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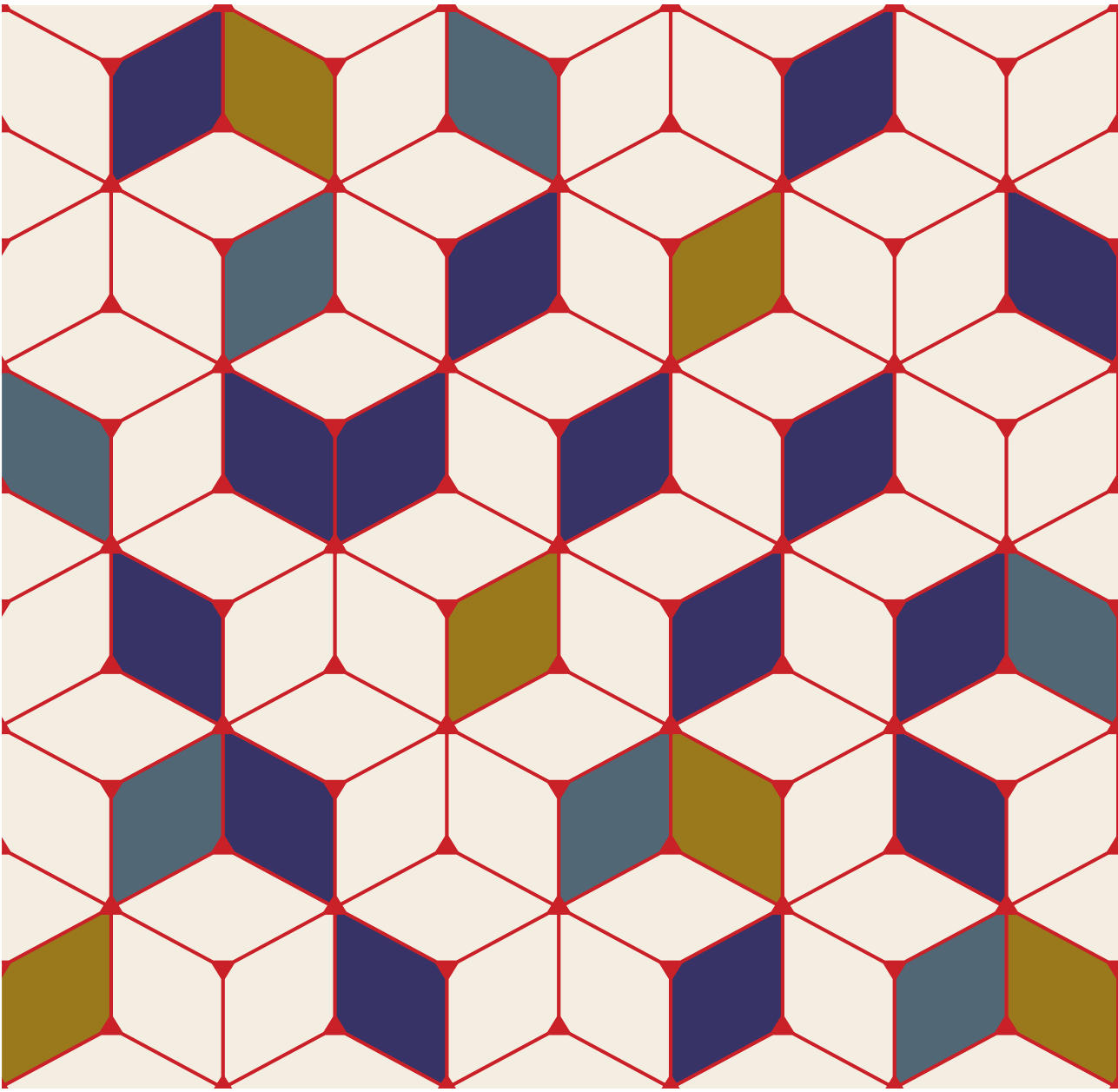

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ARTICLES

NOTES ON ITALIAN LAW

LEGAL WORLDWATCH

BOOKS REVIEW

ANGELO GIRALDI[*]

ALGORITHMS AND BIG DATA TOWARDS A CRIME-PREVENTING GROUPWARE[**]

ABSTRACT. *The scientific and technological progress has bumped into Criminal Law in terms of artificial intelligence systems and predictive policing software. The different crime prevention strategies and its innovative methods may struggle with the legal limits set up by the law. This paper aims at analysing the usefulness of artificial intelligence in Criminal Law, with particular regard to the investigations carried out by the authorities, and at urging the legislator to regulate the matter within the living juridical boundaries.*

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[**] The paper is the result of the research work carried out by the author within the project "*Intelligenza artificiale e giustizia penale*", funded by the European Parliament and directed by Prof. Antonella Massaro.

1. Criminal Investigations Grapple with Artificial Intelligence

One of the most useful and productive advantages of artificial intelligence undoubtedly regards the first stage of criminal proceedings, which is made of the investigation activities. The investigative stage, in fact, is the fulcrum of criminal justice: on one hand, the activity of predictive investigation is functional for the security of the individual and the community, in its intent to effectively identify planned crimes or, in any case, future ones; on the other hand, the operations of the authorities entrusted with the *post-factum* investigation are functional to trace the conduct back to its author and possibly the criminal organisation behind him or her.

The scientific and technological progress that is sweeping across today's society is also the harbinger of innovation in the predictive and investigative sector, which characterises the first stage of the criminal proceedings.[1] Under this perspective, the idea that decisions, both pre-trial and in Court, should be based on the maximum rigour possible is gaining more ground.

From this particular point of view, a brief acknowledgement of the heuristic methodologies dominating the thought of the judicial operator can be useful: this person, grappling with the different forms of crime, must carry out the investigation, be he or she a police officer or a public minister, in the exercise of his or her function.

In the search of the facts and the truth, as well as of the various sources of investigation, the tasked person uses a methodology that is undoubtedly imbued with subjective characteristics which, almost unanimously, are defined as risky.

Since the dawn of social and philosophical thought, the myth of justice remains anchored to both the criteria of impartiality and objectivity which, in practice, encounter grey areas where the objectivity is pervaded by outside influences. One cannot omit to

[1] For an in-depth examination of artificial intelligence as the ultimate purpose of Criminal Law, see C. BURCHARD, *L'intelligenza artificiale come fine del diritto penale? Sulla trasformazione algoritmica della società*, in «Rivista italiana di diritto e procedura penale», n. 4, 2019, p. 1908 et seq.: «gli algoritmi intelligenti sono in grado attraverso la tecnologia di affrontare, a vantaggio di tutti, problemi quotidiani che, tuttavia, vanno oltre le capacità umane; e certamente meglio, più velocemente e in modo più economico rispetto ai decisori umani». See also V. MANES, *L'oracolo algoritmico e la giustizia penale: al bivio tra tecnologia e tecnocrazia*, in *Intelligenza artificiale. Il diritto, i diritti, l'etica*, edited by U. Ruffolo, Giuffrè, Milan 2020, p. 547 et seq.

say that the same legal heuristics, as a social science, has been practised so far by physical people, whose reasoning is also irrationally determined by personal psychological factors that have nothing to do with the committed or to-be-committed crime.

An interesting study dates back several years.[2] Eight Israeli judges were examined over a period of ten months, for a total number of fifty daily sessions. The individual judge, in those occasions, was asked to decide on requests for conditional release put forward by convicts in different prisons. The days were divided into three moments: firstly, the early hours of the morning, in which the judge started his or her work; secondly, the second part of the morning, which started after a break; finally, the rest of the working day after lunch.

The intention was to relate the judicial decisions with the times that they were adopted, in an attempt to understand how much of those decisions could be attributed not just to the discretionary interpretation of the magistrate – always anchored to the canons of the law – but, rather, to his or her psychological situation, completely independent of the legal cases.

The result that the study reached was evident as it emerged, clearly and eloquently, that the percentage of petitions for conditional release approved at the start of every time frame in the day was by far greater than those dealt with once half of the time span in question had passed. In fact, if the favour towards conditional release was granted in around 65% of the petitions dealt with in the early hours of the morning, it tended to zero as time went by, until the magistrate's refreshment. Once the next time frame started, there were no changes and the percentages, initially high, of granting the benefit dropped drastically as time went by.

Essentially, it clearly emerged from the study that tiredness, fatigue, the need for sustenance and the tedium of the judicial authority were risk factors. In fact, the convicts' chances varied considerably according to the psychological/physical status of the decision-maker.

[2] The study is briefly reported in the introduction to a contribution on the reasoning of judges made by science logicians and philosophers. The original study is however to be attributed to Danziger, Levav and Avnaim-Pesso (2011) and was published on PNAS (the prestigious Review of the American National Academy of Science). Significant critical comments on the details of the study, especially on its interpretation, can be found in G. Cevolani, V. Crupi, *Come ragionano i giudici: razionalità, euristiche e illusioni cognitive*, in «Criminalia», 2017, p. 181 et seq.

The above-mentioned study, although emblematic, is only a part of the numerous studies on human reasoning, which, obviously, can also be applied to a court sitting. Reasoning and human logic are analysed by a growing number of scholars, the data for which are not in the least comforting. The mental characteristics of the individuals reveal that the basic mechanisms of our cognitive and decision-making activities (also with regard to the most banal daily activities) constantly deviate from what is prescribed, abstractly, by the so-called theories of correct reasoning.

This cannot necessarily be attributed to mixed factors of human nature. Circumstances completely extraneous to the person, which cannot be predicted by him or her, can also influence the final decision in one way or another.

This is the case, for example, with *anchoring*, which was experimented on a group of German jurists with judicial experience.[3] The former magistrates were proposed a case of theft, the fruit of the authors' imagination, on which they had to make a judgement. The people participating in the study were divided into two groups, each of which received an accurate description of the case together with two loaded (unbeknown to them) dice.

Each of the groups were asked to throw the dice to get, by adding up the results, the number corresponding to the months of conviction requested by the prosecution. In the first group, the throw of the dice was programmed so that a result of three months was obtained (*low anchor*), corresponding to a relatively restrained request for conviction by the prosecution. Instead, in the second group the figure obtained was greater and added up to nine months (*high anchor*).

The result of the study, though significant and satisfying from a scientific point of view, was rather disappointing in light of the law. The first group, which was supplied with a low anchor, completely unpredictable from the participants' point of view, opted to convict the defendant to five months of imprisonment. The second group, on the other hand, having received a high anchor, set the penalty at eight months. As shown by the analysis carried out, the anchoring effect played a fundamental role in the

[3] B. Englich, T. Mussweiler, F. Strack, *Playing Dice With Criminal Sentences: The Influence of Irrelevant Anchors on Experts' Judicial Decision Making*, in «Personality and Social Psychology Bulletin», n. 32, 2006, p. 194.

decision-making process of the involved judges. The fact that all the people in the first group had calibrated the sentence for an amount considerably lower than the participants in the second group could not be attributed to a purely causal mechanism.

It would seem that the external influence on the decision-makers may be attributed to the reliability which the prosecution often generates on the judge, because the result of the throwing of the dice was considered as a proposal for conviction by the Public Prosecutor. Yet, the participants – people with an education level above the average, and already invested with jurisdictional powers – were fully aware that the prosecution was represented by an inanimate object totally incapable of thinking and providing rational proposals. In this sense, the fact that the participating jurists trusted (so-called anchoring) an external, inanimate and completely random element is astounding: the judgement of the professionals in question was broadly conditioned by numbers that were apparently alien to matters.

In the wake of these exemplary experiences, artificial intelligence intervenes to mitigate the subjective influences of the individuals who operate in the world of justice, in an attempt to remove, as objectively as possible, the biases that pervade criminal proceedings.[4]

2. The "Artificial" Attempt to Unveil "Unknown Values"

The idea that decisions, because they potentially refer to every individual, must be based on a rigorous analysis of data through scientifically recognised methods has already taken hold in the current doctrine.[5] Thus, data processing, appropriately collected and analysed, is reaching almost uncontrollable quantitative levels. At the base

[4] On the problem of prejudices (biases), see *amplius* O. Di Giovine, *Il* judge-bot *e le sequenze giuridiche in materia penale (intelligenza artificiale e stabilizzazione giurisprudenziale)*, in «Cassazione penale», n. 3, 2020, p. 951 et seq.

[5] The theme of data analysis and its use in scientific terms is very topical in the contemporary and international doctrinal debate. See *ex plurimis*, N. Hart, M. Yohannes, *Evidence Works: Cases Where Evidence Meaningfully Informed Policy*, in «Bipartisan Policy Center», 2019, available at: <https://bipartisanpolicy.org/report/evidenceworks> (accessed on 02.11.2021).

of the artificial intelligence programs, including predictive and investigative software, lie big data, characterised in the first place by their huge quantity.[6] It is not by chance that the algorithms on which said computerised applications of mathematics and statistics are more efficient the more data they possess.

The final aim of the algorithm is to discover an initially unknown value, to be reached through the analysis and systematisation of a large set of individual data.[7] In order to better understand the purpose of using this (originally) mathematical method, we must question the concept of the "unknown value" that we are looking for through examining the data available to the operators.

Firstly, the value referring to an event that has already happened can be defined as unknown, because there is (and it could not be otherwise) always an element that the interpreter is not capable of knowing with sufficient certainty. At first sight, one could exclude from the category of past events those for which an audio-visual recording is available, as it is capable of providing the interpreter with the possibility, *ex post*, of entering virtually into the spatiotemporal context of the fact. Yet, even in this case, there would be elements that cannot be known, since human action, though faithfully reproduced with *ad hoc* digital tools, hides a series of indeterminate psychological processes which currently elude every type of recording or understanding by third parties that can be said to be absolutely beyond doubt. Secondly, and for obvious reasons, every type of present and, *a fortiori*, future event falls into the category of unknown values.

On the basis of the observations made, it is appropriate to analyse the term "predictive" in more detail. It is often used as an attribute referring to software and policing algorithms, meant in the broad sense as increasingly effective tools for predicting and preventing crime.

In fact, if one of the aims of artificial intelligence is to find "unknown values" referring to future and chance events (hence the term "predictive"), one cannot overlook

[6] For an in-depth examination of big data and the interference with Criminal Law, see C. Momsen, C. Rennert, *Big Data-Based Predictive Policing and the Changing Nature of Criminal Justice. Consequences of the extended Use of Big Data, Algorithms and AI in the Area of Criminal Law Enforcement*, in «Kriminalpolitische Zeitschrift», n. 5, 2021.

[7] F. Provost, T. Fawcett, *Data Science for Business: What You Need to Know About Data Mining and Data-Analytic Thinking*, O'Reilly Media, Sebastopol 2013.

the relationship between the new technological tools and facts belonging to the past and present. In this perspective, predictive policing algorithms – and the related software – must not solely mean the methods exploited to estimate the probability of future crimes, but also those adopted to aggregate the useful data to bring clarity on crimes that have already been committed and on the permanent offences perpetrated in the present.[8]

Thus, the term predictive must be considered in its double meaning of prediction and investigation. In the first case, predictive policing will be aimed at anticipating future crimes; in the second, it will act as the main character in the search for the author of the crime or, in broader terms, the attribution of the latter to a superordinate organisation. It should be noted that the two proposed meanings are strictly interconnected: the investigative activity and the characteristics of the facts and authors flow into the data used for predicting future crimes; conversely, the successful outcome of the strictly predictive activity greatly facilitates any subsequent investigation operation.

The true usefulness of predictive policing lies in the discovery of similarities and analogies from the analysis of variables that are constantly related to each other. In this sense, the change of pace is remarkable compared to the "traditional" tools tied to "natural" intelligence, which have been applied right up to contemporary times.[9] The margin for reducing crime is expanded with the new heuristic methodologies tied to the science of probability and the development of technology. This is mainly due to the fact that the resources, though limited, and the data held by the authorities are exploited in an optimised manner as compared to the past. In fact, on one hand, a similar use of resources allows, *mutatis mutandis*, an investigative "Pareto efficiency" to be achieved; on the other hand, it allows the Criminal Police to organise more efficient operating strategies and decision-making.

[8] The Organization for Security and Co-operation in Europe bears witness to this in its report *OSCE Guidebook. Intelligence-Led Policing*, available in several languages at: <https://www.osce.org/es/chairmanship/455536> (accessed on 02.11.2021).

[9] See *amplius*, G. Tuzet, *L'algoritmo come pastore del giudice? Diritto, tecnologie, prova scientifica*, in «MediaLaws», 2019.

After all, it is not by chance that important studies in the field of environmental psychology have shown some uniformity and regularity in delinquency; in fact, it seems that criminals tend to act in known places, without travelling afar and in determined or determinable times or places.[10]

3. Algorithms and Big Data: A Testbed for Defining AI

An indispensable condition for drawing up effective strategies and reliable predictions is the availability of data.[11] At the same time, this condition is one of the most significant limits of artificial intelligence that exists today. The big data held by the authorities are nothing but resources produced by the authority itself: a vicious circle is thus set up, given the (possible) partiality of the information and data found by those to whom such data will return in an artificially aggregated and analysed form.

Nevertheless, although this allows considerable criticism to be advanced against artificial intelligence, it is difficult to imagine an artifice that operates otherwise. The only (im)practicable way would be to aggregate both sets of data coming from, firstly, the empirical comparison carried out in the local reality and, then, from the results of an ideal "perfect" society. It is difficult to even imagine a complete study that describes, in terms of absolute precision, the perfect social system; even if it was theorised, it would perhaps be unreliable.

In any case, as it is possible to solely use data regarding real society, a fruitful collaboration between the different professionals operating in social sciences becomes

[10] On this point, see S. Vezzadini, *Profilo geografico e crime mapping. Il contributo della criminologia ambientale allo studio del delitto*, in *Scena del crimine e profili investigativi. Quale tutela per le vittime?*, edited by R. Bisi, Franco Angeli, Milan 2006; P.J. Brantingham, P.L. Brantingham, *Environmental Criminology: from Theory to Urban Planning Practice*, in «Studies on Crime and Crime Prevention», n. 7, 1998; J. Eck, S. Chainey, J. Cameron, M. Leitner, R. Wilson, *Mapping Crime: Understanding Hot Spots*, in «National Institute of Justice», 2005, available at: <https://nij.ojp.gov/library/publications/mapping-crime-understanding-hot-spots> (accessed 02.11.2021).

[11] Data is the fulcrum on which artificial intelligence turns. Obviously, the data must firstly be captured using the so-called sensors. They could be cameras, microphones, a keyboard, an Internet site or other data entry systems, as well as sensors of physical quantities (*e.g.*, temperature, pressure, distance or force/torque sensors or tactile sensors). See F. Basile, *Intelligenza artificiale e diritto penale: quattro possibili percorsi d'indagine*, in «Diritto Penale e Uomo», 2019, p. 6.

necessary (and favourable).[12] The world of justice is of course the first to be involved: the investigations of the Criminal Police, just like the already filed cases, are collectors of an inestimable amount of data that can be validly used. Nevertheless, other important parameter sectors, which can bring a volume of qualitatively and quantitatively different data, must not be undervalued.

Think, for example, of the world of health in its broad sense, which also includes the multiform area of the social services. These are the sectors which, also thanks to the implementation of information technology, deal on a daily basis with information regarding criminal or socially dangerous people. In some ways, the health world data can be a *quid pluris* compared to the information collected by the Criminal Police, for different sets of reasons. Firstly, at a quantitative level, entry into a further branch of social activities inevitably allows the exponential increase of data. Secondly, the type of information collected, *e.g.*, from the social service, is by far different and certainly complementary to what was found by the Criminal Police.

Given that there are data – or rather, big data – at the basis of the whole artificial intelligence process, it is maybe appropriate to wonder about the very concept of "intelligence," which is often put to the test by the methodology applied.

In this regard, the authoritative definition of artificial intelligence provided by the independent group of high-level experts appointed by the European Commission for carrying out the consultative function must be remembered.[13] For the EU experts, «artificial intelligence (AI) systems are software (and possibly also hardware[14]) systems

[12] This hope is shared by J.H. Ratcliffe, *Intelligence-Led Policing*, Routledge, Oxfordshire 2016.

[13] Information on the expert group appointed by the European Commission can be found on the institutional website, at: <https://ec.europa.eu/digital-single-market/en/high-level-expert-group-artificial-intelligence> (accessed 02.11.2021).

[14] The systems based on artificial intelligence can be considered both software and hardware. More specifically, vocal assistants, programs for the analysis of images, search engines and biometric recognition systems are well-known examples of software. On the other hand, the implementation of such programs in peripherals that act outside the digital world makes it that artificial intelligence is also present in hardware. Think, for example, of driverless cars, drones, robots and the various applications of the *Internet of Things*. In this regard, see *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. Artificial Intelligence for Europe*, 2018, 2, available in the full version at: <https://ec.europa.eu/digital-single-market/en/news/communication-artificial-intelligence-europe> (accessed 02.11.2021).

designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal. AI systems can either use symbolic rules or learn a numeric model, and they can also adapt their behaviour by analysing how the environment is affected by their previous actions. As a scientific discipline, AI includes several approaches and techniques, such as machine learning (of which deep learning and reinforcement learning are specific examples), machine reasoning (which includes planning, scheduling, knowledge representation and reasoning, search, and optimization), and robotics (which includes control, perception, sensors and actuators, as well as the integration of all other techniques into cyber-physical systems).»

Without prejudice to the definition proposed, it is appropriate to make the following clarifications.[15] Firstly, artificial intelligence, because it was created by human beings, does not fully correspond to the "naturalness" of the latter's reasoning. Secondly, and not for importance, the expression "artificial intelligence" is far from the operation of the human mind, whose "intelligence" remains to this day an undetermined concept. It seems that very little connects today's work in the AI field to the mysterious mechanisms of the human mind. At least at this stage, we are dealing with an engineering discipline with relations with biological organisms that are more metaphorical and "inspirational" than anything else.[16] For this reason, one often prefers to replace the expression "intelligence" with "rationality," where rationality means the capacity to choose the best action in order to achieve a certain objective in light of some criteria for the optimisation of the available resources.[17]

[15] The clarification that follows has been advanced by authoritative doctrine. See Basile, *Intelligenza artificiale e diritto penale*, cit., p. 5; C. Trevisi, *La regolamentazione in materia di Intelligenza artificiale*, *robot, automazione: a che punto siamo*, in «MediaLaws», 2018, p. 1 et seq.

[16] J. Kaplan, *Intelligenza artificiale. Guida al futuro prossimo*, Luiss University Press, Rome 2018, p. 81 et seq.

[17] Basile, *Intelligenza artificiale e diritto penale*, cit., p. 5.

4. Innovative Crime Prevention Strategies

If we examine the dynamics of predictive policing in more detail, in the already-mentioned double meaning of prediction and investigation, we can analyse the different strategies for preventing crime and the functional tools for analysing the facts of an already committed crime or one that is in progress.

Based on the models drawn up at a theoretical level, it would be possible to predict when, where and how the crimes will be committed, so that an attempt can be made to anticipate the causal mechanism of the crime.[18] The ultimate aim of the predictive policing method is a concatenation of elements that, together, make the investigation stage more efficient. The increase in resources to safeguard public safety in the areas at greatest risk allows us to identify the areas where the criminal risk factors are concentrated and, consequently, channel the intervention of the police force in order to conduct targeted operations.

It is possible to distinguish the continuous interaction between the following elements: data collection, analysis, police operations and criminal response. It is complex to imagine the operational efficiency of predictive policing without one of the mentioned components.

Data collection, suitably aggregated (fusion), is functional for their analysis. The latter is prefixed with the objective of preventing future crime, which inevitably guides the police operations. As a consequence of these interventions, the criminals react in a diverse manner, resulting overall in two fronts: on one hand, the reactions of the people in question solicit the requirement for new assessment and consequently new operating actions; on the other, they create an altered environment. In the latter case, the circle is closed because the new information found on the so-called altered environment [*i.e.*, the data on the criminal (re)actions] return to be collected and aggregated.

The use of similar predictive models, therefore, allows police force to organise the resources they have so that they can repress, thwart and, if possible, anticipate

[18] See A. Di Nicola, G. Espa, S. Bressan, M.M. Dickson, A. Nicolamarino, *Metodi statistici per la predizione della criminalità. Rassegna della letteratura su predictive policing e moduli di data mining*, in «eCrime Working Papers», n. 2, 2014, p. 5 et seq.

criminal conducts.

The interventions carried out by the police force achieve a fairly high specificity and concreteness rate and finish up by being remarkably targeted. The crime in certain areas could therefore be considerably reduced, which would allow us to assess the operation of artificial intelligence positively.

The current state of the art seems to allow the classification of the predictive policing strategies into four macro-categories.[19]

[19] *Ivi*, p. 6.

4.1 Methods for Predicting Crime

A first subset of predictive policing is represented by the methods for predicting crime (see *Table 1*). All the types of strategy aimed at predicting the place and time a crime will most likely be committed can be attributed to it. It seems that this category has been widely experimented with, particularly in the Anglo-Saxon countries, where the final objective ends up by coinciding, in a certain sense, with general prevention. In fact, as we will see, these operating models, which benefit from the collection and processing of large quantities of data usually from previously committed crimes, are prefixed with the purpose of anticipating (*i.e.*, preventing) the criminal event. On the other hand, different methods aspire to anticipate, and even prevent, its repeat or the repeat of a different crime by certain individuals.

Problem	**Conventional Crime Analysis (low to moderate data demand and complexity)**	**Predictive Analytics (large data demand and high complexity)**
Identify areas at increased risk		
Using historical crime data	Crime mapping (hot spot identification)	Advanced hot spot identification models; risk terrain analysis
Using a range of additional data (e.g., 911 calls, economics)	Basic regression models created in a spreadsheet program	Regression, classification, and clustering models
Accounting for increased risk from a recent crime	Assumption of increased risk in areas immediately surrounding a recent crime	Near-repeat modeling
Determine when areas will be most at risk of crime	Graphing/mapping the frequency of crimes in a given area by time/date (or specific events)	Spatiotemporal analysis methods
Identify geographic features that increase the risk of crime	Finding locations with the greatest frequency of crime incidents and drawing inferences	Risk terrain analysis

Table 1 – Methods for predicting crime. Source: *Predictive Policing. The Role of Crime Forecasting in Law Enforcement Operations*, in *RAND. Safety and Justice Program*, 2013, p. 10.

4.2 Methods for Predicting the Future Offender

The second category of the predictive methods consists of the methods for predicting the future offender (see *Table 2*). Groups of individuals most exposed to the risk of delinquency are identified through the strategies under analysis. However, in order to do this, it is necessary to collect, analyse and aggregate the data coming from the already committed crimes, though combined with the data concerning each offender. One of the main objectives of the methods falling under this category is the reduction of recidivism. Although theoretically there is not an exact correspondence between committing a crime and its reiteration (in the more or less distant future), in practice a high percentage of specific reoffending has been found.

Problem	**Conventional Crime Analysis (low to moderate data demand and complexity)**	**Predictive Analytics (large data demand and high complexity)**
Find a high risk of a violent outbreak between criminal groups	Manual review of incoming gang/criminal intelligence reports	Near-repeat modeling (on recent intergroup violence)
Identify individuals who may become offenders:	Clinical tools that summarize known risk factors	Regression and classification models using the risk factors
probationers and parolees at greatest risk of reoffending		
domestic violence cases with a high risk of injury or death		
dental health patients at greatest risk of future criminal behavior or violence		

Table 2 – Methods for predicting the future offender. Source: *Predictive Policing. The Role of Crime Forecasting in Law Enforcement Operations*, in *RAND. Safety and Justice Program*, 2013, p. 10.

4.3 Methods for Drawing Up a Criminal Identikit

The third category includes the methods for drawing up a criminal identikit (see *Table 3*). In a certain sense, these models come under the nuance of the term "predictive" which concerns the merely investigative stage for already committed crimes. The objective of this type of strategies is the processing of data for suspects using a multi-level database. These databases contain an indefinite plurality of information that is completely diverse (biometric data, records for the ownership of assets, tax information, etc.), whose aggregation, by using delegated algorithms if necessary, provides the operators with brilliant leads during the investigations.

Problem	**Conventional Crime Analysis (low to moderate data demand and complexity)**	**Predictive Analytics (large data demand and high complexity)**
Identify suspects using a victim's criminal history or other partial data (e.g., plate number)	Manually reviewing criminal intelligence reports and drawing inferences	Computer-assisted queries and analysis of intelligence and other databases
Determine which crimes are part of a series (i.e., most likely committed by the same perpetrator)	Crime linking (use a table to compare the attributes of crimes known to be in a series with other crimes)	Statistical modeling to perform crime linking
Find a perpetrator's most likely anchor point	Locating areas both near and between crimes in a series	Geographic profiling tools (to statistically infer most likely points)
Find suspects using sensor information around a crime scene (GPS tracking, license plate reader)	Manual requests and review of sensor data	Computer-assisted queries and analysis of sensor databases

Table 3 – Methods for predicting the future offender. Source: *Predictive Policing. The Role of Crime Forecasting in Law Enforcement Operations*, in *RAND. Safety and Justice Program*, 2013, p. 11.

4.4 Methods for Predicting the Future Victim

Finally, the last category is an interesting "synthesis" of the methods expounded so far (see *Table 4*). In fact, the methods for predicting the future victim use the tools in the previous categories with the objective, this time, of identifying the groups or individuals at risk of victimisation.

Problem	**Conventional Crime Analysis (low to moderate data demand and complexity)**	**Predictive Analytics (large data demand and high complexity)**
Identify groups likely to be victims of various types of crime (vulnerable populations)	Crime mapping (identifying crime type hot spots)	Advanced models to identify crime types by hot spot; risk terrain analysis
Identify people directly affected by at-risk locations	Manually graphing or mapping most frequent crime sites and identifying people most likely to be at these locations	Advanced crime-mapping tools to generate crime locations and identify workers, residents, and others who frequent these locations
Identify people at risk for victimization (e.g., people engaged in high-risk criminal behavior)	Review of criminal records of individuals known to be engaged in repeated criminal activity	Advanced data mining techniques used on local and other accessible crime databases to identify repeat offenders at risk
Identify people at risk of domestic violence	Manual review of domestic disturbance incidents; people involved in such incidents are, by definition, at risk	Computer-assisted database queries of multiple databases to identify domestic and other disturbances involving local residents when in other jurisdictions

Table 4 – Methods for predicting the future offender. Source: *Predictive Policing. The Role of Crime Forecasting in Law Enforcement Operations*, in *RAND. Safety and Justice Program*, 2013, p. 12.

5. The Development of Predicting Software in Anglo-Saxon Countries

The greatest development of artificial intelligence in this field, with specific regard to predictive policing techniques, has taken place in the Anglo-Saxon countries and, in particular, in the United States. The latter has developed several predictive policing systems which, unlike the European experience, are used for a wide range of crimes.

These predictive methods are designed to predict future crimes in a perspective of general prevention. In fact, the American software is not only based on the characteristics of specific crimes, capable of providing the algorithms with the right data to predict future actions (so-called crime linking), but, more generally, tends to analyse the area and spreads the police force efficiently. With this, they try to dissuade criminals, also thanks to the deterrence generated in the community, which is well aware of the operating efficiency of artificial intelligence systems.

One of the more renowned software in the U.S. is *PredPol* (abbreviation of Predictive Policing), developed by some researchers of two Californian Universities, in collaboration with the Local Police Department.[20]

This software, still in use in the U.S., consists of an operating diagram aimed at analysing property crimes, in particular, burglary, vehicle theft and theft from vehicles. The information on past crimes committed in the area under analysis acts as input to the program, which already has a huge database. This input is crossed with the software's own algorithm, which allows the "hottest" spots to be predicted. The heat map which is traced is functional to the organisation of the police operations, which, promptly and precisely, provide the system with new data records, on the basis of which the analysts continue to process trends and criminal models. It should be specified that the police officers are not acquainted with the methods used to create the maps: they are only required to use their professional skills and experience to identify the interventions to be taken.

One of the first models of predictive policing was born in 2005 in another area of the United States, more specifically in Memphis (Tennessee). The software, innovative at that time, is developed by IBM with the name of *Blue C.R.U.S.H.* (*Crime Reduction*

[20] Z. Friend, *Predictive Policing: Using Technology to Reduce Crime*, in «FBI Law Enforcement Bulletin», 2013.

Utilizing Statistical History). Memphis, the first most populous city in Tennessee, had seen a huge rise in the crime rate, in such a way that it had significant effects on the population and the local economy.

It is for this reason that the local authorities tried to draw up a new methodology to combat and manage crime.[21] The software project took into consideration a set of variables, such as the geographical data regarding the crimes committed and being committed, as well as environmental, social and demographic factors. The crossing of the analysed data allows hot-spot maps to be created. The results obtained using this software were considerable and led directly to a reduction of 25% in property crimes.[22]

A similar experience in Europe is the one made in the United Kingdom by some researchers from the Jill Dando Institute of Security and Crime Science in London. The experiment took place in Trafford with the aim of drastically reducing the incidence of burglaries and was Europe's link with the experiences in the United States.

The project started from the assumption that repeat victimization and near repeat victimization are reiterated over time and space. This is why it was necessary to spread police forces over the areas where burglaries had been committed in the (not distant) past. The operation of the experiments included an initial phase aimed at mapping, on one hand, the buildings in which the thefts had occurred and, on the other, the buffer zones, highlighted with different colours according to the near repeat victimization rate. The organisation of the police, based on the data resulting from the experiment, allowed an important reduction in burglaries to be achieved.

6. The Experience of Predictive Policing in Europe

In Italy, the experience of artificial intelligence applied to predictive policing is quite significant and is concentrated on the prevention of specific crimes and the search for criminal profiles which, sometimes, hide mandates that can be traced back to

[21] T. Armstrong, *Managing for 21st Century Crime Prevention in Memphis*, available at: <http://www.managementexchange.com> (accessed 02.11.2021).

[22] J. Vlahos, *Come anticipare il crimine*, in «Le scienze», 2012.

structured criminal organisations capable of repeating (or have repeated) a considerable quantity of crimes.

Besides the pioneering *KeyCrime*,[23] the experience of other Italian IT programmes is worthy of being mentioned, albeit briefly, because it has led to satisfying results in the territorial areas of interest.

A type of software that handles predictive policing through a heuristic algorithm, on a probability basis, is *XLAW*. This instrument, created by the Police Inspector Elia Lombardo, is based on the idea that urban crimes are committed in precise places and a relatively short space of time, which allows the maximum profit to be drawn from the seriality. The places where crimes are concentrated are chosen by people acting on the basis of an objective (*e.g.*, presence of potential victims) and a subjective element (*e.g.*, presence of shelters, suitability of the area in terms of accessibility and escape routes). The software intelligence crosses the "appetising" places in a single map and superimposes their socio-economic and environmental characteristics, as well as information on past crimes, on it. This way, the system allows the re-creation of criminal models that can be potentially applied to an indefinite series of crimes. The risk map drawn up by the software is supplied to the operator, who, even two hours in advance, can intercept the places and times where, at a probability level, a crime will be committed.

Another predictive policing system, in the experimental stage, is *S.O.Cr.A.TE.S.*, software that is being researched by the Italian Ministry of Defence and the Department of Equal Opportunities, in collaboration with the Department of Prison Administration, in order to carry out the scientific research with the support of inmates. The purpose of the project is to construct an effective criminal profiling that represents the behaviours of various types of crime against the individual (violent crimes, apparently motiveless and with a sexual background).

On the other hand, a computer program capable of receiving anomalies that can be traced back to episodes of money-laundering is being used in financial matters.

[23] For an in-depth analysis of this software, see L. Grossi, *Software predittivi e diritto penale*, in *Intelligenza artificiale e giustizia penale*, edited by A. Massaro, Paruzzo Editore, Caltanissetta 2020, p. 155 et seq.

Gianos is the software used by the majority of Italian banking institutions. It is based on the constant comparison of databases held by the various entities involved, which allows a somewhat efficient cross-check to be carried out.

Predictive policing systems are also constantly used in Spain.[24] Already in 2006, following a series of forest fires in Galicia, the *Guardia Civil*, in collaboration with the *Fiscalía Coordinadora de Medio Ambiente y Urbanismo de la Fiscalía General del Estado*, started a study on the psychological profile of the so-called *incendiarios forestales*. Police officers filled in an online questionnaire of a psycho-social nature whenever they arrested a pyromaniac.[25] Thanks to the information obtained via the questionnaire instrument, predictive policing tools were implemented. These allowed a search for the most frequent characteristics in the pyromaniacs so as to facilitate the police operators to localise and identify the criminal. The experiment was of great use because it placed the methodological bases to be made use of in other criminal dynamics.

The development and application of predictive policing in Spain are of particular significance in two specific sectors, which are strictly connected to each other: on one hand, in gender violence and management of the safety of the victims, and, on the other, in cases of homicide, when the algorithms allow to make a probability estimate for the personal characteristics of the potential authors.

To date, the most developed predictive policing methodology in Spain is the one regarding the creation and validation of a protocol for assessing the risk of re-offending with regard to gender violence using the *Sistema de Seguimiento Integral de los Casos de Violencia de Género* ("Full Monitoring System for Cases of Gender Violence"), which is called *VioGén* and was developed by the *Secretaría de Estado de Seguridad* of the Spanish Ministry of the Interior. This protocol allows the officers to assess the risk that a woman who reports a violent crime runs of being a victim of the same crime from the same or another partner. To do this, a specific computer procedure

[24] See J.L. González Álvarez, J. Santos Hermoso, M. Camacho Collados, *Policía predictiva en España. Aplicación y retos futuros*, in «Behavior & Law Journal», n. 6, 2020, p. 26 et seq.

[25] J.L. González, V. Muñoz, M.L. Calcerrada, A. Sotoca, *Perfil psicosocial del incendiario forestal español privado de libertad*, in «Behavior & Law Journal», n. 3, 2017, p. 26 et seq.

called *Valoración Policial del Riesgo* (VPR, *i.e.*, Police Risk Assessment) is used.[26] Depending on the level of risk obtained using the VPR, preventive strategies aimed at anticipating the repeat criminal action are drawn up, with the final aim of safeguarding the passive subject against the repeat victimization that he or she would be subject to.[27]

In the context of the fight against gender violence, actively combated by the Spanish system (see *Ley Orgánica* no. 1/2004 on global protective measures against gender violence), one should note that the cases of so-called femicide in Spain reach absolute values that cannot be ignored. It is for this reason that the *Equipo Nacional de Revisión Pormenorizada de Homicidios en el contexto de la Violencia de Género* (EHVdG) was set up in 2018, with the aim of examining the case histories of femicide at an international level, as well as the best practices of similar teams set up in other countries.[28] The work group was also in charge of planning and promoting the monitoring of the cases of femicide in Spain, facilitating the organisation of experts at district level, which consisted of professionals from a large number of universities and research institutes. These technicians, on the basis of collaboration agreements with the Ministry of the Interior, undertook the analysis work in the field, after receiving suitable training from the national team.

One of the most significant results of the detailed study of the femicides was the construction of a prediction scale for the risk of a lethal outcome following the reporting of gender violence. An analytical tracing of the crime facts was followed to create the scale, called H. The final sample consisted of over two thousand criminal episodes. Of these, just under 10% resulted in femicides and the remaining 90%

[26] J.J. López Ossorio, J.L. González, S. Buquerín, L.F. García, G. Buela Casal, *Risk Factors Related to Intimate Partner Violence Police Recidivism in Spain*, in «International Journal of Clinical and Health Psychology», 2017, p. 107 et seq.

[27] J.J. López Ossorio, J.L. González Álvarez, J.M. Muñoz Vicente, C. Urruela, A. Andrés Pueyo, *Validation and Calibration of the Spanish Police Intimate Partner Violence Risk Assessment System (VioGén)*, in «Journal of Police and Criminal Psychology», 2019.

[28] J.L. González, M.J. Garrido, J.J. López Ossorio, J.M. Muñoz, A. Arribas, P. Carbajosa, E. Ballano, *Revisión pormenorizada de homicidios de mujeres en las relaciones de pareja en España*, in «Anuario de Psicología Jurídica», 2018, p. 28 et seq.

consisted of non-mortal cases which had to be constantly monitored.[29]

The VPRs of all the episodes of crime about which there was information were needed to complete the study, as the aim was to understand whether the indicators for predicting a repeat of the violence were capable of also predicting a fatal episode.

To make the public safety operators' decisions easier, with regard to the protection of the victims, it was also decided to program a dual algorithmic mechanism that was transparent and shared with the officers. This way, when a report of violence is received, the police officers fill in the information card for the VPR. At this point, without showing any type of result, the *VioGén* system applies the first algorithm and calculates the risk of the specific episode being repeated on the basis of the elements available at that time. Then, with maximum speed, the program calculates, using the second algorithm, the risk that episode could constitute only a part of the criminal plan that will culminate in femicide.

If the second algorithm gives a positive result (*i.e.*, high risk of a mortal event), the risk of re-offending as of the first algorithm is raised a level. Only at this point the result of the analysis using artificial intelligence is shown to the officers, with the warning that the above-mentioned case is of particular interest. This takes place so that the measures adopted by the police bodies can be adequate for the characteristics and circumstances of the specific case.

One element of particular interest is that the report made to the police officers is also recorded in special minutes, to be sent immediately to the competent Court and the public prosecutor's office. The latter, while ascertaining the characteristics of the case, can adopt suitable measures to safeguard the victim and, if necessary, provide that the persons concerned are promptly assessed by psychologists or medical staff capable of going in depth into the factual circumstances and proposing new or different measures to protect and safeguard the victim.

This dual mechanism is put forward to reduce the rate of femicide in cases where a report has been made, clearly within the area where the *VioGén* system is used. The real efficacy of this dual protocol cannot be ascertained at the moment: in fact, in order

[29] González Álvarez, Santos Hermoso, Camacho Collados, *Policía predictiva en España*, cit., p. 33.

to monitor the work of the algorithms and formulate a judgement on their work, it is necessary to analyse the evolution of the various crimes of violence over a significant time scale.

7. Towards a "Criminal" Groupware: Bridging the Gap Between Benefits and Legal Concerns

Artificial intelligence, now at the height of its evolution and at the centre of social and legal debate,[30] is an undoubtedly important innovation which must, nevertheless, face its structural criticisms and the limits set by the current legal system.

Firstly, it has been highlighted several times that the operation of artificial intelligence (or rather, rationality) systems is based on the collection and processing of big data. The quantity of information and data collected is nothing but the fruit of reprocessing by the human being, who, as such, incorporates various partiality factors. At an instrumental level, this circumstance represents an effective limit to the operations of the algorithms: in fact, they only produce effective results if the input supplied is of quality and corresponds to the factual reality.

In order to achieve satisfactory results, it would perhaps be opportune to share and approve a *numerus clausus* of indispensable variables to be considered so as to make the algorithmic procedure much more objective. This closed number would only represent the starting point for data collection. In fact, it is evident that, given the specific circumstances of every case and the personal and professional qualities of the operators, every datum collected could hide aspects which escape the imperativeness of an *a priori* list.

A further problem encountered with data exploited by algorithms regards their quantitative aspect. Algorithms struggle to operate with the same efficiency in large and

[30] On this point, see *European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their Environment*, adopted by the European Commission for the Efficiency of Justice (CEPEJ) during its 31st plenary meeting (Strasbourg, 3-4th December 2018), 35, § 7, available at: < https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c> (accessed 02.11.2021).

small situations. The volume of data held by the operators, even if it were nothing but the different crime rate (from which the information "useful" for predicting the future is taken), diverges in a manner that cannot be ignored, depending on whether the reference territory is a medium-large size or medium-small size area.

Finally, with reference to the data, two more strictly legal questions are worth raising, one on privacy and the other on the ownership and control of the databases and the respective algorithms.

The implications that concern the right of privacy, with reference to the data used by artificial intelligence algorithms, come under the more general framework of the socio-technological development of contemporary society, which has led, in a short time, to a significant and sharp growth in the daily exchange of information, both at a domestic and an international level. However, such as in the case of the big data supplied to the software in question, personal data, and particularly sensitive data, is circulated in remote-controlled mode and, consequently, does not stop at the threshold of the State boundaries. Therefore, a regulatory intervention directly at a supranational level became necessary.

Personal data are thus widely protected both by domestic regulations and European ones. All the characteristics of the crimes, which, for one reason or another, concern individuals (criminals, victims or third parties) and are analysed by operators who feed the artificial intelligence, come into this category. The European legislator, with the General Data Protection Regulation (Regulation EU no. 2016/679), has also intended to prepare a special statute for particular categories of personal data, among which genetic and biometric data and data "regarding health" stand out. In the perspective of the configuration of the aforesaid statute, the range of the expression, designed to be broad, "data regarding health" is of particular importance. This locution, like a broad genus, includes the both the following species of data: firstly, the so-called immediately sensitive data (or sensitive in the strict sense) and, secondly, the so-called indirectly sensitive data (or sensitive in the broad sense).

Personal data which, by their nature, are born and exhausted in the phenomenological description of the individual's state of health come into the first category. The genetic characteristics of the individual, the blood group and audiometric results are, for example, immediately sensitive information. On the other hand, personal

data which, though appearing generic, hide intimate profiles are defined as indirectly sensitive, and are in any case worthy of particular protection. For example, the occasional or habitual use of substances that create addiction (*e.g.*, tobacco, alcohol and drugs) and the common prescription for glasses are information which, once acquired, reveal obvious clues on the state of health of the data subject.

Article 9 of the GDPR prohibits every type of processing for some sensitive data, except if «processing is necessary for the establishment, exercise or defence of legal claims or whenever courts are acting in their judicial capacity» (letter f) and «processing is necessary for reasons of substantial public interest, on the basis of Union or Member State law which shall be proportionate to the aim pursued, respect the essence of the right to data protection and provide for suitable and specific measures to safeguard the fundamental rights and the interests of the data subject» (letter g).

Even if it may seem taken for granted, the algorithm organism is fed with every type of data (sensitive or not), even the most intimate (*e.g.,* concerning health and criminal convictions) or apparently useless data. To date, the current regulations on privacy applied to computer databases could be inadequate or, in any case, non-exhaustive whilst the ownership of the personal data, the subject of the processing, remains in the hands of private entities, with a heavy limitation of public control.

The artificial intelligence algorithms studied so far and the software in use are, indeed, under the almost total hegemony of private entities. The companies or organisations which create and own the algorithms exploit, just about freely, the personal data of a very high number of individuals.

On this point, it is interesting to note that these algorithmic codes seem inaccessible to the citizenry: a lack of transparency is hidden behind this context, which, normally, belongs to the action of the Public Administration.[31] In this regard, it is interesting to mention the recent ruling of the Lazio T.A.R. (Regional Administrative Court), sect. III *bis*, n. 3769/2017, which, although in a different sector and in different circumstances, recognised the right of the petitioner, as involved party, to access the algorithm used by the public administration in managing the proceedings under its remit,

[31] On the problem of the transparency of the algorithms, see E. Gabellini, *La «comodità nel giudicare»: la decisione robotica*, in «Rivista trimestrale di diritto e procedura civile», n. 4, 2019, p. 1305 et seq.

based on the fact that the very algorithm, all in all, gives life to the administrative act.[32]

In conclusion, no critical issues seem to arise relating to the usability of the evidence as far as artificial intelligence systems applied to predictive policing are concerned. With the exception of the privacy problem, the whole process of "predicting the future" does not seem to present any significant problems as long as the computer systems are solely an aid to the operators so that they can have a more efficient organisation, as happens in the case of preparing heat maps.

However, if the "artificial" systems are functional to the constitution of the evidence to be used in trial, the permissiveness of the current system is less clear and leaves space for wide profiles of uncertainty.[33]

In the context of possible co-ordination between predictive policing and predictive justice artificial intelligences, it would seem desirable to create an algorithmic system – one for each macro-category of crimes – that allows you to reconstruct the elements of the offence, both from an objective and a subjective perspective. If the investigators could enter all the elements available into a computer system and this system could manage to "pre-analyse" them in the framework of an informal "pretrial," the course of the trial would benefit from it and would meet less obstacles, both in qualitative terms and with regard to the procedural economy required by the due process.

In conclusion of this analysis, one cannot omit the hope that, in the perspective of an implementation of artificial intelligence tools in the near future, a law proposal is put forward, even directly from the European Union (with the collaboration of the bodies involved, such as Europol and EPPO). With the aim to regulate the automated crime prevention (in the broad sense) processes uniformly, on behalf of a shared

[32] The sentence under analysis recognized the right of the petitioner because the algorithm, though being pre-set to execute the duties established by legal regulations, finished up by deciding *de facto* what should be the working place of the teacher. On this point, see I. Forgione, *Il caso dell'accesso al software MIUR per l'assegnazione dei docenti – T.A.R. Lazio Sez. III* bis*, 14 February 2017, n. 3769*, in «Giornale di diritto amministrativo», 2018, p. 647 et seq.; L. Viola, *L'intelligenza artificiale nel procedimento e nel processo amministrativo: lo stato dell'arte*, in «Foro amministrativo», 2018, p. 1598 et seq..; A. Simoncini, *L'algoritmo incostituzionale: intelligenza artificiale e il futuro delle libertà*, in «BioLaw Journal», n. 1, 2019, p. 73 et seq.

[33] On the subject of the legal limits to the usability of the evidence, see L. Notaro, *Intelligenza artificiale e giustizia penale*, in *Intelligenza artificiale e giustizia penale*, cit., p. 93 et seq.

exigence, such law proposal could lay the foundations for a brand new "criminal" groupware.

In order to do this, it undoubtedly becomes necessary to share knowledge, as the knowledge required to meet the transition from traditional systems to "artificial" ones, so to speak, involve a diverse multitude of disciplinary sectors, ranging from mathematics, computer science and statistics to law.[34]

[34] On the opening of law to other sciences and the need to share knowledge, see P. GARBOLINO, *Nuovi strumenti logici e informatici per il ragionamento giudiziario: le reti bayesiane*, in «Cassazione penale», n. 1, 2007, p. 326 et seq.

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HEALTH CRISIS, EMERGENCY LEGISLATION AND ACCESS TO CREDIT: A FEW OBSERVATIONS

ABSTRACT. *Access to credit, with its multiple implications in terms of financial and social inclusion (the latter especially when consumers are involved), has been subject to important interventions at the outbreak of the COVID-19 pandemic crisis. The paper examines the impact of these 'emergency' measures on the existing framework of private law regulating loans and the opposition of interests which follow from the adoption of these policies. It also evaluates more in general the role of financial institutions as actors, often on behalf of the State, in the governance of emergency situations.*

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1. Introduction

As we hit the two-year anniversary of the outbreak of the COVID-19 pandemic, the legal issues raised by the measures and new legislation adopted by governments worldwide and the surrounding debates are as present as the medical and scientific data which are part of our daily newsfeed. This brief contribution would like to focus on a very specific aspect of the emergency regulations that have been implemented over the past two years, namely those measures that within the wider framework of provisions in support of the economy, have affected access to and availability of credit. The perspective of interest here is the legal one, with special attention to the impact that these measures have on existing (and future) loan contracts.

It is of course needless to recall that access to credit is a foundational issue under a multiplicity of aspects. It is the object of studies and specific regulations not only within economic and legal policies, but also an object of sociological, cultural and historical research, given the impact that a change in availability of credit has on societies.

Indeed, policies aiming at ensuring, promoting or restricting access to credit have characterized the regulation of economic activities through different eras and different macro and micro economic (and legal) policies. If one restricts the analysis to the second half of the past century and the first two decades of the present, there are at least two trends that can be discerned – albeit with a certain degree of over-simplification – regarding credit to individual borrowers in what can be considered as 'ordinary' conjunctures.

The first consists in a wave of strategies promoting easy credit, strongly tied to the so-called 'lending revolution' or 'democratization of credit', with policies emphasizing the inclusive effect of access to credit.[1] This is followed by a more cautious

[1] This 'revolution', beginning in the late 1970s, was based on the promotion of financial liberalization, the deregulation of interest rates, the process of securitization, the development and use of (computer-based) credit scoring, and the increase in use of all-purpose credit cards. See I. Ramsay, T. Williams "The Crash that launched a thousand fixes – Regulation of Consumer Credit after the Lending Revolution and the Credit Crunch", in A. Kern, N. Moloney, *Law Reform and Financial Markets* (Cheltenham: Edward Elgar Publishing 2011), at p. 221. For a reconstruction of 'democratization of credit' see J. Niemi-Kiesiläinen, I. Ramsay, W.C. Whitford (Eds), *Consumer Bankruptcy in Global Perspective*, (Oxford: Hart Publishing 2003); D. Burton, *Credit and Consumer Society,*

approach emerging at the eve of the 2007-2008 financial crisis with the growing awareness of the effects of consumer over-indebtedness, and fully affirming itself in the aftermath of the crisis and its ensuing credit crunch with the realization of the larger systemic impact of consumer debt on financial stability.[2] Hence the introduction of several regulatory measures of banking activities and credit contracts and the rising importance of the concept of 'responsible credit.'

If access to credit is a delicate topic in conjunctures of relative economic stability, it becomes critical in contexts of systemic emergency as a vital instrument both for the management of crises, and, under certain circumstances, for the mitigation and/or prevention of their effects.

Even a quick glimpse at the two major crises that have distressed the global economy over the past fifteen years, namely the global financial crisis of 2007-2008 and the crisis provoked by the COVID-19 pandemic in 2020, immediately evidences that one of the first policies to be affected and which calls for an intervention in times or in the aftermath of emergencies concerns access to credit.

The case of the 2020 COVID-19 pandemic is at point. Among the priority measures approved by governments, alongside health provisions of various nature, there were important regulatory measures having the scope of ensuring that the restrictive orders affecting economic activities adopted in many States due to the health emergency would

(Abingdon: Routledge 2008). The reference to 'democratization' derives from the U.S. context in which these policies were applied to the mortgage and housing market, allowing low income citizens to access private home-ownership; hence the emphasis on financial and social inclusion (see G. Comparato, *The Financialisation of the Citizen*, (Oxford: Hart 2018), at p. 41). This discourse naturally also brought to the fore the problem of ensuring access to credit on a non-discriminatory basis (see Ramsay, "Consumer Credit Law, Distributive Justice and the Welfare State", in 15 *Oxford Journal of Legal Studies*, 177, 1995, at pp. 177 and 193 and ff.; A.D. Taibi, "Banking, Finance, and Community Economic Empowerment: Structural Economic Theory, Procedural Civil Rights and Substantive Racial Justice", in 107 *Harvard Law Review* 1465, 1994).

[2] Indeed, one of the effects of the lending revolution – albeit not deriving solely from it – was an increase in consumer debt and in consumer over-indebtedness. In this sense, some have highlighted that democratization of finance has an "inherent contradiction": it needs to promote the access to financial products, and thus indebtedness, but on the other hand it has to avoid over-indebtedness (Comparato, *The Financialisation of the Citizen*, cit., at p. 72). See F. Ferretti, D. Vandone, *Personal Debt in Europe. The EU Financial Market and Consumer Insolvency*, (Cambridge: Cambridge University Press 2019). See also G. Rojas Elgueta, "Profili sistematici dell'esdebitazione: dalla limitazione di responsabilità dell'imprenditore alla protezione sociale del consumatore", in *Rivista di diritto privato* 2/2014, pp. 261, at 269 and ff. for an analysis of the economic and cultural models of bankruptcy discharge.

not interrupt access to credit for firms, households and individual borrowers (see *infra*).

The urgency of these interventions lies in the need to ensure that the flow of capital for businesses and economic activities and for individuals is not disrupted – or worse interrupted – by a sudden change in the economic conjunctures. This is vital so as to allow both the continuation of production processes and the consumption for individuals through access to different forms of credit, such as consumer credit or mortgage credit. This simple ascertainment induces a few additional considerations on the characteristics of these policies.

2. Expansive and restrictive policies

The first consideration is that interventions on access to credit, whether through temporary executive orders or through vaster reforms of lending activities, are not necessarily expansive interventions. The comparison between the 2008 global financial crisis and its aftermath, and the 2020 COVID-19 crisis is once again emblematic.

On the one hand, the global financial crisis triggered in 2008 introduced vast reforms of the banking system, characterized by strengthened capital requirements for banking institutions, mechanisms of prudential oversight, changes in banking governance and in credit risk management.[3]

On the other hand, during the first phase of the COVID-19 crisis, interventions aiming at ensuring that credit flow would not be interrupted have acted upon two fronts: uplifting or easing of the prudential capital requirements for lending institutions (allowing for example the strict parameters in terms of non-performing loans (NPLs) to be momentarily suspended), and simplifying the processes of creditworthiness assessments for undertakings and individual borrowers. If policies intervening on access

[3] One can recall for example the approval of the Basel III Accords in 2010; the creation of macroprudential authorities (MPAs) in several jurisdictions and the establishment of the Financial Stability Board in 2009; the foundation in the European Union of the European Systemic Risk Board, of the European Banking Authority, the European Insurance and Occupational Pensions Authority and the European Securities and Markets Authority and the ensuing framework for the creation and implementation of the European Banking Union as of 2012; and the adoption of the vast reform in US law contained in the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act.

to credit do not immediately imply easier access, gate-lifting, or promotion of loan-taking, it is interesting to note that changes in policies are often triggered as a counter-reaction to a prior excessively strict or excessively lax policy.

Whilst the measures enacted after 2008 and previously recalled were undoubtedly a move in the sense of tightening the parameters through which certain types of loans could be granted (the well-known case of the 'NINJA' – no income, no job and no assets – loans in the United States and their role in the subprime crisis), it should also be recalled that the crisis was in part provoked by two decades of the so-called 'lending revolution'. Under the latter, recourse to credit had received strong impulse not only as an instrument to fuel the production of consumption goods, but also as a means to access on the private market services no longer provided for by the State. The gradual re-dimensioning of the Welfare State in many countries entailed the private purchase (often financed through loans) of health plans, retirement plans, insurance or higher education for example.[4]

3. Public interventions and the role of banking institutions

The second observation is that interventions regulating access to credit in emergency situations, whether as a key instrument to avoid an increase in spirals of debt both for firms and individuals or as to avoid dangerous interruptions in the flow of

[4] See Niemi-Kiesiläinen, Ramsay, Whitford (Eds), *Consumer Bankruptcy in Global Perspective*, cit., at p. 4 also noting that "Democratisation of credit allowed for the privatisation of social insurance, in the form of credit availability, in societies where the public insurance provided by the welfare state has been reduced"; Comparato, *The Financialisation of the Citizen*, cit., at p. 41 and ff. on the implications in terms of social and financial inclusion of the 'democratization of finance and credit'; C. Crouch, "Privatised Keynesianism: An Unacknowledged Policy Regime", in 11 *British Journal of Politics and International Relations*, 382, 2009; Ramsay, in 15 *Oxford Journal of Legal Studies*, 177, 1995, cit.. For an acknowledgement of the phenomenon, see for example the EU Commission White Paper on Financial Services Policy 2005-2010 (COM (2005) 629) which recognized the gradual withdrawal of the public sector from financing certain aspects of social systems and the need to promote 'good investment choices' (e.g. for pensions) and a direct involvement of citizens in financial issues (White Paper, at 2.6). See also T.A. Durkin, G. Elliehausen, "Consumer Lending", in A.N. Berger, P. Molyneux, J.O.S. Wilson (Eds), *The Oxford Handbook of Banking*, (Oxford: OUP 2d ed., 2015), pp. 312, at 313 on the role of consumer lending in contributing to the growth of durable goods industries.

credit, are public governmental interventions, typically implemented through executive orders and legislative provisions (and in the case of the COVID-19 crisis here examined, accompanied by a framework of supranational soft law in the form of guidelines and recommendations). These are not goals that are left to market forces and their adjustment; on the contrary, the risk that the latter may amplify existing shocks induces authoritative provisions where there are systemic risks on one side, and negative impacts on social and financial exclusion on the other.

Yet – and this leads to the third observation – these interventions adopted in emergency conjunctures more often than not require the use of intermediaries (i.e. banking institutions) for their implementation. The intermediaries, however, are not neutral third parties on the credit market and they need to comply – *inter alia* – with prudential standards and regulations. The implementation, as a *longa manus* of the executive power, of governmental action plans and of specific policies on access to credit, especially when these policies aim at facilitating the access, may not be without consequences on the longer-term solidity of those same lending institutions, with possible systemic repercussions.[5]

Again, a comparison between the global financial crisis and the COVID-19 crisis offers some interesting observations. In both cases, governmental policies have centered around banks and their lending practices. During the 2008 subprime crisis and the following 2011 sovereign debt crisis, banks were put on the watch list and attracted strong criticism for their role in originating the crisis. Ensuing reforms, as previously recalled, acted on credit risk management of the lending institutions and on prudential standards required from them. This entailed, among other consequences, stricter parameters of evaluation before loans could be granted, with a growing importance of procedures of creditworthiness assessments of borrowers (evident also in the case of consumers, with the provisions contained for example both in the EU Consumer Credit Directive[6] and in the Mortgage Credit Directive,[7] and in the US

[5] See A. Brozzetti, E. Cecchinato, E. Martino, "Supervisione bancaria e Covid-19", in U. Malvagna, A. Sciarrone Alibrandi (Eds), *Sistema produttivo e finanziario post Covid-19: dall'efficienza alla sostenibilità. Voci dal diritto dell'economia,* (Pisa: Pacini giuridica 2021), at pp. 170-171; 174.

[6] Directive 2008/48/EC of the European Parliament of 23 April 2008 on credit agreements for consumers, in *OJ*

Dodd-Frank Act[8]).

Furthermore, and in close relation to the consequences that the previous lending revolution had had on consumers and households, policies aiming at preventing consumer over-indebtedness and at introducing special procedures of consumer bankruptcy were implemented and the notion of 'responsible lending' (declined both as responsible lending and as responsible borrowing) began to circulate, though rarely finding legislative implementation.

During the COVID-19 crisis banks were once again at the center of policies, but this time as the preferred (though not the only) intermediaries for the implementation of the emergency measures.[9] As the Chair of the ECB Supervisory Board declared, "Unlike in the 2008 financial crisis, banks are not the source of the problem this time. But we need to ensure that they can be part of the solution."[10]

The measures concerning the banking sector in Europe, under the aegis of the EU Institutions (i.e. the Commission's 'Temporary Framework for State aid measures to support the economy during the current COVID-19 outbreak'[11]) and governed by guidelines of the European Central Bank, the European Banking Authority and the Basel Committee, were adopted along with a series of other economic policy decisions aiming at four macro-objectives: "dealing with health emergency needs; supporting economic activity and employment; preserving monetary and financial stability; and preparing the ground for recovery.[12]" These include the temporary suspension of the

*L*133, 22.5.2008, p. 66, Article 8; See also Article 18 of the Proposal for a Directive on Consumer credits of 30.6.2021 (COM (2021) 347 final).

[7] Directive 2014/17/EU of the European Parliament of 4 February 2014 on credit agreements for consumers relating to residential immovable property, in *OJ L*60, 28.2.2014, p. 34, Article 18.

[8] Title XIV, Dodd-Frank Wall Street Reform and Consumer Protection Act, 15 U.S.C. § 1639(c) - Dodd-Frank Act § 1411.

[9] It is interesting to note that in the case of the Italian emergency plan, the so-called *Decreto cura Italia* (d.lgs n. 18/2020), contains a Chapter (*titolo III*) entitled 'measures for the support of liquidity through the banking system'.

[10] Andrea Enria, Chair of the Supervisory Board of the ECB, Opinion piece published on 1 April 2020 (available at <https://www.bankingsupervision.europa.eu/press/interviews/date/2020/html/ssm.in200401~c19a2ad1ed.en.html>.

[11] Commission Communication of 20 March 2020 (2020/C 91 I/01).

[12] See C.V. Gortsos, "The response of the European Central Bank to the current pandemic crisis: monetary policy

Stability Pact, flexibility in State Aid allowances and the approval of instruments like the temporary Support to mitigate Unemployment Risks in an Emergency (SURE) Plan and the Recovery Fund.

With reference more specifically to lending activities and access to credit as measures supporting the financing of productive activities, the banking regulatory and supervisory authorities emitted financial-stability related measures allowing, within set limits, for the derogation of many of those same rules that had been adopted in the aftermath of the global financial crisis; these include flexibility in the application of micro-prudential banking regulations and the authorization of exceptional uses of prudential capital buffers.[13]

Indeed, the COVID-19 crisis hit when a series of measures approved in May 2019 and known as the 'new Banking Package,' further tightening some of the parameters in terms of capital requirements and banking resolution, were meant to enter into force.[14] It has been noted that the choice of implementing the measures with the aid of banking institutions was made possible precisely because those same banking

and prudential banking supervision decisions", *EBI Working Paper Series* n. 68/2020, p. 3.

[13] The ECB, making use of the 'flexibility' allowed on the basis of the Regulation EU 575/2013 on prudential requirements for credit institutions and investment firms (CRR) and of the Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (CRD IV) adopted measures on temporary capital and operational relief (relaxing some buffers and adapting the composition of specific capital requirements); allowed flexibility in the treatment of NPLs and transitional rules on the international accounting standard (IFRS 9); recommended a temporary ban on payment of dividends by credit institutions. See Gortsos, "The response of the European Central Bank to the current pandemic crisis: monetary policy and prudential banking supervision decisions", cit. at p. 15 and ff. For an overview, see ECB, "Our response to the coronavirus pandemic" (accessible at <https://www.ecb.europa.eu/home/search/coronavirus/html/index.en.html>) and the details of the single measures; EBA, "Our response to Coronavirus (Covid-19)" <https://www.eba.europa.eu/coronavirus>) and EBA "Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis" (April 2020); see also the measures adopted by the Basel Committee to alleviate the impact of COVID-19 <https://www.bis.org/press/p200403.htm>.

[14] The EU 'new banking package' (including new rules approved by the Basel Committee) was approved in May 2019 with amendments on the Capital Requirements Directive and the Capital Requirements Regulation (via the so-called CRD5/CRR2 (Directive 2019/878 and Regulation 2019/876), on the Bank Recovery and Resolution Directive (via Directive 2019/879), and on the Single Resolution Mechanism (via Regulation 2019/877); the entry into force of this package (along with that of new Basel III rules) was however suspended due to outbreak of the COVID-19 pandemic in 2020. See Brozzetti, Cecchinato, Martino, "Supervisione bancaria e Covid-19", cit., at p. 165 and ff.

institutions had been strengthened by important (and ongoing) reforms following the global financial crisis.[15]

The emergency provisions adopted in the first phase of the COVID-19 pandemic impacted access to credit principally by allowing forbearance (although not to be classified as such[16]) measures towards debtors through moratoriums on existing payments and simplified procedures – including creditworthiness assessments – for the granting of new loans (with the State stepping in as a guarantor); and with subsidized interest rates.[17] The content of these measures, to be carried out by intermediaries, brings to a fourth and conclusive observation.

4. The role of private law

The implementation of the policies recalled above is principally entrusted to private contract law. Indeed, the different norms and recommendations enacted to ensure credit flows to businesses and households directly affect the pre-contractual phase and the substantive content of loan contracts yet to be concluded and, introduce derogations on existing loan contracts.

Whilst there is nothing unheard-of in this form of contract governance, the specific role of the chosen intermediaries – banks and lending institutions – can lead to additional sources of 'tension' that can be singled if one examines the different components of lending contracts (as will be seen shortly).

[15] Brozzetti, Cecchinato, Martino, "Supervisione bancaria e Covid-19", cit., at p. 167.

[16] See EBA, Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis (consolidated version 2.12.2020), n. 10-14.

[17] These measures were part of the monetary policy measures adopted by the ECB, including a series of decisions to support bank lending to small and medium-sized enterprises (i.e. ECB Decision 2020/407 of 16 March 2020) and to households and firms (ECB Decision 2020/614 of 30 April 2020), which provided the basis for the national measures cited above. See for a detailed overview of the measures, Gortsos, "The response of the European Central Bank to the current pandemic crisis: monetary policy and prudential banking supervision decisions", cit., at p. 7 and ff.; C. Brescia Morra, "Lending activity in the time of coronavirus" in W.G. Ringe, Gortsos (Eds), *Pandemic Crisis and Financial Stability*, (EBI e-Book Series 2020), at p. 394 and ff.

Indeed whenever measures affecting access to credit are adopted, whether they imply an 'easy' access to credit or, on the contrary, a restriction in the granting of loans, there is often a mismatch between the private contractual autonomy of lenders and borrowers on the one side, and the public sphere (aiming at financial and systemic stability, at the development of credit markets and/or at financial inclusion of consumers) on the other. Contrasts can become particularly exacerbated when new or derogatory measures of existing legislation are taken so as to tackle the economic consequences of an emergency and the proper functioning and stability of the market are challenged. It also explains the attention that policies on access to credit attract not only from operators but also from the mainstream media and public opinion; the policies impact at the very least a) access to capital for firms; b) financial and social inclusion (or exclusion) for individuals and households; c) the banking system.

There are at a minimum three perspectives from which a loan contract can be examined that highlight potential frictions, especially when the borrower is a consumer.

First of all, there is the natural adversarial position between the parties in any (loan) contract. Indeed, a credit contract is first of all a private contractual relationship between a lender and a borrower. Any measure in favor of a debtor aiming at promoting access to credit (even in a temporary, emergency context), gives rise on the one side to an expectation or even a potential 'right' to credit of an applicant borrower (for example one who meets the formal requirements laid down in specific provisions of support for firms or households, or for certain categories of vulnerable or socially excluded borrowers). On the other side, this can come into conflict with the contractual freedom and 'freedom to conduct a business' of the lender (this too recognized as a fundamental freedom in many national Constitutions as well as in international Charters). This is not to speak of the issues related to the substantive content of a loan contract: above all the question of the interest rates and contractual terms applied to the single contract (and not coincidentally consumer loans – i.e. consumer credit and mortgage credit – are highly regulated not only in the pre-contractual phase through the information paradigm, but also as far as the substantive terms of the contract are concerned[18]). It is

[18] At the EU level suffice it to recall for example the two Directives on Consumer Credit (Directive 2008/48/EC)

under this perspective that one of the principal issues when policies of access to credit are analyzed concerns not only 'access to' but rather access to 'affordable' credit or at 'fair terms.'[19]

However, granting a loan or mortgage credit also transcends the mere private contractual sphere of a debt and credit. Extension of credit depends on a previous assessment of the consumer's financial position (creditworthiness, ability to pay, adequacy, and so forth). The compliance with this requirement responds to two related functions: the observance of prudential requirements for lenders and the prevention over-indebtedness of borrowers. The stringency of the requirement and the impact of the assessment on the decision of lenders to grant credit introduce additional elements of potential friction between the contractual counterparties.[20]

There is a second aspect to be considered when looking at individual consumer borrowers. For this category, access to credit is often the only means to access goods and services that are deemed fundamental (suffice it to consider for example access to housing through mortgage credit; access to education through student loans; or access to health paid through private insurance) and that receive recognition at a constitutional level.[21]

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and on Mortgage Credit (Directive 2008/48/EC); or the 2010 Dodd Frank Act and the 1968 Truth in Lending Act (15 U.S.C. § 1601 et seq.) in the United States.

[19] See for example *ex multis* G. Howells, "Seeking Social Justice for Poor Consumers", in Ramsay (Ed.), *Consumer Law in the Global Economy*, (Dartmouth: Ashgate 1997), at p. 266 and ff., introducing, even before the devastating impact of the 2007-2008 global financial crisis, arguments on the 'welfare' of borrowers (especially of fragile and/or low income borrowers often targeted by high cost credit) that lenders should take account of.

[20] On the stringency of the creditworthiness assessment and the problem of the so-called 'duty to deny', please see N. Vardi, "Framing Duties of Responsible Credit Policies in EU Law", in *Osservatorio del diritto civile e commerciale*, 2/2019, 471, at p. 494 and ff. and the literature cited therein.

[21] Housing rights for example have received a multilevel constitutionalization not only in national legal systems, but also at a supranational level, (i.e. via the ECHR and EU private law) where it is regulated indirectly through the regulation of other areas of EU private law such as consumer credit, mortgage credit, and unfair contract terms (see I. Domurath, C. Mak, "Private Law and Housing Justice in Europe", in 83 *Modern Law Review* 1188, 2020, at p. 1189). The 'right to housing' has been invoked in case law of the CJEU dealing, not coincidentally, with mortgage enforcement proceedings, especially with reference to their compatibility with effective consumer protection under Directive 93/13 on unfair terms in consumer contracts (i.e. whether in mortgage eviction procedures consumers have effective procedural remedies and whether they can invoke the invalidity of certain terms of the underlying mortgage loan agreement). See CJEU Case C-415/11 *Mohamed Aziz* v. *Caixa d'Estalvis de Catalunya, Tarragona i Manresa (Catalunyacaixa),* 14 March 2013, EU:C:2013:164; CJEU Case C-169/14, *Juan Carlos Sánchez Morcillo*

It ensues that access to credit in these instances has broader implications, or rather, in a reverse perspective, denial of credit impacts access to certain fundamental rights and has further relevance in terms of financial and (consequential) social exclusion of individuals. The effectiveness of policies aiming at ensuring access to credit, as a means to access further rights, becomes of crucial standing. It is within this context that a negative and a positive dimension of access to credit can be envisioned: the negative dimension can be identified with policies against discrimination, whereas the positive dimension refers to policies aiming at financial and social inclusion. Hence the importance and sensitivity of public action which intervenes in regulating access to credit.

If all this means that the decisions to grant or deny a loan impact a wide array of rights that go beyond the individual contract, including the effects that they may have on the community (i.e. once again suffice it to consider impact of shortage on housing), there is a third aspect that requires consideration and that concerns the position and obligations of the lenders. The decisions of the latter, as previously recalled, are not completely unrestrained in that they respond to prudential standards, imposed by concerns of systemic stability. Therefore, if techniques of credit risk management normally answer the need to comply with these regulations, the introduction of special – derogatory – measures in an emergency conjuncture can jeopardize certain mechanisms of balance.

This is evident for example with the cited temporary measures on NPLs adopted under the COVID-19 framework, the exit from which may prove complicated given the risk of an accumulation of NPLs in banks' balance sheets following a period of increase in the demand of credit by firms and households.[22] Whilst an uplifting of

and María del Carmen Abril García v. *Banco Bilbao Vizcaya Argentaria SA*., 17 July 2014, EU:C:2014:2099; CJEU Case C-34/13 *Monika Kušionová* v. *SMART Capital*, 10 September 2014, EU:C:2014:2189; CJEU Case C-407/18 *Aleš Kuhar* v. *Addiko Bank d.d.*, 26 June 2019 and CJEU Joined Cases C-70/17 and C-179/17, *Abanca Corporación Bancaria SA* v. *Alberto García Salamanca Santos* and *Bankia SA* v. *Alfonso Antonio Lau Mendoza*, of 26 March 2019). On the significance of this line of cases of the CJEU in promoting an indirect 'inclusive justice' for consumers and SMEs, see E. Navaretta, "Principi dell'Unione europea, politiche economiche e diritto privato", in *Osservatorio del diritto civile e commerciale* n.2/2020, p. 409, at p. 430 and ff. For a reconstruction on the evolution and significance of the right to housing, also with reference to mortgage credit, see also M.C. Paglietti, "Percorsi evolutive del diritto all'abitazione", in *Rivista di diritto privato*, 1/2008, p. 5.

[22] Gortsos, "The response of the European Central Bank to the current pandemic crisis: monetary policy and prudential banking supervision decisions", cit., at p. 20.

certain mandatory requirements (i.e. on capital and liquidity buffers for banks) does not per se affect contractual freedom of lenders, it can entail, if prolonged, the so-called boomerang effect that many have signaled.[23]

The 'tension' (this time beyond the adversarial position of the parties) is visible once again in the example of the duty to assess the creditworthiness of borrowers. On the one hand this duty responds, as previously highlighted, to prudential credit risk management of banking institutions (systemic stability). On the other, some of the national measures passed with the COVID-19 emergency legislation have provided for a simplified assessment procedure. The Italian emergency *Decreto cura Italia* (d.lgs n. 18/2020) for example introduced in its article 56 a simplified creditworthiness assessment for SMEs meeting certain requirements in order to obtain a moratorium on payments. This specific provision has attracted attention and criticisms regarding what is actually required from banks and the compatibility of these provisions with the (albeit non-binding) Guidelines adopted by the EBA in April 2020 on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis.[24]

The pressure between the need to comply with the emergency measures, the need to maintain solid structure, and the contractual autonomy in the conclusion of every new loan contract applied for under this conjuncture, is clear. This is all the more problematic if one considers that whilst the emergency measures approved are meant to be temporary, the effects on the banking institutions' balance sheets (and stability) deriving from a growth in impaired loans are likely to be long term.[25]

[23] Brozzetti, Cecchinato, Martino, "Supervisione bancaria e Covid-19", cit., at p 170; see also P. Rossi, "La sfida della gestione (condivisa o autogestita?) degli effetti tossici del COVID-19 sul sistema bancario europeo e nazionale", in Malvagna, Sciarrone Alibrandi (Eds), *Sistema produttivo e finanziario post Covid-19: dall'efficienza alla sostenibilità. Voci dal diritto dell'economia*, cit., p. 193 and ff.; and M. Maggiolino, "Le esposizioni deteriorate ai tempi della pandemia", in Malvagna, Sciarrone Alibrandi (Eds.), *Sistema produttivo e finanziario post Covid-19: dall'efficienza alla sostenibilità. Voci dal diritto dell'economia*, cit., pp. 200-201.

[24] See M. Condemi, "Il 'merito creditizio' nel contesto normativo conseguente alla pandemia da Covid-19" in Malvagna, Sciarrone Alibrandi (Eds), *Sistema produttivo e finanziario post Covid-19: dall'efficienza alla sostenibilità. Voci dal diritto dell'economia,* cit., at pp. 237-238 and p. 242; on the role and function required from banks in this contingency, see Brescia Morra, "Lending activity in the time of coronavirus", cit., at pp. 395-396; and at p. 402, highlighting that the emergency measures did not alter the role and activities required from banks (including in assessing the creditworthiness of borrowers).

[25] Brescia Morra, "Lending activity in the time of coronavirus", cit., at p. 396.

5. Conclusive remarks

It is precisely with reference to the long-term effects of the measures so far recalled, that a few conclusive remarks can be made. One can question first of all, whether the choice of intervening through intermediaries is an efficient and sustainable choice on the long term and what trace, if any, of the measures adopted will affect lending activities and credit contracts on the long run. Most of the provisions approved in the immediate concurrence of the outbreak of the pandemic were expressly labeled and intended as temporary measures. On the one side however, the economic crisis is far from over, as the pandemic continues to rage and cause disruption at different levels to many sectors of the real economy and to households. There are strong expectations that many of the provisions will be extended or renewed. Beyond the foreseeable impact that prolonged measures will have from the systemic point of view (i.e. the accumulation of non-performing or unlikely to perform loans), there is a further interesting question from the legal perspective. Namely, if certain simplified mechanisms (in terms of procedure) of access to loans on behalf of firms or individuals, will continue to characterize loan contracts – and if so, how this will be compatible with the regulatory framework painstakingly approved in the decade or so between the aftermath of the global financial crisis and the outbreak of the COVID-19 crisis.

Closely tied, is the issue of whether the provisions adopted in an emergency context may have set the blueprint not for future instability but rather, for a new *modus agendi* – which continues to rely on intermediaries and with all the necessary balancing to avoid distortive effects – for the implementation of access to credit policies aiming at combating financial exclusion. Or, as an opposite scenario, if the long-term effects of the derogation of prudential standards will lead to a credit crunch once the exceptional measures are terminated, impacting first of all and severely the most fragile categories of borrowers.

LAURA NOTARO*

PREDICTIVE ALGORITHMS AND CRIMINAL JUSTICE: A SYNTHETIC OVERVIEW FROM AN ITALIAN AND EUROPEAN PERSPECTIVE**

ABSTRACT. *The paper seeks to provide a synthetic overview of the current and potential uses of "predictive algorithms" in the context of criminal justice systems, as well as of the critical issues arising from such tools.*
In the first part (§§ 2-3), the main uses of Artificial Intelligence (AI) tools within the legal systems which have implemented them will be presented. Then a synthetic framework of the possible fields of application of AI in the context of criminal justice will be provided.
In the second part (§§ 4-5), the problems arising from the introduction of algorithmic tools in criminal justice will be analysed, with special attention to the fundamental rights guaranteed at a European level, the general principles of criminal law and procedure and the further juridical limits, provided by supranational and national law.
In the conclusions (§ 6), an attempt will be made to define the acceptable scopes of application of algorithmic tools in the criminal justice system and to identify the necessary precautions and conditions for the use of new technologies to be consistent with the national and European legal framework.

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observations – 4.2. Tools for predicting the outcome of judicial decision-making – 5. Legal limits to the introduction of AI into criminal justice systems – 5.1. The Ethical Charter of the CEPEJ of the Council of Europe – 5.2. European Union law: limits to «decisions based solely on automated processing» – 5.3. Italian law: limits to criminological expert evidence – 6. Final remarks. Scope of application and precautions for AI in criminal justice systems

1. Introduction

The use of Artificial Intelligence (AI) tools in the context of criminal justice is becoming a crucial issue also in Europe.

Even if the most significant introduction of new technologies in criminal courts can be observed in the United States' system, a discussion at a European level could be useful in order to anticipate the advances in technology and the development of new practices: it is necessary for setting up the proper cultural context[1] and a clear legal framework in order to be prepared for the challenges of modernity.

The paper is divided into five sections.

Paragraphs 2 and 3 aim at better clarifying the object of the research. First of all, the paper will examine the main uses of AI tools in those criminal justice systems which have implemented them. Then a synthetic framework of the possible fields of application of AI in the context of criminal justice will be provided.

Paragraphs 4 and 5 aim at carrying out an analysis of the problems arising from the introduction of algorithmic tools in criminal justice, with specific reference to the fundamental rights guaranteed at a European level, the general principles of criminal law and procedure and further juridical limits, provided by supranational and national law.

[1] The need that the implementation of AI tools is prepared by an interdisciplinary debate, in order to provide a framework for developing algorithms in compliance with fundamental rights, is underlined by X. Ronsin, V. Lampos, V. Maîtrepierre, *In-depth study on the use of AI in judicial systems, notably AI applications processing judicial decisions and data*, in *Appendix I*, *European ethical Charter on the use of Artificial Intelligence in judicial systems and their environment*, at <www.coe.int>.

Paragraph 6 will provide some conclusions, as an attempt to define the fields of the criminal justice system in which AI tools could be admitted and also to identify the necessary precautions and conditions for the use of new technologies to be consistent with the national and European legal framework.

2. AI in criminal justice systems. Experiences and recent trends

2.1. United States

The United States experience is the first and most advanced example of introducing AI in criminal justice systems.

The fields in which predictive tools are employed are basically two: *a)* the decisions on pretrial release; *b)* the sentencing stage.

Algorithmic tools are very numerous, but the most used are, on the one hand, "PSA" (Public Safety Assessment), which was created by the Arnold Foundation, and, on the other hand, "COMPAS" (Correctional Offender Management Profiling for Alternative Sanctions) and "LSI-R" (Level of Service Inventory Revised), both developed by commercial companies.[2] Some States have also designed their own predictive algorithms.[3]

[2] For an overview of the predictive tools used in each State, see the paper published by EPIC (Electronic Privacy Information Centre), *Algorithms in the Criminal Justice System: Risk Assessment Tools*, available at the following link: <https://epic.org/algorithmic-transparency/crim-justice>. See also D. Kehl, P. Guo, S. Kessler, *Algorithms in the Criminal Justice System: Assessing the Use of Risk Assessments in Sentencing* (Responsive Communities Initiative, Berkman Klein Center for Internet & Society, Harvard Law School), July 2017, available at the following link: <https://cyber.harvard.edu/publications/2017/07/Algorithms>.

[3] For example, the Ohio Department of Rehabilitation and Correction has developed the algorithm "ORAS" (Ohio Risk Assessment System) in collaboration with the University of Cincinnati (in this regard, see Kehl, Guo, Kessler, *Algorithms in the Criminal Justice System*, cit., p. 16). About the algorithm recently adopted in Pennsylvania, after the work carried out since 2010 by the Pennsylvania Commission on Sentencing, see R. Hester, *Risk Assessment at Sentencing. The Pennsylvania Experience*, in J.W. de Keijser, J.V. Roberts, J. Ryberg (Eds), *Predictive Sentencing: Normative and Empirical Perspectives*, Bloomsbury Publishing, 2019, p. 213; A. Diener, *Pennsylvania's Proposed, Questionably Constitutional, Risk Assessment Instrument*, in *Harvard Civil Rights – Civil Liberties Law Review*, 17th October 2019; A. Bashir, *Pennsylvania's Misguided Sentencing Risk-Assessment Reform*, in *The Regulatory Review*, 5th November 2019.

Actually, the spread of computational risk-assessment instruments within the United States criminal justice system is only the last step of a more general tendency of using predictive tools based on statistical-actuarial theories and methods.[4] As highlighted by some legal scholars,[5] the scientific theory on which the algorithm is developed and the "computational" nature of the risk-assessment tool should actually be distinguished,[6] at a conceptual level, in order to properly analyse the different problems arising from each of the two elements.[7]

2.1.1. Decisions on pretrial release

As regards the decisions about pretrial release, in the United States courts there are more than 20 different risk assessment tools (RATs) in use.[8] In seven States[9] the judges are required to take into account the outcome of these tools, at least in certain

[4] About the spread of evidence-based practices (EBP), see KEHL, GUO, KESSLER, *Algorithms in the Criminal Justice System*, cit., p. 7. In this regard, some criticism has been expressed by N. SCURICH, *The case against categorical risk estimates*, in *Behavioral Science Law*, 2018, p. 1 et seq.

[5] S. QUATTROCOLO, *Equo processo penale e sfide della società algoritmica*, in *BioLaw Journal*, 1/2019, p. 135 et seq.; EAD., *Questioni nuove e soluzioni antiche? Consolidati paradigmi normativi vs rischi e paure della giustizia digitale "predittiva"*, in *Cass. pen.*, 4/2019, p. 1478.

[6] See QUATTROCOLO, *Equo processo penale e sfide della società algoritmica*, cit., p. 144. For example, the predictive system "SAVRY" (*Structured Assessment of Violence Risk in Youth*), used in juvenile justice by at least nine of the United States, is a tool with an algorithmic structure, but without a digital/computational nature: it consists of a user manual accompanied by assessment forms. About SAVRY, see also G.M. VINCENT, J. CHAPMAN, N.E. COOK, *Risk-Needs Assessment in Juvenile Justice: Predictive Validity of the SAVRY, Racial Differences, and the Contribution of Needs Factors*, in *Criminal Justice & Behavior*, 2011, p. 47; QUATTROCOLO, *Questioni nuove e soluzioni antiche? Consolidati paradigmi normativi vs rischi e paure della giustizia digitale "predittiva"*, cit., p. 1478.
For a broad definition of algorithm, see T. GILLESPIE, *The relevance of Algorithms*, in T. GILLESPIE, P. BOCZKOWSKI, K. FOOT, *Media Technologies*, MIT Press, 2014, 1: «*Algorithms need not be software: in the broadest sense, they are encoded procedures for transforming input data into a desired output, based on specified calculations*». See also the study carried out by the Council of Europe, *Algorithms and Human Rights*, DGI (2017) 12, 5, in <www.coe.it>, 22nd March 2018, 5.

[7] See *infra* § 4.1.8.

[8] A. WIDGERY, *The Statutory Framework of Pretrial Release*, in *www.ncsl.org*, 8th November 2020, 7; A.Z. HUQ, *Racial Equity in Algorithmic Criminal Justice*, in *Duke Law Journal*, 2019, 1043. In the Italian literature, see M. GIALUZ, *Quando la giustizia penale incontra l'intelligenza artificiale: luci e ombre dei* risk assessment tools *tra Stati Uniti ed Europa*, in *Dir. pen. cont.*, 29th May 2019, 4.

[9] Alaska, Delaware, Hawaii, Indiana, Kentucky, New Jersey and Vermont.

cases, whilst in eight other States[10] their adoption is authorised and encouraged.[11] Some legislative interventions at a state level[12] have introduced regulations on the use of predictive tools in pretrial release decisions: requirements of impartiality and non-discrimination, guarantees of transparency and accessibility of the systems and data processed by the algorithms, as well as the need of periodic validation review of the predictive instrument.[13]

When examining the United States experience, a warning is needed: in that legal tradition, which provides money bail as a condition for the release of the arrested, the introduction of algorithmic risk assessment tools is strictly connected to the debate on the abolition of bail.[14] The case of California could be an example of what just mentioned. In 2018, the State of California abolished money bail and replaced it with the obligation of making use of risk assessment tools to decide whether to release the arrested person and on what conditions. Nevertheless, the reform was repealed in 2020, after a referendum, which was supported by a diverse group of stakeholders: on the one hand, the insurance companies interested in keeping bail money (the so-called "bail industry") and, on the other, some human rights organisations which, though supporting the abolition of bail, have always pointed out the risk of machine bias and the lack of transparency of predictive algorithms.

That said, among the algorithms employed in the context of pretrial decisions, the most used is "PSA" (Public Safety Assessment).[15] It is developed by a non-profit

[10] Colorado, Illinois, Montana, New York, Pennsylvania, Rhode Island, Virginia and West Virginia.

[11] Widgery, *The Statutory Framework of Pretrial Release*, cit., p. 7.

[12] For example in Idaho, New York and California.

[13] See, for example, House Bill 118 in Idaho, Senate Bill 1509 in the State of New York and Senate Bill 36 in California.

[14] Gialuz, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 8; J.L. Koepke, D.G. Robinson, *Danger Ahead: Risk Assessment and the Future of Bail Reform*, in *Washington Law Review*, 4/2018, p. 1725. On money bail, in the Italian literature, see V. Tondi, *Il* Bail. *La libertà su cauzione negli ordinamenti anglosassoni*, Cedam-Wolters Kluwer, 2016.

[15] In this regard, in the Italian literature, see Gialuz, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 7; F. Basile, *Intelligenza artificiale e diritto penale: quattro possibili percorsi di indagine*, in *Dir. pen. uomo*, 29th September 2019, p. 18.

organisation ("Laura and John Arnold Foundation") and is used in four States[16] and in numerous important jurisdictions in the United States.[17] The input of the algorithm consists of nine risk factors for the individual,[18] which are compared with a database of about 750,000 cases from about 300 jurisdictions. The output produced by the system consists of a score of 1 to 6 for each of the three "risks" to assess: Failure To Appear (FTA), New Criminal Arrest (NCA) and New Violent Criminal Arrest (NVCA). The criteria for allocating the scores are published online.[19]

2.1.2. Sentencing

For the sentencing stage, more than 60 different risk assessment tools are employed[20] and the use of predictive instruments is mandatory in some States.[21] Also the well-known "Loomis case,"[22] which put the "COMPAS" algorithm at the centre of the discussion all over the world, was connected to the sentencing context.

COMPAS is a computational predictive tool developed in 1998 by the company Northpointe (now Equivant). The system works on data sampled from over 30,000 COMPAS assessments conducted between January 2004 and November 2005

[16] Arizona, Kentucky, New Jersey and Utah.

[17] Among those, Allegheny County (Pittsburgh, Pennsylvania), Cook County (Chicago, Illinois), Harris County (Houston, Texas), Mecklenburg County (Charlotte, North Carolina), Milwaukee County (Wisconsin) and San Francisco County (California). See "*Where is PSA currently used?*" at *advancingpretrial.org*.

[18] The elements considered are: 1) age at current arrest; 2) current violent offence; 3) pending charge at the time of the arrest; 4) prior misdemeanour conviction; 5) prior felony conviction; 6) prior violent conviction; 7) prior failure to appear in the past 2 years; 8) prior failure to appear older than 2 years; 9) prior sentence to incarceration. See *"How It Works*", at <advancingpretrial.org>.

[19] See *"How It Works*", at <advancingpretrial.org>.

[20] A.Z. Huq, *Racial Equity in Algorithmic Criminal Justice*, cit., p. 1075; A.M. Barry-Jester, B. Casselman, D. Goldstein, *Should Prison Sentences Be Based on Crimes That Haven't Been Committed Yet?*, in <fivethirtyeight.com>, 4th August 2015. More generally, on the use of algorithms in sentencing, see Kehl, Guo, Kessler, *Algorithms in the Criminal Justice System: Assessing the Use of Risk Assessments in Sentencing*, cit., p. 13.

[21] Kehl, Guo, Kessler, *Algorithms in the Criminal Justice System: Assessing the Use of Risk Assessments in Sentencing*, cit., 16; Huq, *Racial Equity in Algorithmic Criminal Justice*, cit., 1075. For example, the legislations of Arizona, Kentucky, Ohio and Pennsylvania require the use of predictive tools in the sentencing stage. Ohio and Pennsylvania have also developed their own risk assessment algorithm.

[22] *State* v. *Loomis*, 881 N.W.2d 749, 753 (Wis. 2016).

across the United States.[23]

The input of the algorithm is made of the information collected from the file and the answers given to a series of questions by the person concerned.[24] The output consists of a *risk* assessment and a *needs* assessment. Within the *risk* assessment, a score on a scale of 1 to 10 is assigned for each of the three risks of recidivism considered: pretrial recidivism risk, general recidivism risk and violent recidivism risk.

The framework of the elements considered and the results returned by COMPAS is therefore very complex and shows that the algorithm was not initially developed for the sentencing stage[25] but as an aid for judges and other competent authorities in the field of pretrial release decisions and in the sentence enforcement (e.g. for the admission to parole).

2.2. European tendencies and experiences

2.2.1. HART (United Kingdom)

In the European experience, the algorithm that can be compared to the predictive tools employed in the United States is called "HART" (Harm Assessment Risk Tool)[26] and is being tested in the United Kingdom. It was developed in a partnership between the University of Cambridge and the Constabulary of Durham, with the purpose of assessing the risk of recidivism two years after the arrest. The

[23] *Practitioner's Guide to COMPAS Core* (2019), at <www.equivant.com>, 11.

[24] *State* v. *Loomis*, cit., § 13. The COMPAS algorithm can consider up to 137 factors (see Ronsin, Lampos, Maîtrepierre, *In-depth study on the use of AI in judicial systems, notably AI applications processing judicial decisions and data*, in *Appendix I*, *European ethical Charter on the use of Artificial Intelligence in judicial systems and their environment*, at <www.coe.int>, § 129; J. Dressel, H. Farid, *The accuracy, fairness, and limits of predicting recidivism*, in *Science Advances*, 4/2018, 1; J. Nieva Fenoll, *Intelligenza artificiale e processo*, translated by P. Comoglio, Giappichelli, 2019, p. 59).

[25] Kehl, Guo, Kessler, *Algorithms in the Criminal Justice System: Assessing the Use of Risk Assessments in Sentencing*, cit., p. 11.

[26] In this regard, M. Oswald, J. Grace, S. Urwin, G.C. Barnes, *Algorithmic risk assessment policing models: lessons from the Durham HART model and "Experimental" proportionality*, in *Information and Communications Technology Law*, 2/2018, pp. 223 et seq. In the Italian literature, Gialuz, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 10.

algorithm was designed for a better implementation of "Checkpoint,"[27] a diversion programme aimed at avoiding criminal prosecution and conviction for the offenders whose risk of recidivism is lower or related to less-serious offences.

In this context, HART has the function of assisting the police in the selection of those eligible for the programme. It places the offenders into three risk categories regarding the risk of committing an offence in the following two years: a) high risk (risk of committing serious offences); b) moderate risk (risk of committing less-serious offences); c) low risk (no risk of recidivism).[28] The Checkpoint programme is for the offenders placed in the second category.

The input of the algorithm consists of 34 predictive factors: 29 are connected with the individual's criminal history; the others concern age, gender, two different post codes and the number of "police intelligence reports" on the offender.[29] HART is built upon a database of 104,000 cases occurred in Durham between 2008 and 2012.[30]

A significant aspect is the different relevance given to "dangerous errors" (false negatives) and "cautious errors" (false positives) at the stage of programming the algorithm: the choice in favour of greater accuracy of the low risk assessments entails an overestimation of high-risk individuals.[31] False negatives are thus very rare, whilst the possibility of obtaining a significant percentage of false positives should be taken into consideration.

One of the most widely discussed issues within the civil society debate – also in the light of some studies carried out by non-profit organisations for the protection of fundamental rights – concerns one of the two post codes included in the predictive elements which are inserted in HART's input: the *Mosaic code.* It is a geo-demographic

[27] Information on the "Checkpoint" project, implemented since 2015, is available on the Durham Constabulary website <www.durham.police.uk>. In this regard, see Oswald, Grace, Urwin, Barnes, *Algorithmic risk assessment policing models*, cit., 227. On the use of HART, since 2017, see S. Carlo, *Big Brother Watch's written evidence on algorithms in the justice system for the Law Society's Technology and the Law Policy Commission*, in *bigbrotherwatch.org.uk*, 2.

[28] Oswald, Grace, Urwin, Barnes, *Algorithmic risk assessment policing models*, cit., p. 227.

[29] Oswald, Grace, Urwin, Barnes, *Algorithmic risk assessment policing models*, cit., p. 228.

[30] *Ibidem.*

[31] Oswald, Grace, Urwin, Barnes, *Algorithmic risk assessment policing models*, cit., p. 230.

tool, developed and sold by a marketing company called "Experian,"[32] which profiles adult residents in the United Kingdom by placing them into 66 categories and works on a base of 850 million data (amongst which there are family composition, ethnicity, online data, occupation, health data, gas and electricity consumption and school performance).[33]

2.2.2. Predictive justice algorithms in civil justice and "judicial analytics" (France)

Even if still limited to the context of civil justice, some predictive tools designed in France should be taken into consideration for their potential impact on the justice system in general.

Since 2016, when *Loi* No. 2016-1321 «*sur la République numérique*» made all the judicial decisions by French courts available to the public, some start-ups have used that huge open access database to develop predictive algorithms aimed at supporting lawyers in their work:[34] the main service offered is the indication of the probability of success for a lawsuit, which could be useful for deciding whether undertaking a legal action and for choosing the best strategy.[35]

The algorithms which have raised the greatest perplexity are those giving relevance to the identity of the individual judge in order to analyse his/her work. Actually, the issue did not emerge from the use of commercial applications designed by LegalTech start-ups, but from the publication of a study on the website "SupraLegem" which provokingly highlighted the significant variance in the percentages of rejection of the appeals by the different judges of the *Conseil d'Etat* who were competent for asylum law cases.[36]

[32] For a description of the product see the company's website at the following link: <www.experian.co.uk/assets/marketing-services/brochures/mosaic-ps-brochure.pdf>.

[33] See Carlo, *Big Brother Watch's written evidence on algorithms in the justice system for the Law Society's Technology and the Law Policy Commission*, cit., 1; Big Brother Watch Team, *A closer look at Experian Big Data and Artificial Intelligence in Durham Police*, at <bigbrotherwatch.org.uk>, 6th April 2018; Big Brother Watch Team, *Police uses Experian marketing data for AI custody decisions*, at <bigbrotherwatch.org.uk>, 6th April 2018.

[34] They are developed by *Predictice*, *Case Law Analytics*, *Doctrine.fr*, *Tyr Legal*. See C. Szwarc, *La justice predictive: une autre justice?*, in *Le Mag des Avocats*, 34, 9/2017, p. 5.

[35] Tests of one of these algorithms (*Predictice*) have been promoted by the French Ministry of Justice at the Courts of Appeal of Rennes and Douai. See C. Castelli, D. Piana, *Giustizia predittiva. La qualità della giustizia in due tempi*, in *Quest. giust.*, 4/2018, p. 156.

[36] The study was conducted by the lawyer Michaël Benesty and the IT engineer Anthony Sypniewski. On this issue,

In 2019, also in the light of the protests promoted by the judges against predictive tools, the French legislature provided that the judges' names and the data that could identify them must be removed from the material made available to the public: the main reason for this intervention was the foreseeable risk that profiling each individual judge could affect the judiciary's independence.[37] The Parliament also criminalised the use of the judges' data having the purpose or the effect of assessing, analysing or comparing them or to predict the judges' future decisions.[38]

3. Possible fields of application for AI in criminal justice

After examining the current experiences of the use of AI systems in the context of criminal justice, it is possible to identify the fields of relevance of those tools and place them within the categories of criminal law and procedure. The perspective will be mainly that of the Italian system, even if some reference to the comparative framework will be made.

3.1. Assessment of the re-offending risk

As seen above, the majority of AI systems experienced in criminal justice are employed for assessing the re-offending risk in its different spheres of relevance, such as the decisions on pretrial release or the sentencing.

In the Italian system, a prognostic assessment of the re-offending risk can be relevant, first of all, in the context of decisions about pretrial precautionary measures.

The Code of Criminal Procedure requires the existence of one of the three so-called *pericula libertatis* listed in Article 274 of the Code of Criminal Procedure, as well

see M. Langford, M.R. Madsen, *France Criminalises Research on Judges*, in *verfassungsblog.de,* 22nd June 2019; M. Benesty, *The Judge Statistical Data Ban. My Story*, at <www.artificiallawyer.com>, 7th June 2019.

[37] B. Galgani, *Considerazioni sui "precedenti" dell'imputato e del giudice al cospetto dell'IA nel processo penale*, in *Sist. pen.*, 4/2020, p. 87.

[38] See article 33, al. 3, Loi n. 2019-222: «*Les données d'identité des magistrats et des membres du greffe ne peuvent faire l'objet d'une réutilisation ayant pour objet ou pour effet d'évaluer, d'analyser, de comparer ou de prédire leurs pratiques professionnelles réelles ou supposées*».

as «serious evidence of guilt» (Article 273 of the Code of Criminal Procedure), for the application of a pretrial precautionary measure. The measures grounded on the first two *pericula* – regarding the risk for evidence and the flight risk – are clearly connected with procedural purposes. The measure ordered because of the third one (Article 274, letter c, of the Code of Criminal Procedure) aims at dealing with the risk of committing «serious crimes»[39] or offences «of the same type of the one under prosecution» and punished by law with a maximum sentence of at least four years (at least five years for ordering prison custody), thus performing a special-preventive function that is not always strictly connected with the proceeding within which the measure is ordered.[40]

Moreover, such examples of pretrial coercive measures – without a strictly procedural function but aimed at special-preventive needs – are not an Italian peculiarity: as a matter of fact, measures with a similar aim can be found in all the main European criminal procedure systems.[41]

A second area of relevance for the risk of committing new offences is the stage of sentencing.

In the Italian system, the decision on the measure of the penalty to be applied is given by the same judge who establishes whether the accused is guilty. The provision about the sentence's measure (Article 133 of the Criminal Code) lists a series of elements which the judge must take into account, divided into aspects regarding the seriousness of the offence and those regarding the so-called "*capacità a delinquere*"[42] (capacity to

[39] More precisely, Article 274, letter *c*, of the Italian Code of Criminal Procedure refers to serious offences with the use of weapons or any other tool against persons or the constitutional system, or offences connected to organised crime.

[40] For some criticisms about the third *periculum* and its special-preventive (and thus non-procedural) function, see F. Callari, *Il* periculum libertatis *costituito dal rischio di realizzazione di determinati reati e le misure cautelari: il fine giustifica i mezzi?*, in *Dir. pen. cont.*, 12th November 2012, 1.

[41] See, for example, Article 144 of the French Code of Criminal Procedure, § 112a of the German Code of Criminal Procedure and Article 503 of the Spanish *Ley de Enjuiciamiento Criminal*. On the issue, also for further references, see R. Vogler, S. Fouladvand, *Standards for making factual determinations in arrest and pre-trial detention: a comparative analysis of law and practice*, in J.E. Ross, S.C. Thaman (Eds), *Comparative Criminal Procedure*, Edward Elgar Publishing, 2016, p. 191.

[42] On this notion, see, for all, G. Fiandaca, E. Musco, *Diritto penale. Parte generale*, VIII ed., Zanichelli, 2019, p. 796.

offend). This latter must be deducted from *i)* the reasons for offending and the nature of the crime; *ii)* criminal records; *iii)* the conduct at the time of and after the crime; *iv)* the person's individual, family and social conditions. That said, it is easy to find a similarity between the elements from which the so-called capacity to offend is deducted and those included in the input of the predictive algorithms used in the United States.

The indicators for determining the sentence are not different, on a general level, to those provided in the main European systems: although a concept similar to the Italian "*capacità a delinquere*" cannot be found in the comparative framework, the French, Spanish and German Criminal Codes do mention personality, family and socio-economic situation of the offender among the elements to be taken into account for establishing the sentence.[43]

Also the identity of the judge competent for the decision about the accused's guilt and for establishing the sentence is common to the main civil law systems. That differentiates them from the common law ones, in which the judgement is structured in two stages and the sentencing hearing – for establishing the sentence to be applied – takes place after the conviction, before a different judge.

A third context, in which the recidivism risk is relevant, is the decision on the applicability of some provisions, for which the system requires, explicitly or implicitly, the exclusion of re-offending risk. Besides the so-called "*sospensione condizionale*" (Articles 163 of the Italian Criminal Code), for which this requirement is clearly stated, several other measures provided by Italian criminal law should be mentioned, which entail a lower level of special-preventive needs: the "*sanzioni sostitutive*" (substitute penalties) provided by Law No. 689 of 1981, the "alternative measures" provided by the Prison Law (*i.e.* Law No. 354 of 1975) and other measures such as release on temporary licence (Article 30-*ter* of the Prison Law) and conditional release (Article 176 of the Italian Criminal Code).

[43] For example, Article 132-1 of the French Criminal Code refers to the personality of the offender and his/her economic, family and social situation ("*la personnalité de son auteur (…) sa situation matérielle, familiale et sociale*"), § 46 of the German Criminal Code includes the personal and economic conditions of the offender ("*seine persönlichen und wirtschaftlichen Verhältnisse*") among the elements considered for establishing the sentence, Article 66 ap. 6 of the Spanish Criminal Code provides that the personal circumstances of the convicted person ("*las circunstancias personales del delincuente*") must be taken into account.

Also the comparative framework is full of similar measures, provided with the same function and whose applicability is therefore grounded on the exclusion of recidivism risk.[44]

Further spheres of relevance for the re-offending risk can be found in the regulation of the security measures (*misure di sicurezza*)[45] and the *ante delictum* preventive measures (*misure di prevenzione*),[46] for which a judgement of "social dangerousness"[47] of the person concerned is required.

Also in the German and Spanish systems[48] a dual-track (*doppio binario*) of penalties and "security measures" can be found. In France and the United Kingdom, instead, no system of "security measures" is provided within the criminal law framework: the penalty is the only criminal measure and the health system is competent for taking charge of people who have been acquitted because of mental disorder but are still considered dangerous.[49] The absence of criminal measures in these cases, however, does not exclude completely a component of coercion, since, for example, strict procedural requirements could be provided for the release of patients placed in a psychiatric hospital.[50] Moreover, the tendency of the last decades is to introduce security measures for imputable persons, which therefore come in addition to the penalty: that is happening also in those systems, like the German[51] and Spanish[52] ones, which, unlike the Italian, were characterised by a "*pure* dual-track" (*doppio binario puro*), with a clear

[44] See, for example, the measures provided by the French (Articles 132-29 and 132-40), German (§ 56) and Spanish (Article 80) criminal codes.

[45] About the personal security measures, also in a comparative perspective, see for all M. Pelissero, *Pericolosità sociale e doppio binario. Vecchi e nuovi modelli di incapacitazione*, Giappichelli, 2008, *passim*.

[46] On social dangerousness in the regulation about personal *ante delictum* preventive measures, see A. Martini, *Essere pericolosi. Giudizi soggettivi e misure personali*, Giappichelli, 2017, spec. p. 81 et seq., p. 121 et seq.

[47] For an overview of the fields of relevance of the "social dangerousness", see Martini, *Essere pericolosi. Giudizi soggettivi e misure personali*, Giappichelli, 2017, *passim*.

[48] See §§ 66 et seq. of the German Criminal Code and Article 96 et seq. of the Spanish Criminal Code.

[49] Pelissero, *Pericolosità sociale e doppio binario*, cit., p. 151 et seq.

[50] Pelissero, *Pericolosità sociale e doppio binario*, cit., p. 163 et seq., p. 171 et seq.

[51] Pelissero, *Pericolosità sociale e doppio binario*, cit., spec. p. 161 et seq., p. 255 et seq.

[52] J. Lascuraín Sánchez (dir.), *Manual de Introduccion al Derecho Penal*, Agencía Estatal BOE, 2019, 280; X. Etxebarria Zarrabeitia, *Medidas de seguridad: presupuestos de su aplicación*, in *Cuadernos penales José María Lindón*, 10/2014, p. 125 et seq.

distinction between those concerned with punishment (imputable persons) and those with security measures (non-imputable persons). The area of relevance of the so-called "social dangerousness" – that is basically the risk of re-offending – appears ever wider.

With regard to the *ante delictum* preventive measures regulated by Legislative Decree No. 159 of 2011, it is difficult to find similar provisions in the comparative framework. Those measures, as a matter of fact, though already widely enforced during Fascism and even before, have survived also in the current constitutional context, since they are strictly connected to the contrast to organised crime.

3.2. Predicting the outcome of judicial decision-making

Besides the possibility of using tools that assess the re-offending risk, the potential of the systems aimed at predicting the outcome of judicial decision-making requires to be framed within the categories of criminal justice.

Although the main experience at the moment is the French one, which consists in a defence tool used by lawyers and is limited to the civil justice field, it is not difficult to imagine the predictive instruments' potential impact on the activity of prosecutors and judges, whether employed in the criminal justice system.

In the Italian debate, for example, some have taken into consideration the possible uses of predictive justice tools for the decision by the Prosecutor's office about going on with criminal prosecution.[53]

In a system like the Italian one, which is informed by the principle of mandatory criminal prosecution,[54] the choice between prosecuting the suspect and dropping the charges is made according to the parameter of the «groundlessness of the *notitia criminis*»[55] (*infondatezza della notizia di reato*), which is defined as the insufficiency of

[53] C. Parodi, V. Sellaroli, *Sistema penale e intelligenza artificiale: molte speranze e qualche equivoco*, in *Dir. pen. cont.*, 6/2019, p. 64.

[54] The mandatory criminal prosecution is provided also in Germany (§ 152, II, StPO) but it has been progressively eroded by the introduction of an area of discretionary power for the Prosecutor with reference to minor offences (*Bagatelldelikte*). In this regard, see M. Delmas-Marty, M. Chiavario (Eds), *Procedure penali d'Europa*, Cedam, 2001, 193. About the area of discretion which emerges, as a matter of fact, within the activity of the prosecutors and about priority criteria for criminal prosecution in Italy, see N. Galantini, *Il principio di obbligatorietà dell'azione penale tra interesse alla persecuzione penale e interesse all'efficienza giudiziaria*, in *Dir. pen. cont.*, 23rd September 2019, p. 1 et seq.

[55] For this translation, see Gialuz, L. Lupària, F. Scarpa, *The Italian Code of Criminal Procedure. Critical Essays and*

the evidence gathered during preliminary investigations in order to uphold the accusation before the court at the trial stage.[56] In this context, an algorithm indicating the probability of conviction could assist the Prosecutor in their assessments.[57]

In those legal systems which instead provide a significant discretionary power within the decision-making about criminal prosecutions, like the French one and the common law ones,[58] a predictive tool like the one imagined could help in programming the activities of the prosecution offices, guiding their choices according to predetermined criteria and guidelines.

A further scenario, which has been examined in the debate over the last few years,[59] is the use of predictive algorithms on the part of the judge, even if, at the moment, it does not find significant confirmation in the practice of criminal justice. Algorithms like those developed in France for lawyers in the civil justice field could be a support for the judge in the preliminary case-law research which is required for the decision-making, even in systems that do not provide a rule of *stare decisis*.

4. Risks of the use of AI technologies in the criminal justice system

The paragraphs above have tried to provide an overview of the current – and some potential – uses of AI in criminal justice, in an attempt to frame its possible uses in the context of the main European systems. The problematic issues arising in the last few years with reference to predictive algorithms shall now be examined.

English Translation, Wolters Kluwer, 2014, p. 324.

[56] See Article 125 of the provisions for the implementation of the Italian Code of Criminal Procedure.

[57] In any case, even if a predictive tool indicating the likelihood of conviction when certain evidence is available could be developed, the possibility that an algorithmic tool could assess the evidence or establish that a person is guilty "beyond any reasonable doubt" is currently to be excluded.

[58] Delmas-Marty, Chiavario (Eds), *Procedure penali d'Europa*, cit., pp. 119, 244.

[59] See O. Di Giovine, *Il* judge-bot *e le sequenze giuridiche in materia penale (intelligenza artificiale e stabilizzazione giurisprudenziale)*, in *Cass. pen.*, 3/2020, p. 951 et seq.; A. Massaro, *Determinatezza della norma penale e calcolabilità giuridica*, Editoriale Scientifica, 2020, 501; Basile, *Intelligenza artificiale e diritto penale*, cit., p. 14.

4.1. Risk-assessment tools

As mentioned above, the systems for assessing the risk of recidivism, already in use in the United States and experienced also in Europe, have a primary position in the discussion about the use of AI tools in criminal justice.

A lot of critical issues have emerged, on both sides of the Atlantic, in the discussion among legal scholars and in the civil society debate.

Each of the arising problems shall be synthetically examined and put in relation to the general principles of criminal law and procedure which could be affected by the introduction of "intelligent" risk assessment systems. At the end of this overview, a distinction between the issues connected with the computational nature of the predictive tools and those linked to statistical/actuarial theories at the basis of the algorithms should be considered.[60]

4.1.1. De-individualisation of decisions

One of the main problems emerging from the use of risk-assessment algorithms is that the "predictive" output is obtained by extending to the individual case the outcome of statistical processing carried out on a sample of cases.[61] A decision grounded (exclusively) on the outcome of the algorithmic tool would necessarily be the product of a generalisation and could not be considered as an individualised assessment of the case at stake.

In the context of sentencing, the criticism just mentioned could end up affecting the fundamental principle of culpability, which requires an individual assessment not only for deciding about conviction but also for establishing the sentence.

Whether considered in the context of pretrial precautionary measures, the risk of a de-individualisation of the decision could be contrary to the guarantees aimed at protecting personal liberty: the limitation of that fundamental right can only be ordered

[60] For this distinction, see QUATTROCOLO, *Equo processo penale e sfide della società algoritmica*, cit., p. 144.

[61] See L. MALDONATO, *Algoritmi predittivi e discrezionalità del giudice: una nuova sfida per la giustizia penale*, in *Dir. pen. cont.*, 2/2019, p. 411; L. D'AGOSTINO, *Gli algoritmi predittivi per la commisurazione della pena. A proposito dell'esperienza statunitense nel c.d.* evidence-based sentencing, in *Dir. pen. cont.*, 2/2019, p. 356; GIALUZ, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 21.

as *extrema ratio*, when relevant precautionary needs require coercive measures with specific reference to the person concerned.

4.1.2. Discriminatory effects

The risk of de-individualisation of decisions, as described above, and the use of statistical generalisations appear strictly connected to another critical issue concerning the discriminatory effects[62] of the use of risk-assessment tools in criminal justice (which is probably the most well-known and controversial aspect, also in the public opinion debate).

If the algorithm has been "trained" on a data-set consisting of criminal records, it could easily reproduce existing discriminations, connected to the conditions of social marginalisation of certain communities, even when ethnicity data or, more generally, the data about being part of a minority group are not included in the system's input.[63] The functioning of the most advanced computational tools is based – besides on the data provided at the time of programming the algorithm – on the connections identified by the algorithm itself by measuring the frequency of certain recurring elements. The system could therefore recognise "false" connections between data which are not linked at an etiological level[64] and thus could end up producing discriminatory outcomes.

A problem of compatibility with the principle of equality is therefore arising, both with reference to decisions on pretrial detention and to the sentencing stage.

4.1.3. Criminal determinism

Moreover, with regard to sentencing, it is possible that a predictive system affected by implicit "prejudices" against specific categories may lead to a more severe sentence as a consequence of belonging to a certain group: in other words, a person could

[62] See MALDONATO, *Algoritmi predittivi e discrezionalità del giudice*, cit., p. 407; D'AGOSTINO, *Gli algoritmi predittivi per la commisurazione della pena*, cit., p. 364; GIALUZ, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 21.

[63] MALDONATO, *Algoritmi predittivi e discrezionalità del giudice*, cit., p. 407.

[64] See RONSIN, LAMPOS, MAÎTREPIERRE, *In-depth study on the use of AI in judicial systems, notably AI applications processing judicial decisions and data*, cit., § 56 et seq., spec. § 66, 71.

be punished not for what he/she *has done*, but for what he/she *is*, according to a pattern which recalls the model of "*Tätertyp*" or "*tipo d'autore*."[65] That appears to be inconsistent with the so-called materiality principle (*nullum crimen sine actione*) and the harm principle (*nullum crimen sine iniuria*), which are vital for any liberal criminal system.

The criticisms just described – which is connected to the de-individualisation of decisions, arising from the statistical origin of the predictive outcome, to its tendency to make generalisations, and to the consequent discriminatory effects – entails the risk of moving towards a *deterministic* approach by reintroducing some outdated assumptions of the Italian Positive School.

4.1.4. Lack of transparency

Besides the criticisms around the generalising and potentially discriminatory effect of the predictive outcomes, one of the most widely discussed problems concerning the use of AI tools in the criminal justice system is about the lack of transparency of the predictive algorithms' mechanisms.

The impossibility for the person concerned by the judicial decision to access the system could be in conflict with the principles connected to fair trial and the right of defence: the proceedings would be carried out with a strong limitation to the principles of cross-examination and equality of arms, since the defence cannot dispute the validity of the predictive tool and its outcome. Moreover, the right of appeal would be essentially denied, whether the defence lacks adequate tools for contesting the judicial reasoning which makes reference to the output of the predictive algorithm.

The inaccessibility of computational risk-assessment tools is normally connected to the "commercial" nature of many predictive algorithms in use in the United States,[66] whose source codes are under trade secret and thus cannot be disclosed to either the judge or the parties (or the experts that may intervene in the proceeding). This issue could probably be solved by providing a mandatory publication of the source code and

[65] See MANES, *L'oracolo algoritmico e la giustizia penale*, cit., 17; GIALUZ, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 21.

[66] *Supra*, § 1.1. A distinction between algorithms developed by public institutions, "commercial" algorithms and non-profit algorithms has been suggested by GIALUZ, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 5.

other relevant information for accessing the algorithm, or through the provision of competitive procedures for the predictive services' providers, or, more radically, by prohibiting the use of "private" tools and entrusting public administrations with the development of the algorithms to be used in criminal justice systems.

In any case, the principle of equality of arms and the right to defence would be frustrated, whether the analysis of the algorithm in order to dispute its validity requires high specialisation. The problem is not new, since similar problems arise in every proceeding within which scientific evidence is admitted, thus requiring the intervention of experts. Nevertheless, with reference to predictive algorithms, the problem could be more serious because of the potential extent of the scope of application of these tools.

Moreover, it is not completely clear whether the access to the source code is enough to allow full knowledge of the tool's mechanisms, especially whether it concerns algorithms able at developing their self-learning proceedings (so-called "machine learning").[67]

4.1.5. Risks for the system's and data's integrity

Further criticism could also arise from the computational nature of predictive algorithms: the risk of alterations of the system or intrusions aimed at influencing the decision-making should be taken into account. For example, someone might illicitly intervene on the algorithm or on the data[68] in order to guide the judge towards a specific decision (favourable to the intruder or unfavourable to a political opponent or economic rival) or might manipulate the system without a specific purpose, but still conditioning the decision-making process.

Of course, this could be avoided through technological protection measures designed to guarantee the security and integrity of the systems used in criminal justice. The harmful potential of unauthorised intrusions, however, deserves to be considered, with special reference to the independence of judges.

[67] In this regard, a reference to the «ontological inaccessibility of the functioning mechanism» is made by Maldonato, *Algoritmi predittivi e discrezionalità del giudice*, cit., p. 408. See also J.P. Davis, *Law without mind. AI, Ethics and Jurisprudence*, in *University of San Francisco Law research Paper*, 2018, p. 6.

[68] See Di Giovine, *Il* judge-bot *e le sequenze giuridiche in materia penale*, cit., p. 957.

4.1.6. Cognitive biases

The use of quantitative and automated risk-assessment tools in criminal justice systems might cause cognitive errors or distortions in the judicial decision-making process. This might entail a substantial delegation of the decision to the computational tool, even whether the algorithm's output is not considered as binding for the judge.[69]

The judge who receives the outcome of a predictive tool could run into a first logical error, connected to the cognitive bias known as "anchoring":[70] it refers to the influence of the first information obtained on all the following steps of a decision-making process.

Even assuming that this phenomenon could be avoided or reduced – for example by introducing the contribution of the predictive tool only after the judge has autonomously come to a decision[71] – there would still be the risk of further cognitive distortions, connected to so-called "automation bias":[72] when using computational risk-assessment tools, the decision-makers (such as the judges) would tend to prefer the solutions suggested by the automated system over those reached without their use.

Both the "cognitive prejudices" examined lead to an excessive and unjustified reliance on the predictive tool's outcome. This means that, even provided that algorithms are used merely as "advisors" or "assistants" to the judge, the decision-making concerning the re-offending risk might end up being delegated to the predictive tool.[73]

4.1.7. Contamination of the decision on the accused's guilt

A further problem – which is also connected to cognitive errors – is that the introduction of evidence regarding the accused's personal conditions and his/her

[69] See Basile, *Intelligenza artificiale e diritto penale*, cit., p. 22.

[70] In this regard, see Maldonato, *Algoritmi predittivi e discrezionalità del giudice*, cit., 410; Nieva Fenoll, *Intelligenza artificiale e processo*, cit., p. 38.

[71] The use of predictive tools as a "double check" instrument after the judge's assessment has been carried out is taken into consideration by Manes, *L'oracolo algoritmico e la giustizia penale*, cit., p. 20.

[72] In this regard, G. Ubertis, *Intelligenza artificiale, giustizia penale, controllo umano significativo*, in *Sist. pen.*, 11th November 2020, 4; P. Comoglio, *Prefazione*, in Nieva-Fenoll, *Intelligenza artificiale e processo*, italian translation by P. Comoglio, Giappichelli, 2019, X.

[73] Basile, *Intelligenza artificiale e diritto penale*, cit., p. 22.

personality might lead to a contamination of the decision on his/her guilt[74] and raise some concerns with reference to the principles of materiality (*nullum crimen sine actione*) and harm (*nullum crimen sine iniuria*), as well as with the presumption of innocence.

Such a contamination is what the Italian legislature intended to prevent through Article 220, paragraph 2, of the Code of Criminal Procedure, which forbids any assessment aimed at establishing the character or personality of the accused or his/her «psychic qualities independent of pathological causes.» In the perspective of the legislator of the time, a similar measure was necessary to avoid undue contaminations and alterations of the decision on the accused's responsibility, within a system like the Italian one, which – as well as other European legislations – does not provide a separation of the judgement on the defendant's guilt and the sentencing stage.[75]

4.1.8. Some observations

After the synthetic overview of the emerging criticisms with reference to risk-assessment algorithms in the criminal field, it is possible to connect some of the problems to the tools' computational nature and others to the statistical-actuarial character of the scientific theories according to which the algorithm has been designed.[76]

For example, at the origin of the risk of de-individualising the decision there is the use of generalisations based on outputs of statistical nature. Also the discriminatory outcomes seem to be linked, first and foremost, to the inevitable generalising effect connected to the use of statistical data and methods.[77]

Even the perplexities of a wider range – regarding the possible tendencies towards criminal determinism – seem to come from the use of generalising methods, which lead to reasoning by categories (or "types") of offenders.

[74] In this regard, see Di Giovine, *Il* judge-bot *e le sequenze giuridiche in materia penale*, cit., p. 959; Maldonato, *Algoritmi predittivi e discrezionalità del giudice*, cit., p. 411; D'Agostino, *Gli algoritmi predittivi per la commisurazione della pena*, cit., p. 367; A. Garapon, J. Lassègue, *Justice digitale. Révolution graphique et rupture anthropologique*, Puf, 2018, p. 279.

[75] About the two-stage structure of criminal proceedings in common law systems and the autonomy of the sentencing stage, see D'Agostino, *Gli algoritmi predittivi per la commisurazione della pena*, cit., p. 367.

[76] As suggested by Quattrocolo, *Equo processo penale e sfide della società algoritmica*, cit., p. 144.

[77] This however does not exclude that it is the tool's computational nature that allows to quickly process the database and to identify a statistical correlation between some recurring elements and the recidivism prediction.

Otherwise, both the risks arising from the opacity of the algorithms' functioning – the danger of manipulations of the system and the risks concerning the right of defence – seem to be directly connected to the computational nature of these systems.

As for the problematic issues connected with the risk of cognitive biases, on the one hand, there is the so-called "automation bias" which is determined by the "computational nature" of the tool, whilst in other cases (e.g. the "anchoring") the cognitive errors are independent from that aspect.

The observations above cannot (and are not meant to) lead to a minimisation of the problems of AI tools for criminal justice systems: they are only an attempt to take into account the origins of the reported problems, in order to contextualise each of them within broader and well-known issues – one for all, the introduction of scientific evidence in the criminal proceeding – and hence to better identify the appropriate precautions.

4.2. Tools for predicting the outcome of judicial decision-making

Some criticisms can also be highlighted with reference to the use of tools which aim at predicting the outcome of judicial decision-making.

As regards the use of them by private parties, the main problem is the one emerging from the French debate: in that context, someone has underlined the risk of an undue control on the judges' activities, which might be against the judiciary's independence.

Actually, as said above, the problem arose after the publication of a study which analysed the tendencies of the individual judges in the field of asylum law and not from the use of predictive algorithms by law firms. In any case, the issue is not easy to tackle, considering the (equal) constitutional value of all the interests at stake: if, on the one hand, there is the judiciary's autonomy, on the other hand, there are the guarantees regarding the accessibility of judicial decisions as a democratic control of the judicial power, as well as the right to information and the freedom of expression.[78] The solution

[78] In this regard, see RONSIN, LAMPOS, MAÎTREPIERRE, *In-depth study on the use of AI in judicial systems, notably AI applications processing judicial decisions and data*, cit., § 43.

provided by the French legislator by prescribing to remove any data referring to the individual judge – and by criminalising the analysis and comparison of those data – still raises some perplexities.[79]

With regard to the use of predictive tools on the part of the judges, the main risk is that of generating a tendency to conform with the dominant direction (the so-called "herd effect"[80]), which might result in a standardisation of law interpretation and judicial decisions[81] and might lead the judges to excessively rely on the algorithmic tool's output.[82]

Actually, a similar effect occurs, to a certain extent, also regardless of the use of predictive algorithms: judges tend to make ever wider reference to case-law precedents within the grounds of their judgements, even in legal systems like the Italian one, which do not recognise the *stare decisis* rule.

Such a "decisional conformism" may be seen partly as a physiological effect of the Supreme Courts' activity, aimed at ensuring homogeneous interpretation and application of the law, and partly as an unorthodox remedy to the need to deal with complex legal issues and to cope, at the same time, with an increasingly heavy workload.

In any case, what should be stressed is not so much the compliance with the dominant case-law in itself, but rather *how* the "prevailing" opinion is identified. As already highlighted with reference to risk-assessment tools, the algorithm – by working on the data-set provided during the programming stage – might identify false correlations between elements that are actually not connected at all in the legal reasoning which grounds the judicial decisions examined.

One last hypothetical application of predicting tools which is worth to be taken into account is that of an algorithm used as an aid for the Prosecutor at the time of choosing between prosecuting the suspect and dropping the charges.[83] In this regard, the principle of mandatory criminal prosecution – in those systems, like the Italian one,

[79] Langford, Madsen, *France Criminalises Research on Judges*, cit.

[80] Di Giovine, *Il* judge-bot *e le sequenze giuridiche in materia penale*, cit., p. 959.

[81] See Ubertis, *Intelligenza artificiale, giustizia penale, controllo umano significativo*, cit., p. 13, who foresees the risk of an "ossification" of case law.

[82] Basile, *Intelligenza artificiale e diritto penale*, cit., p. 22.

[83] Parodi, Sellaroli, *Sistema penale e intelligenza artificiale*, cit., p. 64.

in which it is provided – does not appear to be at stake, since the decision of dropping the charges would in any case fall within the jurisdiction of a judicial authority (called "*Giudice per le Indagini Preliminari*", i.e. Judge for the Preliminary Investigations).

5. Legal limits to the introduction of AI into criminal justice systems

The introduction of AI systems in criminal justice, as seen above, might conflict with some fundamental principles of criminal law and procedure.

As regards the risk-assessment tools for predicting recidivism, some concerns have been raised with reference to the principle of culpability, to the principle of equality and to the principles of materiality (*nullum crimen sine actione*) and harm (*nullum crimen sine iniuria*); at a procedural level, the problems highlighted concern the right of defence and fair trial, which might be frustrated by the lack of transparency, especially when the algorithm is private-owned and its functioning mechanism is covered by trade secret.

As regards the algorithms that offer a prediction of the outcome of judicial decision-making, and especially the use of them on the part of the judges, the main risk is that of a standardisation of decisions, which, without full clarity on the functioning of the algorithmic tool, might end up eroding the principle of legality and the judiciary's independence.

At this stage, it is necessary to examine the limits that currently exist at an international level, as well as in the context of European Union and national law, for the possible introduction of AI in criminal justice systems.

The "European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their Environment", adopted by the European Commission for the Efficiency of Justice (CEPEJ) of the Council of Europe, even if not binding, has certainly a primary relevance at an interpretative level.

In the context of European Union law, the regulations on the protection of personal data are of special importance within the debate on the limits of AI in criminal justice systems.

Finally, with reference to the Italian system, Article 220, paragraph 2, of the Code of Criminal Procedure should be taken into consideration, since it might be seen

as an obstacle to the use of predictive tools for assessing the risk of recidivism.

5.1. The Ethical Charter of the CEPEJ of the Council of Europe

The "European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their Environment"[84] was adopted in 2018 by the European Commission for the Efficiency of Justice (CEPEJ) of the Council of Europe.[85]

The document affirms five principles: 1) the «principle of respect for fundamental rights» (ensuring that the design and implementation of artificial intelligence tools and services are compatible with fundamental rights); 2) the «principle of non-discrimination» (specifically preventing the development and intensification of any discrimination between individuals or groups of individuals); 3) the «principle of quality and security» of the data (with regard to the processing of judicial decisions and data, using certified sources and intangible data with models elaborated in a multi-disciplinary manner, in a secure technological environment); 4) the «principle of transparency, impartiality and fairness» (making data processing accessible and comprehensible and authorising external audits); 5) the «principle "under user control"» (precluding a prescriptive approach and ensuring that the users are informed actors and in control over the choices made).

5.2. European Union law: limits to «decisions based solely on automated processing»

In the context of European Union law, the acts adopted in 2016 for the protection of personal data (EU Regulation 679/2016 and Directive 2016/680) include some provisions of great interest for the debate on the introduction of AI systems in justice systems.

For the criminal law field, the main reference is Article 11 of Directive 2016/680, which specifically concerns the «processing of personal data by competent

[84] CEPEJ (2018)14.

[85] The contents of the Charter, with a focus on the main questions for the criminal sector, are analysed by QUATTROCOLO, *Intelligenza artificiale e giustizia: nella cornice della carta etica europea, gli spunti per un'urgente discussione tra scienze penali e informatiche*, in *Leg. pen.*, 18th December 2018.

authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties.»

The first paragraph of the provision requires the Member States to prohibit any «decision based solely on automated processing which produces an adverse legal effect» on the persons concerned or has otherwise a significant impact on them.[86] Such decisions are admitted only whether authorised by the European Union law or by the law of the State to which the "controller" is subject, and provided that appropriate safeguards are introduced for the rights and freedoms of the "data subject" and, among these, «at least the right to obtain human intervention on the part of the controller.»

Moreover, the second paragraph provides that decisions on criminal convictions and offences must not be based on automated processing of so-called "sensitive data," listed in Article 10. An automated processing of those data is only allowed when suitable measures for the protection of the data subject's rights are provided.

Finally, the third paragraph introduces an absolute prohibition of profiling activities which produce discriminatory effects on «natural persons.»

The interpretation of the notion of «decision based solely on automated processing» is crucial for identifying the scope of application of the prohibition in Article 11 of the Directive (as also in Article 22 of the Regulation)[87].

A restrictive interpretation would limit the prohibition to the case of a decision entirely entrusted to a machine. In this perspective, the use of AI tools would be permitted when it consists of a mere aid to the decision-making process and the human intervention is not limited to endorsing the machine's decision but consists of a substantial assessment of the case.[88]

[86] A similar prohibition is provided by Article 22 of EU Regulation 2016/679 ("Automated individual decision-making, including profiling"). A prohibition of decisions based solely on automated processing had already been established by Article 15 of Directive 95/46/EC.

[87] Gialuz, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 16.

[88] See M. Brkan, *Do Algorithms Rule the World? Algorithmic Decision-Making in the Framework of the GDPR and Beyond*, in *Electronic Journal*, 2017, p. 10.
In a similar meaning, see the *Linee guida sul processo decisionale automatizzato relativo alle persone fisiche e sulla profilazione ai fini del regolamento 2016/679* (17/IT; WP 251 rev.01), p. 23, in the amended version adopted on 6th February 2018 by the data protection Working Group, set up by Article 29 of Directive 95/46/EC.

The wording of Article 11, however, also allows to be interpreted in a broader meaning: according to some legal scholars,[89] the prohibition of automated processing would entail a specific rule for evidence assessment, which requires the algorithmic output to be corroborated by other elements.

5.3. Italian law: limits to criminological expert evidence

In the Italian system, there is a significant limit to the use of algorithmic tools for the assessment of the re-offending risk, like those widespread in the United States and tested in the United Kingdom.

The second paragraph of Article 220 of the Italian Code of Criminal Procedure, as a matter of fact, establishes that «expert evidence shall not be admitted to determine whether the accused is a habitual or professional offender or he/she has a tendency to commit offences or to establish the character or personality of the accused and, in general, his/her qualities independent of pathological causes,[90]» unless it is provided for the purposes of executing the sentence or security measure.[91]

At the basis of the choice made by the legislator of 1988 to confirm the regulation provided under the former Code of Criminal Procedure,[92] there were two

[89] Gialuz, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., 16; G. Malgieri, G. Comandè, *Why a Right to Legibility of Automated Decision-Making Exists in the General Data Protection Regulation*, in *International Data Privacy Law,* vol. 7, 1st November 2017, p. 14; Manes, *L'oracolo algoritmico e la giustizia penale*, cit., p. 20.

[90] For this translation, see Gialuz, Lupària, Scarpa, *The Italian Code of Criminal Procedure*, cit., p. 193.

[91] On the prohibition of psychological and criminological expert evidence in the Italian system, see F. Eramo, *Il divieto di perizie psicologiche nel processo penale: una nuova conferma dalla Cassazione*, in *Dir. pen. proc.*, 7/2007, p. 931 et seq.; P. Moscarini, *La perizia psicologica e il 'giusto processo'*, in *Dir. pen proc.*, 8/2006, p. 929 et seq.; P. Martucci, *Il contributo del criminologo nel processo penale: un problema ancora aperto*, in *Dir. pen. proc.*, 6/2004, p. 744 et seq.; I. Giannini, *Il dibattito sull'ammissibilità della perizia e della consulenza criminologica nel processo penale*, in *Rass. penit. crim.*, 3/2003, p. 87 et seq.; A. Saponaro, *L'esame della personalità del reo nel processo penale: evoluzione, involuzione, modelli alternativi, prospettive,* Cacucci, 2000, spec. p. 104 et seq.; P. Rivello, voce *Perito e perizia*, *Dig. disc. pen.*, IX, p. 474 et seq.; D. Bielli, *Periti e consulenti nel nuovo processo penale*, in *Giust. pen.*, 2/1991, p. 65 et seq.; E. Amodio, *Perizia e consulenza tecnica nel quadro probatorio del nuovo processo penale*, in *Cass. pen.*, 1989, p. 170 et seq.; G. Tranchina, *Il divieto di perizia psicologica sull'imputato: una limitazione sicuramente anticostituzionale*, in *Riv. it. dir. proc. pen.*, 1971, p. 1325 et seq.

[92] The wording of Article 314, paragraph 2, of the Italian Code of Criminal Procedure of 1930 was almost identical to the one in force today: «Expert evidence is not permitted to determine whether the accused is a habitual or professional offender, or he/she has a tendency to commit offences, or to establish the character or personality of the ac-

fundamental concerns, related to as many procedural guarantees. First and foremost, the prohibition of criminological and psychological expert evidence was informed by the presumption of innocence, which could be affected by expert evidence on the personality of the accused being introduced when his/her guilt is still to be established. Secondly, the provision examined is grounded on the same concerns for the accused's moral freedom that are at the basis of Article 188 of the Code of Criminal Procedure, which prohibits the use of any «methods or techniques which may influence the freedom of self-determination or alter the capacity to recall and evaluate facts.»[93]

However, two provisions in the Italian procedural system might open to the introduction of a judgement on the personality of the accused within the criminal trial. Article 194 of the Code of Criminal Procedure, while prohibiting testimony on the morality of the accused, admits it when «it concerns specific facts that may be suitable for qualifying his/her personality in connection with the offence and his/her to social danger». Article 236 allows the acquisition of criminal record certificates and final judgements, but also the documents held at social services offices and at the office of the judge entrusted with the supervision of the sentence's enforcement (*Ufficio di Sorveglianza*): all these documents might contain criminological or psychological opinions on the personality of the accused. The case law, however, tends to limit the use of the documentation mentioned in Article 236 only for deciding on the application of the so-called "general mitigating circumstances" (*circostanze attenuanti generiche*) and for the decisions about sentencing and probation (*sospensione condizionale*).[94]

Moreover, an exception to the prohibition of criminological expert evidence is provided within the juvenile criminal procedure.[95] The juvenile justice system, as a matter of fact, allows assessments on the minor's personality (Article 9 of D.P.R. No.

cused and, in general, his/her psychic qualities independent of pathological causes».

[93] For this translation, see Gialuz, Lupària, Scarpa, *The Italian Code of Criminal Procedure. Critical Essays and English Translation*, cit., p. 177.

[94] Cass., sez. VI pen., 24th September 2013, no. 42823. In this regard, see Quattrocolo, *Questioni nuove e soluzioni antiche?*, cit., p. 1763.

[95] In this regard, see C. De Luca, *Gli accertamenti sulla personalità dell'autore del reato minorenne e il divieto di perizia psicologica nel rito ordinario: riflessioni e nuove prospettive*, in *Cass. pen.*, 2018, p. 2146 et seq.; L. Carceni, *Processo penale minorile*, in *Enc. Dir.*, *Agg.*, vol. IV, Giuffrè, 2000, p. 1018 et seq.

448 of 1988)[96] during criminal proceedings. Even if their function is mainly that of taking into consideration the access to a diversion programme as an alternative to criminal trial and sentence, the use of the outcomes of those assessments in the sentencing stage cannot be excluded.

Finally, the use of psychological and criminological assessments is allowed at the stage of sentence enforcement, as provided by Article 220 of the Code of Criminal Procedure. As a matter of fact, in the system designed by the Prison Law (*i.e.* Law No. 354 of 1975) the "scientific observation" of the convict's personality is given primary importance, since it grounds the individualised rehabilitation programme.

Looking at the comparative framework, a prohibition of criminological expert evidence such as the one established by Italian law cannot be found in any of the main European legal systems. On the contrary, the introduction of information and assessments on the accused's personal conditions is explicitly provided. For example, the French system provides for "quick social enquiries" (*enquêtes sociales rapides*) on the economic, family and social situation of the accused, which are aimed at verifying the practicability of certain sentencing options and at identifying the appropriate measures for social rehabilitation.[97] More detailed investigations on the personality of the accused and his/her economic, family and social situation can then be ordered by the investigation judge.[98] The results of those investigations are gathered into a "personality dossier," which has the function of providing the judicial authority with information on the person's past and present life and «does not have the purpose of searching for evidence of his/her guilt.»[99] The German system allows the Prosecutor to request the

[96] See paragraph 2 of Article 9.

[97] Delmas-Marty, Chiavario (Eds), *Procedure penali d'Europa*, cit., p. 147. The "*enquêtes rapides*" can be ordered by the Public Prosecutor (Article 41, paragraph 8, of the French Code of Criminal Procedure), the investigating judge (Article 81, paragraph 7, of the French Code of Criminal Procedure) or the correctional court (Article 396, paragraph 2, of the French Code of Criminal Procedure).

[98] Delmas-Marty, Chiavario (Eds), *Procedure penali d'Europa*, cit., p. 147. See Article 81, paragraph 6 of the French Code of Criminal Procedure.

[99] See Article D16 of the French Code of Criminal Procedure. «*L'enquête sur la personnalité des personnes mises en examen ainsi que sur leur situation matérielle, familiale ou sociale prévue à l'article 81, alinéa 6, du code de procédure pénale et les examens, notamment médical et médico-psychologique, mentionnés à l'alinéa 7 du dit article, constituent le dossier de personnalité de la personne mise en examen. Ce dossier a pour objet de fournir à l'autorité judiciaire, sous une*

social services to prepare a dossier (*Gerichtshilfe*), by gathering together all the elements regarding the environmental, social, family and psychological situation of the accused.[100] Such an investigation is mandatory for persons aged 18 up to 21.[101]

In order to establish whether the use of algorithmic tools for predicting recidivism comes under Article 220 of the Italian Code of Criminal Procedure, it is necessary to clarify whether the use of such tools falls within the scope of the notion of "expert evidence".

Some legal scholars have supported that conclusion: according to their opinion, risk-assessment tools like those widespread in the United States should be considered as a technical-scientific assessment, similar to expert evidence, since the algorithm is programmed on the grounds of psychological and criminological models and theories.[102]

6. Final remarks. Scope of application and precautions for AI in criminal justice

The overview of the algorithmic tools used in the context of criminal justice and the further tendencies emerging in civil justice have allowed to identify two main uses of AI systems worth of attention.

On the one hand, the United States experience – which at the moment has not been replicated in Europe, except for one example in the United Kingdom – has brought to light the use of tools aimed at assessing the re-offending risk, in the context of decisions about pretrial custody and those regarding the sentencing. Moreover, the

forme objective et sans en tirer de conclusion touchant à l'affaire en cours, des éléments d'appréciation sur le mode de vie passé et présent de la personne mise en examen. Il ne saurait avoir pour but la recherche des preuves de la culpabilité».

[100] Delmas-Marty, Chiavario (Eds), *Procedure penali d'Europa*, cit., 209. See § 160 of the German Code of Criminal Procedure.

[101] Delmas-Marty, Chiavario (Eds), *Procedure penali d'Europa*, cit., 209. See § 38 of the *Jungengerichtsgesetz* (JGG).

[102] In this meaning, Quattrocolo, *Questioni nuove e soluzioni antiche?*, cit., 1762; Maldonato, *Algoritmi predittivi e discrezionalità del giudice*, cit., p. 412. However, the similarity between the use of risk assessment tools and the criminological expert evidence is not self-evident, according to Gialuz, *Quando la giustizia penale incontra l'intelligenza artificiale*, cit., p. 20.

recidivism risk-assessment might gain a much wider area of relevance, considering provisions such as "alternative measures" and other prison law provisions, as well as the so-called security measures and the *ante delictum* preventive measures.

Risk-assessment tools aimed at predicting recidivism, however, are at the centre of a wide debate among legal scholars and within the civil society, because of the numerous problems that their use in the context of criminal justice seem to arise. Some of those issues can be connected to the validity of scientific theories and statistical models which ground the algorithmic tools' functioning: making reference to an output generated by processing statistical data, according to a generalising approach, might lead to a de-individualisation of the judgement and, potentially, to discriminatory effects against minority groups. On the other hand, the computational nature of the tools considered is linked to the lack of accessibility to the systems and to the codes governing their functioning, with the risk of affecting fair trial and the right of defence, especially in case of private-owned algorithms covered by trade secret.

The second category of tools which has emerged from the analysis of the current experiences is that of the predictive algorithms – developed mainly in France in the civil law field – which offer a prediction of the outcome of judicial decision-making. Although they are mainly used by law firms and have been tested by very few courts, these tools need to be considered because of their potential impact and for the risks of a wider use of them, especially on the part of the judges.

The risk highlighted with reference to these algorithmic systems concerns, on the one hand, the independence of judges, in case of undue attempts at profiling each individual judge by analysing and comparing his/her previous decisions. The main problem is however the one connected to the risk of standardising decisions, not because of the effect of conformity but because of the method for identifying the "prevalent" case law, which might be based on merely quantitative data or statistical correlations erroneously detected by the machine.

In the light of the criticism considered, the European law framework, also of soft law, suggests an extremely cautious approach with regard to the introduction of AI tools into criminal justice systems. The fundamental principles set out by the CEPEJ Ethical Charter of the Council of Europe (respect of fundamental rights, non-discrimination, quality and security of the data, transparency, impartiality and fairness,

guarantee of human control) and the provisions established by the European Union, which prohibit decisions based solely on an automated processing of personal data, are an important starting point for the European Union and domestic legislators in order to further regulate the use of such tools. Moreover, as regards the algorithms for predicting the risk of re-offending, the Italian procedural system, unlike others, has always excluded the possibility of introducing criminological or psychological expert evidence in criminal trials, since Article 220 of the Code of Criminal Procedure – at least according to the interpretation given by some legal scholars – might be an obstacle to the use of risk-assessment tools.

In the light of the framework thus outlined, some final remarks can be expressed about possible precautions for avoiding the highlighted risks.

With reference to the instruments which assess the probability of re-offending, the risk of a de-individualisation of the decision and the potential discriminatory effects seem to need two fundamental precautions: a serious multi-disciplinary debate on the quality of data and the validity of the models generated by their processing, as well as an adequate training of judges who may use the algorithms' outcomes. Legal professionals, most of all, should be warned about the generalising effects of extending the outcome of the algorithmic process to the individual case at stake: deeper awareness of the limits of the machine's "reasoning" may avoid the risk of automation biases and acritical acceptance of the "judgement" suggested by the algorithmic system.

The transparency problem – which is tied to the need to guarantee the effectiveness of the right of defence and fair trial principles – requires at least a clear public law regulation which, besides providing strict requirements for the selection of the service provider, should also establish obligations of disclosure in order to give the defence the widest possible access to the functioning mechanisms of private-owned systems. The solution to be preferred, however, would be entrusting public institutions with the development of the algorithms to be used in the justice field. On the other hand, the risk of the system being manipulated must be addressed through specific measures in order to guarantee the security of the environment where the software in use in the criminal justice system is kept and used.

Finally, in order to prevent possible violations of the presumption of innocence, as a consequence of introducing information about the accused's personality, a

prohibition of the use of those data for deciding on guilt should be clearly stated. Even if that would appear not sufficient to remove the risk of contaminations of the decision-making process concerning the accused's responsibility, the idea of introducing a separation between the decision on responsibility and the time of sentencing, also in systems like the Italian one, could be at least taken into consideration. In any case, such an intervention would be of extremely relevant impact for the legal system and thus needs to be very cautiously considered, bearing in mind the overall balance of the procedural law in force.

As regards the AI systems offering a prediction of the outcome of judicial decision-making, the fundamental precaution to be taken into account would be training legal professionals: judges, above all, must be adequately informed on how algorithmic tools work so that they can be aware, while carrying out their activities, of the fundamental difference between human reasoning and the "reasoning" of the algorithm. The algorithmic output is grounded on correlations established on the basis of the statistical frequency of certain groups of words and not on a real evaluation of the argumentations at the origin of the case law precedents. As regards the use of algorithms for profiling the judges, the main precaution would be prohibiting the publication of any data regarding the identity of the judges and any use of them for the analysis and comparison of the judges' decisions.

In any case, besides all the precautions aimed at addressing the issues arising the use of AI tools criminal justice systems, the most important need is that of wider awareness on how algorithms work: only justice professionals' greater knowledge of the algorithmic process and the consequent limits of its "product" may avoid the risks of de-individualisation of decisions on re-offending risk and the «ossification»[103] of case law. What is needed is a multi-disciplinary debate aimed at clarifying whether the risk of false correlations and the problem of technical inaccessibility to the algorithms with "self-learning" functions can be reduced, at least to a measure considered acceptable for their use in the context of criminal justice.

[103] Ubertis, *Intelligenza artificiale, giustizia penale, controllo umano significativo*, cit., p. 13.

ANDREA VIGORITO*

POSTMORTEM EXERCISE OF DATA PROTECTION RIGHTS: THE APPLE CASE

ABSTRACT. *The paper aims at developing the debate on digital inheritance by analyzing its first judicial application in Italy. In this decision, the Court applied Article 2-terdecies, d.lgs 196/2003 and took a crucial step with regard to the legal regime of personal data – and, more broadly, of digital resources – after the data subject's death. The Italian legislation, as this decision shows, seems to have adopted a 'personalistic model' through which not only heirs and relatives, but any person showing a legitimate interest could exercise the data subject's rights on personal data. After a brief introduction of the main themes concerning the postmortal exercise of data (1.), this essay analyzes the reasons behind the judicial decision (2.) and seeks to further explore the dogmatic qualification of the rights on personal data recognized by the legislator with Article 2-terdecies (3.).*

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1. Data perpetuity in the information society

'*We live on the internet, but what happens when we die there?*'[1] The debate surrounding the correct framing of the legal regime of digital resources is currently involving the time span following the death of an individual. The topic has been gaining momentum in the scholarly studies and it has recently found a concrete example in our legal system with the first judicial case decided by an Italian court concerning postmortem access to personal data, decided by the first civil section of the Court of Milan.

The extension of the scope of application of the debate inherent to the digital goods' legal regime to the post-mortal phase arises as a logical corollary of the 'commodification' process that affects the goods of the information society. Indeed, a variety of socioeconomic rationales are traditionally identified for the relevance recognized to the issue of 'digital death'[2] and are deeply connected with the centrality that digital resources such as data have reached within the digital economy.[3] Within this framework, many economic actors are flourishing and developing the so-called 'Digital Afterlife Industry' (DAI):[4] the trend of stratification and exploitation of data belonging to deceased individuals finds its origin in empirical evidence such as, on the one hand, the (over)accumulation[5] of profiles (and, therefore, information) of deceased persons on social networks and, on the other hand, the spreading of for-profit enterprises that focus their commercial practices on data.

[1] N.M. Banta, *Inherit the Cloud: The Role of Private Contracts in Distributing or Deleting Digital Assets at Death*, *Fordham L. Rev.*, 83, 2014, p. 799, at 800.

[2] G. Resta, *La "morte" digitale*, *Dir. inf.*, 6, 2014, pp. 891-920.

[3] Summarized by Id., *Personal Data and Digital Assets after Death: a Comparative Law Perspective on the BGH* Facebook *Ruling*, *EuCML*, 5, 2018, p. 201, at 201-202.

[4] C.J. Öhman, L. Floridi, *The Political Economy of Death in the Age of Information: A Critical Approach to the Digital Afterlife Industry*, *Minds and Machines*, 27, 2017, pp. 639-662. Specifically, regarding the policy choices made by Facebook, see D. McCallig, *Facebook after death: an evolving policy in a social network*, *International Journal of Law and Information Technology*, 22/2, 2014, pp. 107-140.

[5] It has been calculated that, if Facebook continues to attract new users and expand with the same rate, the number of deceased users will exceed 4.9 billion before 2100. The statistic is reported by C.J. Öhman, D. Watson, *Are the dead taking over Facebook? A Big Data approach to the future of death online*, *Big Data & Society*, *January-June* 2019, pp. 1-13.

This depicted tendency has provoked, in many areas, a rethinking[6] of the relationship between the single individual and the end of life[7] in light of the new information society's paradigms. Consequently, numerous questions of legal nature are arising as well; amongst them, particular attention has been addressed to the so-called 'digital inheritance.'

For obvious reasons, the studies inherent to data 'perpetuity'[8] have mostly focused on governing data related to living individuals, in line with the enhancement of forms of protection such as the right to be forgotten.[9] Since few years, however, the attention of scholars has turned to the theorization and identification of forms of protection aimed at pursuing an adequate data access model or governance model also related to deceased people.[10]

At least in part, the shift is due to the fact that the same problem of the 'dissociation'[11] between digital identity and personal identity affects the individual both in life and after death.[12] In fact, it could be argued that this dissociation reaches its acme at the moment of the separation between the digital identity of the deceased and his

[6] T. Walter, *The pervasive dead*, in *Mortality*, 24/4, 2019, pp. 389-404 points out that a 'pervasivity' model of death is spreading and that it is characterized by the continuation of bonds even after the event of dying, moving away from the paradigm of death as a place without return (that dates back to Catullus, 3, 11-12: "*Qui nunc it per iter tenebricosum/illuc, unde negant redire quemquam*").

[7] D. Sisto, *Morte e immortalità digitale: la vita dei dati online e l'interazione postuma*, *Funes. Journal of narratives and social sciences*, 2, 2018, p. 111, at 111.

[8] Resta, *La "morte" digitale*, cit., at p. 892.

[9] Among the many scholars who have been dealing with the topic, see G. Finocchiaro, *Il diritto all'oblio nel quadro dei diritti della personalità*, *Dir. inf.*, 4-5, 2014, pp. 591-604; M.R. Morelli, *Oblio (diritto all')*, *Enc. dir.*, Agg. VI, Milano, 2002; J. Rosen, *The Right To Be Forgotten*, in *Stan. L. Rev. Online* 64, 2012, pp. 88-92; also, naturally, on a case-law basis, see ECJ 13 May 2014, C-131/12, *Google Spain SL, Google Inc. contro Agencia Española de protecciòn de datos (AEPD) e Mario Costeja Gonzàles*.

[10] In the Italian context, see M. Cinque, *La successione nel "patrimonio digitale": prime considerazioni*, *Nuova giur. civ. comm.*, 2012, II; A. Magnani, *L'eredità digitale*, *Notariato*, 2014, pp. 519-532; V. Barba, *Interessi* post mortem *tra testamento e altri atti di ultima volontà*, *Riv. dir. civ.*, 2017, pp. 319-349; C. Camardi, *L'eredità digitale. Tra reale e virtuale*, *Dir. inf.*, 1, 2018, pp. 65-93.

[11] Resta, *La "morte" digitale*, cit., at p. 892, where the Author specifies that this dissociation disjoints in a synchronic dimension (data accumulated in a plurality of archives) and in a diachronic one (the reputation of the person remains inherently dependent on the events of the past).

[12] Resta, *Identità personale e identità digitale*, *Dir. inf.*, 3, 2007, pp. 511-531.

physical body: for the living individual, the dissociation affects his identity, which is disjointed into a plurality of digital identities, distinct from each other by place of storage and respective temporal frame of reference; instead, with regard to the deceased, the disappearance of the physical body is not balanced by the disappearance of the 'electronic'[13] one, which, indeed, outlives it.

The fact that the physical body is survived by the digital alter ego should not be overlooked, since the latter keeps existing in countless formats and for an incalculable time.[14] As a consequence, the expression digital 'immortality' is becoming increasingly popular among scholars.[15]

Therefore, the outlined scenario justifies the efforts to clarify the fate of digital assets relating to an individual after his/her death. Correspondingly, judges have to deal with challenges arising on two levels: firstly, the identification and legal qualification of tools and remedies that can be implemented with the purpose of providing effective post-mortal protection of the rights; secondly, judicial decisions should address the internet as a whole, in order to prevent the protection's nullification due to the inherent 'aterritorial' nature of data.[16]

A first step in addressing these issues was taken by the decision of Court of Milan pertaining to the subject of this essay.

2. The ruling

In accordance with Articles 669-*bis* and 700 c.p.c., the parents of a man deceased in a car accident appealed to the Court of Milan to obtain assistance from Apple in the recovery of their son's personal data. Data created with the physical device

[13] S. Rodotà, *Il diritto di avere diritti*, Roma-Bari, Editori Laterza, 2012, p. 397.

[14] Sisto, *Digital Death. Le trasformazioni digitali della morte e del lutto*, *Lessico di etica pubblica*, 1, 2018, p. 49, at 57.

[15] Sisto, *Morte e immortalità digitale…*, cit., pp. 111-122.

[16] J. Daskal, *The Un-Territoriality od Data*, *The Yale Law Journal*, 125, 2015, pp. 326-398. In this context, data is understood as part of the 'digital heritage' to which the digital inheritance pertains (for this expression, see Cinque, *La successione nel "patrimonio digitale"…*, cit., pp. 645-655).

– destroyed in the accident – was stored in the iCloud account thanks to the synchronization system, but the parents, despite their requests, were not allowed to access it, due to the restrictions Apple applied.

Once established the admissibility of the legal request, the reasoning of the Court departs from the innovative legal provision introduced by D.lgs. 10 agosto 2018, n. 101, i.e. Article 2-*terdecies* of the Italian Data Protection Code (D.lgs. 30 giugno 2003, n. 196).

The ground-breaking rule, that follows the guidance of the GDPR[17] and whose function is explicitly to ensure regulatory coverage to postmortal data protection, states that the rights provided by Arts. 15 to 22 of the GDPR can be exercised by the ones who have an interest, or act in the protection of the deceased, or due to family reasons. In the specific case, the Court deals with the request of recognizing the right of access under Article 15 GDPR.

On the basis of Article 2-*terdecies*, by referring to the 'family reasons worthy of protection' identified in the provision, the Court stated that the plaintiffs were entitled to exercise the right to access to the deceased son's personal data. The judge has pointed out, indeed, that the bond existing between parents and children, the content of the allegations and the desire of collecting a selection of recipes which their son – working as a chef – had saved in the device, were conditions that could justify the provision's application.[18]

Given the admissibility of the appeal and the legitimacy to access the data of the deceased, the Court's logical reasoning unfolds by taking into consideration the possible reasons that could have precluded the approval of the requested measure: on the one hand, the limits that the legislative framework places on the postmortem exercise of the rights on personal data and, on the other hand, the conditions that the procedural

[17] Recital n. 27 specifies that the Regulation does not apply to this kind of data ('This Regulation does not apply to the personal data of deceased persons. Member States may provide for rules regarding the processing of personal data of deceased persons'), due to a choice that has been defined coherent with the traditional principle that legislative policy decisions regarding family law or succession law exceed the legislative competence of the European Union (F. Trolli, *La successione* mortis causa *nei dati personali del defunto e i limiti al loro trattamento*, *Jus Civile*, 4, 2019, p. 313, at 318).

[18] Trib. Milano, ord. 10.02.2021, p. 5.

discipline requires for the preventive measure under Article 700 c.p.c.

With regard to the first set of limits, Article 2-*terdecies*, II, Data Protection Code enhances the autonomy of the data subject and allows him/her to 'prohibit' the exercise of the rights on personal data after the event of death. However, neither an explicit will nor its specific formal and substantive requirements can be found in the present case. Therefore, the judge could admit the legitimacy of the plaintiffs.

With regard to the second set of limits, the Court considered both the *fumus boni iuris* and the *periculum in mora* as existing. The first was recognized because of the legitimacy to exercise the right to access personal data.[19] The second was claimed as actual due to the fact that the Apple systems related to the deceased person would have been definitively 'destroyed' following a period of inactivity of the user, with the consequence of the loss of the data stored and, hence, the irreparable damage to the exercise of the recognized rights.

For the reasons briefly summarized here, the Court sentenced Apple 'to provide assistance […] in the recovery of data from the accounts […] in the procedure called «transfer», aimed at allowing the applicants to acquire the credentials of access to Apple ID'.[20]

3. Postmortem exercise of data protection rights

The decision of the Court of Milan addresses, for the first time in our legal system, at a case law level, the issue of 'digital inheritance.' This expression identifies the problem inherent to the fate of data and, more generally, of digital goods, after the death of an individual.

The *quaestio iuris* lies on the thin line along succession law and personality rights and it is emphasized by a phenomenological element: the dissociation between

[19] The judge follows this hermeneutic path by coordinating the national discipline with the principles expressed by the GDPR. In particular, the reasoning is shown by the reference to the 'legitimate interest' mentioned by Article 6, par. 1, lett. f) GDPR, that makes the processing of data 'lawful'.

[20] Trib. Milano, ord. 10.02.2021, p. 7.

an individual's biological existence and his/her electronic double.[21] In addition to this aspect, another, more recent phenomenological factor arises, the concrete implications of which are yet to be determined: the consequences of the aterritorial nature of data in terms of circulation of digital goods. The aterritoriality raises questions concerning the individuation and coordination of regulatory measures which should be implemented with respect to data. Indeed, it may occur that the effectiveness of legal protection could be frustrated due to the continuous crossing of territorial borders and, consequently, of jurisdictions, by data and by digital goods in general.

The mentioned decision offers some particularly interesting insights.

In order to define the rights on personal data of a deceased user, it is necessary to preliminarily address the concrete structure that the 'digital heritage' can assume. A patrimonial component should be distinguished from an affective one.[22] Moreover, the interest may be directed both to data access and to their governance.[23]

The interesting aspect emerging from the ruling of the Court of Milan concerns the practical application of the new Article 2-*terdecies*, D.lgs. 196/2003, introduced by D.lgs. 101/2018, through which the Italian legislator confirms the theoretical approach of the previous legal framework.[24] This approach, according to some scholars, aligned the systematic choice related to the exercise of personal data after death with a 'personalistic model,'[25] which addresses both personality rights and personal data.[26]

The above-mentioned consistency between the previous formulation and the

[21] Resta, *La "morte" digitale*, cit., at 894.

[22] Cinque, *La successione nel "patrimonio digitale"…*, cit., at p. 646.

[23] S. Delle Monache, *Successione* mortis causa *e patrimonio digitale*, *Nuova giur. civ. comm.*, 2, 2020, p. 460, at 460.

[24] In particular, Article 9, III, d.lgs. 196/2003, on similar model to the previous Article 13, III, l. 675/1996. This aspect is brought out by S. Stefanelli, *Destinazione* post mortem *dei diritti sui propri dati personali*, *MediaLaws*, 1, 2019, pp. 136-147.

[25] Resta, *La successione nei rapporti digitali e la tutela post-mortale dei dati personali*, *Contratto e impresa*, 1, 2019, at 89 and 104, where it is emphasized the distinction between this approach and two other models, defined as 'succession model' (which is based on a proprietary approach to immaterial goods of the individual and seeks to adapt the traditional succession law to the reality of the digital economy) and as 'contractual autonomy model' (which underlines the trend to develop computer models that help the data subject in making a conscious choice over the fate of her digital 'traces' after death).

[26] Resta, *La successione nei rapporti digitali…*, cit., at pp. 94-95.

current formulation – which does not lack of significant innovations – is confirmed by the explicit reference which the ruling makes to the thesis of the persistent exercise of the rights on personal data beyond the life of the individual.[27] According to this doctrine, some legal systems, including the Italian one, favor 'an extension of protection, attributing to relatives, heirs or other subjects the power to exercise the rights of the data subject after his/her death,'[28] creating a sort of permanence of the individual rights amongst those mentioned by the legal provision.[29]

By accepting this position, the Court shows to move away from the most relevant European judicial precedent addressing both digital death and digital inheritance: the 2018 ruling of the German *Bundesgerichtshof* on the case concerning the request for access to the Facebook account filed by the parents and heirs of an underage girl who died after an accident in the Berlin subway.[30] Following the prevailing theory amongst scholars, the German Federal Supreme Court had affirmed the full inheritability of personal data, adopting a 'succession model' for the data governance of a deceased individual.

Instead, the approach adopted by the Court of Milan reflects the aforementioned 'personalistic model'.

The solutions offered by the two rulings come to the same conclusion, i.e. the recognition of the right to access to the personal data of the deceased by the plaintiffs, from a practical point of view. However, they diverge on a theoretical level. The first one embraces the thesis according to which legal relationships concerning intangible goods pertain to the asset of the deceased and can be inherited, consistently with the principle of universality of succession (§1922 BGB).[31] Instead, the second one, through the application of Article 2-*terdecies* Data Protection Code, recognizes a sort of

[27] Trib. Milano, ord. 10.02.2021, p. 4.

[28] Resta, *La successione nei rapporti digitali…*, cit., at p. 97.

[29] Delle Monache, *Successione* mortis causa…, cit., at p. 465; in the same sense, F. Zagaria, *Patrimonio digitale e successione* mortis causa, *De iustitia*, 2020.

[30] BGH, 12-7-2018, III ZR 183/17. For a detailed analysis of the case, see R. Mattera, *La successione nell'account digitale. Il caso tedesco*, *Nuova giur. civ. comm.*, 2019, I, pp. 703-708.

[31] Resta, *La successione nei rapporti digitali…*, cit., at p. 91.

persistence (*Fortwirkung*) of the rights in question beyond the life of the natural person, without the legislator having clarified whether it constitutes a legitimacy *iure hereditatis* or *iure proprio*.[32]

Scholars seem to favor the second interpretation and justify this approach by stressing that the problem of vacancy of entitlement of the legal relationship, to which the succession phenomenon normally responds, would not occur when dealing with digital resources.[33]

In other words, according to the Italian legislation, the postmortem exercise of the rights on personal data, recognized to certain categories of subjects, represents a possible answer to the legal questions raised by new technologies with regard to the fate of digital assets after the data subject's death.[34] In addition, the provision, compared to the hypothesis of the 'succession model', potentially expands the number of those entitled to exercise the rights and, at the same time, restricts it, as it provides for more stringent requirements for the permanence of rights to occur. Finally, it needs to be stressed that the legislator limits the general principle of the possible postmortal exercise of the rights on personal data. Indeed, the second paragraph of Article 2-*terdecies* does not admit the exercise of the referred rights in the cases provided for by law or when the data subject has expressly prohibited it, enhancing private autonomy and self-determination.

Ultimately, it is also worth mentioning the relationship between the judicial decision and the debated issue of digital sovereignty.[35]

[32] Resta, *La successione nei rapporti digitali…*, cit., at p. 99.

[33] Delle Monache, *Successione* mortis causa…, cit., at 468: "*sembra che, quando ci si collochi al di fuori del perimetro dei diritti patrimoniali del defunto, ciò che può residuare, in realtà, siano solo forme di tutela* iure proprio*, con legittimazione attribuita dalla legge o comunque da riconoscersi, secondo i principi, a determinati terzi in base, per lo più, al loro legame familiare con il* de cuius".

[34] As stated by Article 2-*terdecies* d. lgs. 96/2003, the categories are: the ones having a 'personal interest', the ones acting to protect the interested party, or the ones acting 'for family reasons worthy of protection'.

[35] For an early comment on this aspect, see M. Bassini-G. De Gregorio-O. Pollicino, *L'accesso ai dati post mortem su cloud: il commento all'ordinanza del Tribunale di Milano 2020/44578*, *federnotizie.it*, 5 March 2021, available at: <https://www.federnotizie.it/laccesso-ai-dati-post-portem-su-cloud-il-commento-allordinanza-del-tribunale-di-milano-2020-44578/> (last access: 09.04.2021).

Most relevantly, in the Italian case the access request was related to data stored in the cloud computing platform iCloud. From this perspective, the Italian case differs from the well-known case of the San Bernardino attack, with which the issue of access to personal data of a deceased person – also for reasons of public interest – emerged on a global scale.[36] In the latter case, access to the cloud had been granted, but not to the physical device.

Digital inheritance evokes the operational difficulties typical of disputes concerning digital goods and data generated by digital platforms. Specifically, cloud computing allows to access the synchronized material from anywhere, regardless of the physical storage location and data retention.

In the decision of the Court of Milan, no circumstances from the evidence revealed the place of storage of the requested data. Furthermore, the decision of the Court denied Apple's claim to impose data access conditions typical of the US legal system, but extraneous to the Italian legal system. The judge concluded that the Court should rely on the rules of the legal system 'before which the right is enforced'.[37]

This case explains well why the planetary dimension of the 'silicon giants'[38] also involves the jurisdiction and the law to be applied in the specific dispute.

To summarize, the ruling of the Court of Milan allows an initial definition of a few questions related to the issue of postmortem governance of digital resources, by embracing the theory of the persistent exercise of rights on personal data after the death of the data subject. At the same time, the above-mentioned decision leaves other issues unsolved, especially those concerning the concrete ways through which individuals may dispose of their rights on personal data after their death as well as the role which digital platforms will (or will not) play in relation to those powers of disposal.

[36] A full scrutiny of the case and of the questions raised can be found in M. Orofino, *FBI v. Apple: il caso è (forse) chiuso, ma le questioni di fondo rimangono apertissime*, *DPCE online*, 26/2, 2016, pp. 277-295.

[37] Trib. Milano, ord. 10.02.2021, p. 6.

[38] As Stefano Rodotà used to describe "*i grandi soggetti economici che si identificano con la rete*" (Rodotà, *Il diritto di avere diritti*, cit., p. 414).

GUERINO BIASUCCI*

LA POSICIÓN DE LOS TERCEROS EN LA EJECUCIÓN DINERARIA ESPAÑOLA E ITALIANA: "*PRIMAUTÉ*" DEL ACREEDOR PROCESAL VS PAR *CONDICIO CREDITORUM*

RESUMEN. *El objetivo de este artículo es comparar el papel de los terceros en los procedimientos de ejecución italianos y españoles a partir de una breve exposición del tratamiento que recibe esta cuestión en uno y otro ordenamiento. Sin ánimo de efectuar un examen exhaustivo sobre la extensa materia del proceso de ejecución, este trabajo se centra en el aspecto más divergente de ambos sistemas, es decir, la figura del acreedor interviniente. A diferencia del italiano* «terzo contrario» *o su equivalente español en el "acreedor preferente", nos referimos al status de otros acreedores como intervinientes en el proceso, cuya falta se evidencia en el proceso de ejecución español. Esta ausencia se explica por los principios ordinarios que inspiran cada uno de estos procesos de ejecución, uno basado en la igualdad de todos los acreedores y, por tanto, en la insolvencia, y otro que tiende a acelerar el procedimiento y a garantizar la rápida satisfacción del acreedor que fue el primero en actuar contra su deudor. Examinaremos esta cuestión por su eventual utilidad para alumbrar un sistema mixto que aúne o combine la estabilidad de las decisiones que caracteriza al sistema italiano y la necesidad, ahora vital, de dar una solución rápida a los problemas crediticios del país, en coherencia con las prioridades de aceleración y simplificación procedimental que marca la Unión Europea.*

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1. Introductión

Nunca es fácil intervenir en una materia como la comparación jurídica en la que tantos autores procedentes de tan diversos ámbitos realizan sus aportaciones. Esta dificultad aumenta cuando, en particular, la comparación jurídica se proyecta sobre los ordenamientos italiano y español, por la frecuencia con la que se aborda esta perspectiva comparada en numerosos trabajos[1]. La razón de tal proliferación podría atribuirse a las numerosas similitudes de diversas instituciones de los dos sistemas jurídicos considerados y a la influencia ejercida por juristas del pasado de la talla – en el ámbito del Derecho procesal civil – de Chiovenda o Carnelutti, a través de las obras de Alcalá-Zamora y Castillo, Gómez Orbaneja o Prieto-Castro. Pero sería reduccionista atribuir el fundamento de tal *fil rouge* a una mera identidad parcial del derecho. Esta afirmación se apoya en un silogismo: si es cierto que el sistema jurídico es un reflejo de la sociedad[2], también hay que afirmar que los pueblos itálicos y españoles, en realidad, están muy próximos entre sí, y no sólo en el ámbito del derecho. Este vínculo se ve reforzado por la legislación comunitaria, que ha intentado en repetidas ocasiones armonizar los distintos sistemas jurídicos de Europa. No menos importante, de hecho, es la propuesta de Directiva sobre normas mínimas comunes del proceso civil en la UE presentada en 2017[3], con el objetivo de «laying down minimum standard concerning the commencement, conduct and conclusion of civil proceeding», seguida del proyecto de UNIDROIT sobre "Best practices for effective enforcement"[4]. Precisamente de cara a la concreción de tales proyectos,

[1] Piénsese en los numerosos artículos que abordan el estudio comparado de los ordenamientos de Italia y España en ámbitos como el derecho regional, constitucional o el procesal, tanto civil como penal, y cuya amplitud, a estas alturas, aconseja no compendiar en una nota bibliográfica.

[2] R. Iannone, *«La dimensione culturale del diritto»*, *Quaderni di Sociologia*, 29, 2002, <http://journals.openedition.org/ qds/1297>, DOI: https://doi.org/10.4000/qds.1297, [consulta fecha 29.10.21], «Nel diritto, tale conoscenza può essere colta guardando alla natura e funzione delle norme giuridiche le quali, lungi dall'essere mere forme specifiche di mediazione simbolica o semplice strumento di comunicazione finalizzata all'ordine sociale, costituiscono la forma tipica dell'azione e uno dei principali fattori costitutivi del processo di costruzione della realtà stessa. Il diritto in altri termini è anche, e forse soprattutto, norma giuridica che riflette e produce cultura».

[3] EU *Proposal of an EU Directive on Accelerated Extrajudicial Collateral Enforcement Mechanism,* ST 14261 2019 REV 1 COR.

[4] UNIDROIT, *Study lxxvi b: best practices for effective enforcement*, at <https://www.unidroit.org/work-in-progress/effective-enforcement-best-practices>.

cuya salida natural sería un nuevo y revisitado proyecto Storme[5], parece interesante examinar algunos aspectos del proceso de ejecución italiano y español, que, dada su similitud, se beneficiarán sin duda de la comunión de sus mejores y más eficaces instituciones procesales.

2. El concepto de tercería y de intervención: las diferencias entre los dos sistemas

En Italia, el término *tercero* se utiliza comúnmente para significar «una tercera persona, es decir, una persona distinta de las dos partes en cuestión o de los dos interlocutores»[6]. En concreto, por referencia al proceso de ejecución español, el tercero se identifica como « aquel[los] sujeto[s] que, sin ser parte, ostente[n] un interés especial en el proceso de ejecución, en la medida en que puede[n] verse afectado[s] por su desarrollo o su resultado (que es irrevocable»[7]. Por lo tanto, la parte interviniente puede hacer valer o un derecho incompatible con el que hace valer el ejecutante, o eventualmente el ejecutado, o bien un derecho compatible con el que es objeto de la acción. Este concepto se debilita en los procedimientos de ejecución italianos. En los procedimientos de ejecución italianos, junto a las dos partes principales, que tienen intereses contrapuestos, hay otras personas con intereses similares a los del acreedor principal-parte anterior, es decir, los acreedores intervinientes. Los acreedores intervinientes, en el proceso de ejecución italiano, precisamente por el interés especial que tienen, no se agrupan exactamente con los terceros como *extraños,* sino que, de acuerdo con el principio de *par condicio creditorum* según el art. 2741 c.c.[8], se consideran iguales a los demás acreedores. Así, por supuesto, las reclamaciones del deudor serán incompatibles con las de los acreedores, y también entrarán en conflicto los créditos de los distintos acreedores, con evidentes consecuencias para el mecanismo de reparto. Por lo tanto, mientras que en el proceso de ejecución español el término tercero se entiende como un sujeto dis-

[5] M. Storme, "*A single civil procedure for Europe: A Cathedral Builders' Dream*", *Ritsumeikan Law Review* n. 22, 2005.

[6] "Térzo" in *Treccani.it – Enciclopedie on line*, Istituto dell'Enciclopedia Italiana.

[7] F. Gascón Inchausti, *Derecho procesal civil materiales para el estudio*, 2021, p. 415, v.e. disponible en <https://eprints.ucm.es/id/eprint/62238/> [consulta fecha 29.10.21].

[8] En su forma más sintética y correcta según R. Nicolò, *Tutela dei diritti*, en *Comm. Scialoja, Branca*, *sub* art. 2741, Bologna-Roma, 1945, 1.

tinto, como ya se ha dicho, al *extraneus* del proceso y de las propias partes, en el proceso de ejecución italiano "tercero" adquiere el significado de "acreedor ulterior". Esto no quita que haya fuertes puntos de contacto como, por ejemplo, en la "*opposizione dei terzi*" que tiene su contrapartida española en la "*tercería de dominio*", pero las identidades entre ambos sistemas, como se verá más adelante, se detienen solo en estas instituciones. Esto se debe a los diferentes principios que regulan el proceso de ejecución italiano y español, que han influido en los legisladores en la creación de instituciones completamente diferentes. Esta discrepancia también se observa en las expresiones verbales solas. Las instituciones españolas de "*tercería de mejor derecho*" y de "*reembargo*" son próximas, pero no iguales, a las figuras italianas del "*creditore procedente*" y del "*interveniente*". Aunque solo sea desde un punto de vista lingüístico, puede entenderse que en el ordenamiento jurídico italiano existe una diferencia puramente procesal entre "procedente" e "interviniente", mientras que en el ordenamiento jurídico español el tercerista de mejor derecho aspira a convertirse en acreedor procedente al amparo de su derecho de privilegio al cobro que ha de hacer valer para adquirir la condición de acreedor procedente por medio de la tercería, mientras que el reembargante adquiere sus derecho sobre el bien reembargado desde su propia ejecución y no necesita intervenir procesalmente en el proceso de ejecución del primer embargo. Ambos, como "*terceros*", entran en el proceso de ejecución en oposición al curso ordinario del procedimiento. Para comprender mejor el matiz lingüístico aquí como *hyuseteron protereron* del papel, será necesario primero esbozar las instituciones en cuestión.

3. Opposizione dei terzi vs Tercería de dominio

"La opposizione dei terzi all'esecuzione", regulada en el derecho italiano por el art. 619 c.p.c., constituye «la oposición de una persona que, sin ser parte en el procedimiento (y, por tanto, siendo *tercero* en el proceso de ejecución[9]), está, sin embargo, de facto e ilegítimamente, implicada en él de tal manera que, si la ejecución llegara a su fin, ese tercero sufriría el sacrificio injusto de sus derechos»[10]. Esta definición no difiere

[9] Este supuesto está relacionado con lo expuesto en el párrafo anterior.

[10] A. Carratta, C. Mandrioli, *Diritto proceduale civile*, IV, *L'esecuzione forzata, i procedimenti sommari, cautelari e*

de la figura homóloga española, que encontramos regulada en los arts. 595 a 604 LEC bajo la denominación de "tercería de dominio" y que se define como «el instrumento principal que otorga el ordenamiento al tercero cuyos bienes han sido embargados en la creencia errónea de que pertenecían al ejecutado»[11]. Evidentemente, la finalidad de ambas instituciones en los dos ordenamientos jurídicos es que el juez ejecutor sepa que la titularidad real del bien embargado, o de uno de sus bienes, no es del deudor sino de un tercero. Como subraya la definición dada por el autor español (creencia errónea), el *error* en la titularidad del bien por parte de quien lo embarga materialmente, el *funcionario judicial* o *Letrado de la Administración de Justicia*[12], es fundamental. Precisamente por esta razón, esta aberración suele producirse en la expropiación de bienes muebles, tanto que no gozan de publicidad registral, como bienes y derechos sometidos a publicidad registral, por la razón de que la resolución procesal de embargo se adopta en España a la luz de la mera apariencia de titularidad del ejecutado sobre el bien embargable, como prevista el aptdo. 1 del art. 593 LEC[13], donde es el funcionario encargado quien tiene la función de acordar el embargo. La tercería de dominio, al igual que la oposición de terceros, es definida por algunos como una fase incidental y cognitiva dentro del proceso de ejecución[14]. Es evidente que, para ambos ordenamientos jurídicos, la persona legitimada para ejercitar la acción es la que realmente sufriría el perjuicio de la realización forzosa del bien embargado, el tercerista. Sin embargo, existen diferencias en cuanto a las partes pasivas de la acción: en el sistema procesal italiano, el tercero que desee presentar una oposición debe hacerlo no solo contra el acreedor, sino también contra el deudor, dada la hipótesis de litispendencia necesaria[15]. Este no es el caso del derecho español, según el cual la oposición debe dirigirse contra el deudor solo «cuando el bien al

camerali, Torino, 2019, p. 246.

[11] Gascón Inchausti, *Derecho procesal civil materiales para el estudio*, 2021, p. 457, v.e. disponible en <https://eprints.ucm.es/id/eprint/62238/> [consulta fecha 29.10.21].

[12] Referencias a "Secretario Judicial" ahora llamado "Letrado de Administración de Justicia" por disp. adic. 1 de Ley Orgánica n. 7/2015 de 21 julio.

[13] Art. 593 LEC «1. Para juzgar sobre la pertenencia al ejecutado de los bienes que se proponga embargar, el Letrado de la Administración de Justicia, sin necesidad de investigaciones ni otras actuaciones, se basará en indicios y signos externos de los que razonablemente pueda deducir aquélla»

[14] Gascón Inchausti, cit., p. 455.

[15] *Litisconsorzio* que, por razones obvias, implica también a los acreedores intervinientes, v. G. Tarzia, *Sul litisconsorzio necessario nell'opposizione di terzo all'esecuzione*, in *Giur. It.*, 1965, I, 529.

que se refiera haya sido por él designado», lo que hay que poner en relación con el deber de manifestación de bienes que el artículo 589 LEC atribuye al deudor ejecutado. En todo caso, en el incidente de tercería de dominio el art. 600 párr. 2, LEC señala que «Aunque no se haya dirigido la demanda de tercería frente al ejecutado, éste podrá intervenir en el procedimiento con los mismos derechos procesales que las partes de la tercería». La opposizione dei terzi, así como la tercería de dominio, debe ejercerse en un momento determinado, para no ver frustrado el *petitum*; momento que en el proceso de ejecución español es «antes de que se ordene la venta o cesión del bien» o «en el momento en que, de acuerdo con lo dispuesto en la legislación civil, se produzca la transmisión del bien al acreedor o al tercero que lo adquiera en pública subasta» (art. 596, párr. 2, LEC). En cuanto a la tercería, merece una mención adicional la (mal) llamada *tercería registral*[16]. El ordenamiento jurídico español prevé una protección jurídica reforzada para los titulares de derechos reales sobre bienes inscritos en los Registros de la Propiedad. Se trata de la protección prevista en el art. 38, párr. 3, LH[17]. Esta protección encuentra su contrapartida italiana en la protección *ex* art. 510 c.p.c. Esta descripción de las dos instituciones presenta un cuadro de la oposición que puede hacer un tercero injustamente vinculado, que no es diferente entre los dos sistemas jurídicos, pero que, sin embargo, está influenciado por las orientaciones sistemáticas de las dos legislaciones.

4. La posición de los acreedores con privilegio y la tercería de mejor derecho

Otra categoría de acreedores, en el proceso de ejecución, es la de los acreedores preferentes[18], cuya protección jurídica en el proceso español de ejecución se entiende mejor explicando que el sistema de realización forzosa se basa en un principio de sub-

[16] Decimos "mal llamada" porque la tercería entraña el ejercicio de una pretensión por un tercero respecto de un proceso de ejecución ajeno, que, en cambio, no existe en relación con la falta de inscripción registral del embargo de un bien acordado como perteneciente al deudor y que, sin embargo, consta inscrito a nombre de un tercero. La denegación de la inscripción de embargo en el Registro, que en lo que consiste la llamada ordinariamente "*tercería registral*", no es más, pues, que el funcionamiento de los propios principios registrales que protegen la titularidad inscrita.

[17] Decreto de 8 de febrero de 1946 por el que se aprueba la nueva redacción oficial de la Ley Hipotecaria, BOE-A-1946-2453, <https://www.boe.es/eli/es/d/1946/02/08/(1)/con>.

[18] «Es la calidad que corresponde a un crédito de ser pagado con preferencia a otro» (art. 2573 c.c.n.).

sistencia de las cargas anteriores inscritas; por decirlo empleando las palabras de la Exposición de motivos de la LEC (aptdo. XVII), «*En relación con la subsistencia y cancelación de cargas se ha optado por mantener el sistema de subsistencia de las cargas anteriores al gravamen que se ejecuta y cancelación de las cargas posteriores, sistema que se complementa deduciendo del avalúo el importe de las cargas subsistentes para determinar el valor por el que los inmuebles han de salir a subasta. Esta solución presenta la ventaja de que asegura que las cantidades que se ofrezcan en la subasta, por pequeñas que sean, van a redundar siempre en beneficio de la ejecución pendiente, lo que no se conseguiría siempre con la tradicional liquidación de cargas*.». Estos, según lo dispuesto tanto en el código italiano (art. 2741 c.c.) como en el español (arts. 1921 y ss. CC español), tienen derecho de preferencia en el orden de distribución de las ganancias (art. 613.2 LEC a contrario[19]). Este derecho se protege de forma diferente debido a la distinta causa del privilegio. En la legislación española, este privilegio se reclama a través de la *tercería de mejor derecho* (arts. 614 - 620 LEC). Esta última se refiere al ejercicio de una o varias acciones según las circunstancias. En primer lugar, el tercero - que no es acreedor hipotecario o que no tenga sus derechos y/o privilegio inscrito registralmente con anterioridad al embargo del bien – tiene la carga de hacer valer su preferencia interponiendo una acción constitutiva contra el ejecutante para que se le reconozca su derecho. Por otro lado, los acreedores hipotecarios en el proceso de ejecución español gozan de lo que podría llamarse una protección reforzada, ya que la venta forzosa carece del efecto purgativo de la ley italiana. En este caso, el sistema registral y la ejecución forzosa garantizan en España que sus derechos y privilegios se mantendrán intangibles y no les puede afectar de forma directa ningún otro proceso de ejecución dirigido contra el deudor común. Esto se traduce, en el sistema español, en que el importe de estos créditos anteriores inscritos se deduce del valor de tasación del bien *ex* art. 666 LEC y que una de las condiciones necesarias para participar en la subasta, que se hace constar siempre, es que "las cargas, gravámenes y asientos anteriores al crédito del actor continuarán subsistentes y que, por el solo hecho de participar en la subasta, el licitador los admite y acepta quedar subrogado en la responsabilidad derivada de aquéllos si el remate se adjudicare a su favor" (art. 668.2.II LEC). Esta disposición del legislador español es coherente con el carácter

[19] Dispone el aptdo. 2 del artículo 613 LEC que "Sin estar completamente reintegrado el ejecutante del capital e intereses de su crédito y de todas las costas de la ejecución, no podrán aplicarse las sumas realizadas a ningún otro objeto *que no haya sido declarado preferente por sentencia dictada en tercería de mejor derecho*".

singular de la aplicación española, que de otro modo se prestaría a fuertes aberraciones. Esta solicitud será suficiente por sí misma si la reclamación ya está respaldada por un título ejecutivo; en cambio, si la reclamación no está respaldada por un título ejecutivo, el tercerista tendrá que acumular en su demanda de tercería la pretensión de condena frente al ejecutado[20], para obtener este título[21]. La acción descrita tiene un límite dentro del cual se puede interponer, a saber, «es aquel en que las cantidades de dinero obtenidas en el proceso de ejecución se entregan al ejecutante» (ver art. 615, párr. 2 LEC). En cambio, según la legislación italiana, el acreedor que tiene un derecho de retención contra el deudor no tiene que interponer una acción específica para hacer valer su derecho. El legislador italiano ha querido proteger a esta categoría de acreedores, dándoles la posibilidad de intervenir "*simplemente*" en el procedimiento, en virtud de los arts. 525 y ss. c.p.c., para que se les adjudique la suma que les corresponde bajo su derecho de tanteo. Solo en el caso de que surja un conflicto entre varios acreedores concurrentes sobre la existencia de la cuantía o los derechos de tanteo, el juez deberá proceder según lo dispuesto en el artículo 512 c.p.c. Según algunos autores[22], este litigio puede incluirse entre las «oposiciones sobre el fondo del proceso de ejecución», que abren así una fase cognitiva en el proceso, cuyo objetivo es resolver de forma simplificada[23] todos los litigios

[20] Gascón Inchausti, cit., p. 462 «En efecto, debe insistirse en la idea de que el tercerista pretende el cobro forzoso de su crédito en el marco del proceso de ejecución; y esto sólo le está permitido a quien dispone de título ejecutivo. Si el tercerista ya disponía de título ejecutivo antes de interponer su tercería, en caso de que la gane estará legitimado para obtener el cobro forzoso, pues tiene título ejecutivo: no tiene sentido que ejercite una acción de condena frente al ejecutado, pues ya tiene lo que le aportaría el éxito de esa acción (el titulo ejecutivo). En cambio, si no dispone de título ejecutivo, es imprescindible que lo obtenga, pues de lo contrario, aunque se reconociera la preferencia de su crédito sobre el del ejecutante, no sería legitimo el cobro del tercerista en el marco de una ejecución forzosa: de ahí que resulte necesario obtener un título ejecutivo, a través del ejercicio de una acción de condena frente al ejecutado – con la ventaja de que el ordenamiento le permite incluir dentro de la tercería de mejor derecho esta acción de condena –».

[21] Para apreciar la distinción entre los sistemas italiano y español, hay que añadir también que el sistema español prevé un corolario de *documentos con* fuerza ejecutiva, títulos judiciales y no judiciales, que es diferente del sistema italiano cf. arts. 517-520 LEC.

[22] C. Furno, *Disegno sistematico delle opposizioni nel processo esecutivo*, Firenze, 1942, p. 196 in *sub* art. 512, *Codice di Procedura Civile commentato* a cura di C. Comoglio e R. Vaccarella, Torino, 2010.

[23] Simplificado por el hecho de que no es necesario interponer una única acción y porque «L'ordinanza con la quale il giudice della esecuzione mobiliare, provvedendo alla distribuzione della somma ricavata dalla vendita dei beni pignorati, risolve una contestazione in ordine ai criteri di distribuzione, che non atteneva né all'esistenza dei crediti, né a quella di diritti di prelazione, ma solamente alla graduazione dei crediti stessi, non decide una opposizione alla

que puedan surgir durante el reparto del producto. Así, los derechos de los acreedores privilegiados están protegidos si el privilegio es general, mientras que los privilegios especiales, y más concretamente el privilegio hipotecario, no lo están. Cuando el crédito está garantizado por una hipoteca, la Ley de Enjuiciamiento Civil prevé un proceso especial arts. 681-698 LEC[24]. Este proceso se caracteriza por la rapidez y la sencillez: sólo tendrán legitimación activa quienes figuren en los registros públicos, mientras que la legitimación pasiva será la del deudor y, eventualmente, la del hipotecante no deudor. El procedimiento hipotecario obvia la fase de embargo presente en la ejecución ordinaria y, transcurridos cinco días desde el requerimiento, se puede solicitar que se proceda directamente a la realización forzosa del bien hipotecado. Por tanto, se puede apreciar la rapidez y fluidez que el legislador ha querido dar a este proceso. Por otro lado, el ordenamiento jurídico italiano se opone a la previsión de un procedimiento específico para los acreedores que disfrutan de una garantía hipotecaria. El legislador italiano no ha impuesto procedimientos específicos que puedan ser iniciados únicamente por los acreedores hipotecarios, pero en caso de que un bien hipotecado sea embargado por un acreedor que no sea el beneficiario de la inscripción, dos instituciones acuden al rescate. La primera es la prevista en el art. 498 c.p.c., según el cual la notificación debe hacerse, entre otros, al acreedor que figure en los registros públicos, para que tenga conocimiento del embargo. La segunda, prevista en el art. 596 c.p.c., que remite al art. 510 c.p.c., prevé la inmovilización de las sumas obtenidas por la venta del inmueble objeto de la hipoteca hasta la certeza de poder ceder dichas sumas al acreedor en cuestión (o, en todo caso, durante un período no superior a tres años). Esto tipo de tutela no es necesario en derecho español porque el valor de las cargas anteriores se deduce del valor de

distribuzione ai sensi dell'art. 512 c.p.c. e non ha carattere decisorio e contro di essa può essere proposta opposizione agli atti esecutivi, avendo ad oggetto il modo e non il merito dell'esecuzione, con la conseguenza che la immediata proposizione in sua vece del ricorso per cassazione ai sensi dell'art. 111 Cost. è inammissibile.» Cass. 10 giugno 1996, n. 5576.

[24] El objetivo del legislador procesal era evidente, establecer una nueva tipología procesal clara que concediese respuesta a las nuevas realidades jurídicas, suprimiendo la diversidad procesal existente en una doble dirección, tanto interna, en referencia a la pluralidad de procesos especial- les regulados en la interinidad del texto procesal, como externa, respecto de las normas procesales consignadas y desarrolladas en diferentes textos normativos de carácter sustantivo, filosofía anunciada en la Exposición de Motivos de la LEC, al establecer que «lo exigible y deseable no es unificar a ultranza, sino suprimir lo que resulta innecesario y, sobre todo, poner término a una dispersión normativa a todas luces excesiva». A. DOMENECH, *La ejecución hipotecaria*, Barcelona, 2009, p. 22.

realización de bien, por lo que siempre se salvaguarda el derecho y la prioridad del acreedor hipotecario, teniendo en cuenta que en el sistema de realización español, como se ha mencionado anteriormente, el bien se transmite con sus cargas anteriores, por la propia lógica del carácter estrictamente singular del proceso de ejecución español. Las instituciones descritas hasta ahora dan una pista de lo que se pondrá de manifiesto en el siguiente apartado, el sistema español, marcado por la rapidez y la singularidad de la ejecución, ha establecido instrumentos de protección del acreedor preferente que difieren de la legislación concursal italiana. Las disposiciones que tienden a "singularizar" el procedimiento de ejecución, en este sentido también va la disposición del art. 614, párr. 2 LEC, es decir, la imposibilidad de interponer una segunda acción de tercería de mejor derecho[25], pone de manifiesto lo fundamental que es el derecho español para la más rápida satisfacción del acreedor, pero este aspecto sacrifica la certeza de la decisión judicial, esa garantía para el deudor de la que está lleno el derecho italiano. Cabe destacar que la mencionada imposibilidad, se aplica al mismo tercerista de mejor derecho porque deben hacerse valer todas las eventuales preferencias crediticias en la misma demanda de tercería. Por otra parte, no se prevé ninguna ejecución para el acreedor hipotecario porque, como ya se ha dicho, no hay efecto "*purgativo*" típico italiano.

5. Los principios de ordenación de los dos sistemas

Como se ha mencionado anteriormente, el procedimiento español favorece la rapidez y la inmediatez frente a la certeza de las decisiones del juez en el momento del reparto de los productos. Pero, sobre todo, el legislador español, al preparar el procedimiento de ejecución, ha querido privilegiar, por encima de todo, la oportunidad del acreedor o, tomando prestada la expresión de numerosos papeles sobre las fuentes comunitarias, el "*primauté*" del acreedor procesal. En realidad, desde el punto de vista del derecho español, sería erróneo hacer una distinción propia del derecho italiano, ya que la subdivisión entre acreedor procesal y acreedor interviniente es una diferencia del sistema italiano. En el derecho español, de hecho, cabe afirmar que se favorece al acreedor

[25] Art. 614, párr. 2, LEC «No se admitirá la demanda de tercería de mejor derecho si no se acompaña el principio de prueba a que se refiere el apartado anterior. Y, en ningún caso, se permitirá segunda tercería de mejor derecho, que se funde en títulos o derechos que poseyera el que la interponga al tiempo de formular la primera.».

que primero embargó los bienes del acreedor y en cuyo favor está reconocido el derecho de realización y aplicación del artículo 613 LEC (que favorece el principio general de prioridad temporal que expresa la máxima *prior tempore potior iure*), ya que el derecho ibérico no permite – con el carácter colectivo que destila el sistema italiano – la intervención de otros acreedores en el procedimiento de ejecución[26] (o, si se permite, queda limitada a una posición subordinada)[27]. A pesar, por tanto, de los numerosos puntos en común[28] entre ambos sistemas, especialmente gracias a la influencia que juristas como Chiovenda y Calamandrei han ejercido en el procesalismo español, en estos principios los dos sistemas difieren. Esta discrepancia puede justificarse por el carácter autoritario del código italiano, como afirman algunos Autores[29], que se opone al principio pater-

[26] Está, en realidad, muy limitada al estrecho círculo de su legítimo interés en un proceso de ejecución ajeno, circunscrito al cobro del eventual sobrante de la realización de los bienes ex art. 672 LEC. A estos llamados "terceros acreedores posteriores" la jurisprudencia les permite intervenir, aunque no lo diga expresamente la ley, en el trámite de valoración o tasación del bien embargado (B. Sánchez López, *Ejecución dineraria: liquidez, embargo y realización forzosa*, 2019, p. 393).

[27] Esto se refiere a acreedores posteriores no dotados de un crédito cuya preferencia disfrute de publicidad registral, lo que por sí ya representa la salvaguarda institucional del respeto de sus derechos crediticios.

[28] La contigüidad de los sistemas también se analiza desde el punto de vista de los principios de ordenación de los dos códigos, y así el legislador ibérico en la Exposición de los motivos de la LEC: "es a quien cree necesitar tutela a quien se atribuyen las cargas de pedirla, determinándola con suficiente precisión, alegar y probar los hechos y aducir los fundamentos jurídicos correspondientes a las pretensiones de aquella tutela" especificando que "esta inspiración fundamental del proceso – excepto en los casos en que predomina un interés público que exige satisfacción – no constituye, en absoluto, un obstáculo para que (...) la Ley refuerza notablemente las facultades coercitivas de los tribunales respecto del cumplimiento de sus resoluciones o para sancionar comportamientos procesales manifiestamente contrarios al logro de una tutela efectiva" que se hace eco del Informe al Rey sobre el cp. de 1940, donde leemos que el cp. de 1940, donde se afirma que nuestro proceso civil, incluso ante un "reforzamiento" general de los poderes de impulso e investigación del juez, está marcado por el principio dispositivo, entendido "como expresión irreprimible del poder reconocido a los particulares para disponer de su propia esfera jurídica" y declinado según los "aforismos de la sabiduría antigua: *ne procedat índex ex officio*; *ne beat iudex ultra petita partían*; *iudex secundum alligata et probeta decidere debet*" v. M.P. Fuiano, *La soddisfazione dei creditori nell'esecuzione singolare e collettiva spagnola*, en *Riv. dir. proc,* 2021, 1, p. 282.

[29] S. Satta, *Commemorazioni del codice di procedura civile del 1865*, in *Quad. dir. proc. civ.*, I, Padova 1969, 86 ss.; *id.*, *L'estinzione del processo*, in *Riv. trim. dir. proc. civ.* 1957, 1005 ss.; F. Cipriani, *Ideologie e modelli del processo civile*, Napoli, 1997, *passim*; *Id.*, *Il processo civile tra vecchie ideologie e nuovi slogan*, in *Riv. dir. proc.*, 2003, 455 ss.; *Id.*, *Il processo civile italiano tra revisionisti e negazionisti*, 2002, *Id.*, *Il processo civile nello Stato democratico*, Napoli 2006, 95 ss.; *Id.*, *I problemi del processo di cognizione tra passato e presente*, 2003, *ivi*, 27 ss.; G. Monteleone, *Manuale di diritto processuale civile*, I, 8 a ed., Padova 2018, 328 ss.;I*d.*, *La grande illusione*, in *Giusto proc. civ.* 2008, 621 ss.; *Id.*, *Princìpi e ideologie del processo civile: impressioni di un «revisionista»*, in *Riv. trim. dir. proc. civ.* 2003, 575 ss.; *Id.*, *Note sui rapporti tra giurisdizione e legge nello Stato di diritto*, *ivi* 1987, 1 ss. cit. in Fuiano, cit., p. 298.

nalista-moralista[30] que caracteriza al legislador español[31]. Esta afirmación se confirma si se observan algunos pasajes de la Exposición de Motivos de la LEC, en los que el legislador quiso potenciar la «responsabilidad de los litigantes» y la «procuraduría y abogacía» con una fuerte propensión a una «respuesta judicial más pronta, mucho más cercana en el tiempo a las demandas de tutela, y con mayor capacidad de transformación real de las cosas»[32] para obtener una efectiva justicia civil. Esta orientación se aleja completamente del concepto de igualdad de condiciones entre los distintos acreedores, *par conditio creditorum*[33] y tradición romanista[34] aplicado por el ordenamiento jurídico italiano. La razón de una opción legislativa tan fuerte se encuentra tanto en la voluntad de acelerar los tiempos de los juicios, tratando de ajustarse al European Average Time Disposition[35], como en la de solucionar el ya patológico problema del crédito que se ha visto agravado por la crisis financiera de 2008 y la crisis sanitaria de 2020.

6. La intervención de terceros y el reembargo

La intervención en el procedimiento de ejecución por parte de terceros[36] acreedores y la acción de reembargo son las instituciones que mejor ilustran los principios

[30] Cipriani, *Il codice di procedura civile tra gerarchi e processualisti*, Napoli 1992.

[31] A. Girolamo, *Princìpi e ideologie del processo civile: impressioni di un «revisionista»*, in *Riv. trim. dir. proc. civ.*, 2003, 2, pp. 576-582.

[32] Papel de tornasol de la eficacia de las disposiciones son los informes proporcionados por el Consejo General del Poder Judicial (CGPJ), <https://www.poderjudicial.es/cgpj/es/Temas/Transparencia/Estimacion-de-los-tiempos-medios-de-duracion-de-los-procedimientos-judiciales/> y el informe de la Comisión Europea del Consejo de Europa para la eficacia de la justicia (CEPEJ) <https://www.coe.int/en/web/cepej/cepej-stat>.

[33] Principio que algunos autores afirman que está cada vez más debilitado M. Fabiani, *La par condicio creditorum al tempo del codice della crisi*, in *Quest. giust*., 2, 2019, p. 202.

[34] P. Lazo Gonzalez, *El contexto dogmático de la par condicio creditorum en el derecho romano*, RDUCN, v. 17, n. 2, p. 79-97, 2010, en <http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-97532010000200004&lng=es& nrm=iso/>; <http://dx.doi.org/10.4067/S0718-97532010000200004> [consulta fecha 29.10.21].

[35] En este sentido, aunque España no se encuentra en la misma situación desastrosa que Italia, sí está en la parte baja del ranking elaborado por el informe de la CEPEJ, ver nota 24.

[36] La sentencia identifica un perfil interesante. Pret. Alba, 17 de marzo de 1994, en *Giur. it.,* 1994, I, 2, 1109, según la cual un acreedor que hace valer un crédito distinto del que se hace valer debe ser considerado también como *tercero.*

subyacentes a ambos sistemas. Por regla general, en el ordenamiento jurídico italiano, la acción ejecutiva ejercida sobre un bien concreto no excluye la acción concurrente de otros (art. 499 c.p.c.). Por lo tanto, los acreedores que hayan intervenido legítima y oportunamente, a más tardar en la primera audiencia fijada para la autorización de la venta o para la cesión, tienen derecho a participar en la distribución de la suma obtenida en la ejecución y, por lo tanto, a participar en la expropiación y a provocar los actos individuales (art. 529 c.p.c.). Por el contrario, los acreedores que intervienen posteriormente sólo participan en el reparto del importe residual, una vez satisfechos los derechos del acreedor embargante y de los que intervinieron con prontitud. Esta división temporal es el factor determinante para diferenciar ambos sistemas, ya que el sistema español no contempla de ninguna manera la posibilidad de los terceros acreedores de convertirse en parte ejecutante en la ejecución, en el sentido de tener reconocidos derechos de realización sobre el bien en el proceso ajeno; esto solo se puede conseguir ejercitando con éxito una tercería de mejor derecho, como se ha indicado[37]. Por lo tanto, el acreedor que actúe con posterioridad sobre ese bien en particular puede, desde su propio proceso de ejecución, pero no desde el ajeno, pedir y obtener el reembargo del bien, lo que le conferirá el derecho a obtener la cantidad que sobre en la realización forzosa celebrada en la ejecución ya despachada (art. 610 LEC)[38]. En esta disciplina, o más bien en la falta de previsión de la "institución italiana" de la intervención, vuelve a evidenciarse el principio de *primauté* del embargo español. Una vez más, esta diferencia se refleja en la posibilidad que la ley italiana reserva al acreedor de realizar un embargo posterior (art. 524 c.p.c.), que, dependiendo del momento en que se produzca el primer embargo, puede unificarse o equipararse a la intervención tardía en el procedimiento (véanse los

[37] Ahora bien, cuestión distinta es que a todo acreedor se le permite participar en el sobrante de la realización forzosa, que es una facultad que está escasamente reconocida en el art. 672 LEC. Ergo, trasladando esto al sistema italiano, todos los acreedores posteriores españoles se encuentran en la segunda de las situaciones que se describen en el texto: terceros con mero derecho al sobrante de la realización forzosa.

[38] «En sentido estricto, reembargo es la traba, en una ejecución singular, de un bien que ya se encuentra embargado en otra u otras ejecuciones anteriores» D.R. Vega Torres, *Algunas cuestiones que plantea el reembargo*, en V. Moreno Catena (dir.), *La ejecución civil, Colección Estudios de Derecho Judicial. CGPJ. Escuela Judicial*, 53, 2004, Madrid, 2005, pp. 497-574. Cuando el reembargo recae sobre bienes inscritos registralmente opera la excepción, prevista en el aptdo. 2, 610 LEC, en el sentido de, por la propia lógica de la subsistencia de cargas anteriores, el reembargante podrá realizar el bien en su propio proceso de ejecución sin afectar por ello a los derechos de realización de embargantes anteriores.

párrafos 2 y 3 del art. 524 c.p.c.). Puede decirse que los legisladores español e italiano se han movido en dos direcciones distintas: una siguiendo el principio de *prior in tempore, potior in iure*, lo otro en la línea de *par condicio creditorum*[39]. En aras de la exhaustividad, cabe señalar que el proceso de ejecución español tiene un enfoque diferente de la ejecución colectiva[40], lo que demuestra que el principio de *la par condicio* no es completamente ajeno al derecho español. A diferencia del concurso italiano, es decir, de la liquidación judicial, que sólo es aplicable a las personas que ejercen actividades empresariales[41], según la Ley Concursal española[42] – que es la que regula este procedimiento – la declaración de concurso también puede emitirse tras la insolvencia comprobada de cualquier deudor, o del deudor común si ya no puede cumplir las obligaciones vencidas e inmediatamente exigibles (art. 1 y 2 LC)[43]. A la luz del art. 2.4 LC, que incluye entre los indicadores de insolvencia los embargos infructuosos por parte de los acreedores, se

[39] *Par condicio creditorum* atenuado en su aplicación, «fatte salve le cause legittime di prelazione, la soddisfazione sul ricavato della LEC vendita dei beni pignorati, pur non essendo riservata al creditore procedente, ed essendo perciò soggetta ad una ripartizione proporzionale in caso di insufficienza a soddisfare tutti i creditori, è tuttavia limitata a vantaggio, oltre che del creditore procedente, di quelli, tra gli altri creditori, che trovandosi in una delle particolari situazioni, abbiano assunto tempestivamente una precisa iniziativa nel processo espropriativo, che abbiano cioè effettuato un intervento nel processo». En esencia, los terceros acreedores se aprovechan de la iniciativa del acreedor reclamante provocando un reparto proporcional respecto a los bienes embargados. MANDRIOLI y CARRATTA, *Diritto processuale civile*, IV, *L'esecuzione forzata, i procedimenti sommari, cautelari e camerali*, Torino, 2015, p. 90 y 91.

[40] L. PANZANI, *La storia del fallimento: uno sguardo d'insieme*, en *Crisi d'impresa e procedure concorsuali*, O. Cagnasso e Panzani (dir.), I, Milano 2016, p. 65 ss.

[41] Sin perjuicio de la demostración de la posesión conjunta de los requisitos, llamados en la jerga de "falibilidad", prescritos por el artículo 1, apartado 2, L.F. En este punto, parece oportuno destacar que el nuevo código de crisis introducido por el Decreto Legislativo 12 de enero de 2019, núm. 14, se sitúa en un sentido de continuidad con el r. d. 16 de marzo de 1942, núm. 267, ya que este supuesto será aplicable en referencia a los empresarios comerciales que no acrediten la posesión conjunta de los requisitos establecidos en el artículo 2, apartado 1, let. d), d.lgs. cit, y, por tanto, no entran en el concepto de "empresa menor".

[42] Sobre la reforma de la Ley concursal M. OLIVENCIA, *Los motivos de la reforma de la ley concursal*, RDCP, 17, 2012, pp.23-30; J.M. EMBID IRUJO, *Crisis económica y reforma del derecho concursal español*, *XXX Convegno di studio su le procedure concorsuali verso la riforma tra diritto italiano e diritto europeo*, Courmayeur, 23-24 septiembre 2016, *Fondazione centro nazionale di prevenzione e difesa sociale* y *Fondazione Courmayeur Mont Blanc*.

[43] En orden a la decisión legislativa de unir los dos procedimientos m. la *Exposición de Motivos* de la *LC*, § II «La unidad del procedimiento de concurso se consigue en virtud de la flexibilidad de que la ley lo dota, que permite su adecuación a diversas situaciones y soluciones, a través de las cuales puede alcanzarse la satisfacción de los acreedores, finalidad esencial del concurso. A mayor abundamiento, se han previsto reglas especialmente ágiles para los concursos de menor entidad».

puede deducir que, si una ejecución contra algún deudor resulta ineficaz, se puede iniciar un concurso entre todos los acreedores. Estas normas acercan el sistema jurídico español al italiano, también a la luz de un procedimiento concursal[44] casi similar al italiano.

7. Conclusiones

Como ya apuntó Fuiano en su papel[45], a pesar de la política del legislador español de reducir la estructura del embargo a lo esencial (impidiendo el *par condicio creditorum*) y de otras soluciones que contribuyen a diferenciar la ejecución forzosa del proceso de ejecución italiano, no cabe duda de que ambos procedimientos, en sus líneas esenciales, se solapan sustancialmente. A diferencia del proceso italiano, en el español los diferentes paréntesis cognitivos que se abren en el transcurso de la ejecución forzosa sólo sirven para completar el procedimiento, no para constatar los derechos reclamados. Así, una vez finalizado el reparto del producto, cada parte es libre de hacer valer sus derechos mediante la interposición de una acción ordinaria e independiente. Además, el acreedor embargante podrá actuar contra el tercerista de mejor derecho para constatar la inexistencia de su crédito y obtener lo indebidamente cobrado. De este mosaico legislativo se desprende la intención del legislador español, orientada a la rápida satisfacción del acreedor de acuerdo con la política de «mientras tanto, paga a alguien que, con toda probabilidad, es su acreedor». En contra de lo que han afirmado algunos autores[46], existe una cierta racionalidad y coherencia por parte del legislador, que pretende perseguir a los deudores mediante instrumentos que, aun siendo sumarios, pueden infundir ese miedo que hoy, con la crisis crediticia[47], puede provocar este planteamiento. Este enfoque se contrarresta con la eficacia de las medidas adoptadas durante el procedimiento "a los solos efectos" de ejecución o distribución, que, por otra parte, la jurispru-

[44] Hay que recordar que el principio de la *par condicio creditorum* en la liquidación judicial no se observa como en la ejecución singular ver nota 32.

[45] FUIANO, cit.

[46] En referencia a la actitud del legislador en las reformas procesales "*muy próximas a la esquizofrenia*", AROCA, *Proceso (civil y penal) y Garantía. El proceso como garantía de libertad y de responsabilidad*, Valencia, 2006, p. 91.

[47] Entendido en el sentido románico como la confianza en la persona a la que se le presta el dinero dándole confianza.

dencia ha matizado para dotar de estabilidad a las resoluciones que ponen fin a las tercerías e incidentes de oposición. Por otro lado, se produce la vuelta del principio de *par conditio creditorum* en la ejecución colectiva, en la que las decisiones del juez tienen plena estabilidad. Esto es así porque el procedimiento concursal fue concebido con la finalidad de liquidar la totalidad del patrimonio del deudor, satisfaciendo así a todos los titulares de créditos vencidos, por lo que los acreedores consideraron lógico y racional que la fijación de los créditos y su posicionamiento en el grado de reparto fuera decidida por una medida estable, un juzgado. A la luz de esta comparación, de la que surgen aspectos positivos y negativos de los dos sistemas, es ciertamente deseable que los legisladores italiano y español puedan extraer lo que hay de positivo en el otro sistema, integrando mutuamente sus propias debilidades. Este intercambio relacional parece estar en consonancia con la deseable realización de los proyectos europeos mencionados en la introducción, que al estar dirigidos a la más amplia armonización de los procesos, tienen como objetivo la creación de un sistema paneuropeo. «*Ciò che si oppone converge, dai discordanti bellissima armonía*»[48].

[48] ERACLITO, fr. 8, *Dell'Origine*, trad. di A. Tonelli, Milano, 1993.

BENEDETTA RINALDI FERRI[*]

ALESSANDRO STANZIANI, *LES MÉTAMORPHOSES DU TRAVAIL CONTRAINT. UNE HISTOIRE GLOBALE*, PARIS, SCIENCESPO. LES PRESSES, 2020

Is Capitalism compatible with slavery, servitude, and, to a broader extent, with forced labour? Is it true that it arose out of the cinders of a "world of coercion" and servile statuses – the so called *Ancien Régime* – preparing the stage for wage labour, formal equality and free negotiations? By addressing these issues, Alessandro Stanziani provides us with a framework to understand labour history in early capitalist regimes (18th-19th). The leading assumption of the book is that early Capitalism was somewhat comfortable with forced or compulsory labour, contrary to a traditional thesis – generally referred by Stanziani to Smith, Marx, and Weber – linking the emergence of wage labour and the generalization of labour contract to the rise of capitalist economies (pp. 7-8, 306-307). The author suggests that "Capitalism does not define itself by the advent of wage labour," but "through the coexistence of free labour and forced labour – being perfectly at ease with the latter – with multiple gradations between the two"[1] (p. 7). Such a position entails a number of historiographical consequences, the first

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[1] Translated by the author. In French: "Le capitalisme ne se définit donc pas par l'avènement du travail salarié – la privatisation des terres communes entrainant la prolétarisation des paysans, thèse commune aux libéraux et aux marxistes – mais plutôt par la coexistence du travail libre et du travail forcé – dont il s'accommode parfaitement – avec de multiples gradations entre les deux".

being, of course, a deeper understanding of the very interplay between free and unfree labour in late-modern regimes.

Stanziani frames his research in a global context, starting from a biographical-literary event, that is the birth of Joseph Conrad (1857) and his traveling life, from the Atlantic and the Indian Ocean, till the "Heart of Darkness" (Congo). As the author immediately clarifies, though, the book does not recount the history of the polish writer, "but that of labourers and servants whom he mixed with"[2] (p. 7): from the peasants of the Russian Empire to the wage labourers and the seamen who ploughed the oceans between the 18th and the 19th century.

The first chapter of the book, significantly titled *Le miroir russe* (Russian Mirror), addresses the case of Russian serfs between the second half of the 18th century and the abolition of serfdom of 1861. The author provides an exhaustive analysis of the emancipatory strategies enacted by landlords, serfs and public authorities – e.g. military conscription, which entailed a complete liberation of the enrolled soldier. The Russian dynamics are framed in a broad European perspective: it is in Russia that the Bentham brothers, the liberal Jeremy and his brother Samuel, conceived the *Panopticon*, that is the project of a prison designed to deal with the lack of discipline of some English workers which Samuel Bentham called to work on the properties of a Russian prince, Grigori Potemkine, in Kritchev. Moreover, it is through Russia that Stanziani can seize the role of labour coercion in global market dynamics. Because of the increase in wheat demand, both international and domestic, Russian landowners tried to increase their productivity with a surplus of coercion, requiring heavier performances on their serfs. The result was a consistent efficiency gain, not a loss.

With a slightly longer chronology (18th-19th century), the second chapter covers an intrinsic global category of labourers: the sailors of British Navy, enrolled through the press system, and the French *marins*, who in contrast to their English counterparts, enjoyed some welfare benefits. The growth of national fleets and maritime routes between the 18th and the 19th century enables the author to question the status of sailors

[2] From French: "Ce livre ne raconte pas l'histoire de Conrad – d'innombrables ouvrages sont disponibles sur sa vie – mais celles des travailleurs et des asservis qu'il a côtoyés".

on board, depending upon their origin, and the legal settlements applied to them. Towards the end of the 19th century, the more liberties national sailors gained, the more governments tended to displace "the exercise of coercion towards the global market of sailors"[3] (p. 96), that is colonies and foreign harbors.

The third chapter underlines the prominent role of constraint in the making of English and French labour markets. Going back chronologically, the analysis starts in England, from the *Master and Servant Acts* and the *poor laws* (14th-16th century) – the very cornerstones of labour relationships in the United Kingdom until the second half of the 19th century – ending with French legal evolution of labour regimes (18th-19th century).

These subjects are well known by historians. The novel argument of the book is their understanding in the long run and in a wider geography. Stanziani outlines that, by the end of the 19th century, improvements of working conditions in European countries had no equivalent in colonial world. Actually, they could even prompt a deterioration in the latter.

Chapters from four to seven introduce the issue. Significant attention is devoted to the French case: the Mascareignes and, for the early beginnings of the 20th century, French Equatorial Africa (AEF). By the second half of the 19th century, European countries faced the rise of abolitionist movements. However, the new conscience extended to African and Asian dominions in very ambivalent ways. In 1887 the *Code de l'Indigénat* for AEF, for instance, established penal sanctions for the breach of a labour contract by the worker and for vagrancy, a criminal notion applied to unemployment. A somewhat similar dynamic was observed in the United States, between white and black workers from the abolition of American slavery in 1865 onwards.

The sixth chapter simultaneously addresses the abolition of serfdom in Russia (1861) and that of slavery in American plantations (1865). Stanziani suggests that American abolition had a somehow paradoxical impact on the global market of cotton, and thus on labour relationships, especially amid emerging producers: Turkestan, for

[3] From French: "Le passage de la dépendance extrême, proche de l'esclavage, à la sécurité sociale se fait en déplaçant l'exercice de la coercition vers le marché global des marins".

instance, Egypt, which started to import Sub-Saharan slaves and Circassian from the Russian Empire, India – where the unabolished *Masters and Servants Acts* were applied with increasing rigour. A global framework is about to surface. "The end of serfdom in Russia and that of slavery in the United States," Stanziani concludes, "prompts a global process of transformation which is definitely to shape a fundamental asymmetry concerning rights and labour between the West on the one hand and its colonies and the USSR on the other"[4] (p. 251).

Indeed, *Les métamorphoses du travail contraint* is not a book on compulsory labour nor on its legal structures, but it focuses rather on its dynamics embracing a large sample of labour or exploitative relationships – serfdom, slavery, indenture, *engagisme*, *domesticité*, maritime work, etc. – without applying rigid distinctions between these categories. As Maria Luisa Pesante pointed out: "we should not translate the *travail contraint* of Stanziani with compulsory labour, but, as he made clear himself, with the more appropriate *constraint to work*."[5] Stanziani analyses constraint from a historical-economic perspective. While his global approach necessarily leads to some generalisations, it also encourages verification and in-depth analysis by legal historians and comparative jurists.

[4] From French: "Pour autant, après les abolitions en France et au Royaume-Uni et la dislocation des empires centraux en Europe, la fin du servage en Russie et de l'esclavage aux États-Unis déclenche un processus global de transformation qui, lui, créera une asymétrie fondamentale en matière de droits et de travail entre "l'Occident", d'une part, ses colonies et l'URSS d'autre part".

[5] Società Italiana di Storia del Lavoro: Discussioni 6 <storialavoro.it>.

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