithmic surveillance"[11] which have a broader sense[12], perhaps too extensive as it comprehends also a very wide range of techniques of random surveillance (in contrast to predicting specific criminal events, persons, or behaviour) and/or techniques not necessarily regarding criminal behaviour. We can however agree with R. Van Brakel that predictive policing should also not be seen in a too narrowly sense as only regarding techniques predicting criminality in a certain area (known as "predictive mapping"). It certainly also includes "predictive identification".[13] This is the identification of persons as being criminals or persons repeating previous criminal behaviour or as potential victims (profiling).

Due to the lack of a clear definition in Belgium, we will therefore for this report use the definition given respectively by R.I. Mawby and J. Radcliffe: Policing is "*a term we might apply to the process of preventing and detecting crime and maintaining order*".[14] In this report, we limit ourselves to policing by public officers, members of the police services.[15] Predictive policing "*means the use of historical data to create a forecast of areas of criminality or crime hot spots or high-risk offender characteristic profiles that will be one component of police resource allocation decisions. The resources will be allocated with the expectation that, with targeted deployment, criminal activity can be prevented, reduced, or disrupted*".[16] Some key elements seem to be important in this definition, the use of (police) data, the use of machine learning and algorithmic analysis of these data, the prediction of crime and the consequences of it, and the more efficient allocation of personal and means. Predictive policing is the logical successor of "evidence-based police"[17] and "intelligence-led policing"[18] using "big data" and AI. Predictive policing can either focus

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[9] R. Van Brakel, "Rethinking predictive policing. Towards a holistic framework of democratic algorithmic surveillance", in M. Schuilenburg en R. Peeters (eds.), *The Algorithmic Society Technology, Power, and Knowledge*, Routledge, 2022, (104), 108-109; R. Van Brakel, "Pre-Emptive Big Data Surveillance and its (Dis)Empowering Consequences: The Case of Predictive Policing", in Van der Sloot, B. et al (ed.), *Exploring the Boundaries of Big Data*, Amsterdam, Amsterdam University Press, 2016, (117), 122; see also L. Antonov, M. Laleman, Q. Planckaert, D. Shabouev, C. Uyttenhove en A. Vermeire, *Predictive Policing in the Belgian Police Services* (Bachelor thesis), Vives, Kortrijk, 2021, 20 [they propose also an own definition derivated from others: "*A process which uses (computer) models and relevant (police) data from different sources to assign explicit probabilities to future criminal events in space and time in order to provide a more effective and proactive response to future crime*"]; M. Vogelaers, *Predictive policing vanuit een antidiscriminatieoogpunt* Master thesis), UGent, 2021, 15.

[10] S. De Kimpe, E. De Pauw, G. Vande Walle en J. Vincent, "Inleiding", *Orde van de Dag*, 2015, 2 et seq.; R. Van Brakel, "Iedereen verdacht? De Effectiviteit en impact van het gebruik van preëmptive surveillance voor publieke veiligheid", in *Orde van de Dag*, 2015, 35; R. Van Brakel, 2016, (117).

[11] R. Van Brakel, 2022, 104.

[12] R. Van Brakel, 2015, 35.

[13] R. Van Brakel, "Een reflectie over het huidig toezicht van het gebruik van surveillancetechnologie door de lokale politie in België", in Cahiers Politiestudies, n° 55, 2020,

[14] R.I. Mawby, "Models of policing", in T. Newburn (ed.), *Handbook of Policing*, London, Routledge, Kindle Edition, 2011 (second edition), 17.

[15] In Belgium the term "police officer" (see misleading the articles 8-9 Criminal Procedure Code) can also mean a civil servant with police authority. Special federal or regional laws can also give these powers to other persons, in principle certain civil servants. They will however not become a policeman with the powers given to policeman by the law.

[16] J. Ratcliffe, "Predictive policing", in D. Weisburd and A.A. Braga (eds.), *Police innovation: contrasting perspectives*, Cambridge, Cambridge University Press, 2019, 349; cited by M. Hamilton, "Predictive policing through risk assessment", in J.L.M. McDaniel and K.G. Pease (eds.), *Predictive Policing and Artificial Intelligence,* Routledge Frontiers of Criminal Justice, Routledge, London, Kindle ed., 2021, 58.

[17] The idea here is to tackle problems by first identifying problems, make an analysis and try to understand it and only then find a relevant solution for the problem; further a tactical and strategic plan is made to deal with this specific problem; see N. Tilley, "Modern approaches to policing: community, problem-oriented and intelligence-led", in T. Newburn (ed.), *Handbook of Policing*, London, Routledge, 2011 (second ed.), Kindle Edition, 380.

[18] This a more vague term including the use of modern technologies whereby with the gathering of information and the use of statistics and analytics certain patterns of crime can be discovered. This will allow a relevant the response to this and again the dressing of tactical and strategical plans on the short or even long term (see for e.g. N. Tilley, (2011), 383 et seq.). The central word here is management of crime. Each of these techniques have it problems to implement (see N. Tilley, (2011), 391 et seq.).

on the identification, in time and space, of "hot spots" where crimes will occur or victims will suffer from the consequences of these crimes (called "crime mapping")[19] or predict through profiling if a certain person will commit a crime or will re-offend or if a person can become a victim of crime.[20] Important is that predictive policing is not used to respond to a report of a crime, but to predict it even before it was committed. The purpose is to prevent harm[21], deter crime or recidivism, and react immediately or even before it was committed. The focus is on gathering intelligence and pre-emptive strike.[22] Like an author formulated it, instead of an approach like a fire brigade or an emergency force reacting to danger, the police services will strategically plan of events.[23] From a Belgian legal point of view, it is mostly to be situated in front of the classic criminal investigation. It can even not be situated in the pro-active investigation (see below).

1.2. Practices

Concerning practices, predictive policing is still in the early stages in Belgium.[24] As with the digitalisation of police work, predictive policing is believed to be in an experimental phase. Some of these are known on the level of the Federal Police (profiling at the national airport)[25] and Local Police zones (one zone was mentioned in the press in 2016[26], another for the development of software in cooperation with the University of Antwerp[27], another more recently in cooperation with the University of Gent[28]). In a recent survey, some police zones mentioned the use of statistics and intelligent systems, but this doesn't mean the use of AI or predictive policing.[29] In 2016 a national plan was launched (I-Police) which had to be implemented in 2021, but this seems not to have happened effectively.[30] After the terrorist attacks in Brussels, the deployment of ANPR cameras all over the Belgian territory and at the borders was speeded up. The software or capacity needed for automated processing seems to be

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[19] This is not a new thing and comes from certain theoretical models about crime (see in detail for e.g. S. Chainey, *Understanding Crime, analysing the geography of crime*, New York, Esri, 2021; D. Weisburd and J.E. Eck, *Unraveling the Crime-Place Connection*, in *Advances in Criminological Theory*, Vol. 22, London, Routledge, 2018; see for Belgium W. Haryns, T. Snaphaan en L.J.R. Pauwels, "Criminaliteitsconcentraties en microplaatsen. Een toets van de "law of concentration of places", in *Tijdschrift voor Criminologie* 2017, (59) 3, 227-244).

[20] See also M. Hamilton, 2021, 58; W.L. Perry, B. McInnis, C.C. Price, S. C. Smith, J.S. Hollywood, *Predictive Policing: The Role of Crime Forecasting in Law Enforcement Operations*, RAND Corporation, 2013, 8.

[21] N. Cope, "'Interpretation for action?': definitions and potential of crime analysis for policing", in T. Newburn (ed.), Handbook of Policing, London, Routledge, 2011 (second edition), 404; T. Newburn, "Future of policing", in T. Newburn (ed.), Handbook of Policing, London, Routledge, 2011 (second edition), 833.

[22] S. De Kimpe, E. De Pauw, G. Vande Walle en J. Vincent, (2015), 2-3.

[23] N. Tilley, (2011), 373.

[24] R. Van Brakel, "Een reflectie over het huidig toezicht van het gebruik van surveilancetechnologie door de lokale politie in België", *Cahiers Politiestudies,* n° 55, 2020, (139-160), 6-7; L. Rooselaers en J. Maesschalk, "Digitalisering in lokale politie in Vlaanderen en Brussel: Waar staan we?", Panopticon 42 (5), 2021, 415-438, 2.

[25] The system consisted of making snap shots of persons passing the security checks and comparing the image with a database of self-made list of persons. The software seemed to be failing to recognise persons, a specially colour of skin and in case of wearing glasses or a beard. The experiment was partially stopped, but the taking of snaphots continued (COC, *Tussentijds rapport met corrigerende maatregel betreffende de visitatie bij de federale politie van de luchthaven Zaventem door het Controleorgaan op de politionele informatie met betrekking tot het gebruik van gezichtsherkenning op de nationale luchthaven van Zaventem*, 2020, n° DIO19005, https://www.controleorgaan.be/files/DIO19005_Onderzoek_LPABRUNAT_Gezichtsherkenning_Publiek_N.PDF). See also Belgian Parliament, Written question, n° 6-2175, 15th of January 2019.

[26] See R. Van Brakel, 2020, 7.

[27] Nearly nothing is know about this project: see Belgian Parliament, Written question nr. 7-591, 5 june 2020.

[28] See https://www.ugent.be/re/nl/actueel/nieuws/predictivepolicing; see also Zonaal veiligheidsplan 2020-2025 PZ Zennevallei, aiming at preventing burglaries and asocial behaviour (https://www.politie.be/5905/sites/5905/files/attachments/Zonaal%20Veiligheidsplan%202020-2025_samenvatting.pdf). This experiment should end around end 2021 (see also Belgian Parliament, Written question nr. 7-591, 5 june 2020).

[29] L. Rooselaers en J. Maesschalk, 2021, 9.

[30] See R. Van Brakel, (2020), 9.

missing, however.[31] The surveillance tool can surely be used in the reactive phase, but probably not for predictive purposes. It can also be supposed that web crawling is in use, but again not much is known if this is linked with AI systems and for purposes of predictive policing. Excepted for the federal police experiment where software problems and the lack of legal base was the reason why the experiment was stopped, little to nothing is known why other experiments have stopped and even if they have stopped completely.[32]

In general terms it is difficult to know if and which police services[33] use what type of predictive policing techniques and for which purposes or which results are sought.[34] Practices are mostly kept secret.[35] From the survey and the policy documents, it can be assumed that Belgian police forces are interested in the use of predictive policing.[36] It is also not known if foreign experiences have influenced the use or not, or had an influence on policies. Neither is known for which types of offences predictive policing is used or is wished to be used. We can only guess[37] to which offences predictive police is used in the above-mentioned experiments. Belgian research concluded that in theory predictive policing can be used for any offence, but is best used for burglary and mugging and better not used for crimes where offender and victims know each other.[38] Further, policy objectives are kept vague.[39] As mentioned above not much is known of the results, so it is therefore impossible to say if the government has achieved its goals, even if a predictive policing project was implemented.

Therefore, it is not known if predictive police techniques have led to the improvement of police work. Belgian scholars who have studied the efficiency, reliability, or impartiality of these techniques have to refer to foreign research and foreign official reports (US, UK, Germany, Netherlands, …).[40] As we will see below, even if not much is known about the practice of predictive policing, Belgian scholars (even if they are not so numerous) have extensively discussed the pros and cons and (legal) arguments regarding predictive policing.

What concerns the media, the above-mentioned experiments, and official statements are commented in an anecdotic way or in very general terms. There is therefore in Belgium a more limited public debate about predictive policing than in other countries.

2. Normative framework

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[31] VRT, 25th of March 2021, interview with director of COC, see https://www.vrt.be/vrtnws/nl/2021/03/23/privacy-en-ik-camerasurveillance/. In a projection if the whole system is operational a projection predict that the detection could gave 7500 hits a day. The capacity to deal with these hits are not present.

[32] See sources above.

[33] This is even more difficult regarding special services form different federal and regional departments and agencies. It is known to our knowledge that data-mining is used by the tax offices to lead administrative preventives investigations which can lead to criminal investigations. It is clear that hear further scientific research is needed.

[34] R. Van Brakel, (2020), 6-7; L. Rooselaers en J. Maesschalk, 2021, 2.

[35] R. Van Brakel, (2020), 6.

[36] L. Rooselaers en J. Maesschalk, 2021, 9.

[37] We can think about theft and burglary (this was confirmed in the above mentioned experiment of PZ Zennevallei, see above), especially by mobile groups of criminals, drug trafficking, human smuggling, and terrorism, but fraud and sexual offences could be in the centre of interest. See also T. Snaphaan en W. Hardyns, "Utilizing geo-referenced imagery for systematic social observation of neighbourhood disorder", *Computers Environment and Urban Systems,* 2021, 90.

[38] See W. Hardyns en A. Rummens, "Predictive policing as a New Tool for Law Enforcement? Recent Developments and Challenges", EJCPR 24 (3), 2017, 201-218.

[39] See for e.g. the experiment of PZ Zennevallei mentioned above (Zonaal veiligheidsplan 2020-2025 PZ Zennevallei) aiming at having "a better picture of burglaries". See the more or less same purpose proposed by the Minister of Internal Affairs (Belgian Parliament, Written question nr. 7-591, 5th of June 2020).

[40] See R. Van Brakel, (2015), 37; R. Van Brakel, (2020), 6-7; W. Hardyns en A. Rummens, (2017), 201-218; see also M. Vogelaers, *Predictive policing vanuit een antidiscriminatieoogpunt,* (Masterthesis), Gent, 2021, 42-44; see however W. Haryns, T. Snaphaan en L.J.R. Pauwels, (2017) concluding that the idea of Weisburd e.o. to concentrate on hot spots of crime seems for a limited sample of Belgian cities relevant.

In Belgium, there is no legal framework, or at least adapted framework, for the use of predictive policing. This became cruelly clear when the federal police had to stop a profiling experiment at the national airport.[41] It can be feared that other experiments are also at risk.[42] As there is no legal framework and there seems to be some demand to use it by different police forces, some authorities have called the legislator to draft adequate legislation.[43] It must be noted that predictive policing consists of different phases each with a corresponding legal framework: data collection, analysis, police operations, criminal response, and then back to data collection.[44]

To examine the existence of a framework we have to ask ourselves the following questions: a) can predictive policing be considered as a criminal investigation? b) regarding the answer to question a), who has the competence to order this? c) are there national, European (or international rules) applicable, and which conditions apply to the use of predictive policing? d) Are there any rules specifically governing the use of AI? In the third section below we will further look at the questions if a legal framework would exist, could it be that predictive policing raises concerns regarding discrimination, impartiality, reliability, and efficiency?

To start with, can predictive policing be considered as a criminal investigation, or is it mere preventive surveillance and maintaining public order? Belgian law considers that the judicial police has the task of searching for offences, the collection of evidence, and the handing over of perpetrators to the courts responsible for their punishment (art. 8 Belgium Criminal Procedure Code). The criminal investigation led by the prosecutor is the set of deeds needed to search for offences, the perpetrators, and the evidence of it and to collect the data needed for the exercise of the criminal action (art. 28bis, § 1, al. 1 Belgium Criminal Procedure Code). There is no general principle in Belgian law that a criminal investigation or any measures cannot be started and proceeded before a kind of suspicion of an offence exist. The suspicion condition exists for more intrusive measures or techniques. However, one can assume that the definition of a criminal investigation indicates that there is a least a vague indication that an offence has been committed. Next to the criminal investigation itself, exist the proactive investigation which is to be considered as a part of the criminal investigation led by the prosecutor is. It is, with the purpose to prosecute offenders, the search, collection, registration, and processing of data and information when a reasonable suspicion rises that offences will be committed or has been committed but not yet discovered and only if these offences were or will be committed by a criminal organisation or that the offence is a serious offence as enumerated in article 90ter, §§ 2, 3 en 4 (article 28bis, § 2 Belgium Criminal Procedure Code). This proactive investigation can only be started by the police with the written authorisation of the prosecutor (article 28bis, § 2 Belgium Criminal Procedure Code). It seems that the mapping of offences that have been committed and been discovered doesn't fall under the definition of a criminal investigation. Mapping can be ordered by the police themselves. The *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt*) and the Law on the integrated Police (*Lois sur la police integrée/ Wet op de geïntegreerde politie*) give general powers to the police to maintain public order, to

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[41] COC, *Tussentijds rapport met corrigerende maatregel betreffende de visitatie bij de federale politie van de luchthaven Zaventem door het Controleorgaan op de politionele informatie met betrekking tot het gebruik van gezichtsherkenning op de nationale luchthaven van Zaventem*, 2020, n° DIO19005, https://www.controleorgaan.be/files/DIO19005_Onderzoek_LPABRUNAT_Gezichtsherkenning_Publiek_N.PDF; see also R. Van Brakel, (2020), 14.

[42] The COC noted that the use of the *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt* is doubtfull for experiments COC, *Tussentijds rapport met corrigerende maatregel betreffende de visitatie bij de federale politie van de luchthaven Zaventem door het Controleorgaan op de politionele informatie met betrekking tot het gebruik van gezichtsherkenning op de nationale luchthaven van Zaventem*, 2020, n° DIO19005, https://www.controleorgaan.be/files/DIO19005_Onderzoek_LPABRUNAT_Gezichtsherkenning_Publiek_N.PDF, p. 4, n° 9 and p. 5, n° 10.

[43] See below the recommendations of the COC and Privacycommission.

[44] W.L. Perry et al., (2013), 128; see also J. Chan, (2021), 48.

prevent the commission of offences and to assure the protection of people and properties[45] and to do surveillance on all places where they have legal access to[46] and to collect information for this task[47]. However, it is not impossible that predictive policing techniques would start with 'committed offences' and 'offenders', to map the 'to be committed or yet to be discovered offences', e.g. by a criminal organisation. In that case, predictive policing can fall under the term of pro-active investigation and will then fall under the sole authority of the prosecutor. The same applies to the profiling of people (offenders, perpetrators, victims) where it can be purely preventive but also in the framework of a criminal investigation into activities of a criminal organisation or gang. It must be clear that in certain situations the written authorisation of a prosecutor is needed, and police services can then not do this on their own.

But there is more. Article 8 of the ECHR and article 4, 1 (a) of the Law Enforcement Directive of 27th of April 2016 (hereafter LED) makes it clear that for a privacy infringement a legal text is needed. The collection of data and processing it, and the surveillance by cameras for profiling e.g., are such infringements of privacy. Simple mapping of criminal events and offenders needs thus also a legal basis. Most of the time data about offences and offenders are considered as part of criminal police work and cannot be used for purposes of preventive police work, such as predictive policing. Exceptionally, a limited list[48] exists where data can be gathered for the use of prevention, like e.g. the "data" regarding people who can harm people or damage properties and the persons who can be the target of these assaults.[49] It seems to be that this doesn't concern judicial data from criminal records e.g., but only for specific clues concerning the intention of people.[50] We believe therefore that even predictive mapping can be problematic under current Belgian legislation.

Real-time profiling is even more complicated and seems to totally lack a legal framework. After a report of the Privacy Commission in February 2012[51], noting that the Camera Law was insufficient as a legal basis for intelligent cameras, the *Police Function Act* was amended (art. 25 et seq.). It now provides a legal framework for intelligent cameras, meaning systems holding parts or software, that can eventually be linked with registers and databases, can automatically treat images.[52] The cameras must be placed under the authority of a police officer who takes into account the principles of subsidiarity and proportionality. Images can only hold for a maximum of 12 months and even for a maximum month if these are not used for purposes of criminal investigations. Access to these images is restricted and a register of access must be held.[53] These data must be treated and processed in conformity with the rules in articles 44/1 et seq. of the Police Function Law. The COC, the Control Organ on The Police acting as Data Protection Office (*Organe de Contrôle*) noted that the legislator in article 44/11/decies of this law only made a legal framework for the use of ANPR camera's but not for other intelligent cameras. Although these intelligent cameras are mentioned in article 25 of the Law, the law doesn't state in which

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[45] Article 14, al. 1 *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt*). See also the articles 16-16quater (surveillance of traffic), article 18 and 19 (surveillance on mental ill persons), surveillance on prisoners or condemned mental ill persons who benefit a temporary measure of free movement), 20 (border and migration control), 21 (surveillance on mass gatherings).

[46] Article 26 *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt*).

[47] Article 14, al. 2 *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt*).

[48] Cour Constitutionnelle, 14 juillet 2016, arrêt n° 108/2016, B.16.3.

[49] Think about the mapping of burglaries and suspects of this offences; Article 44/5, § 1, 4° *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt*).

[50] Cour Constitutionnelle, 14 juillet 2016, arrêt n° 108/2016, B.36 and 80.3. Point 6° of the mentioned law stipulates that for public order disturbances criminal data can be used, what reinforces that for damage to properties this can not be used.

[51] Privacycommission, Recommendation n° 04/2012 of 9th of February 2012 on the different uses of camera control, p. 18; see also K. Van Poucke, (*On)begrensd Automatic Number Plate Recognition (ANPR)?*, Brugge, Van den Broele, 2017, 54 p.

[52] Article 25/2, 4° *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt*).

[53] Article 25/5-25/8, *Police Function Act* (*Loi sur la function de la police/ Wet op het politieambt*).

circumstances and conditions the use of these cameras can be used, how these images must be held en kept. The legal framework for e.g., automated facial recognition software processing biometric data, is simply not available.[54] The case shows however that with the COC there is a dedicated control authority specific for these matters and that they effectively control the infringements on the right of privacy. If predictive police would be used on a large scale the COC should be supported with more means and personnel.[55]

Predictive policing is also using AI techniques. And there Belgium is certainly not a front runner regarding legislation. At this moment there is no legislation about the authorisation, certification or labelling, monitoring, accountability, and transparency for authorities or private companies, or public services developing AI systems. One can assume that since the recent initiative of the EU commission on AI[56], regulation will follow. It should then be looked up if these regulations are also applicable to predictive policing linked with AI.

The Belgian legislator has also to pay attention[57] to article 11 of the LED which states that for automated individual-decision making (like profiling) there should at least be a right to obtain human intervention on the part of the controller.[58] This was nearly literally transposed in article 35 of the National Data Protection Law of 30th of July 2018.

Finally, it should be noted that that there is no case law regarding predictive policing. This can be explained for three reasons. First, as there are only experiments it can be assumed that the scale where it has been applied is limited. Further as predictive policing is mostly situated in the preventive administrative phase it doesn't concern the criminal investigation and that as such the results of processing data cannot be considered as evidence. We are here in the vague field of "information's". Third, even if it can be considered as evidence, the lack of legal framework or the violation of general principles or even articles of the ECHR will only bring to the conclusion that the evidence is illegally obtained. As this will be shown in part three of this report, Belgian law nearly doesn't have cases where the evidence is excluded. So even if it is illegally obtained evidence, it has not much sense to mention it before a trial judge. It is on the point of reliability or credibility that this should be challenged. In part three we will discuss if which chances such a defence would have before a trial court.

The same applies to the existence of soft law, regulations, or recommendations. The secrecy, as mentioned before, surrounding predictive policing makes it further impossible to know if such soft law exists.

3. General principles of law and discussion

In this part, we will show the debate about predictive policing in literature by Belgian scholars. The pros and cons will be discussed as they appear in the literature. It should be stressed that due to the nature

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[54] COC, *Tussentijds rapport met corrigerende maatregel betreffende de visitatie bij de federale politie van de luchthaven Zaventem door het Controleorgaan op de politionele informatie met betrekking tot het gebruik van gezichtsherkenning op de nationale luchthaven van Zaventem*, 2020, n° DIO19005, https://www.controleorgaan.be/files/DIO19005_Onderzoek_LPABRUNAT_Gezichtsherkenning_Publiek_N.PDF; p. 4.

[55] See also R. Van Brakel, (2020), 8 et seq.

[56] Proposal of the EC, 21 the of April 2021, Proposal for a regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (artificial intelligence act) and amending certain union legislative acts, COM(2021) 206 (https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52021PC0206).

[57] L. Antonov et al., (2021), 48.

[58] See also consideration 38: *The data subject should have the right not to be subject to a decision evaluating personal aspects relating to him or her which is based solely on automated processing and which produces adverse legal effects concerning, or significantly affects, him or her. In any case, such processing should be subject to suitable safeguards, including the provision of specific information to the data subject and the right to obtain human intervention, in particular to express his or her point of view, to obtain an explanation of the decision reached after such assessment or to challenge the decision.*

of the report we can here only give a summary of the main opinions. We will address problems regarding equality and discrimination, impartiality, democratic control and trust, proportionality and subsidiarity, accountability, bias, reliability, and finally trust in police work. Belgian scholars seem to be overall quite negative about predictive policing. The focus will therefore be more on what can go wrong (an argument not to introduce it). Some Belgian scholars however also give solutions or alternatives to make predictive policing more acceptable. The problems about the legal framework regarding privacy and the condition of suspicion were treated in point 2 above.

The first group of criticism[59], we could call the fundamental ones or those concerning human rights, see predictive policing as a form of mass surveillance[60] and violating the right of privacy and human rights like the right of free expression and gathering.[61] This could be solved by introducing the condition of subsidiarity and proportionality, just as used in Belgian law for many criminal investigative measures and special techniques. Predictive policing will only be used if other tools aren't successful or available. It could be limited to certain offences. The focus on certain offences or groups of people (perpetrators) can however aggravate the problem of bias (see below). Concerning the right of privacy, some scholars have the opinion how good privacy laws will be, surveillance will find its escape routes to avoid these legal rules. Therefore, regulating surveillance for maintaining privacy is an illusion.[62]

Mass surveillance can further lead or at least give the impression to the public that everybody is a suspect.[63] The distinction between victim and suspect or protection and safety get lost.[64] This becomes then a violation of the presumption of innocence. It could also lead to a general distrust[65] and uprise against the government or at least its enforcement policy. Democracy is at risk.[66] This risk is bigger in countries like Belgium where there is no need for suspicion to use predictive policing (see point 2 above) and where it belongs to administrative preventive control where it always can be used on every user (e.g., because you use a motorway because you cross a border etc.). The use of predictive policing for criminal investigations could avoid this. At least introducing a certain level of suspicion could bring predictive policing from the level of the mass to the level of certain dangerous people for society. But this can also aggravate the problem of bias (see below).

As the first phase of predictive policing consists of gathering data, the danger exists that certain groups which on a certain moment or time appear more in statistics will be systematically targeted even if things have changed. Even worse is that the system is fed by racist or false believes of police officers regarding certain groups. The objective system will then be biased by those believes introduced in the system. The same can happen in the interpretation and application by the police of the results after

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[59] See also R. Van Brakel, (2016), 123-131 and R. Van Brakel en P. De Hert, Policing, "Surveillance and law in a pre-crime society: Understanding the consequences of technology based strategies", *Cahiers Politiestudies*, 2011-3, n°20, 163-192.

[60] S. De Kimpe, E. De Pauw, G. Vande Walle en J. Vincent, 2015, 2. The phenomenon is called by this authors as panoptisme. This type of surveillance is a-selective in nature (L. Rooselaers en J. Maesschalk, 2021, 21) and looks at everyone at any moment at any place. Other techniques like mapping and profiling tend just the opposite, social sorting, dividing people into groups. A risk of discrimination follows naturally (R. Van Brakel and P. De Hert, (2011), 176.

[61] R. Van Brakel, (2020), 1-2; G. Vande Walle, E. De Pauw, J. Vincent en S. De Kimpe, "Locomotieftekst", in *Orde van de Dag*, 2015, 10.

[62] R. Van Brakel and P. De Hert, (2011), 180.

[63] See also R. Van Brakel and P. De Hert, (2011), 177.

[64] R. Van Brakel, (2015), 38.

[65] See L. Antonov et al., (2021), 52.

[66] See R. Van Brakel (2022), 104 et seq.

processing the data.[67] Also during the development of the software bias can be introduced.[68] One could say that question of whether predictive policing leads to discrimination will highly depend on these factors. It has not so much sense to test legal grounds on discrimination on a theoretical model of predictive policing.[69] It should finally also be noted that new technologies can perhaps mean an opportunity to avoid discrimination in a smart way.[70]

The second group of criticism refers to practical reasons. We have seen that little is known about the effectiveness of predictive policing. Belgian scholars have to refer to foreign studies (see above point 2). From these studies is concluded that predictive policing is not effective or at least that nothing is known about the capacity to reduce crime.[71]

Another aspect is acceptance of the practice. Acceptance seems to be a key condition to success.[72] Society, police authorities, and policemen must see the benefits. Fear or distrust by the public will have the opposite effect.

The public in general has a natural distrust in AI systems. Even if predictive police systems will work, the public will not believe it to be true.[73] Accountability and transparency can perhaps help to make the public believe and trust AI-based systems like predictive policing.[74] This is perhaps true if the system in itself is working correctly and unbiased, and the problem is only unfounded and subjective disbelieve by the public. If the system is biased e.g. accountability and transparency will not help solve this, probably on the contrary. Mass surveillance could lead to disruption of social coherence and general distrust in police.[75] Limiting the use to cases of suspicion of a crime would probably avoid this. Another problem is that one can question if accountability[76] and transparency respectively are possible with automated processes and with very complex systems. In a country like Belgium where secrecy seems to be the rule regarding predictive policing (see point 1 above) it seems that openness and transparency[77] (to a certain extent?[78]) would certainly not be a bad thing. Accountability for AI systems seems also to be a principle to follow.[79] At least should an investigation by humans be made possible on demand when decisions are made automatically (see above point 2, Article 11 LED).

Another problem is that if AI becomes so effective the opinion of the human subjective and weak police officer could be distrusted, which is not the goal to achieve.[80] The use of predictive policing could also

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[67] See L. Rooselaers en J. Maesschalk, 2021, 22; L. Naudts, "Criminal profiling and non-discrimination: on firm grounds for the digital area?", in A. Vedder, J. Schoers, Ch. Ducuing and .P. Valcke (ed.), *Security and Law, Legal and Ethical Aspects of Public Security, Cyber Security and Critical Infrastructure Security*, Cambridge/Antwerpen, Intersentia, 2019, 3-4; see also L. Antonov et al., (2021), 53; see further in detail M. Vogelaers, *Predictive policing vanuit een antidiscriminatieoogpunt,* (Masterthesis), Gent, 2021, 20-27 and 30-33..

[68] M. Vogelaers, (2021), 28-29.

[69] See also L. Naudts, (2019), 4 et seq. (with an extensive research on different European law sources); M. Vogelaers, (2021), 56 (focusing more on Belgian anti-discrimination law).

[70] R. Van Brakel, (2015), 39.

[71] R. Van Brakel, (2020), 7.

[72] See L. Antonov et al., (2021), 44-45.

[73] See L. Antonov et al., (2021), 52.

[74] R. Van Brakel en P. De Hert, (2011), XX; see also L. Antonov et al., (2021), 54-55.

[75] R. Van Brakel, (2015), 40.

[76] See L. Rooselaers en J. Maesschalk, 2021, 22. For this authors, because of the automatic monitoring and registering of processes accountability can also be improved by the use of AI.

[77] This means to every step of the process (how data is gathered, how is it processed and safeguarded, etc.) (See L. Antonov et al., (2021), 55).

[78] There is the problem of divulging information on how the software works, but private companies will no be so keen to reveal there working methods which can be used by competing firms. Police authorities can perhaps also be reluctant. If too much information is disclosed, can this be used by criminals to learn how to avoid the system?

[79] There could be a tendency to say that as the decision was automatic, the responsibility lies in the system. The consequence could be that nobody becomes responsible (R. Van Brakel en P. De Hert, (2011), 178).

[80] See L. Antonov et al., (2021), 44-45.

lead to the feeling of absence of the police by the public.[81] As they will only focus on certain hot spots in place of systematic patrolling, the police can give the impression to have vanished. This will enhance the feeling of insecurity in some people. On the other hand, the fact that more time will come free by using resources wisely could also mean that police officers can take more time to speak to the local community or victims e.g.

Police authorities can also have a distrust in the system. Efficiency will probably convince the authorities. Factors as the involvement of the top leaders of the police, a uniform policy overall services, and phased introduction can also help give trust to mid-scale authorities.[82] Another problem is that police authorities can be mispleaded by the promises of the private or public developers which can not be made true. This leads from over-enthusiasm about a more objective, more efficient cost and crime reducing system to disenchantment and so to distrust in the idea.[83]

At last, the individual policeman must also be convinced. A first measure could be making sure that the policeman is informed of the kind of decision (by AI or not)[84] Secondly, by making predictive policing systems a non-mandatory tool, the police officer will have the feeling that he is responsible and that a powerful tool has been given to him to prevent crime.[85]

4. Final remarks

From all of this, we can conclude that Belgian scholars have many concerns. We think that regarding discrimination that a concrete analysis is needed. Further, we believe that predictive policing should better be incorporated in the field of criminal investigations. A minimal form of suspicion like for invasive criminal investigative measures and minimal conditions like subsidiarity and proportionality are needed. Transparency and accountability will also help, even if this is difficult to achieve. Acceptance of the practice is also a point to pay attention to if predictive policing is to be introduced.

II. Predictive justice[86]

1. Definitions and practices

1.1. Introduction

Just like in the first part concerning predictive policing, it should first be noted that although predictive justice is the most referred technique linking AI to justice, there are other 'automated' processes where a part of the job of judges or prosecutors is partially or fully taken over by some kind of electronic system. There are many examples in foreign countries. For (criminal) lawyers different tools using AI will probably be developed. One can think about tools for drafting documents, document analysis, legal analytics tools based on case law or legislation, automated chatbots and speech-to-text tools and finally tools providing assistance in the internal office administration of law firms.[87] Most of these tools can be adapted for the work of judges: drafting documents, analysis of court procedure documents provided by the parties, legal analysis of case law and legislation, internal administration and communication tools.

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[81] L. Rooselaers en J. Maesschalk, 2021, 23.

[82] See L. Antonov et al., (2021), 44.

[83] See L. Antonov et al., (2021), 51.

[84] See L. Antonov et al., (2021), 45.

[85] L. Rooselaers en J. Maesschalk, 2021, 21; see also L. Antonov et al., (2021), 45.

[86] The text was completed in June 2022 with the then available sources.

[87] P. Homoki, Guide on the use of Artificial Intelligence-based tools by lawyers and law firms in the EU, CCBE/ELF, 2022, p. 20 and more.

Further, the work of the judges and the criminal justice has been hit by the wave of digitalization of processes. [88] More timidly this has been the case for Belgium too [with projects like video-streaming of court sessions[89], the digitalization of sending papers to the court electronically called *E-deposit* (not for criminal matters), the digitalization of court files called *JustScan* (only for police courts [90]) and *JusticeonWeb* with *MyJustice* and *JustSearch* where every Belgian citizen can find the digital products regarding his case in Belgium or can find information about the courts and more], sometimes recently encouraged by the sanitarian crisis. These processes are not always driven by AI systems, but sometimes they are. Anyway, in this report, we will limit ourselves to the technique of predictive justice. Some will call it "legal analytics". Questions of evidence will again not be treated in this part.

1.2. Definition.

Again, there is no specific definition of predictive justice (or legal analytics[91]) in Belgium. One scholar has outlined that this concept can be divided into "analytical justice" and "provisional justice". The first aims to predict the outcome of judicial decisions based on the analysis of previous decisions. The second aims to predict the dangerousness of an individual, or the risk of recidivism.[92] In reality "predictive justice" covers different techniques[93], where they either give instruments to the judges to better assess the behaviour of convicts and the possible risk they form for society, either they help the judge in drafting decisions or provide outside actors the possibility to predict the outcome of a case before a certain court. In both cases, they give a probabilistic calculation through AI systems and are based on the analysis of data.[94] These systems need thus the collection of "big data", covering all decisions (or a selection) regarding the process of qualifying acts into crimes, or regarding sentencing, and data regarding the behaviour of criminals and the rates of recidivism. In other words, predictive justice demands large databases with this kind of data.

1.3. Practices and existence of debate.

To our knowledge, there is in Belgium today no use of any kind of predictive justice, not to generate decisions or to predict them, not to predict risks concerning criminals. The same can be said for the private market. Even private practice and private companies don't deliver probabilistic tools to predict the outcome of criminal trials. The private market is still restricted to a limited number of countries due to legal and languish matters.[95] Further, the lack of a public database containing all judicial decisions is an important factor to understand this.

The current Minister of Justice has stated that the future of Belgian justice will be more modern and digitalized. Partly, the digitalization will be achieved by the use of data that will be made available for

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[88] See for Belgium: D. De Wolf, *Influence of ICT on the criminal process*, Belgian report, AIDP, 2013 (unpublished). See for France : A. Touré, *L'influence des Nouvelles technologies dans l'Administration de la justice pénale*, Paris, Dalloz, 2017, 696 p.

[89] See also D. De Wolf, *Handboek correctioneel procesrecht*, Antwerpen, Intersentia, 2013, 52.

[90] O Leroux, "Justice pénale et algorithme", in J-B. Hubin, H. Jaquemin et B. Michaux (ed.)/ CRIDS, *Le juge et l'algorithme: justice augmentées ou justice diminuée*, Brussel, Larcier, 2019, p. 56. This scholar justly points out that this has been the first wave of digitalisation in Belgium.

[91] G. Vanderstichele, "Artificiële intelligentie ter ondersteuning van menselijke rechtspraak", *NJW* 2020, 610-623.

[92] O. Leroux (2019), 58 and 61-62.

[93] See also G. Vanderstichele, (2020), 611-612).

[94] G. Vanderstichele, (2020), p. 611, n° 5.

[95] P. Homoki, *(2022)*, p. 12. In Belgium, a tool was developed by Kluwer but is only in the field of labour law (D. Mougenot, "L'intelligence artificielle dans la justice belge, où en somme-nous ?", *Rev.dr.tech.inf.* n°78-79, 2020, 11).

all and the use of AI to support judges (amongst others) in taking their decisions.[96] The phrase is so vague that it is clear that no clear plan exists. So everything lies in making the data from judgments available.[97]

In reality, the Belgian government has launched twice (in 2016 and this year in 2022) a plan to gather a wide range of judicial decisions in a database.[98] Each time this was postponed. So we don't know exactly when things will precisely be available. However, in the future, the data from all judgments will be available to everyone and searchable.[99] It is expected that commercial players will then develop certain tools.[100] Some scholars are totally opposed this idea as it could lead to predictive justice.[101]

It is clear that predictive justice is only in a very early stage in Belgium. No clear public policy was published to develop or implement AI in criminal justice yet. We can presume that initiatives are been taken or will be taken in Belgium too in the coming years. Some political policy documents made clear that predictive justice will have a certain impact on society. Measures should be taken to guide this evolution, for e.g. by drafting ethical rules.[102] There is today no large debate (by the general public or by practicians or experts) regarding these projects nor regarding foreign experiences. There is to our knowledge no public statement from officials or politics why they chose or refrain from the use of AI and the reasons for this. All of this remains the field of a very limited number of legal experts and academics. There seems (just opposite to predictive policing) to be some more knowledge and interest in the matter in the French-speaking part of Belgium than in other parts of the country.

Since no tools exist in Belgium no tool has been tested on the reliability, consistency, impartiality, equality, or adaptability of the systems.

1.4. Incentives.

It is however sure that after the gulf of "digitalization" another wave will follow and that will be the use of AI and techniques of predictive justice. There are many incentives to decide in this sense. Mostly one will point out that shortcomings of the criminal justice system can be solved or reduced. The use of AI will lead to better, more objective, more complete, and just, more efficient, cheaper, and faster justice. Some will say more logical, scientific, and controllable.[103] One Belgian author notes that the pretended advantages of predictive justice can be qualitative or practical. The first aims to make justice more uniform and leave judicial uncertainty behind. Justice will be more transparent, accessible, and predictable. Justice will also be more objective and without bias. Secondly, on the practical level, predictive justice will lead to economizing means and treating more cases.

2. Normative framework

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[96] Minister of Justice, "Beleidsverklaring, Justitie", 4 november 2020, Kamer, *Parl. St.*, 55-1610 (2020/2021), p. 21 (the French and Dutch texts don't correspond, while the Dutch text refers to decision-makers, the French version refers to political decision-makers and judges; we can assume that the French version better reflects the thoughts of the (Flemish) Minister …); See M. Messiaen and C. Verbruggen, "Une justice plus rapide", *JT* 2021, 191-192.

[97] D. Mougenot, (2022), 11.

[98] See J. de Codt, "La parole du juge sous le boisseau de sa quantification numérique. A propos de la publicité des jugements à l'ère 2.0", *JT* 2021, 22-24.

[99] See article 782bis Judicial Code; L. Gerard and D. Mougenot, "Justice robotisée et droits fondamenteaux", in J.-B. Hubin, H. Jaquemin et B. Michaux (ed.)/ CRIDS, *Le juge et l'algorithme: justice augmentées ou justice diminuée*, Brussel, Larcier, 2019, 45; D. Mougenot, (2020), 11-13; J.-B. Hubin, "La publicité de la jurisprudence en version 2.0 ", *Rev.dr.tech.inf*. n°74, 2019/1, p. 55-71; S. van Veen, "Openbare databank voor Belgische rechtspraak : een stand van zaken", *NJW*, 2022, n°. 461, p. 342-355.

[100] *DS* 31th of march 2022.

[101] J. de Codt, (2021), 23.

[102] AI4, *Belgium Report*, with foreword of Ministers of Digital Agenda A. De Croo/Ph. De Baker, https://www.ai4belgium.be/wp-content/uploads/2019/04/report_en.pdf, p. 15.

[103] O. Leroux, 2019), p. 56-57.

Today there is no specific legal framework in Belgium for the use of AI or more specifically the use of AI for predictive justice. As mentioned before there is no use of predictive tools there is also no case law about it. At this moment there is no ahead or ongoing testing of reliability, impartiality, equality and adaptability of systems, neither any form of control, certification or labeling of tools provided by private or public companies or organisations. Neither the private or public market is on this moment governed by specific rules. There are no rules either about obligations of transparency or accountability. Linked to the absence of use of AI at this moment there is no largely scaled or obligatory training for legal professionals.

So, due to the early stage of the use of AI, specific laws must still be developed on the European[104] and the Belgian level. We must in Belgium, therefore, turn to the existence of a general legal framework that could be applied if AI would be used in the future. It can also shape the debate about the future use of predictive justice tools. Further scholars can be inspired by national or international guidelines and refer to them. We will start with these first.

As mentioned before (1.2.) the Belgian government explicitly recognized that the use of predictive justice tools will need the use of an ethical code. Such a Belgian code has however not been drafted yet. The most know guidelines or ethical codes are the 2019 European Ethics guidelines for trustworthy AI,[105] the 2021 European Parliament resolution on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters[106] and the 2018 CEPEJ European Ethical Charter on the use of artificial intelligence (AI) in judicial systems and their environment[107]. Less know is perhaps the 2011 opinion of the CCJE on justice and information technologies[108] and the 2015 Resolution of the Assembly of the Council of Europe on Technological convergence, artificial intelligence and human rights.[109] One can also refer to the EC proposal for an AI act.[110] It will have no use for this report to analyse these documents in detail but they have surely an impact on the opinions of the (limited number) of authors and their discussions on AI. Interesting is, however, to note that the CEPEJ drafted five ethical principles for AI (and predictive justice tools should): these are: the principle of respect for fundamental rights, the principle of non-discrimination, the principle of quality and security (use of certified sources and intangible data in a secure technological environment), the principle of transparency, impartiality and fairness and the principle "under user control".[111]

On the Belgian level, human rights enshrined in the ECHR or in the Constitution (access to the courts, principle of legality of procedure, non-discrimination, privacy, independence and impartiality of the judiciary) could also be applied. At a lower level, privacy laws and general principles of law like

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[104] See infra proposal of EC.

[105] High-Level Expert Group on AI, 8th of April 2019, Ethics guidelines for trustworthy AI, see https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai.

[106] Resolution of 6th of October 2021, EP 2020/2016(INI). See also the follow-up by the EC 26th of January 2022, SP(2021)791.

[107] CEPEJ, European ethical charter on the use of artificial intelligence AI in judicial systems and their environment, December 2018, https://www.coe.int/en/web/cepej/cepej-european-ethical-charter-on-the-use-of-artificial-intelligence-ai-in-judicial-systems-and-their-environment.

[108] Opinion no. 14 (2011) of the consultative council of European judges (CCJE) to the attention of the committee of ministers of the council of Europe on justice and information technologies (https://rm.coe.int/ccje-opinions-compilation-1-23-en-final/1680a40c2e).

[109] APCE, Resolution n° 2102 (2017), Technological convergence, artificial intelligence and human rights, http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=23726.

[110] Proposal of the EC, 21 the of April 2021, Proposal for a regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (artificial intelligence act) and amending certain union legislative acts, COM(2021) 206 (https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52021PC0206). See also EC White Paper on Artificial Intelligence - A European approach to excellence and trust, 19th of February 2020, COM(2020) 65 final, https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf.

[111] CEPEJ, Ethical charter, p. 7.

impartiality, proportionality and subsidiarity can also be taken into account. These general rights and principles will also feed the debate by scholars in Belgium.

3. Discussion: general principles of law

In this part, we will study the discussion that scholars[112] have conducted about the use of predictive AI tools. We will overview the arguments and the risks that have been pointed out regarding general principles of law. Every time we will show which of these general principles of law could be applicable and if this is sufficient to deal with the problems that probably will occur.

3.1. Non-discrimination

AI tools are said to be objective, not biased, and will be consistent in judging.[113] Scientific research has shown that judges can not only be biased but are not able to judge in a constant and equal way. This is known as the "system noise" on human judgements. Scholars like the American Nobel prize winner D. Kahneman believe that AI could solve this.[114]

On the other hand, it is known that predictive tools depend not only on the used algorithm, but also on the used data.[115] In other words, if the data is wrong the outcome will also be wrong.[116]

The Belgian law of course forbids discrimination, but as we will see with other fundamental rules, no Belgian law expressly accompanies the use of AI tools how to prevent bias and discrimination. It will be up to the controllers (we will see later who this can be) to check which data was used.[117]

3.2. Independence

Many authors and drafters of ethical codes propose that AI tools should only be a tool to help the judges with their work.[118] In other words, AI should be an assistant to humans. This implies that the AI tool can be controlled at any time (see hereunder) and the outcome of an AI tool can be examined. Further, the principle of independence means that the judgment is still human-made (perhaps not written by), personally by the judge following their own reasoning regardless of the outcome of the tool.[119] Inversely, AI tools where the outcome would be imposed on the judge and/or the judge could not examine the outcome would be an infringement of the principle of independence of the judge.[120] Some scholars go even further and state that as the tool is making the decision and overtakes a task of the judge, this is a forbidden shift of powers as enshrined in the constitution.[121]

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[112] The actual number of publications are again very limited, even more dan about predictive policing. Many credits go to O. Leroux with his article "Justice pénale et algorithme" (cited hereabove). Further G. Vanderstichele treated the problem in a larger context in her article Artificiële intelligentie ter ondersteuning van menselijke rechtspraak (cited hereabove). For civil law we have the article of L. Gerard and D. Mougenot, "Justice robotisée et droits fondamenteaux", p. 13-54 (cited hereabove).

[113] O. Leroux (2019), p. 69.

[114] See D. Kahneman, O. Sibony and C.R. Sunstein, Ruis (Dutch edition), Nieuw Amsterdam, 2021, 130 et seq.,

[115] G. Vanderstichele, (2020), 620.

[116] This is very well known in IT terms in quite lyric words such as "shit comes in, shit comes out".

[117] See further G. Vanderstichele, (2020), 622.

[118] O. Leroux (2019), p. 69.

[119] See O. Leroux (2019), p. 69 referring to the CEPEJE rules regarding the use of AI; see also CEPJE, *Opinion n° 20 (2017) the role of courts with respect to the uniform application of the law*, p. 6.

[120] See also L. Gerard and D. Mougenot, (2019), p. 28-29.

[121] G. Vanderstichele, (2020), 616.

Belgian law provides different rules to guarantee the independence of judges. A general principle of law states that the trial judge has a large power of discretion to examine any kind of evidence and never will be obliged to take a certain element of evidence as true.[122] Case law will probably rule the same about predictive tools it will be considered as advice to the judge that he will sovereignly examine. It will also be important that the judge gives his own reason and will not just refer to the outcome of the predictive tool.[123] At last, to respect the *principle of presumption* of innocence, the guilt of the suspect must be proven.[124]

The principle of independence seems to be assured in Belgian law if it is a) accepted that predictive tools are only advisory tools that don't impose any solution on the judge and b) that before trial courts the outcome of AI tools can be challenged before trial courts (see hereunder).

The real danger could lie perhaps in a dangerous evolution to replace the judge in first instance by the police or prosecutor who will draft a decision automatically with a computer. Only in appeal, there will be then a review by a judge. This seems not only a shift of powers, but also a real threat to the independence of judges.

The general principles seem to be sufficient to guarantee the independence of the judges. But more precise rules should rule out which role AI instruments will have.

3.3. Right to a fair trial

One author remarks that in the case AI is used to examine the culpability of the defendant, this falls under the scope of article 6 of the ECHR. Therefore, this person has the right to an "adversarial" trial. Translated to AI this means the right of transparency regarding the used AI tool, its working, and its outcome. This author continues that every concerned person should have the right to challenge the validity of the outcome, the weight attributed to it and to point out the errors it is containing.[125] This condition of transparency is also included in most European ethical codes and guidelines. From foreign experiences, one can fear however that certainly the working and structure of privately developed tools will not be disclosed by their developers.[126] More in the case of certain AI where the tool itself learns and adapts its algorithms by itself, the question arises of how transparency can be achieved because after some years nobody will know how the tool is working. The use of this type of AI could be precluded for the use of predictive justice. Same problems arise with systems working with a "black box".[127] Some scholars see a solution for this, by obliging states only to use "explainable AI". Further special attention should also be given to openness regarding the data which are introduced in the tool. This is a precondition for fighting against bias and discrimination.

AI must be "understandable" for ("or explainable to") lawyers, including judges. Of course, can training help this and make professionals more aware, but some scholars[128] correctly doubt if lawyers are able to fully understand it (see further hereunder possibilities to challenge). Anyway, the right to defense will mean even more the right to be assisted by a lawyer or even better an "AI trained" lawyer.

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[122] Among others D. De Wolf, (2013), 249.
[123] O. Leroux (2019), p. 72.
[124] This will be developed further in part III Evidence law.
[125] O. Leroux (2019), p. 66-67; see also G. Vanderstichele, (2020), 620 and 621.
[126] See also L. Gerard and D. Mougenot, (2019), p.
[127] See G. Vanderstichele, (2020), 621-622.
[128] See G. Vanderstichele, (2020), 616, 617 and 621.

It is clear that the general principles and rules (article 6 ECHR, the principle of adversity, the principles in the ethical codes like transparency) will not be enough to ensure the right to a fair trial. Another key aspect will be the possibility to challenge the input and outcome of predictive tools.

3.4. Possibilities to challenge results

In Belgium, there are no specific rules about preventive (e.g. through certificates or labeling granted after a process of testing or peer-reviewing) or ongoing control (for e.g. audits, sample testing, etc.). Further, there are no rules on which standards the reliability, the impartiality, the equality, the adaptability, the validity and the trustworthiness of systems and tools should be tested.[129] More there is no procedure for how to challenge the outcome of these tools. This is perhaps aggravated as there are no specific rules of accountability for developers of AI or AI itself.

Scholars have thought about the weight that should be given to the results of predictive tools and the ways that during litigation the AI system could be tested.

First, linked to the above-mentioned principle of independence, it was stated that the outcome can never be decisive. In this sense that the result of the algorithm is subject to examination by the judge and the result is only a piece of advice or an indication. This means that tools that would not be meant to help the judge, but to make the result binding and replace the judge, would be unacceptable.[130]

But there is a double problem. First, when the judge will intervene or the tool contradicts his judgment, this will undermine probably his judgment.[131] This problem is sometimes referred to as the "automation bias", this is the fear to depart from solutions given by AI tools.[132] Secondly, if a law professional, or a judge, is able to judge matters it means the AI tool is used for quite easy tasks. In other words, if the task becomes more complex, the judge will probably not be able to examine the tool.[133]

Secondly, how can predictive tools be tested during a trial[134]? Nobody will go against the idea that it should be possible to challenge AI in courts. Nor that everybody *has the right to get access to a court* to challenge AI. As no specific procedure or remedy is provided in Belgian law, this discussion will take place before the trial courts. However, how will this work?

It is as mentioned before doubtful that parties will be able to challenge the outcome of predictive tools only based on their right to an adversarial trial. The lack of transparency, the technological complexity, and the training of lawyers will be problems. For the same reasons, judges will not be able to understand and challenge it either. If they as "trusted persons" would have more knowledge about the working of the system, this will be problematic because in that case, they will have a knowledge advantage on parties that is also in violation of the right for a fair trial.[135] Software developers could be heard as witnesses. This will only help if the AI tool will not have learned by itself. In that last case, even the creators will not be able to tell how the algorithm works. But probably even with simple algorithms, this will not be enough. There will be the need for the judge to appoint expert witnesses that perhaps with or without the help of the software developers will extensively test the system.[136] This means that

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[129] A system of labeling or certificates could perhaps partly solve the problems (see G. Vanderstichele, (2020), 620).
[130] O. Leroux (2019), p. 69.
[131] O. Leroux (2019), p. 69.
[132] G. Vanderstichele, (2020), 621.
[133] See P. Homoki, (2022), 45; see also L. Gerard and D. Mougenot, (2019) p. 18-21.
[134] With trial we mean in first instance and appeal. As the appeal procedure still fundamentally implies that the whole case is fully reexamined in appeal (see D. De Wolf, (2013), n° 161).
[135] See ECHR Edwards and Lewis vs. UK, 22th of July 2003.
[136] In that sense G. Vanderstichele, (2020), 617.

lawyers will have to work together with computer scientists. Both will have to find a common language to understand the law aspects as the technical aspects.

A Belgian scholar has proposed to see predictive tools differently, as follows[137]: in the first stage parties and judges will analyse the case on facts and laws like they have done for many ages; next, they will look at the outcome of the tool; after comparing the result to their analysis and the facts and the law they will either repel the solution of the algorithm. At each stage, the parties can challenge the tool, which means questioning the input and the outcome of the tool. This model would be in compliance with the right of a fair trial.

To conclude, it's clear that rules on how and when AI will be tested should be drafted.

3.5. Replacing legal reasoning with mathematical calculation

Scholars have stated also that although predictive tools will make case law more uniform, equally and repeatable in the same way for the same cases, it means also that there will be no evolution or changes in case law anymore.[138] The risk exists that judges will be refrained to depart from a generally accepted solution given by AI tools, as this will automatically be seen as deviant case law and so as incorrect judgments.

A further risk exists also that the AI tool will not be able to take into account the full context of cases or will neglect certain facts which would give a totally different outcome to the case.[139]

Finally, the risk is that the judge will disappear and be replaced by dehumanized automated decision tools.[140] The judgment will be a product of a computer ordered by the judge or even by the police or a prosecutor.

The judgment and the criminal trial will lose their symbolic and ritual function. To avoid this the judge must always, next to the power to direct the trial, have the lead in organizing the search for the truth at the trial by ordering the attendance of the parties, the disclosure of pieces and the audition or cross-examination of witnesses.[141]

The replacement of legal reasoning is perhaps more a question of policy, but if this would be introduced, some legal basis and rules should be drafted to implement this policy. Like mentioned before, a radical replacement of the judge will go against some fundamental principles and should thus not be followed as policy. Smaller shifts should however also go with detailed rules working this out.

3.6. Privatizing

It is clear that a lot or the majority of the tools are developed by private companies. Today the IT world is largely in the hand of a limited group of companies. One can fear that all tools for predictive justice will be developed by private companies. One author sees there a threat to the privatization of justice (as these companies will run justice). What is more, these companies have only an aim of maximization of benefits.[142] One can fear that ethical principles will not be at the center of interest of those companies (comparable to mining and oil companies regarding sustainability). It is difficult to say if things will go so wrong (only private companies, only driven by profits), but this risk certainly exists. In Belgium, there is some funding for universities to develop "ethical" and affordable AI solutions for government

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[137] G. Vanderstichele, (2020), 619-620.
[138] O. Leroux (2019), p. 70.
[139] O. Leroux (2019), p. 70; P. Homoki, (2022), 46.
[140] O. Leroux (2019), p. 71.
[141] See O. Leroux (2019), p. 71.
[142] O. Leroux (2019), p. 68.

agencies. The government is also involved in making the data open to the public at no cost. One could say that there is a (timid?) policy to prevent total privatization.

3.7. Equality of litigants

One author points out that there is a new risk of inequality due to the problem that not all parties could afford these tools. One party that can however afford certain tools can be put in a more advantageous situation. One author states that the trial judges should pay attention to the existence of such situations.[143]

The problem could also arise in a different constellation. It is possible that the (private) parties will have the possibility to afford these tools while the judges and prosecutors will not have them due to the lack of budget provided by the national State.[144] This will probably depend on how politics will see the potential benefits of augmenting the quality and quantity of judgments.

4. Final remarks

To end some concluding remarks can be made about the use of predictive tools driven by AI.

Firstly, not many scholars question if the use of AI for legal analytics or predictive justice should be allowed. This is however a fundamental question. Many advantages exist, but many inconveniences also.[145] The danger of an automated process whereby the establishing of the offence, the drafting of the police report, the prosecution and the drafting of a judgment will all be handled by a computer is not a science-fiction screenplay anymore. Even the replacement of the judge by a machine is not impossible. With all the fundamental and ethical objections, do we want AI coming into the field of criminal justice? Perhaps we can say that human judges make so many poor judgments that AI tools would bring us much further to a just society? But are AI systems as great as predicted? They seem very dependable from the data that was inputted. Further AI systems seem to have some troubles with the distinction between details that matter and those that are irrelevant. The context seems also to be a problem to take into account.[146] We think that at least some tools should not be allowed. Not everything that is technologically possible should also be accepted.

Secondly, let's say that we accept the use of certain AI tools, or are obliged to accept it because States will choose it for reasons of budget cuts and efficiency and because (let's admit that too) many human-driven judicial systems are not working properly today. Perhaps we must see predictive tools as a necessary evil that we will have to surround with great care and suspicion. What to think in that scenario about the idea of AI predictive tools as assistance to humans? Some see this as an alternative to avoid justice will be overtaken by computers. But then new fundamental questions arise. For example, will it be possible to reduce AI to the role of assistant? Will judges and lawyers resist the facility to use a predictive tool that delivers an outcome in some minutes instead of working for hours by doing it themselves? Will lawyers overcome the "automation biases" and dare to depart from solutions (seen as a precedent) given by predictive tools? But even more fundamentally will we be able to challenge AI outcomes in the trial? And can we understand AI-driven tools, even if transparency would be achievable (which is already a huge problem)? A realistic approach is to say that lawyers will not be able to do that. And even if we could, will we check the AI system in each and every case or only in

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[143] O. Leroux (2019), p. 68.

[144] In Belgium some emotions surged when the Ministry of Justice decided to end the subscription of the major Flemish Law Journal. Only one subscription would remain in the library of the Ministry in Brussels. Some judges and prosecutors were furious about this budget cut. An individual subscription to one of the three private searchable databases is not provided for all judges. One can expect the same problems for subscriptions to AI tools.

[145] CCBE, *Considerations on the legal aspects of artificial intelligence*, 2022, p. 18.

[146] P. Homoki, (2022), 46.

some cases? Ahead labeling and certification can help, but perhaps that monitoring the system outside the trial is a better solution? We think that certain tools which use moderate (looking up case law; giving a vague indication of sentence or risk) or mid-levels (proposing a draft judgment) of AI can be useful to facilitate the work of the judges, but we will have to accept that this will change the tasks of the judge and the way of judging. Real predictive tools (binding decisions, automated processes) seem however problematic.

Finally, it is more than possible that the role of the judge will change. And perhaps there is here good news to tell. Instead of being busy with routine work, the judge will be able to focus more on drafting judgments in complex cases or developing new case law. Another shift could occur, he will be busier with controlling the fair trial or with the search for the truth than with drafting judgments. This will probably be a good thing and enhance the quality of trial procedures. Let's thus end on a positive note for the future.

III. Evidence law[147]

1. Definitions and practices

In this part we examine the impact that use of AI in Belgium will have on the gathering and assessment of criminal evidence or at least we will try to answer the question that if AI systems were introduced in Belgium how this will have an impact on the gathering and assessment of criminal evidence and the law concerning this.

From the beginning it can namely be stated that there is in Belgium no officially known use of AI for criminal evidence matters yet and no specific regulation or case law. There is also nearly no academic debate on this topic.

So, although there is officially no use of AI to collect evidence or to treat evidence in Belgium, one can imagine that AI systems could contribute to collect, analyse, and assess evidence. It could go from the automated surveillance of people on a certain place, the automated recording of communication between suspects, the automated transcripts and analyse of these communications, the automated process of going through millions of digital files on a computer and the automated viewing of images. The collect of evidence in criminal gang or organised crime cases or the catch of delinquents looking for child pornography would be made easier. The work of police officers, prosecutors' judges and the advocates of the parties would be made lighter. But one could imagine going further and to let AI systems analyse the relevancy, trustworthiness, and credibility of evidence. Up to fully replace the task of the judge to decide if a certain count is proven. The last question has already been addressed in the second part of this report. Therefore, in this part we will focus on the process of collecting evidence with the help of AI, the admissibility of AI made evidence and the processing and assessment by a human judge of evidence collected or made by AI. It is in this sense that we define the use of AI and the impact on the gathering and assessment of criminal evidence. For this reason, this part of the report will look somewhat different as the two previous parts. In a first point we will look at evidence produced by AI and the question of admissibility. In a second point we will look at the assessment of AI-based evidence. We will again end with some general remarks.

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[147] This part was completed in May 2023 with the then available sources.

2. Collecting and producing evidence by AI.

Belgium makes part of the group of countries with a so-called free system of proof. This means that all types of elements of evidence can provide the proof and that all types of proof are admissible.[148] No need to put evidence in a certain category.[149] This makes it possible to accept forensic evidence as evidence or to accept certain police techniques, like the lie detector, as evidence.[150] It doesn't matter here if the evidence is collected by officials or by private parties.[151] Rare are also the types of evidence where legal rules will say how they must be gathered (examples are DNA, blood testing, drug testing, gathering samples in environmental cases, …). Even these elements of so-called "legal evidence" are admissible if the rules governing the collection were violated.[152] However, in that case will rise the question if the evidence is then still trustworthy and if it must be considered as illegally obtained and must be excluded or not. The same question of illegally obtained evidence will apply if the evidence was obtained without authority or that the conditions to obtain them were violated. One could theoretically discuss if this is a question of admissibility of evidence or not.[153]

From the previous follows two points. First evidence collected or produced by AI based systems will be admissible as evidence unless new laws will make an exception to the general rule of free admissibility. Secondly if the process of collecting and producing evidence by AI is governed by future laws, the violation of these laws will not be a problem of admissibility of evidence in the strict sense, but of illegally obtained evidence. And there Belgium is quite unique. From 1920-2003 Belgium followed the exclusionary rule of illegally obtained evidence and evidence that followed from it. From 2003 on it is only possible to exclude illegally obtained evidence when it is either collected in violation of a law that's expressly sanctioned with nullity, either when its unlawful collection will endanger the reliability, either when the unlawful collection violates the right of a fair trial.[154] In practice this means that nearly no evidence that is obtained unlawfully is excluded by the courts. This is also applying to "legal evidence".[155] Examples of cases where exclusion will follow are the use of torture[156], the violation of the right to remain silent and the violations of legal privileges.[157]

From all this follows that even if the parliament would make a specific legal framework for the use of AI there will not be any legal incentive that officials will have to follow this framework. It will be up to

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[148] O. Michiels and G. Falck, *Principes de procédure pénale*, Bruxelles, Larcier, 2023, n° 1384; M.-A. Beernaert, H.D. Bosly and D. Vandermeersch, *Droit de la procédure pénale*, 2021, Bruges, La Charte, t. II, p. 1331; F. Deruyck, *Overzicht van het Belgisch strafprocesrecht*, Brugge, Die Keure, 2020, n° 699; D. De Wolf, *Handboek correctioneel procesrecht*, Antwerpen, Intersentia, 2013, n° 195.
[149] D. De Wolf, 2013, n° 195.
[150] O. Michiels and G. Falck, (2023), n° 1385;
[151] D. De Wolf, 2013, p. 250.
[152] D. De Wolf, 2013, p. 250.
[153] See D. De Wolf, 2013, n° 209. In theory on could say that excluded illegally obtained evidence is also "not admissible" evidence. Better is to make a distinction between rules of admissibility and rules regarding lawfully obtaining evidence. In practice this theoretic dispute doesn't make much sense as in Belgian practice nearly all illegally obtained evidence is not excluded anymore and is thus also admissible.
[154] O. Michiels and G. Falck, (2023), n° 1404-1405; M.-A. Beernaert, H.D. Bosly and D. Vandermeersch, (2021), p. 1345-1363; F. Deruyck, (2022), n° 702; D. De Wolf, 2013, n° 216-224.
[155] See M.-A. Beernaert, H.D. Bosly and D. Vandermeersch, (2021), p. 1360-1361
[156] No Belgium case law however expressly states this. Belgium got on the other hand the dubious honor to be convicted by the ECHR in the case of EL HASKI v. BELGIUM (judgement of 25th of September 2012) where the Belgian judges accepted the use of evidence obtained by torture by Moroccan officials and transmitted to Belgian authorities.
[157] See D. De Wolf, 2013, n° 223, p. 281.

the good will to follow rules. Even if these rules will concern the rights of parties, it is doubtful that the courts will sanction their violation. It makes any framework quite obsolete in advance.

3. The assessment of evidence collected or made by AI based systems.

So, without rules of admissibility, the weight to prevent abuses and to control the use of AI in evidence matters will completely lie on the shoulders of the judge when he assesses the evidence.

The law of evidence in Belgium doesn't provide much guidance for the Belgian judges to do that. The general rule is again the freedom of the judge to evaluate evidence and to obtain an inner resolution (*conviction intime*).[158] The rule is somewhat nuanced by the obligation for the judge to minimally give the main reasons for his decision.[159]

There are probably different problems for the judge to do this. Most problems are equally problems for the parties to participate effectively in the process and to challenge this type of evidence.

First most judges or lawyers don't have the general skills to understand basic computer technology. Secondly AI can be a black box for everybody, even for the software developer, so also for the judge. The use of certified AI software or the systematic assessment by expert witnesses are possibilities, but with both solutions there are well known inconveniences.[160] Human cross checking of samples can be a method to check the reliability of the evidence. But here nobody will be sure that AI is not only working for the samples but for all cases. There is no real easy solution to solve this problem. Third AI can bring a certain laziness into the system, where judges, without any sense of criticism[161], will rely too easily on AI systems. When judges (in Belgium but also in most continental systems) are too much relying on the case file, in the future there is the possibility that they will rely too much on AI and lay back. Fourth and last, it will not be easy just as with more scientific evidence like DNA evidence, to match these scientific concepts it with vague law concepts as inner resolution and judicial certainty. Perhaps that AI will even be strict on labelling certain elements of proof as evidence, while humans with lower standards of evidence would not have any problems with this. This could be seen as an advantage, AI can perhaps help to better observe, calculate and analyse elements of proof and be less lenient on standards regarding reliability, relevance and credibility. This could lead in other words to better evidence than human collected and gathered evidence. One could see it also a new burden for collecting proof.

4. Final remarks.

Nearly nothing has been written on this subject by scholars. Further, Belgian law is again not ready at all for AI. While the admissibility may not be a problem, we see already now in practice in Belgium many problems with the assessment of forensic evidence. These problems will be bigger or the same with the use of AI for the gathering and assessment of evidence. The habit to work without many rules gives certainly a great flexibility to the system, but it brings uncertainty (every judge will handle it differently). It also brings inefficiency in the process to control and assess AI made evidence. There is a

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[158] O. Michiels and G. Falck, (2023), n° 1400; M.-A. Beernaert, H.D. Bosly and D. Vandermeersch,, (2021), 1365; F. Deruyck, (2022), n° 710; D. De Wolf, 2013, n° 190.

[159] D. De Wolf, 2013, n° 192.

[160] We raise the question if AI can be certified at all (see part II, point 3). The use of expert witnesses (these experts can also be AI systems?) will make procedures very lengthy, while the purpose to use AI is to reduce time. With expert witnesses the battle of experts is not far away etc. Most of these methods will also cost a lot of money. Without the help of the judge, only wealthy parties will be able to take the battle.

[161] In practice we see with the technique of the lie detector that certain judges didn't question the reliability of this method while other categorically refuse it because of its doubtful reliability. The law now provides a legal framework for it (see O. Michiels and G. Falck, (2023), n° 1480-1488), but doesn't treat the problem of the reliability. However, the law, stipulates that it can only give evidence when corroborated with other evidence (see O. Michiels and G. Falck, (2023), n° 1488).

danger that judges will lay back and let it happen, what could be a new source of judicial errors. But providing a legal framework will also mean that these rules must be followed. The exaggerated leniency on not excluding unlawfully obtained evidence, is a true handicap for any successful legal framework.

AI can also bring improvement to the evidence law. AI could generate "better" evidence in terms of reliability and credibility. Phony techniques could be banned.[162] Technology could certainly on many points improve the search for the truth. But others will just find this a negative point, as it brings new burdens to the gathering of criminal evidence.

To conclude, AI-systems could bring improvements to the gathering and assessment of evidence. The challenges which will come along could however be bigger and perhaps much bigger than the profit that we will obtain with the use of AI in criminal evidence law.

IV. Conclusion

In Belgium much is still to happen, both in terms of practice and debate. But we are on the verge of next digital evolution which could drastically change things. One should ask if we accept the use of these new technologies and which ones. AI systems can bring improvements in the criminal procedure (faster procedures, more equal and uniform judging, more focus on qualitative work than administrative tasks and routine, better evidence and search for the truth), but it could also bring new problems and new burdens to a procedure with already many problems and a lack of efficiency. More, AI do rise also questions of more fundamental nature risk of discrimination, independency of the judges, privatizing justice).

Further, it is clear that Belgium is not ready to start with the use of AI in the criminal procedure. We must leave the stage of wild experiments like in the field of policing. The lack of legal framework is every time a problem. Even if a framework would exist it is essential that the rules should be followed and non-compliance with it will be sanctioned.

Finally, although the idea of human leaded and cantered use of AI is put forward by many, it is questionable if on the one side this is a real possibility and on the other side officials will not tend to lay back and rely totally on AI systems. In the case AI systems are challenged it is questionable if judges will be able to take up this task to test and check the systems. The future will show it.

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[162] Some years ago, police and prosecutors were so desperate to solve certain difficult cases that they rely on … fortune tellers or self-declared forensic experts.