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REGULATION ISSUES OF ALGORITHMIC ADMINISTRATIVE DECISIONS: LOOKING FOR AN ITALIAN LEGISLATIVE MODEL

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1. FOREWORD: DELIMITATION OF THE FIELD OF RESEARCH

Although the digitalization of public administrations has not been a recent issue in administrative law studies ([2]), in recent years it has offered new opportunities for the development of the traditional organizational and operational modules of public authorities.

As it is well known, the current phase of computerisation no longer concerns experimentation with different forms of expressing the will of the administration towards private individuals or the introduction of particular platforms for the exchange of data and information between public authorities ([3]).

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([2]) The importance of the subject has already been highlighted by M.S. GIANNINI, *Rapporto sui principali problemi della Amministrazione dello Stato*, in *Riv. trim. dir. pubblica*, 1982, 722 ff., who, after pointing out that such a process should not only concern the internal organisation of offices, but also the same modalities of adoption of administrative acts ("[...] information systems are no longer used by administrations for internal management purposes, but are actually used to administer, i.e. they are increasingly projected outwards"), pointed out the circumstance that the feasibility of the new paradigm of action would have required specific technical skills, difficult to find within the staff working in the single administrations. It should also be noted that the relevant problems linked to the use of computer systems in the exercise of administrative activity have also been addressed in the work of A. PREDIERI, *Gli elaboratori elettronici nell'amministrazione dello Stato,* Bologna, 1971, and G. DUNI, *L'utilizzabilità delle tecniche elettroniche nell'emanazione degli atti e nei procedimenti amministrativi. Spunti per una teoria dell'atto amministrativo emanato nella forma elettronica*, in *Riv. amm. Rep. it.* , 1978, 407 ff.

([3]) On this point, see D.U. GALETTA, J.G. CORVALAN, *Intelligenza artificiale per una pubblica amministrazione 4.0?*, in *Federalismi.it*, n. 3/2019, 2, according to which it is possible to divide the digitalization process that has affected the public sector in the Italian legal system into four phases: the initial phase, in which the public administration of the 19th century was characterised by the use of paper and typewriters within public offices; the second phase, in which the public administration began to equip itself with new technical tools (mainly computers, printers and fax machines) to carry out its institutional activities; the third phase, started at the beginning of the 21st century, in which internet, digital portals, mobile applications and social networks began to spread within the public sector,

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On the contrary, it concerns the possibility of entrusting the administrative decision-making process itself to specific software, that is computer tools which, on the basis of the *input* data and the provided calculation instructions (i.e. algorithms), are able to perform all the operations necessary to achieve a result (*output*) (⁴).

Concrete examples of the process of algorithmic transformation of public action are numerous and seem to affect the most different sectors of administrative activity (⁵).

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significantly changing the way it interacts with the outside world; the fourth phase, the so-called Administration 4.0., characterised by an advanced level of automation and interconnection of administrative activities. For a similar reconstruction of the evolutionary path of public digitalization in Italy, see also S. CIVITARESE MATTEUCCI, L. TORCHIA, *La tecnificazione dell'amministrazione,* in Id. (ed*.), La tecnificazione* , directed by L. Ferrara, D. Sorace, *A 150 anni dall'unificazione amministrativa italiana ,* IV, Firenze, 2016, 15 ff.

(⁴) Some doctrine has tried to summarise the transition to this innovative paradigm of action by recalling the conceptual distinction between electronic form act and electronic content act. On the distinction in question, see*, ex multis,* A. MASUCCI, *L'atto amministrativo informatico. Primi lineamenti di una ricostruzione*, Napoli, 1993, 13 ff., who highlighted the opportunity to make a qualitative leap in the use of computers in the public sector, and that is "to go beyond the management (however sophisticated) of data and entrust the computer with tasks before reserved for man: it is possible to move from the computer-archive phase to the computer-official phase"; A. USAI, *Le prospettive di automazione delle decisioni amministrative in un sistema di teleamministrazione*, in *Dir. inf.*, 1993, 164 ff.; D. MARONGIU, *L'attività amministrativa automatizzata*, Rimini, 2005, 17 ff.; A.G. OROFINO, *La patologia dell'atto amministrativo elettronico: sindacato giurisdizionale e strumenti di tutela*, in *Foro amm.*, 2002, 2256.

(⁵) On the conceptual and operational revolution brought about by the spread of algorithmic reasoning, both in the public and private sectors, see J.M. BALKIN, *The Three Laws of Robotics in the Age of Big Data*, in *Ohio State Law Journal*, 78, 2017, 1219 ff.; S. ZUBOFF, *The Age of the Surveillance Capitalism. The Fight for a Human Future at the New Frontier of Power*, London, 2019; M.C. CAVALLARO, G. SMORTO, *Decisione pubblica e responsabilità dell'amministrazione nella società dell'algoritmo*, in *Federalismi.it.,* n. 16/2019, 2, who underline that in the current social context "algorithms include or exclude, establish hierarchies, decide rewards and punishments. And this happens in both the private

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In this regard, all the cases in which public administration decides to use a telematic procedure to interface with the citizen, asking to insert the data necessary for the adoption of the administrative measure, can be seen. These hypothesis seem to be an increasingly frequent occurrence in the case of public competitions of various type, of the submission of applications for public funding or incentives, of participation in tenders and of organisation of mobility procedures for teaching staff ([6]).

More recently, the use of algorithmic formulas has also shown its potential in the health field, being one of the main tools implemented at government level to coordinate the national management of the Covid-19 epidemiological emergency ([7]).

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and the public sector, from commerce to employment, from health to criminal justice: they preside over voting systems and the provision of mortgages, decide the issuing of credit cards, the dismissal of a worker and even personal freedom"; S. RODOTÀ, *Il mondo nella rete*, *Quali i diritti, quali i vincoli,* Roma-Bari, 2014, 37, according to whom "important or only apparently minor decisions, choices relevant to the economy and to daily life itself, are increasingly entrusted to automated procedures, to software developed thanks to mathematical models which, by reducing or eliminating human intervention altogether, should make many operations faster and more reliable, reducing their risks".

([6]) For an analysis of these hypothesis in case law, see, *ex multis,* TRGA Trento, sez. I, 15 April 2015, n. 149, in *www.giustizia-amministrativa.it*, with reference to the issuance of authorizations for the opening of pharmacies; Cons. Stato, sez. VI, 7 November 2017, n. 5136, in *www.giustizia-amministrativa.it,* with reference to the submission of applications for public funding; TAR Lazio, Roma, sez. III-bis, 22 March 2017, n. 3769, in *www.giustizia-amministrativa.it*, with reference to the automated performance of a mobility procedure for teaching staff (on which we will say more below); TAR Lazio, Roma, sez. III, 3 July 2018, n. 7368, in *www.giustizia-amministrativa.it*, with reference to the automated exclusion from participation in a public competition; and, most recently, TAR Lazio, Roma, sez. III-bis, 30 June 2020, n. 7370, in *www.giustizia-amministrativa.it*, with reference to the automated performance of the correction of the selective tests of the competition for school managers.

([7]) In this regard, see the automatic mechanism for determining the different levels of alert for the spread of viral contagion within the national territory, which operates on the

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This seems to demonstrate the importance of bringing back to the centre of the debate not only the controversial relationship between political choices and (knowledge-based) technical choices, but also between decisions that are the result of human intelligence and decisions entrusted to artificial intelligence systems ([8]).

However, considering the growing use of automated decision-making process in the public sector, it seems to be a greater need to define a clear and organic regulatory framework for this phenomenon within Italian legal system.

In particular, the above-mentioned regulatory needs seem to relate to two main aspects.

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basis of 21 indicators defined by the Ministry of Health under art. 2 of the DPCM of 3 November 2020.

([8]) For an all-encompassing definition of the different computer systems related to artificial intelligence, cf. the recent study by the European Commission's High Level Expert Group "*A definition of AI: Main capabilities and scientific disciplines*, *High-Level Expert Group on Artificial Intelligence"* of 8 April 2019, in *www.ec.europa.eu*, according to which "Artificial intelligence (AI) systems are software (and possibly also hardware) systems 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)".

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The first one is related to the ways of collection, storage and supervision of data and information involved in automated decision-making process ([9]).

A issue affected by the difficulties linked to the failure to modernise the technological and organisational resources available to public bodies ([10]), which have not been solved by the recent introduction of specific databases in certain sectors of administrative activity ([11]).

The second aspect concerns the functioning and articulation modes of the algorithmic administrative procedure, the regulation of which requires, as it will be discussed in detail shortly, the identification of a balance between the different legal interests concerned in the automated exercise of public action.

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([9]) As pointed out by D.U. GALETTA, *Algoritmi, procedimento amministrativo e garanzie: brevi riflessioni, anche alla luce degli ultimi arresti giurisprudenziali in materia*, in *Riv. it. dir. pubbl. com.*, 2020, 501 ff., for the good functioning of the automated processes it is essential to implement an adequate governance of the data available to the public administrations, since the latter are required to adopt their decisions on the basis of the data and information collected in the preliminary phase of the administrative procedure.

([10]) On the dramatic digital backwardness of Italy compared to the European average, see the DESI report (Digital Economy and Society Index) drawn up by the Commission for the year 2019, in *www.ec.europa.eu/digital-single-market/en/desi*, which sees Italy in third place for the implementation of the European Digital Agenda. On this point, recently, see E. CARLONI, *Algoritmi su carta: politiche di digitalizzazione e trasformazione digitale delle amministrazioni*, in *Dir. pubbl.*, n. 2/2019, 3632 ff.

([11]) One of the most obvious examples in this sense is represented by the failure to set up the National Database of Economic Operators referred to in art. 81 of Legislative Decree n. 50 of 18 April 2016. More generally, on the issues related to data management by public administrations, see, for all, the monographic work by G. CARULLO, *Gestione, fruizione e diffusione dei dati dell'amministrazione digitale e funzione amministrativa*, Torino, 2017.

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The aim of this paper is to highlight the most relevant problematic points that should be taken into consideration by the legislator in order to introduce a regulation of the institution of automated administrative decisions, limiting the purpose of the investigation to the use of the most straightforward automation systems ([12]).

In particular, after having briefly recalled the current legal framework on the digitalization of administrative acts and the main doctrinal theories on this subject, the relevant positions expressed in recent administrative case law will be examined.

This analysis will make it possible to emphasize, in particular, the absence of a precise regulation of algorithmic decision-making process and the consequent urgency of guaranteeing a minimum protection for the rights of citizens affected by public action.

With the intent to discuss possible regulatory measures, the main legislative and interpretative solutions developed in this regard in the French legal system will then be recalled from a comparative law perspective.

At the end of the survey, some conclusive remarks will be made regarding the principal needs to regulate the phenomenon within the Italian legal system.

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([12]) The aforementioned delimitation of the scope of the investigation is justified by the fact that the recent revaluation of the phenomenon of decision-making automation has focused precisely on deterministic or deductive automated processes, while forms of automation based on the use of more advanced artificial intelligence tools are still far from receiving a judgement of full admissibility in the Italian legal system. This, however, does not eliminate the circumstance that the main problematic aspects characterising the use of the simplest automated mechanisms can also be found in relation to the more sophisticated and technologically advanced ones.

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2. THE MYTH OF DIGITALIZATION AND THE MEASURES OF THE ITALIAN LEGISLATOR: MUCH ADO ABOUT NOTHING?

In attempt to recall the current state of the legal debate on automated administrative decisions, it seems appropriate to analyse, first of all, the legislative provisions which, directly or indirectly, refer to the phenomenon in question ([13]).

In this regard, it should be noted that one of the first regulatory measures related to automated decision-making was Legislative Decree no. 39 of 12 February 1993, entitled *"Norme in materia di sistemi informativi automatizzati delle amministrazioni pubbliche"*, which defined, for the first time, the general objectives and operational criteria of the process of computerising of public administration.

Specifically, the mentioned decree established the principle according to which "administrative acts adopted by all public administrations are normally prepared through automated information systems" ([14]).

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([13]) For an analysis of the main regulatory measures on *e-Government* in Italy, see G. PESCE, *Digital first. Amministrazione digitale: genesi, sviluppi, prospettive*, Napoli, 2018, 39 ff., as well as G. DUNI, *Amministrazione digitale. Il diritto amministrativo nell'evoluzione,* Milano, 2008, 14 ff., who points out that the first references to digitalization can be found in sectoral provisions, such as in art. 15-quinquies of Law no. 38 of 28 February 1990, concerning the possibility of automatic issuance of certificates.

([14]) Indeed, although the rule in question has received little application (on this point, see G. DUNI, *Amministrazione digitale*, cit., 16, who underlines how the only application of art. 3 was the start of the reform of the computerised payment mandates by the State Administrations under Presidential Decree no. 367 of 20 April 1994), it is necessary to underline that the diffusion of the so-called automated administrative acts had also been hoped by a part of jurisprudence, which has highlighted how "the use of computerised procedures and electronic machines in the performance of administrative activities is not only legitimate, but is now permitted and regulated by the legislation in force, also in view of the greater objectivity and impartiality that the machine can ensure, especially in the performance

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According to the perspective adopted by the legislator, in fact, the use of such instruments in the public sector would have contributed to: the improvement of the public services; the achievement of a higher level of transparency in administrative action; the strengthening of the cognitive supports used until then to take decisions; the containment of costs incurred by public structures.

These objectives would be achieved, in particular, following a process of integration and interconnection between the various ICT systems of the public administrations, which would be linked, in turn, to a national telematic plateform set up in accordance with the standards defined also at European level.

However, in spite of the appreciable effort to lay down a first organic discipline of digital administration ([15]), the intention of the new legislation does not seem to have been actually achieved. This is justified because of the relevant sectorial measures adopted in the following years, such as Law no. 59 of 15 March 1997 (the so-called Bassanini I), which

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of repetitive operations, since it is not subject to the loss of attention found in man after a certain time of application to the same task". In these terms, Cons. Stato, sez. VI, 24 October 1994, n. 1561, in *Foro amm.*, 1994, I, 2438; Cons. Stato, sez. VI, 7 February 1995, n. 152, in *Cons. Stato*, 1995, I, 242.

([15]) On this point, it should be pointed out that, prior to the adoption of the aforementioned legislation, the legislator had already intervened in the field of automation through specific and sectorial provisions. See, in this regard, art. 15-quinquies, paragraph 1, of Law Decree no. 415 of 28 December 1989, according to which: "Municipal administrations may make use of automated systems for the direct issue to the applicant of certificates of registry and civil status, guaranteeing in any case the payment of any tax or duty on the acts issued. To this end, it is permitted to replace the handwritten signature of the registry or civil status officer with the graphic signature of the mayor or the delegated councillor, affixed at the time of the automatic issue of the certificate. Certificates issued in this way are valid for all legal purposes if their originality is guaranteed by systems that do not allow photocopying for identical copies, such as the use of watermarked sheets or embossed stamps. The system used must be approved by decree of the Minister of the Interior in agreement with the Minister of Justice".

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conferred full legal validity to all acts, data and documents formed by the public administration and by private individuals using ICTs or telematic instruments (art. 15), directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on electronic signatures, and the well-known unique text of the legislative and regulatory provisions on the subject of administrative documentation (d.P.R. no. 445 of 28 December 2000), which conferred full legal validity on all acts, data and documents formed by the public administration and by private individuals using ICTs or telematic instruments (art. 15), which has regulated in detail the "electronic documents" drawn up by public administrations (art. 8 ff.).

In an attempt to achieve a more effective coordination and reorganisation of the previous provisions, the Italian legislator adopted the Digital Administration Code (Legislative Decree no. 82 of 7 March 2005, henceforth simply CAD) ([16]), which regulates central institutions and mechanisms for achieving a more advanced level of public computerisation ([17]).

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([16]) Among the first comments on the regulatory text, adopted in implementation of the Law no. 229/2003, see, *ex multis,* E. CARLONI (ed.), *Codice dell'amministrazione digitale,* Rimini, 2005; S. CACACE, *Codice dell'amministrazione digitale. Finalità e ambito di applicazione*, in *www.giustizia-amministrativa.it*, 2006; M. PIETRANGELO, *La società dell'informazione tra realtà e norma*, Milano, 2007, 86 ff., who points out how the Code, although significantly innovating the previous discipline, failed to give an effective impetus to the process of computerisation, due to the presence of a significant number of programmatic and principled statements, not accompanied by as many preceptive norms, the absence of concrete measures against the *digital divide* and insufficient provisions to link the powers of regional and local authorities.

([17]) On the measures introduced by the legislator to improve the organisation and management of the rich information heritage in public hands, see also B. PONTI, *Il patrimonio informativo pubblico come risorsa: i limiti del regime italiano di riutilizzo dei dati delle pubbliche amministrazioni,* in *Dir. pubbl.,* n. 3/2007, 991 ff.

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The aforementioned legislation has been the subject of numerous reforms, including, at the very least, the Legislative Decree no. 179 of 26 August 2016, implementing art. 1 of Law no. 124 of 7 August 2015 (the so-called Madia Reform) ([18]).

In particular, this legislative act tried to give a significant boost to the implementation of national *e-Government* strategies, pursuing the objective of "guaranteeing citizens and businesses, including through the use of information and communication technologies, the right to access all data, documents and services of interest to them in digital form" and of "guaranteeing simplified access to personal services, reducing the need for physical access to public offices" (art. 1).

To this end, it was introduced, among the directive legislative criteria, the principle of '*digital first*', as a new parameter in the light of which to redefine and simplify the traditional methods of managing front office procedures and back office procedures ([19]).

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([18]) On the main innovations introduced by the new legislation on digitalization, see B. CAROTTI, *L'amministrazione digitale: le sfide culturali e politiche del nuovo Codice*, in *Giorn. dir. amm.* n. 1/2017, 7 ff., who notes how, beyond the individual aspects of content, the introduced legal changes convey a basic message, by virtue of which the need for efficiency in public administration passes through the overall review of the means the latter uses; M.L. MADDALENA, *La digitalizzazione della vita dell'amministrazione e del processo*, in *Foro amm*, n. 10/2016, 2555, who points out that the reform had three basic objectives: to effectively implement the Italian Digital Agenda of 2012; to define the rights of the so-called digital citizenship; to coordinate the previous text of the CAD with the EU Regulation n. 910/2014 of 23 July 2014 on digital identity (so-called eIDAS regulation, *electronic Identification Authentication and Signature*). More generally, for an analysis of the novelties introduced by the Madia law, see, for all, B.G. MATTARELLA, *Il contesto e gli obiettivi della riforma*, in *Giorn. dir. amm*., n. 5/2015, 621ff.

([19]) See Article 1, par. 1, lett. b) of the aforementioned Law no. 124/2015, according to which it is necessary to: "redefine and simplify administrative procedures, in relation to the need for speed, time certainty and transparency towards citizens and businesses, through

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As it was pointed out, the reform in question aimed to launch a new phase in public digitalization, in which the aim is to promote the standardisation of proceedings, give priority to electronic communication and facilitate the search and exchange of information between individual administrations ([20]).

However, even then the legislator did not provide any regulatory indication on the phenomenon of automated decisions, leaving a clear gap in the regulation of this point in the Italian legal system ([21]).

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a discipline based on their digitalization and for the full implementation of the "digital first" principle, as well as the organisation and internal procedures of each administration".

([20]) In these terms, cfr. F. MARTINES, *La digitalizzazione della pubblica amministrazione*, in *Medialaws*, n. 2/2018, 7; M.L. MADDALENA, *op.ult.cit.,* 2561 ff. On the digitalization of administrative activities, see*, ex multis*, D. MARONGIU, *Il governo dell'informatica pubblica*, Napoli, 2007, 35 , who agrees that the public computerisation process should be by procedures and not by subjects, as this is the only way to achieve an effective 'application cooperation', i.e. the possibility for administrations to interact remotely with the same software that allows them to carry out common tasks.

([21]) See F. CARDARELLI, *Amministrazione digitale, trasparenza e principio di legalità*, in *Dir. inf.*, 2015, 227 ff.; S. CIVITARESE MATTEUCCI, *Umano troppo umano. Decisioni amministrative automatizzate e principio di legalità*, in *Dir. pubbl.*, n. 1/2019, 10 ff.; E. CARLONI, *I principi della legalità algoritmica. Le decisioni automatizzate di fronte al giudice amministrativo*, in *Dir. amm.*, n. 2/2020, 278, who points out that the current legislation contained in the CAD deals only with some aspects of the *e-Government* phenomenon, focusing on the reengineering of processes and procedures only from a formal and/or organisational point of view. Thus, currently "the digital administration Code does not allow the issue of the legitimacy (and conditions) of algorithmic decision-making to be resolved, ending up by placing itself in the background with respect to the most topical challenges". This is a not surprising circumstance, also in view of the fact that, as it is well known, algorithms constitute the essential elements of any computerised procedure, from the simplest to the most advanced. This led part of the doctrine to question the real objectives pursued by the digital transformation of the public sector, sometimes described as a "false

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A different conclusion does not seem to be reached when analysing the current provisions on the use of ICTs in the performance of administrative activities.

In this regard, it can be considered the art. 12 CAD, according to which public administrations use information and communication technologies in their internal relations, in those with other public administrations and with private parties, "in order to achieve the objectives of efficiency, effectiveness, cost-effectiveness, impartiality, transparency, simplification and participation"; in the same way, it can be taken into consideration the art. 41 CAD, according to which "public administrations manage administrative procedures using information and communication technologies".

These arrangements seem to emphasize the instrumental function of digital tools with respect to the pursuit of the fundamental principles of public action, without indicating, however, the operational modes through which ICTs can concretely contribute to the achievement of such objectives [22].

Art. 3-bis of Law no. 241 of 7 August 1990, under the heading "*Uso della telematica*", is equally generic, which states, in the original version introduced by art. 3 of Law no. 15 of 11 February 2005, that: "In order to achieve greater efficiency in their

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digitalization that has simply transferred sheets of paper [...] into computers", as noted by F. CAIO, *Lo Stato del digitale*, Padova, 2014, 7.

[22] On the subject, see G. AVANZINI, *Decisioni amministrative e algoritmi informatici*, Napoli, 2019, 82, who recalls that the same opinion rendered by the Council of State on the draft of Legislative Decree no. 82/2005 (opinion 7 February 2005, n. 11995) stressed the "need to accompany the statements of principle with directly preceptive rules, which do not postpone the implementation of such principles exclusively to the will (changeable by definition) to implement them by the individual administrations". On this point, most recently, see also D.U. GALETTA, *Algoritmi, procedimento amministrativo e garanzie,* cit., 506.

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activities, public administrations shall encourage the use of telematics, in internal relations, between the various administrations and between the latter and private individuals".

In fact, although it is now accepted that the term telematics should be understood in a not strictly literal sense, and is therefore referable to the plurality of technological tools that fall within the ICTs sector ([23]), the aforementioned provision is also lacking of any reference to the operational measures and instrumental resources necessary for its implementation ([24]).

Therefore, as it has been argued, the provision must be given a merely programmatic value, comparable to that of a declaration of intent and principles ([25]).

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([23]) Thus, F. COSTANTINO, *L'uso della telematica nella pubblica amministrazione*, in A. ROMANO (ed.), *L'azione amministrativa. Saggi sul procedimento amministrativo*, Torino, 2016, 243; F. CARDARELLI, *L'uso della telematica*, in M.A. SANDULLI (ed.), *Codice dell'azione amministrativa* , Milano, 2017, 510; S. DETTORI, *Articolo 3-bis*, in N. PAOLANTONIO, A. POLICE, A. ZITO (eds.), *La pubblica amministrazione e la sua azione*, Torino, 2005, 182. On the literal meaning of the term "telematics", see V. FROSINI, *Telematica e informatica giuridica*, in *Enc. dir.*, XLIV, Milano, 1992, who recalls that the term derives from the semantic contraction between the terms "telecommunications" and "informatics", and commonly indicates the technological method of transmitting thought at a distance through the use of a computerised language that conveys automated information.

([24]) The remarks relating to the original provision of art. 3 seem to remain relevant also in relation to the new wording of the provision, amended by art. 12, par. 1, letter b) of the Decree Law no. 76 of 16 July 2020, on the basis of which the words "encourage the use of telematics" have been replaced by the words "act through computer and telematic tools".

([25]) In this sense, F. CARDARELLI, *op.ult.cit.* 511; S. DETTORI, *op.ult.cit.,* 181, according to whom the rule in question, in addition to having a programmatic value, would also be redundant, since the principle established by the same was already perfectly derivable from the provision of art. 97 of the Italian Constitution, as a corollary of the principle of good performance. *Contra*, F. COSTANTINO, *op.ult.cit.*, 245, according to whom the above argument would fail to prove the low practical value of the provision when, reasoning in these terms, the criticism should be extended to all the existing legislation on digitalization. If it is true, in fact, that the technological transformation of the public sector has been slowed

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In the light of the above considerations it can be affirmed that there is no specific rule concerning the use of automated systems in the context of administrative procedures conducted by public bodies ([26]).

In the absence of any regulation of the phenomenon, numerous issues seem indeed to arise with reference to the compatibility of the decision-making mechanisms in question with the principle of legality of the administrative action.

3. TRADITIONAL DOCTRINAL APPROACH: FROM ADMINISTRATIVE SELF-RESTRAINT TO AUTOMATED DECISION-MAKING PROCESS

The lack of a legislative framework on the automation of public decisions has led the doctrine that first examined the issue to search the possibility of finding the theoretical basis of the phenomenon using the existing legal categories.

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down due to the emergence of criticalities of various kinds, this does not change the circumstance that the regulatory provisions on the subject are placed in terms of obligation for the public administration, to which is added the fact that Italian legislator has provided for sanction mechanisms for their non-compliance by the addressees (see, in this sense, art. 12, par. 1-ter, CAD).

([26]) In this regard, it should be noted that while, on the one hand, there are regulatory provisions which refer, with regard to certain specific procedures, to hypotheses of automated data processing (such as, for example, art. 56 of Legislative Decree no. 50 of 18 April 2016, relating to the institution of "Electronic Procurement"), on the other hand, it does not seem possible to derive from such limited measures a more general legal framework of the institution of automated decision-making act; and this for two fundamental orders of reasons: on the one hand, due to the sectorial nature of the use of the aforementioned computerised processing, the conditions of admissibility of which change depending on the administrative procedure taken into consideration; on the other hand, due to the total absence of legislative references to the issues of transparency and controllability of the results of the processing, tha value of which is highlighted by recent evolution of jurisprudence on the matter (on these profiles, see below).

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As it is well known, one of the main problematic aspects addressed by doctrine has concerned the issue of the transposition of legal language into computer language, also known as the phenomenon of 'normalisation' ([27]).

In this regard it was pointed out that achieving the normalisation of a legal text implies that the latter "can be translated, according to the rules of analysis, into a formal language, in which each sign has one and only one function" ([28]), so that it can be understood by the software and easily replicated in the programming phase by technicians.

Starting from the constraints of technical nature that characterize the programming phase, two fundamental conditions have been outlined for the success of the automated decision-making process: *a*) the circumstance that the law to be applied contains precise and determined legal concepts, to which it is possible to attribute exclusively a single meaning or a single interpretation among those abstractly obtainable from the legal text in the concrete case ([29]); *b*) the possibility of tracing the logical reasoning used to adopt the final decision to

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([27]) As it is well known, the subject was first addressed by foreign literature (on this point, see L.E. ALLEN, *Una guida per redattori giuridici di tesi normalizzati*, in *Inf. e dir.*, 1979, 61 ff.). With reference to the Italian doctrine see*, ex multis*, L. NIVARRA, *Come normalizzare il linguaggio legale*, in *Contratti e impresa. Dialoghi con la giurisprudenza*, Padova, 1987, 262 ff.; A. MASUCCI, *L'atto amministrativo informatico*, cit., 19 ff.; D. MARONGIU, *L'attività amministrativa automatizzata*, cit., 30 ff.; F. SAITTA, *Le patologie dell'atto amministrativo elettronico e il sindacato del giudice amministrativo*, in *Riv. dir. amm. el.*, 2003, 17 ff.; P. OTRANTO, *Decisione amministrativa e digitalizzazione della p.a.*, in *Federalismi.it,* n. 2/2018, 17 ff.; S. VACCARI, *Note minime in tema di Intelligenza artificiale e decisioni amministrative*, in *Giust. amm.*, 2019, 3-4.

([28]) A. MASUCCI, *op.ult.cit.*, 19.

([29]) In this sense, consider legal concepts referring to value judgments, which require an assessment by the official in relation to the concrete case examined. Examples include the concepts of 'uncommon beauty', 'urgency' or 'public utility'. More recently, see D. MARONGIU, *L'attività amministrativa automatizzata,* cit., 53 ff.; P. OTRANTO, *Decisione*

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the logical scheme of conditional judgement, which can be summarised with the locution "*If ... then"* ([30]).

On the other hand, where the legal text contains imprecise and indeterminate notions or concepts, such as to make it difficult to predetermine the meanings related to them in practice, it would not be possible to define "valid criteria for establishing whether a given situation is subsumed under a given rule or whether a given fact falls within a given concept".

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amministrativa e digitalizzazione della p.a., cit., 18 ff., who stresses how the formulation of regulatory acts can be an obstacle to automation.

([30]) This is, therefore, the possibility of identifying within a legal rule a relationship of conditionality between its own parts, in such a way that the occurrence of all the conditions required by the rule is linked to the occurrence of certain legal consequences (on this point, see L. NIVARRA, *Come normalizzare il linguaggio legale*, cit., 262 ff.). It is worth noting that this approach has deeply influenced the subsequent doctrinal debate on the subject of automation, as underlined by CARIDI, *Informatica giuridica e procedimenti amministrativi*, Milano, 1983, 49 ff.; F. SAITTA, *Le patologie dell'atto amministrativo elettronico e il sindacato del giudice amministrativo*, cit., 18; G. SARTOR, *L'informatica giuridica e le tecnologie dell'informazione*, Torino, 2016, 292; L. VIOLA, *L'intelligenza artificiale nel procedimento e nel processo amministrativo: lo stato dell'arte*, in *Federalismi.it*, n. 21/2018, 7. Of course, these are models based on computer programs that are structurally very simple and that use linear or deterministic algorithms, which do not develop an autonomous reasoning compared to that indicated in the programming code, as it happens, instead, for the most advanced artificial intelligence technologies. It should be noted, in this regard, that according to A. MASUCCI, *op.ult.cit.,* 25, it would not be possible to overcome the difficulties of formalizing indeterminate legal concepts, both for the alleged logic incompatibility of programming with the provision of a series of alternative interpretations of the same legal concept, and for reasons related to the economic cost of such articulated programming (and of the consequent updating of the software). However, as it is easy to understand, the two outlined difficulties would be excessive today, given the considerable technological evolution that has taken place in recent years.

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This circumstance would make it impossible to replicate the content of the relevant rule in the concrete case in specific commands capable of guiding the operations of the computer program ([31]).

The aforementioned conceptual approach has indeed had a significant impact on following reflections in the field of automated administrative decisions.

In particular, in doctrine there has been over time a large adhesion to the idea that the adoption of binding administrative acts was fully compatible with the logic reasoning used by the computer and reproducible from a technical point of view ([32]).

In fact, if in presence of a binding administrative power the decision-making process followed by the public administration takes the form of an assessment of presuppositions and requirements laid down by law ([33]), it has been observed that this form of exercising

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([31]) In such hypotheses, moreover, part of the doctrine proposed the implementation of a partial automation, in which the software would be entrusted with the performance of part of the investigation (i.e., the verification of requirements and criteria of unambiguous meaning), and the remaining activities would be left to the individual official. Thus, G. CARIDI, *op.ult.cit.,* 100 ff., who proposed the implementation of a "segmented" automation of the administrative procedure, according to which some phases follow an automatic course, while others are carried out in a traditional way, i.e. under the exclusive human control.

([32]) As pointed out by A. USAI, *Le prospettive di automazione delle decisioni amministrative in un sistema di teleamministrazione*, cit., 165, all binding administrative activity can be technically automated: from payroll accounting to the issuing of certificates, notices, and warnings. However, the implementation of this measure encounters some important obstacles, such as the preparation of suitable software and the verification of the legitimacy of the procedures.

([33]) These are the terms of the well-known reflections of E. CAPACCIOLI, *Disciplina del commercio e problemi del processo amministrativo*, in Id. (ed.), *Diritto e processo,* Padova, 1978, 310 ff., according to which the process of adopting a binding act would be reconduct to the scheme "norm-fact-effect", while that relating to the discretionary act would be framed in the scheme "norm-power-effect". Following this approach, binding acts, since

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administrative power can well be reduced to the conditional logical judgment ("*If... then*") typical of the simplest software.

On the contrary, numerous doubts have been raised regarding the admissibility of the automation process with respect to the performance of administrative activities of discretionary nature ([34]).

It has been argued, in fact, that in such a case the automatic adoption of the administrative act would have been possible only in the event that the legal text to be applied could be traced back to the above-mentioned logical scheme, i.e. when the decisions that could be adopted by the public administrations in relation to a given procedure were limited and, therefore, predetermined by the proceeding authority (in this regard, it has been talked about "acts of low discretion").

As a consequence, it has been stated that it is not possible to entrust to a computer the adoption of acts of a broadly discretionary nature, which require, as is well known, a careful assessment of the various relevant legal interests and a choice of the way in which to pursue public interest in practice ([35]).

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they do not express any choice by the administration, merely constitute the application of the legal rules to the specific case. Indeed, the debate in question must now be considered outdated in the light of the most recent doctrinal orientations, according to which, even if the content of the binding measure is precisely defined by the law, the exercise of a power by public administration is in any event necessary for the production of legal effects. On this point, for all, see F.G. SCOCA, *Diritto amministrativo,* Torino, 2019, 260 ff.

([34]) Against the idea of automation of discretionary administrative activity, see A. MASUCCI, *op.ult.cit,* 31 ff.; G. CARIDI, *op.ult.cit.,* 145 ff.; A. USAI, *op.ult.cit.,* 181 ff. On the contrary, U. FANTIGROSSI, *Automazione e pubblica amministrazione*, Bologna, 1993, 97 ff.; D. MARONGIU, *L'attività amministrativa automatizzata*, cit., 62 ff.

([35]) See, in particular, the reflections of A. MASUCCI, *op.ult.cit.*, 33, according to whom "if the essence of discretionary power consists in ensuring that the authority, in

Decisions that cannot be made in a stage prior to the conduct of the individual administrative proceeding.

The awareness of the above-mentioned technical limitations has, therefore, led the most recent doctrine to identify the theoretical basis of the institution of the automated administrative decisions in the power of self-organisation and of self-restraint incumbent on every administration in the exercise of its public functions.

On this point, it has been noted that "every subjective figure to which an organisation belongs, indeed, boasts a power of self-regulation of the powers it holds. It can adopt preceptive provisions to regulate the exercise of its powers or, even better, it can provide - with reference to the specific objectives to be achieved - a regulation, in terms of action regulation, of the exercise of the administrative powers belonging to it" [36].

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pursuing the public interest, can, from time to time, for each specific concrete case, identify the solution that takes into account all the possible interests (public and private) inherent in a concrete case and all the interrelationships that are established between these interests, among the many solutions equally admitted by the rule (which confers discretionary power), then the purposes underlying discretionary power are incompatible with the rigid predetermination of the decision, typical of the logic of computer programming". On the subject of administrative discretion, see M.S. GIANNINI, *Il potere discrezionale della pubblica amministrazione*, Milan, 1939, 78 ff.

[36] In these terms, A. MASUCCI, *op.ult.cit.,* 53 ff., according to which the exercise of such power is in compliance with the requirements of impartiality and good performance as set forth in art. 97 of the Italian Constitution, since it would allow the public authorities to achieve greater uniformity in the application of the law and in their own actions. On the concept of self-organising power of the public administration, see M. NIGRO, *Studi sulla funzione organizzatrice della pubblica amministrazione*, Milano, 1966; A. ROMANO, voce *Autonomia nel diritto pubblico*, in *Dig. disc. pubbl.,* II, 1987, 34 ff.; P. CERBO, *Il potere di organizzazione della pubblica amministrazione fra legalità e autonomia*, in *Jus*, n. 1/2008, 228 ff.

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By virtue of its organisational capacity, in fact, the public authority is in the position to define, in a general and preventive manner, rules of conduct which it will observe in the future in the exercise of its functions. Rules which may be considered "an imperative addressed by the authority to itself".

In other words, if it is recognised that each organisation has the power to predetermine its action by setting criteria and parameters that will bind the process of adopting its decisions, it is necessary to admit, in the same way, public administration's ability to plan its decision-making choices also through the use of appropriate ICT formulas [37].

In order to reach this objective, public bodies have to foresee all the possible choices that could be adopted at the end of the individual administrative procedure.

A mechanism that, in theory, could also be applied when the power concretely exercised by the public administration has discretionary nature, at least in the hypotheses in which it can be based on objective criteria of judgement translated into computer instructions [38].

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[37] On the phenomenon of the so-called predetermination of administrative action, see F. BASSI, *La norma interna. Lineamenti di una teorica*, Milano, 1963; P.M. VIPIANA, *L'autolimite della pubblica amministrazione*, Milano, 1990; A. POLICE, *La predeterminazione delle decisioni amministrative*, Napoli, 1997; as well as, recently, R. VILLATA, M. RAMAJOLI, *Il provvedimento amministrativo*, Torino, 2017, 182 ff.

[38] In other words, in such hypotheses, it occurs what was previously defined as the "anticipated exercise of administrative action". With regard to the relationship between automated decision-making process and predetermination of administrative action, it has been observed (F. SAITTA, *Le patologie dell'atto amministrativo elettronico e il sindacato del giudice amministrativo*, cit., 18) that even the discretionary aspects of administrative activity are always reducible to rational logical processes, to the extent that even discretionary activity must be carried out in accordance with certain principles and criteria. Accordingly, through the use of the institution of self-restraint, aimed at determining in advance, at the time of the preparation of the programme, the concrete ways in which discretionary powers

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While that above-mentioned may be considered the traditional approach to the issue of automated decisions, it must be pointed out that some of the recent doctrine has raised various doubts towards the sustainability of such an interpretative theory ([39]).

In this respect, it has been argued that the use of technological tools in administrative proceedings can only be justified by reference to the concept of organisational autonomy if the technology used affects the external form of the public decision.

On the contrary, if a software is used for processing the very content of administrative decisions, it would not be possible to take advantage of to the existing legal provisions on public digitalization or to the theory of the self-restraint power.

In particular, these objections seem to be based on two main arguments.

Firstly, it was emphasized that the decision to adopt administrative acts through algorithmic formulas cannot be considered a choice of purely internal or organisational relevance.

Such an operation would, in fact, require a specific authorisation rule allowing the public official in charge of the procedure to delegate the process of taking the administrative decision to a computer program ([40]).

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are to be exercised in the future, it would be possible to process automatically even certain administrative acts of a discretionary nature, representing the computer programme managed by the official "a simple tool to assist in the pursuit of the objective which the official has set himself".

([39]) See S. CIVITARESE MATTEUCCI, *Umano troppo umano*, cit., 10 ff.; G. AVANZINI, *Decisioni amministrative e algoritmi informatici*, cit., 79 ff.; R. CAVALLO PERIN, *Ragionando come se la digitalizzazione fosse data*, in *Dir. amm.*, n. 2/2020, 305 ff.

([40]) On this point, it has been observed that the choice of entrusting a computer programme with the issuance of an administrative measure is often the product of a bundle

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In the absence of such a provision, therefore, it has been highlighted to continue to guarantee, within the Italian legal system, the respect for the so-called "anthropocentric principle", by virtue of which "the conferral of decision-making power on a certain apparatus implies that it refers to a human intentional act, unless otherwise established" (⁴¹).

Further arguments in favour of the introduction of a specific legislative basis to legitimize the use of automated administrative decisions have also been identified by the analysis of supranational legislation (⁴²).

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of decisions coming from several subjects and matured at different times. Thus, M. D'ANGELOSANTE, *La consistenza del modello dell'amministrazione invisibile nell'età della codificazione*, in S. CIVITARESE MATTEUCCI, L. TORCHIA (eds.), *La tecnificazione,* cit., 162.

(⁴¹) Thus, S. CIVITARESE MATTEUCCI, *op.ult.cit.,* 22. According to the author, this principle could be interpreted by analysing some provisions of Law no. 241/90; for instance, those relating to the person in charge of the procedure, who can only be represented by a natural person, because of the specific tasks entrusted to him by the law (art. 6). With regard to the importance of the institution in question, as a subject able to offer citizens an essential point of reference in the performance of the procedure, see*, ex multis,* G. BERTI, *La responsabilità pubblica,* Padova, 1994, 305, who described the figure in terms of an "official designated to give physical semblance to the administrative inquiry". On this point, see also R. CAVALLO PERIN, *Ragionando come se la digitalizzazione fosse data*, cit., 317-318, according to whom the introduction of the automated administrative act does not bring any derogation to the principle according to which the powers of the administrative authority are subject to the principle of legality, but requires, on the contrary, that it is possible to invoke as a legal basis a specific and reasonable provision of the EU or of the Member State to which the data controller is subject.

(⁴²) On this point, see also what is observed in the White Paper on Artificial Intelligence of the European Commission of 19 February 2020, COM 2020/65, 11, in *www.ec.europa.eu,* in which it is clarified that the definition of a regulatory framework, also at European level, on the possibilities of using artificial intelligence "would strengthen consumer and business confidence in AI and would therefore accelerate the adoption of the technology". On this point, see S. DEL GATTO, *Una regolazione europea dell'AI come veicolo*

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As it is well known, an express limitation to the possibility of taking automated decisions is contained within art. 22 of EU Regulation no. 2016/679 ([43]), according to which "the data subject shall have the right not to be subject to a decision which is based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her".

The paragraph 2 of the recalled article provides that the prohibition in question does not apply under certain conditions ([44]).

In particular, as far as relevant here, if the automated decision-making process has been authorised by the law of the Union or the Member State adopting this *modus operandi*, and if this legal authorisation provides for "appropriate measures to protect the rights,

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di eccellenza e affidabilità, in *Osservatorio sullo stato digitale IRPA*, available at *www.irpa.eu*.

([43]) This is the well-known EU Regulation no. 2016/679 of the European Parliament and of the Council of 27 April 2016, entitled "*General Data Protection Regulation"* (hereinafter, GDPR), which repealed the previous Directive 95/46/EC. On the art. 22 see, *ex multis,* F. PIZZETTI, *Intelligenza artificiale, protezione dei dati personali e regolazione*, Torino, 2018, 34 ff.; A. MORETTI, *Algoritmi e diritti fondamentali della persona. Il contributo del Regolamento UE 2016/679*, in *Dir. inf.*, 2018, 799 ff.; A. MASUCCI, *L'algoritmizzazione delle decisioni amministrative tra Regolamento europeo e leggi degli Stati membri*, in *Dir. pubbl.*, n. 3/2020, 956 ff.; S. SASSI, *Gli algoritmi nelle decisioni pubbliche tra trasparenza e responsabilità*, in *Analisi economica del diritto*, n. 1/2019, 114 ff., according to whom the rule responds to the clear objective of putting human being before the algorithmic machine, which should always be considered in a servant function respect to the human kind.

([44]) Art. 22, par. 2, GDPR: "Paragraph 1 shall not apply where the decision: (a) is necessary for the conclusion or performance of a contract between the data subject and a data controller; (b) is authorised by Union law or by the law of the Member State to which the data controller is subject, which also lays down appropriate measures to protect the rights, freedoms and legitimate interests of the data subject; and (c) is based on the explicit consent of the data subject".

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freedom and legitimate interests of the data subject", the algorithmic decision may be considered legitimate under the GDPR ([45]).

In the absence of a clear regulation of algorithmic decision-making process, the aforementioned interpretative position has come to exclude the possibility of taking administrative acts on the basis of fully automated procedures ([46]).

With reference to these remarks, a different issue seems to concern the suitability of a legislative provision that merely authorises in general terms the use of software in the

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([45]) More in detail, pursuant to art. 23 GDPR, the law of the Union or of a Member State may introduce specific limitations to the right referred to in the aforementioned art. 22 in order to pursue certain public interests (indicated by the same art. 23), on the condition that such limitation respects the essence of the fundamental rights and freedoms of citizens and consists of a necessary and proportionate measure. On this point, see also A. SIMONCINI, *L'algoritmo incostituzionale: intelligenza artificiale e il futuro delle libertà*, in *BioLaw Journal*, n. 1/2019, 80, according to whom the scope of the exceptions mentioned by the rule is in fact very broad, "so much so that one wonders when, in reality, the rule can be applied".

([46]) See G. AVANZINI, *Decisioni amministrative e algoritmi informatici,* cit., 115, according to whom the choice to automate an administrative procedure in which personal data are processed cannot be left to the discretion of the individual administration, but must be based on a specific provision authorising such a decision; D.U. GALETTA, *Intelligenza artificiale per una pubblica amministrazione 4.0?*, cit., 16-17, who, after recalling that, according to Recital 69 of the GDPR, the prohibition of art. 22 GDPR does not apply if the automated processing is "necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller", concludes that automated processing would be admissible in the public sector "provided that it is based on specific legal provisions (principle of legality) and provided that it complies with the principle of proportionality, understood in the classic terms of suitability, necessity and proportionality in the strict sense of the term of processing with respect to the protection of the public interest concretely pursued by the controller".

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context of administrative action, without providing for which types of measures (and therefore procedures) may be subject to automation (⁴⁷).

Infact, from this point of view, the lack of precise indications related to the cases and proceedings that can be automated could rise further inconsistencies between the institution of automated administrative decisions and the fundamental principle of legality of public powers (⁴⁸).

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(⁴⁷) See S. CIVITARESE MATTEUCCI, *Umano troppo umano,* cit., 38 ff., according to whom, in a general legislative framework establishing a set of common principles, "the identification of the single cases [...] could be entrusted to rules designed on the characteristics and specificities of the different structures and procedures to be automated". In other words, without prejudice to the need to be compliance with the principle of legality and the reservation of the law laid down by art. 22 GDPR, "the specific conferral of power on the IA could be the subject of legal provisions that are not necessarily legislative - given the derivative or secondary nature of such power - such as regulations or acts of general content".

(⁴⁸) On this matter, it should be noted that in the German system the need to ensure greater predictability of the automation of administrative decisions seems to be more satisfied. In particular, according to par. 35a *VwVfG*, introduced by the law for the modernisation of the tax procedure of 18 July 2016, which entered into force on 1 January 2017, "an administrative act may be entirely adopted by means of ICT tools, if it is authorised by a regulatory provision and does not involve the exercise of discretionary power". On the article in question see, *ex multis*, P. STELKENS, H.J. BONK, M. SACHS, *VwVfG Kommentar,* München, 2018, 1191 ff.; P. KOPP, U. RAMSAUER, *VwVfG. Verwaltungsverfahrensgesetz*, München, 2019, 787 ff., who highlight how the need for the automated act to be authorised by an express legal provision (to be understood not only as a legal provision, but also as a regulation or statutory provision) performs the function of attributing a specific legitimacy in the legal reality of an administrative act referable to artificial intelligence tools. On the inadmissibility of the automation process in case of administrative acts involving the exercise of a discretionary power, see A. BERGER, *Der automatisierte Verwaltungsakt,* in *NVwZ*, 2018, 1262 ff., according to which in these cases the decision can only be the result of a complex cognitive process performed by the person.

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4. THE OPENINGS OF RECENT ADMINISTRATIVE CASE LAW AND THE ROLE OF EUROPEAN PRINCIPLES

After briefly recalling the traditional theoretical framework on the subject of automated decisions, it now seems appropriate to turn the attention to the relevant positions taken on this field in recent administrative case law.

In fact, if we disregard those initial approaches that excluded the possibility of automating the administrative procedures ([49]), it is possible to note that, in its latest pronouncements, the Italian Council of State has inaugurated a more open interpretation of the use of computer systems by public administrations ([50]).

In particular, in two interesting occasions administrative judges have expressly recognised that a higher level of digitalization of administrative action would not only be entirely desirable within the Italian legal system, but it would also be fully compliant with

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([49]) See TAR Lazio, Rome, sez. III-bis, 11 July 2018, n. 9230; Id., 10 September 2018, nn. 9224, 9225, 9226, 9227; Id., 27 May 2019, n. 6606; Id., 9 July 2019, n. 9066; Id., 13 September 2019, nn. 10963 and 10964, all available at *www.giustizia-amministrativa.it*. On this point, R. FERRARA, *Il giudice amministrativo e gli algoritmi. Note estemporanee a margine di un recente dibattito giurisprudenziale,* in *Dir. amm.*, n. 4/2019, 784 ff., who points out that on such occasions the administrative judges have shown a convinced recognition of the role that the human person (the official) is called to play in all administrative procedures, even the automated ones, when "it is information technology and the digitalization of procedures at the service of Man, and not vice versa". To the contrary, see TAR Lazio, Roma, sez. III-bis, 22 March 2017, n. 3769, cit., which acknowledged that, in relation to binding administrative activity, the electronic processing of the administrative act is legally admissible, since such activity is compatible with the logic of the computer programme.

([50]) Cons. Stato, sez. VI, 8 April 2019, n. 2270; Cons. Stato, sez. VI, 13 December 2019, n. 8472, in *www.giustizia-amministrativa.it*.

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the principles of good performance and impartiality laid down in art. 97 of the Italian Constitution ([51]).

The use of software capable of autonomously elaborating administrative acts would, indeed, determine numerous advantages for the action of the public authorities, such as a considerable reduction in the procedural timeframe and the exclusion of possible interferences due to the negligence (or malice) of the official in charge of the procedure.

According to the Supreme Administrative Court, the benefits deriving from the use of such a *modus operandi* would be particularly evident with reference to serial or standardised administrative procedures, as procedures which, although complex for the large number of applications to be examined, are articulated in the acquisition and evaluation of certain and objectively verifiable data.

In this sense, the final act of the administrative proceeding could well be drawn up by a computer program, because of the fact that the latter would be able to "reasonably foresee a definite solution for all possible concrete cases" ([52]).

Moreover, given that the software is to be considered in terms of an "organisational module", i.e. as an investigative tool that the proceeding authority may choose to use in the

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([51]) As noted by R. FERRARA, *op.ult.cit.,* 780, these statements are a sign of the contemporaneity of the reasoning of the Council of State, which shows awareness of the processes of transformation at the time of the digital revolution, although the latter, as mentioned, is devalued and reported in its critical profiles by other parts of the jurisprudence, "almost in the sign of an aprioristic and ideological rejection of modernity".

([52]) In other words, the software must be designed in such a way that, in the presence of certain elements, it is always possible to arrive at a predictable solution that complies with the instructions given when the machine is developed.

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exercise of its functions ([53]), "there are no reasons, in principle or in practice, to limit the use [of the organisational module] to binding administrative activity rather than to discretionary one, both of which referred to authoritative action carried out in pursuit of public interest".

It follows that, even in the performance of activities characterised by areas of discretion, the procedural authority may in theory make use of the automated systems, in spite of benefits deriving from the use of such instruments in the performance of binding activities are more significant in qualitative and quantitative terms.

In the expressions used by the administrative judges, it can be noted a great awareness of the legal debate of recent years ([54]), which seem to have adopted a new perspective of analysis.

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([53]) On this point, see M. TIMO, *Algoritmo e potere amministrativo*, in *Dir. ec.*, n. 1/2020, 775, who states that the decision, by not aligning with the previous jurisprudential orientations that equated the software with the computerized administrative act, succeeded in pointing out that the most relevant problematic aspect in the matter of automated decision is not so much the outcome of the automated procedure, but the way in which the administration reached its decision. According to the author, moreover, the approach conferring nature of administrative act to the computer program would not be convincing, because "since art. 21-septies of Law no. 241/90 requires, under penalty of nullity, a minimum content of the administrative act - at least, in terms of subject, object, will and form - it does not seem that a mere computer program, as a mathematical formula, has the essential elements required for the act to come into legal existence". This is an approach that deserves to be fully shared, as it allows, more correctly, to attribute a true and proper nature not to the software itself, which is a technological means functional to the better pursuit of public interests, but to the choices of predetermination of its action made by the public administration.

([54]) In this regard, see the reference to the well-known decision of the Supreme Court of the State of Winsconsin (State vs. Loomis, 881 N.W.2d 749, Wis. 2016) on the principle of non-exclusivity of the algorithmic decision, as well as the reference to the provisions of the GDPR and the "*Robotics Charter*" adopted by the EU Parliament Resolution of 16 February 2017 (on which see *infra*).

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In the current economic and social context, which is increasingly digitalized and interconnected, there should be no further questioning of the admissibility of the phenomenon of automation within the Italian legal system, but it would be more appropriate to reflect on the possibility of defining the minimum conditions of legitimacy that any automated administrative decision must fulfill, regardless of the abstract possibility of bringing it within the conceptual framework of binding or discretionary public action ([55]).

Following this approach, in fact, the current debate on the use of algorithmic administrative decisions should deal with the identification of a satisfactory balance between two opposing concrete requirements: on the one hand, those relating to the efficiency, speed and simplification of administrative action; on the other hand, those relating to the safeguarding of procedural guarantees normally afforded to private individuals against the action of public authorities.

In attempting to address this issue, the administrative courts have for the first time laid down some fundamental principles, which also have a specific legal basis at supranational level.

In particular, the Council of State has clarified how the introduction of specific algorithmic formulas within the administrative procedures can be considered legitimate where it is ensured: on the one hand, the principle of transparency of the decision-making

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([55]) With regard to the perplexities moved by the most recent doctrine on the tightness of the categorisation in question, see M.C. CAVALLARO, G. SMORTO, *Decisione pubblica e responsabilità dell'amministrazione nella società dell'algoritmo*, cit., 12; F. FOLLIERI, *Decisione amministrativa e atto vincolato*, in *Federalismi.it*., n. 7/2017, 10 ff., who speaks, in this regard, of "scepticism on bindingness"; as well as R. VILLATA, M. RAMAJOLI, *Il provvedimento amministrativo*, cit., 74 ff., to whom we refer also for the extensive bibliography cited.

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process followed by the public administration; on the other hand, the principle of responsibility of the authority that adopted the final measure in an automated way ([56]).

In order to better understand the relevance of the above statements, it seems appropriate to proceed now to analyse separately the recalled conditions of legality of the algorithmic administrative decision.

4.1 The full knowledge of the decision-making process

With reference to the first of these conditions of legitimacy, the administrative judges have come to recognise a special or "strengthened" right of access for citizens involved in automated procedures.

In particular, it has been affirmed that, in order to consider the automation process fully compliant with the principle of transparency, interested parties must be granted not only the possibility of accessing the source code that guides the functioning of the software ([57]), but also the right to a full knowledge of the main features that characterize the decision-making process itself.

Specifically, by virtue of a new declination of the traditional right of access, an algorithmic administrative decision can be said to be truly transparent only when the citizens concerned can acquire knowledge of:

([56]) See Cons. Stato, n. 8472/2019, cit., point 12 of the decision.

([57]) The accessibility of the source code has been acknowledged, as it is known, since TAR Lazio, Roma, sez. III-bis, 22 March 2017, n. 3769, with a comment by I. FORGIONE, *Il caso dell'accesso al software MIUR per l'assegnazione dei docenti*, in *Giorn. dir. amm.*, n. 5/2018, 647 ff. For a detailed analysis of the judgment, see also P. OTRANTO, *Decisione amministrativa e digitalizzazione della p.a.*, cit., 19 ff.

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a) the instructions executed by software written in a formal language, accompanied by the explanations translating "the technical rule" into the "underlying legal rule", in order to make it readable and understandable both for citizens and for the judge ([58]);

b) the exact breakdown of the software development chain and the people who worked on it;

c) the functioning of the decision-making mechanism, with specific reference to the priorities, parameters and criteria assigned to the machine;

d) the origin and type of data and/or information used in the course of the administrative procedure.

The above list emphasizes that, according to the most recent legal guidelines, in the hypothesis of decision-making automation, the exercise of the right of access by private party must make possible to obtain any information inherent in the design phase and in the logic functioning of the ICT tools.

In fact, as the Council of State has observed, only by adhering to such an approach the citizen, first, and the judge, eventually, will be able to "verify that the criteria, prerequisites and outcomes of the robotized procedure are complaint with the prescriptions and purposes established by the law or by the administration itself upstream of such

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([58]) The need to provide the above-mentioned "explanations", it is possibile to note that the obligation required by administrative case law seems to constitute a derogation from the legislative provision that excludes the possibility of imposing on the administration holding administrative documents a burden of processing the information contained in such documents. Thus, M. TIMO, *Algoritmo e potere amministrativo,* cit., 772, who recalls that, pursuant to art. 2, par. 2, of the d.P.R. 12 April 2006, n. 184, "*Regulation containing rules on access to administrative documents*": "the public administration is not obliged to process data in its possession in order to meet access requests".

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procedure, and that the modes and rules on the basis of which the decision was established are clear and consequently opened to review" (^{59}).

In this respect, it should be noted that the need to adopt a broader definition of the traditional right of access had already been explicitly recognised in the European rules on the processing of personal data (^{60}).

According to the GDPR, when an automated process in which data of personal nature are involved is started, the data subject can enjoy a series of rights of information (art. 13 and 14) and of access (art. 15), which constitute, by express legislative prevision, a corollary of the principle of transparency (^{61}).

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(^{59}) Cons. Stato, n. 8472/2019, cit., point 13.1 of the decision. Although it is not possible here to analyse the issue of the administrative judge's review of the automated administrative act, we can limit to pointing out that, even in the case where the administrative procedure has been conducted through digital tools, the judge who examines the correctness and reasonableness of the algorithmic decision must be able to have full knowledge of the evaluations and assessments carried out by the software during the procedure, also by resorting to technical consultancy, as in the context of similar proceedings carried out in traditional modes. On this point, see F. SAITTA, *Le patologie dell'atto amministrativo elettronico e il sindacato del giudice amministrativo,* cit., 24 ff.; A.G. OROFINO, *La patologia dell'atto amministrativo elettronico: sindacato giurisdizionale e strumenti di tutela,* cit., 2263 ff., as well as, most recently, F. PATRONI GRIFFI, *La decisione robotica e il giudice amministrativo*, in CARLEO A. (ed.), *Decisione robotica*, Bologna, 2019, 170 ff.

(^{60}) As noted by G. AVANZINI, *Decisioni amministrative e algoritmi informatici,* cit., 102 ff., as well as E. CARLONI, *I principi legalità algoritmica*, cit., 290, who points out, in particular, that in recognising the centrality of the principle of transparency of algorithmic decisions, the most recent pronouncements of the Council of State have taken (not by chance) as a point of reference the discipline dictated on the matter within the GDPR.

(^{61}) See Art. 12, par. 1, GDPR, "*Transparent information, notices and modalities for the exercise of the rights of the data subject*": "The controller shall take appropriate measures to provide the data subject with all the information referred to in Articles 13 and 14 and the notices referred to in Articles 15 to 22 and Article 34 relating to the processing in a concise,

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In particular, the information communicated to the private party must have very precise characteristics: in regards to its form, it must be expressed in a concise and intelligible manner, through a clear language accessible to all (art. 12); in regards to its subject matter, it must contain specific references to the choice of adopting automated decision-making process, to the legal consequences that will derive from the procedure for the data subject and to the concrete operating modes of the software used (art. 13 and 14).

Indeed, if the objective of the GDPR is to ensure that data subjects have full control over the data concerning them, they must be put in position to know not only the fact that the procedure is the result of an automated process, but also the algorithmic logic underlying the proceeding. Without a clear understanding of these aspects, an informed exercise of the other forms of protection provided by GDPR would not be possible (⁶²).

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transparent, intelligible and easily accessible form, using clear and plain language". For a significant comment on this article see, *ex multis,* F. PIZZETTI, *Intelligenza artificiale, protezione dei dati personali e regolazione*, cit., 20 ff. Specifically, while the first two provisions are formulated in such a way as to impose on the owner of the treatment of the data a precise and articulated obligation of information, which operates both in the case in which the data has been obtained directly from the interested party (art. 13) and in the case in which it has been acquired indirectly (art. 14), art. 15 recognizes to individuals a real and proper right of access, which can be exercised also in the case in which the treatment of the data has already been concluded.

(⁶²) In this field, see the observations made in the European Parliament Resolution of 14 March 2017, *Implications of Big Data for fundamental rights: privacy, data protection, non-discrimination, security and law enforcement*, 2016/2225 (INI), in *www.europarl.europa.eu*: "Accountability and transparency at the level of algorithms should reflect the application of technical and operational measures that ensure transparency, non-discrimination of automated decision-making and the calculation of the probabilities of individual behaviour; [...] transparency should provide individuals with meaningful information about the logic used, the significance and the intended consequences; [...] this should include information about the data used to form Big Data analysis and enable individuals to understand and monitor decisions that affect them" (Recital N).

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Furthermore, apart from the fulfilment of the aforementioned communication obligations, pursuant to art. 15 GDPR the data subject has the right to obtain information directly from the data controller concerning the logic and consequences of automated process.

Thus, it seems possible to observe how, from the perspective of the European legislator, the extension of the sphere of knowledge of the private individuals derives directly from the need to guarantee an adequate level of protection of *privacy* of people subjected to automated processing of their data.

However, outside the field of application of the GDPR the requests of full knowledge didn't found a specific regulatory recognition within the Italian legal system. Hence the need to introduce, not only by way of interpretation, a general system of protections for all the subjects involved in the context of a automated administrative procedure.

In this perspective, important considerations have recently been formulated in a number of European policy documents.

On this point see, in particular, what highlighted by the European Parliament resolution of 12 February 2019 on robotics and artificial intelligence ([63]), in which the following principles, among others, were set out:

a) the intelligibility of automated decisions must be clearly stated by a rule of EU law, along the lines of the above-mentioned articles 13, 14 and 15 of the GDPR (par. 158);

([63]) See European Parliament resolution of 12 February 2019, *A comprehensive European industrial policy on robotics and artificial intelligence*, 2018/2088 (INI), in *www.europarl.europa.eu*.

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b)   any system involving the use of artificial intelligence must be developed in accordance with the principles of transparency and accountability, allowing a human understanding of the actions performed by the software (par. 158);

c)   in order to build a more general climate of trust in automated mechanisms, users must be made fully aware of how their data have been used (and whether other data have been derived from them), and of the processes and parameters followed by the robot systems, in such a way that they are understandable to a non-technical audience (par. 161);

d)   in order to ensure transparency in the use of artificial intelligence, mere disclosure of the 'computer code' is not in itself adequate to address the problem of intelligibility, as it would not reveal inherent errors that may exist in the machine and would not explain the mechanism by which the machine learning process works (par. 166).

These statements confirm the need to ensure a higher level of transparency in cases where administrative decisions have been taken on the basis of automated mechanisms, especially if technologically complex.

4.2 Accountability and control of automated decisions

The knowledge of the logical steps and criteria that characterize the automated administrative procedure is not the only element to be assessed for formulating a judgment on the legality of the algorithmic administrative decision.

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Alongside this, administrative case law has indicated a second condition for the validity of the institution in question, that is the responsibility of the public administration competent to adopt the final act of the proceeding ([64]).

According to the Council of State, irrespective of the possibility of assessing who has actually determined the unlawfulness of the administrative act (and any damage resulting therefrom), every decision adopted by the software must be considered as the result of a genuine administrative proceeding.

This is a principle that, although obvious with reference to the simplest automation systems, acquires its full relevance when referred to the use of the most advanced digital technologies.

As it is well known, in automation processes carried out using machine learning technologies, the result of processing the inputs provided to the machine is not always predictable in advance.

In fact, the latter can be influenced by the software's ability to transform the instructions prepared during the design phase and to draw up new solutions that cannot be explained by deductive reasoning ([65]).

In such cases, therefore, there is a risk that the procedural authority will attempt to avoid responsibility for the negative consequences of the adoption of automated decisions invoking an inscrutable calculation error of the software or of the computer technicians themselves.

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([64]) See Cons. Stato, n. 8472/2019, cit., point 12 of the decision.

([65]) See G. AVANZINI, *Decisioni amministrative e algoritmi informatici*, cit., 7 ff.

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On the contrary, as stated by the administrative judges, the citizens concerned may always impute to the public authority that conduct the automated procedure the possible unlawfulness of the final administrative act and claim from it, if the other relevant conditions are met, compensation for any damage suffered ([66]).

In relation to this principle there have already been some important guidelines adopted at supranational level.

Consider, in this respect, the provisions of the Robotics Charter annexed to the European Parliament resolution of 16 February 2017 on the introduction of "*Civil law rules on robotics*" ([67]).

In this document, the need to trace back to human behaviour any consequences or negative effects resulting from the use of robotized decision-making mechanisms was clearly

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([66]) Moreover, as noted by S. VERNILE, *Verso la decisione amministrativa automatizzata?* in *MediaLaws*, n. 2/2020, 13, when the public administration decides to use automated decision-making mechanisms, the burden of proof relating to the subjective element could be discharged through reference to the concept of "fault of the apparatus", which today includes every hypothesis of disorganization of the public body in the management of its resources. In doctrine, with reference to the notion of "fault of the apparatus", see, at least, S. CIMINI, *La colpa nella responsabilità civile delle amministrazioni pubbliche*, Torino, 2008; F. FRACCHIA, *Elemento soggettivo e illecito civile della pubblica amministrazione*, Napoli, 2009.

([67]) European Parliament, Resolution of 16 February 2017, *Civil law rules on robotics*, 2015/2103 (INL), in *www. europarl.europa.eu*, with which the Commission was invited to propose new common rules on artificial intelligence capable of contemplating the degree of autonomy achieved by some technological tools and of overcoming the current regulatory gaps regarding the liability of the official in the use of such systems.

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affirmed, and the absence of a regulation capable of establishing whether and under what conditions the ICT tools should be considered independently responsible was underlined ([68]).

Indeed, in addition to recognising in general terms the above-mentioned principle of responsibility, the Council of State made some interesting considerations on a further issue of great importance, that is the supervision of the outcome of the computerised administrative proceeding ([69]).

In fact, on the one hand if the electronically processed act must be considered to all intents and purposes as the expression of the willing of public authority, on the other hand the possibility of carrying out a verification (although a summary one) of the decision suggested by the computer program provides an opportunity to identify, with greater precision, the person actually responsible for any illegality of the administrative act.

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([68]) In particular, "in the current legal framework, robots cannot be held liable in their own right for acts or omissions that cause damage to third parties; that the existing liability rules cover cases where the cause of an action or omission of a robot can be traced back to a specific human agent, such as the manufacturer, operator, owner or user, and where that agent could have foreseen and avoided the harmful behaviour of the robot; [...] that, in the event that a robot is able to make autonomous decisions, the traditional rules are not sufficient to trigger liability for damage caused by a robot, since they would not make it possible to determine who is liable for compensation or to require that person to make good the damage caused" (Recital AD).

([69]) Cons. Stato, n. 8472/2019, cit., point 14.1 of the decision: "As regards the verification of the outcomes and the related accountability, downstream verification must be guaranteed, in terms of the logic and correctness of the outcomes. This is to ensure that the choice can be imputed to the holder of the authoritative power, identified on the basis of the principle of legality, as well as to verify the consequent identification of the person responsible, both in the interest of the public authority itself and of the persons involved and affected by the administrative action entrusted to the algorithm".

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This would also be in the interest of the administration itself, since the latter would be able to intervene promptly on any malfunctioning of the machine before it affects the recipients of the automated acts.

Moreover, the recognition of this principle is also supported by reference to a similar right established at European level in the same field, in particular by art. 22 GDPR ([70]).

As it is known, by virtue of this provision, unless one of the exceptions contemplated in paragraph 2 applies, any automated decision-making process requiring the processing of personal data must be carried out in compliance with the principle of non-exclusivity of the algorithmic decision.

This principle, as interpreted by the Italian Council of State, would require individual administrations to intervene in the procedure in order to confirm or revise the content of the administrative act proposed by the software ([71]).

Therefore, in all cases where public administrations make use of automated mechanisms, it would be necessary to control the outcomes of the proceeding according to the model that, in the ICT field, is expressly defined as "*human in the loop*" (HITL).

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([70]) On this point, see note 43.

([71]) On the doctrinal debate concerning the identification of the level of human supervision able to guarantee an adequate scrutiny of automated processing, see S. WACHTER, B. MITTELSTADT, L. FLORIDI, *Why a Right to Explanation of Automated Decision-Making does not exist in the General Data Protection Regulation*, in *International Data Privacy Law*, n. 7/2016, 76 ff., as well as, for all, A. SIMONCINI, *L'algoritmo incostituzionale: intelligenza artificiale e il futuro delle libertà* , cit., 79 ff., according to whom the principle of non-exclusivity would risk being circumvented in all the hypotheses in which, although it is possible to operate a control downstream of the decision suggested by the algorithm, for reasons of practical convenience the proceeding authority decides to comply with the outcome of the algorithm.

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Indeed, the latter consideration seem to expose itself to some significant objections, which can be divided into two main points.

In the first place, it is possible to note how the mentioned interpretative position is in contrast with what is indicated on this subject in the recent "*Ethics Guidelines for Trustworthy AI"* developed by the High Level Expert Group on Artificial Intelligence of the European Commission ([72]).

In particular, the Guidelines state that human oversight should be included among the fundamental principles of the development of A.I. at European level.

However, this principle can be put into practice by implementing three different models of human-software interaction ([73]):

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([72]) European Commission*, Ethics guidelines for trustworthy AI*, 8 April 2019, in *www.ec.europa.eu.*

([73]) Cfr. par. 1.1. of the Guidelines: "*Human oversight helps ensuring that an AI system does not undermine human autonomy or causes other adverse effects. Oversight may be achieved through governance mechanisms such as a human-in-the-loop (HITL), human-on-the-loop (HOTL), or human-in-command (HIC) approach. HITL refers to the capability for human intervention in every decision cycle of the system, which in many cases is neither possible nor desirable . HOTL refers to the capability for human intervention during the design cycle of the system and monitoring the system's operation. HIC refers to the capability to oversee the overall activity of the AI system (including its broader economic, societal, legal and ethical impact) and the ability to decide when and how to use the system in any particular situation. This can include the decision not to use an AI system in a particular situation, to establish levels of human discretion during the use of the system, or to ensure the ability to override a decision made by a system. Moreover, it must be ensured that public enforcers have the ability to exercise oversight in line with their mandate. Oversight mechanisms can be required in varying degrees to support other safety and control measures, depending on the AI system's application area and potential risk. All other things being equal, the less oversight a human can exercise over an AI system, the more extensive testing and stricter governance is required*".

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1. a first model, namely the aforementioned "*human-in-the-loop*" (HITL), which represents the form of greater human control over the operation of the machine and implies the possibility of intervening in every logical step taken by the system;

2. a second model, defined as "*human-on-the-loop*" (HOTL), which is characterized by the fact that human intervention is only required during the software design cycle and during periodic software monitoring;

3. finally, the third model, the so-called "*human-in-command*" (HIC), which is a more limited form of supervision, and consists in the possibility for the controlling body to decide in which contexts to use automation tools, which stages of the procedure to continue to carry out in the traditional way, and on which occasions to deviate from the final decision suggested by the algorithm.

Although the document does not express any preference for one of these models, the European Group of Experts points out that, in many cases, the adoption of a system based on the human in the loop model would be "neither possible nor desirable".

This seems to be justified both by the technical difficulty of setting up an automated system capable of allowing the human manager to intervene at each stage of the administrative proceeding, and by the bulky nature of such an operational solution, which could only lead to a significant loss of efficiency of the decision-making mechanism itself ([74]).

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([74]) As noted in doctrine, except in the case of macroscopic defects in the functioning of the machine, denying the result obtained by software would in fact end up neutralising the initial administrative choice of entrusting the management of the public procedure to a robot, making the investigation carried out by means of automated systems completely useless and, thus, requiring a new investigation to be carried out according to traditional methods. In this

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Thus, although a minimum level of supervision of the automated process should always be guaranteed ([75]), the generalised introduction of a form of downstream control for all administrative acts would not seem to provide an optimal trade-off between the benefits and risks of using these technologies.

In a *de iure condendo* perspective, it is to be hoped that future regulatory measures will be able to strike a more convincing balance between the interests at stake, providing for control methods tailored to the different types of automated systems used in the specific case ([76]).

Moreover, a second critical remark could be made regarding the approach followed by the Council of State, concerning the interpretation of the principle of non-exclusivity under art. 22 GDPR.

Indeed, while it is true that, if an automated decision is taken, the European framework ensures the data subject's right to obtain the intervention of the data controller

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sense, S. TRANQUILLI, *Rapporto pubblico-privato nell'adozione e nel controllo della decisione amministrativa "robotica"*, in *Dir. soc.*, n. 2/2020, 297.

([75]) On the importance of promoting the implementation of the principle at stake, including through the introduction of algorithmic impact analyses, centralized software certification structures and specific protocols for monitoring and identifying any distortions, see G. ORSONI, E. D'ORLANDO, *Nuove prospettive dell'amministrazione digitale. Open data e algoritmi,* in *Ist. del Fed.*, n. 3/2019, 615-616.

([76]) In particular, at least with reference to the most elementary hypotheses of automated decisions, the activity of human supervision could find expression at a time prior to the final decision, such as at the end of the design of the software by computer technical programmers and during the necessary periodic monitoring of the operation of the machine.

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(^{77}), the legal provision does not oblige the latter to carefully scrutinise the outcome of the procedure.

On the contrary, it is possible to argue that, in the perspective adopted by the European legislator, the right to obtain human intervention translates in practice into the implementation of an organisational model more similar to that of human in command or that of human on the loop.

In this direction it can be seen the provisions of Recital 71 of the GDPR, which specifies that the data controller is obliged to implement "should use appropriate mathematical or statistical procedures for the profiling, implement technical and organisational measures appropriate to ensure, in particular, that factors which result in inaccuracies in personal data are corrected and the risk of errors is minimised, secure personal data in a manner that takes account of the potential risks involved for the interests and rights of the data subject, and prevent, inter alia, discriminatory effects [...]" (^{78}).

Indications from which it seems to be possible to deduce that, especially in cases where the outcome of the digitalized proceeding is easily foreseeable, the right to human

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(^{77}) On this subject, see F. PIZZETTI, *Intelligenza artificiale, protezione dei dati personali e regolazione*, cit., 34 ff.

(^{78}) On the risks of discrimination inherent in the use of automated decision-making mechanisms, see, *ex multis*, F. COSTANTINO, *Rischi e opportunità del ricorso delle amministrazioni alle predizioni dei big data,* in *Dir. pubbl.*, n. 1/2019, 56 ff.; A. SIMONCINI, *L'algoritmo incostituzionale: intelligenza artificiale e il futuro delle libertà*, cit., 84 ff.; F. DE LEONARDIS, *Big data, decisioni amministrative e "povertà" di risorse della pubblica amministrazione,* in E. CALZOLAIO, *La decisione nel prisma dell'intelligenza artificiale,* Padova, 2020, 152 ff.; P. SAVONA, *Administrative Decision-Making after the Big Data Revolution*, in *Federalismi.it*, n. 19/2018, 22 ff.

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intervention can also be ensured by checking for any errors or inaccuracies in the source data processed by the software.

Therefore, as it has been effectively noted in doctrine, the human supervision required in the automated decision-making process could also be guaranteed through the affirmation of the further principle (indeed not expressly mentioned by the administrative judges) of the correctness and quality of the data on which the decision is based [79].

In such a context, this principle assumes its value indeed from a logical rather than a legal point of view, since the quality of the measure adopted downstream of the procedure cannot but depend, inevitably, on the quality of the information on the basis of which the decision was taken [80].

Leaving aside the remarks above made, however, the principle expressed by the Council of State constitutes an appreciable attempt, although an unripe one, to reaffirm the

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[79] Thus, E. CARLONI, *I principi della legalità algoritmica,* cit., 298, who underlines how the risk that automated treatments may produce new forms of discrimination against the recipients of algorithmic decisions is one of the main critical issues that appear on the horizon in the hypothesis of the use of artificial intelligence systems. This would seem to fully justify the inclusion, by the administrative judges, of the principle of algorithmic non-discrimination among the fundamental rules that should guide the use of automated decision-making mechanisms. On this point, see also what is underlined in the White Paper entitled "*Artificial Intelligence at the service of the citizen*" of March 2018, edited by a special *task force* of the Agency for Digital Italy, available at *www.agid.gov.it*, where it is highlighted that machine learning systems should be based on selected and prepared data, when the possible presence of inaccuracies or biases in the data, as well as possible calculation errors due to the work of the designers, risks producing a program that replicates the initial errors in any future application (p. 40).

[80] The principle in question is today well summarised by the fortunate expression, widespread also among scholars of mathematical sciences, "rubbish in = rubbish out". This does not mean, of course, that the control of the quality of the used data should not be accompanied by frequent monitoring and updating of the software by public administration.

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need for a virtuous interaction between the individual pubblic official and the computer program.

A relationship which, as we have tried to highlight, deserves to be interpreted differently depending on the functioning of the automated system used by the public authorities in each individual case.

This circumstance would make it possible, on the one hand, to avoid a considerable attenuation of the advantages deriving from the automated process and, on the other, to maintain the anthropocentric approach that should characterize any application of the ICT tools in question ([81]).

The analysis has thus revealed the first attempts to give clearer legal shapes to the institution of algorithmic administrative decision.

([81]) The importance of recovering the aforementioned anthropocentric dimension in the use of artificial intelligence technologies has been well highlighted in numerous European guidelines. In this regard see, *ex multis*, the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions of 8 April 2019, *Building Trust in Anthropocentric Artificial Intelligence*, COM/2019/168, where it is emphasized that "the European AI Strategy and the Coordinated Plan on AI clearly indicate that trust is a prerequisite for ensuring an anthropocentric approach to AI: artificial intelligence is not an end in itself, but a tool at the service of people whose ultimate goal is to improve the well-being of human beings. This requires ensuring the trustworthiness of AI", as well as the three documents adopted on 19 February 2020 by the European Commission: the White Paper on Artificial Intelligence, cit.; the Report to the European Parliament, the Council and the European Economic and Social Committee, *Report on the security and liability implications of artificial intelligence, the Internet of Things and robotics,* COM/2020/64; and the Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Shaping Europe's digital future*, COM/2020/67, all available in *www.ec.europa.eu*.

The above-mentioned measures seem to show, however, the inadequacy of a regulatory approach based on general principles and case-by-case solutions, which does not allow to draw a clear and definite systematic framework from the significant case-law statements.

In an attempt to make some final considerations on the possible strategies for regulating the phenomenon in exam, it is appropriate to recall, even though briefly, the interesting regulatory approaches that have been adopted in this field within the French legal experience.

5. THE FIRST REGULATORY MEASURES IN THE FRENCH LEGAL SYSTEM

The possibility of using algorithmic formulas to take public decisions is not a recent issue also in the transalpine legal context [82].

As it is well known, one of the first provisions on this subject was contained in art. 10 of *Loi* no. 1978-17, as amended by *Loi* no. 2004-801 of 6 August 2004, on the processing of personal data [83].

This article set two clear limits to the use of automated systems: a first one, more specific, addressed to judicial statements, which cannot be based on automated processing of personal data if they imply an assessment of individual conduct by the judge; a second one, more generic, addressed to administrative decisions, which cannot be taken on the basis of

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[82] Among the first doctrinal reflections on the subject see, for all, D. BOURCIER, *La Décision artificielle: le droit, la machine et l'humain*, Paris, 1995.

[83] *Loi n. 78-17 du 6 janvier 1978 relative à l'informatique, aux fichiers et aux libertés*, in *www.legifrance.gouv.fr.*

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automated processing of personal data if they aim at defining the profile or the personality of a person ([84]).

This measure, although of a sectoral nature, seems to show that the French legislator took an early interest in the risks linked to the use of automated procedures by public authorities, which resulted in the establishment of certain general restrictions.

As the process of digitalization of the public sector has spread, the regulatory framework has been progressively enriched. More recently, in fact, a specific impetus towards the achievement of an effective digital transformation of public action was given through the adoption of *Loi* no. 2016-1321 of 7 October 2016, entitled '*Loi pour une République numérique*' ([85]).

([84]) *"Aucune décision de justice impliquant une appréciation sur le comportement d'une personne ne peut avoir pour fondement un traitement automatisé de données à caractère personnel destiné à évaluer certains aspects de sa personnalité. Aucune autre décision produisant des effets juridiques à l'égard d'une personne ne peut être prise sur le seul fondement d'un traitement automatisé de données destiné à définir le profil de l'intéressé ou à évaluer certains aspects de sa personnalité"*. This provisions ha been, recently, modified by *Loi* n. 2018-493 of 20 June 2018, in order to update national privacy legislation to the novelties introduced by the GDPR and to remove the previous legislative limits related to the automation of individual administrative decisions. Thus, J.B. DUCLERCQ, *L'automatisation algorithmique des décisions administratives individuelles*, in *Revue du droit public*, n. 2/2019, 296 ff.

([85]) The legislative reform in question was the result of an intense political and legal debate, followed by a period of public consultation on the text of the law. In this regard, see the report edited by the Conseil d'Etat, *Le Numérique et les droits fondamentaux*, 2014, in *www.vie-publique.fr*, spec. 278 ff., in which it is emphasized the importance to follow an approach inspired by the "principle of loyalty" of the algorithm, that is to promote regulatory solutions that may lead to fostering (and not to undermine) the trust of the community in the ICT tools used by the public authorities; as well as the report *Ambition Numérique* of June 2015 edited by the National Digital Council (Cnnum), available in *www.cnnumerique.fr.*, which brings together some 70 proposals for action by citizens to implement the digital

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The aim of the reform is to implement the technological development strategies defined at national level, which would not be able to produce the desired outcomes without a regulatory framework that addresses, at the same time, the issues of digital innovation, the openness and transparency of public data and the protection of people's fundamental rights ([86]).

In particular, on the one hand it aims at giving France a competitive advantage on the international scenario in the field of digitalization, by promoting a policy of re-use of public information, on the other hand it intercepts the need to promote a new approach to the

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strategy outlined by the government, stating that "*Le numérique permet d'augmenter la transparence et la traçabilité de l'action publique. Mais ce n'est que s'il est mobilisé pour développer de nouveaux modes de participation aux processus décisionnels qu'il pourra renforcer effectivement le pouvoir d'agir des citoyens. Le défi est donc de rompre avec une vision de l'expertise verticale et cloisonnée, et de développer des pratiques de co-construction des politiques publiques intégrant l'ensemble des acteurs de la société numérique*". Thus, according to the Council, "*La transformation numérique de l'action publique n'a de sens que si elle respecte un certain nombre de principes, inhérents aux fondements du droit public. Ces principes constituent autant de prérequis pour l'intégration de tous et le respect des libertés et droits fondamentaux*".

([86]) As it is known, the law is developed around three fundamental questions: "The circulation of data and information" (Title I), "The protection of rights in a digital society" (Title II), and "Access to digital information" (Title III). Among the most significant comments on the reform see, in particular, D. BOURCIER, P. DE FILIPPI, *Les algorithmes sont ils devenus le langage ordinaire de l'administration?* in *LGDJ*, 2018, 193 ff.; B. BARRAUD, *L'algorithmisation de l'administration*, in *Revue Lamy Droit de l'immatériel*, 2018, 42 ff.; H. OBERDORFF, *La République numérique: un nouvel espace pour de nouveaux droits?* in *Revue du droit public*, n. 3/2018, 665 ff.; L. CLUZEL-MÉTAYER, *La loi pour une République numérique: l'écosystème de la donnée saisi par le droit*, in *AJDA*, n. 6/2017, 340 ff.; J.B. DUCLERCQ, *Le droit public à l'ère des algorithmes*, in *Revue du droit public*, n. 5/2017, 1401 ff..

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technological revolution, capable of keeping at the centre the rights of individuals in the digital world ([87]).

Within this general framework, the legislator has introduced a number of significant provisions concerning the possibility of adopting administrative acts using special algorithmic formulas ([88]).

Specifically, the regulatory changes that have taken place on this field seem to be motivated by the intention of ensuring a stricter application of the principle of transparency of public action in the context of automated procedures.

In this respect, two important provisions (artt. 4 and 6) reforming the previous text of the *Code de relations entre le public et l'administration* (hereinafter CRPA) are worth mentioning.

The first of the innovations introduced concerns the new art. L311-3-1, according to which the recipient of an individual administrative decision taken on the basis of algorithmic processing must be informed of this fact and, if he or she so requests, must be able to know the rules under which the processing was carried out and the main features of its operation.

In other words, if public administration adopts an algorithmic decision, it is obliged to provide the data subject, upon his/her request, with clear and intelligible information concerning: 1) the modes through which the automated processing contributed to the decision-making process; 2) the data analysed and their origin; 3) the parameters of

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([87]) In this sense, see *Dossiers législatifs, Exposé des motifs de la LOI n° 2016-1321 du 7 octobre 2016 pour une République numérique*, in *www.legifrance.gouv.fr*.

([88]) As noted above, within the new legislation, the issue of automated decision-making process seems to find a more general discipline, which is concerned with providing a series of guarantees to protect the rights of the data subject that go well beyond the right to the proper processing of personal data.

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judgement established and their concrete use to reach the individual decision; 4) the operations carried out through the aforesaid processing ([89]).

It is clear from the above-mentioned article that the French legislator wished to introduce a real obligation of communication towards public authorities, which determines, correlatively, the right of the recipient of the administrative act to have access the computerised proceeding and to know the way in which the software has devoloped the final decision ([90]).

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([89]) See R. 311-3-1-2 del CRPA, introduced with Decree n. 2017-330 of 14 March 2017, on which P. COPPOLANI, *Le décret n. 2017-330 du 14 mars 2017 relatif aux droits des personnes faisant l'objet de décisions individuelles prises sur le fondement d'un traitement algorithmique: vers une victoire à la Pyrrhus*, in *Information, données et documents*, n. 54/2017, 16 ff.

([90]) There seems to be no uniformity of views on the scope of the right of access defined by the above-mentioned provision. As noted by J.M. PASTOR, *Accèc aux traitements algorithmiques utilisés par l'administration*, in *AJDA*, 2017, 604, the legislator's objective is not to guarantee the data subject the possibility to know every aspect of the automated processing, but only to know the criteria and the main characteristics that define its functioning. Moreover, as in Italy, the French legal system has also dealt with the important question of recognising the right to access the source code of the software used in the context of the automated administrative procedure. The issue in question has long been discussed before the *Commission d'accès aux documents administratifs* referred to in articles L. 341-1 and L. 342-1 of the CRPA and led to an initial sectoral recognition with the *avis* of 8 January 2015, n. 20144578 and to more general statements since the *avis* of 23 June 2016, n. 20161989 (both of decisions can be found at *www.cada.data.gouv.fr*). In particular, in the context of the latter case, concerning a request for access to administrative documents relating to the well-known automated procedure for pre-enrolment to university campuses managed by the French Ministry of Education (on which more will be said shortly), the *Commission d'accès* allowed the applicants to know the source code of the procedure, stating that the computer files composing the code can be assimilated to real administrative documents and are, consequently, communicable to anyone who can exercise the right of access under art. L. 311-1 of the CRPA (*La commission [...] estime que les fichiers informatiques constituant le code source ou algorithme sollicité, produits par l'Institut national polytechnique de*

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In other words, in the hypothesis that the final act of the administrative procedure has been processed electronically, it seems necessary to recognise in the legal sphere of the private individual the possibility of exercising a broader right of access than that recognised in the context of traditional administrative proceedings ([91]).

The same observations seem to have been made also within the Italian legal system, where the initial resistance of a part of the jurisprudence was later overcome, as mentioned above, in the name of the principle of full knowledge of the functioning of the computer program on the basis of which the administrative decision was taken.

However, in spite of these important openings, it is not yet possible to formulate a judgment of homogeneity between the means of protection offered to private individuals within the two legal systems ([92]).

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Toulouse pour le ministère de l'éducation nationale, de l'enseignement supérieur et de la recherche dans le cadre de leurs missions de service public respectives, revêtent le caractère de documents administratifs, au sens de l'article L300-2 du code des relations entre le public et l'administration. Ce code est, de ce fait, communicable à toute personne qui le demande, conformément à l'article L311-1 du même code). In accordance with these guidelines, the 2016 legislature amended art. L. 300-2 of the CRPA, which now includes the expression '*codes sources*' among the administrative documents that may be shown.

([91]) Thus, A.G. OROFINO, L'*attuazione del principio di trasparenza nello sviluppo dell'amministrazione elettronica*, in *Iudicium*, October 2020, 9. Moreover, it should be noted that, also with reference to the aforementioned disclosure obligation, limitations to the right of access are set forth by art. L. 311-5, par. 2, of the CRPA.

([92]) On this point, see also the provisions of *Loi* n. 2018-493 of 20 June 2018 on the protection of personal data, by which, in adapting French legislation to the new European regulation, the aforementioned art. 10 of *Loi* No 1978-17 was amended. According to the current text of the rule, all individual administrative decisions taken on the basis of algorithms must comply, on pain of nullity, with the communication obligations provided for in art. L. 311-3-1 of the CRPA. Thus, from the point of view of the transalpine system, the violation of the prescriptions aimed at establishing a public-private relationship marked by the

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This consideration is reached, in particular, by analysing the second provision introduced by the 2016 amendment to the CRPA.

In particular, under art. L. 312-1-3, public administrations are required to publish online the rules defining the functioning of the main algorithmic processes used to take individual decisions in the exercise of their functions.

Adopting a perspective that is, in some ways, mirroring that which led to the introduction of the reporting obligations, the French legislator has thus given public authorities wishing to use automated systems a further important task.

This task is the obligation to publish the criteria of judgement and the logical operations carried out by the software that develops administrative acts.

This provision seems to meet a different need for transparency from that felt by the recipients of the acts, to whom the mentioned reporting obligations are addressed ([93]).

From this perspective, the rule moves in two main directions: on the one hand, it allows the exercise of a form of widespread control over the operation of computer programmes, also aimed at subjects not affected by the adoption of a specific administrative act; on the other hand, it increases the sense of trust of the entire community of those

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principle of transparency of the administrative action is sanctioned with a form of invalidity more serious than that which affects the automated administrative acts which do not comply with the principle of full knowledge established in the Italian legal system.

([93]) E. MOURIESSE, *L'opacité des algorithmes et la transparence administrative* , in *Revue française de droit administratif*, 2019, 47, which highlights how, through the provision in question, "*les règles de fonctionnement des algorithmes ne sont pas seulement quérables: elles doivent être diffusées spontanément. Toute personne ayant connaissance de l'utilisation d'un algorithme par l'une des administrations précitées peut, si elle constate l'absence d'explication de cet algorithme en ligne, demander qu'une présentation soit publiée et éventuellement contester le refus d'y procéder*".

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administered in relation to the use of such technologies, which are thus less opaque and more comprehensible to the outside world.

These elements lead to a positive judgement on the mechanism devised by the French legislator, which shows that it has understood the importance of promoting citizens' participation in the process of digital transformation.

Indeed, even the interesting regulatory choices made in the transalpine system seem to present some critical issues.

First of all, it should be noted that the publication obligations in art. L312-1-3 have been formulated in a rather elastic and undefined manner.

Therefore, in order to be able to know precisely what it is about and to be able to assess whether or not it is adequate in terms of the transparency requirements of the interested parties, it will be necessary to wait for the adoption of further details by future implementing decrees ([94]).

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([94]) In fact, unlike what happened with the obligations under art. L. 311-3-1, the content of the obligations to publish on the institutional websites of public administrations is still vague. This has led not only to consider uncertainty the application of the provisions of the legislation, but also to the spread of different practices among the individual administrations. On this matter, see H. PAULIAT, *La décision administrative et les algorithmes: une loyauté à consacrer*, in *Revue du droit public*, n. 3/2018, 648, who observes that "*ces éléments sont informatifs mais les obligations demeurent trop limitées*"; E. MOURIESSE, *op.ult.cit.*, 46 ff., according to whom the fulfilment of the aforementioned obligation would require individual administrations to disclose the instructions they have given when developing the software and to explain them in a language understandable to non-experts.

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Secondly, it should be noted that, from the legislator's perspective, the crucial principle around which the protection of the private party involved in a process of decision-making automation is centred is that of administrative transparency.

However, on the one hand the reform aims at affirming the full knowledge of the algorithmic decision, on the other hand it does not pay adequate attention to the related issue of the comprehensibility of the decision-making mechanisms that justified the adoption of the automated act ([95]).

With regard to the characteristics and limits of the application of the robotic administrative decision, it is important to recall two recent significant pronouncements of the *Conseil constitutionnel* ([96]).

In particular, in a first judgment, the French constitutional court is concerned with defining the minimum conditions for the legitimacy of the institution in question ([97]).

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([95]) J.B. DUCLERCQ, *L'automatisation algorithmique des décisions administratives individuelles*, cit., 313, who highlighted that "*[...] l'accessibilité à la décision suppose de distinguer la transparence de l'intelligibilité. Transparency implies the possibility of access to the information specific to the object, while intelligibility implies that this information is easily accessible to human intelligence*".

([96]) Reference is made, in particular, to Décision n. 2018-765 DC of 12 June 2018, by which the *Loi* n. 2018-493 of 20 June 2018 (*Loi relative à la protection des données personnelles*) was deemed to be constitutionally compliant, and to Décision n. 2020-834 QPC of 3 April 2020, in which the *Conseil* expressed its opinion on the constitutional compatibility of art. L. 612-3 of the *Code de l'éducation*, both available in *www.conseil-constitutionnel.fr.*

([97]) On the pronouncement under consideration, see J.B. DUCLERCQ, *op.ult.cit.*, 306 ff., as well as S. TRANQUILLI, *Rapporto pubblico-privato nell'adozione e nel controllo della decisione amministrativa "robotica",* cit., 309 ff.

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On that occasion, it was pointed out that, by introducing a specific right for the recipient of the algorithmic decision to know the main operating characteristics of the software, the legislator implicitly affirmed the impossibility for the public administration to use those automated systems that are not accessible to the private party.

This hypothesis occurs, in particular, where the operational procedure followed by the programme to adopt the concrete decision is not transparent in itself, or where the right of access to administrative documents cannot be exercised by express willing of the legislator (⁹⁸).

Secondly, the *Conseil constitutionnel* stated that, in order to consider the automated decision-making process to be legitimate, the mere recognition of a right of access to the acts of the computerized proceeding is not sufficient; on the contrary, the recipients of the administrative act must be guaranteed the right to obtain an explanation, in intelligible language, of the manner in which the administrative act was adopted.

Thus, computer systems capable of autonomously changing their operating rules cannot be used to take administrative decisions if there is no provision for supervision and validation of the result achieved by the machine (⁹⁹).

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(⁹⁸) See, for example, the categories of documents and acts listed by the aforementioned art. L. 311-5, par. 2, of the CRPA. Cfr. CC, n. 2018-765, DC, point 70: "*conformément à l'article L. 311-3-1 du code des relations entre le public et l'administration, la décision administrative individuelle doit mentionner explicitement qu'elle a été adoptée sur le fondement d'un algorithme et les principales caractéristiques de mise en œuvre de ce dernier doivent être communiquées à la personne intéressée, à sa demande. Il en résulte que, lorsque les principes de fonctionnement d'un algorithme ne peuvent être communiqués sans porter atteinte à l'un des secrets ou intérêts énoncés au 2° de l'article L. 311-5 du code des relations entre le public et l'administration, aucune décision individuelle ne peut être prise sur le fondement exclusif de cet algorithme"*.

(⁹⁹) See CC. n. 2018-765 DC, point 71: "*le responsable du traitement doit s'assurer de la maîtrise du traitement algorithmique et de ses évolutions afin de pouvoir expliquer, en*

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Lastly, the French judges pointed out that it is necessary to ensure that the administrative act that is processed electronically can be challenged by the person concerned before the administration and the administrative courts, specifying that, in the first case, the public administration before which the case is brought is obliged to give its decision without using once again automated mechanisms.

This latter condition seems to be closely linked both to the need to know all the most relevant aspects of automated decision-making process and to the need to understand the concrete modes of functioning of the software ([100]). It is aimed, in fact, at ensuring the

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détail et sous une forme intelligible, à la personne concernée la manière dont le traitement a été mis en œuvre à son égard. Il en résulte que ne peuvent être utilisés, comme fondement exclusif d'une décision administrative individuelle, des algorithmes susceptibles de réviser eux-mêmes les règles qu'ils appliquent, sans le contrôle et la validation du responsable du traitement". These considerations still seem to stress the need to ensure forms of supervision of algorithmic systems, which cannot be imposed as a single subject of the automated process, but must, on the contrary, take on a collective dimension, as suggested by the study conducted by *Commission nationale de l'Informatique et des Libertés*, *Comment permettre à l'homme de garder la main? The ethical challenges of algorithms and artificial intelligence*, December 2017, in *www.vie-publique.fr:* "*ce principe de vigilance doit avoir une signification collective. Plus que d'algorithmes, sans doute faudrait-il parler de systèmes algorithmiques, de complexes et longues «chaînes algorithmiques» composées de multiples acteurs (du développeur à l'utilisateur final, en passant par la société ayant collecté les données utilisées pour l'apprentissage, le professionnel qui réalise cet apprentissage, par celui qui a acheté une solution de machine learning qu'il va ensuite déployer, etc.)"*. On this point, see J.B. DUCLERCQ, *L'automatisation algorithmique des décisions administratives individuelles*, cit., 303 ff.

([100]) As noted by J.B. AUBY, *Il diritto amministrativo di fronte alle sfide digitali,* in *Ist. del fed.*, n. 3/2019, 631-632, judicial review of algorithm-based administrative decisions is far from straightforward. This is because "not only judges will not be better at understanding algorithms than the average citizen, but there is a risk that the techniques usually used to scrutinise the motivation of administrative acts and the relationship between them and their reasoning, may lose their current effectiveness. These techniques [...] are

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effectiveness of the remedies invoked by the people concerned against the improper exercise of administrative power.

The conditions of legitimacy established by French constitutional jurisprudence have thus supplemented the regulatory provisions introduced by *Loi* no. 2016-1321 and focused attention not only on the well-known requirements of transparency of the algorithmic procedure, but also on the principles of comprehensibility and justiciability of the automated administrative act.

Principles which, following the statements made in the mentioned decision, will have to be taken into account in subsequent applications of the institute.

On this point, however, it is necessary to emphasize that the recalled conditions of legitimacy of automated adminsitrative decisions may also be subject to certain exceptions in relation to specific sectors of public activity.

This conclusion can be reached by analysing another significant judgment of the *Conseil constitutionnel* on this field, which assessed the constitutional compliance of the derogation from the reporting and publication obligations laid down by the last paragraph of the first subparagraph of art. L. 612-3 of the *Code de l'éducation* ([101]).

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based on classical models of causal rationality. They may have a limited impact on motivations that are based on statistical correlations, as in many algorithms".

([101]) See art. L. 612-3, par. 1.4: "*Afin de garantir la nécessaire protection du secret des délibérations des équipes pédagogiques chargées de l'examen des candidatures présentées dans le cadre de la procédure nationale de préinscription prévue au même deuxième alinéa, les obligations résultant des articles L. 311-3-1 et L. 312-1-3 du code des relations entre le public et l'administration sont réputées satisfaites dès lors que les candidats sont informés de la possibilité d'obtenir, s'ils en font la demande, la communication des informations relatives aux critères et modalités d'examen de leurs candidatures ainsi que des motifs pédagogiques qui justifient la décision prise*".

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In particular, this provision was introduced with reference to the well-known automated university pre-enrolment mechanism used by the French Ministry of Education since 2009 ([102]).

On the basis of this article, the right of access to the documents of the administrative procedure was limited to the criteria and modes for assessing students' applications established at central level, thus excluding the possibility for interested parties to know the requirements defined by the special Commissions (*Commissions d'examen des voeux*) set up at the universities to examine and classify the applications submitted via telematic platform ([103]).

The mentioned rule is justified by the need to preserve the secrecy and independence of the evaluation activities assigned to the local commissions, so as to prevent them from being subject to external pressure when determining the annual ranking of each faculty.

The system devised by the French legislator has, however, attracted a great deal of criticism from the public and from students' representative associations, since it does not

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([102]) This is a computerized system managed through the Apb platform (*Admission post bac*), replaced from January 2018 by the similar *Parcoursup* portal, through which applications for admission to university faculties are assessed on the basis of the student's educational background and the parameters set by the Assessment Board set up in the individual universities. At the end of the procedure, in relation to the number of places available, the system sends individual applicants proposals for enrolment compatible with their personal profiles. On this subject, see the report edited by C. VILLANI, G. LONGUET, *Les algorithmes au service de l'action publique: le cas du portail admission post-bac*, 15 February 2018, in *www.senat.fr.;* E. MAUPIN, *La CNIL impose une réforme du portail de l'admission post-bac*, in *AJDA*, 2017, 1860 ff.

([103]) Pursuant to par. 1.4. of art. L. 612-3, these requirements must, in any case, be taken into account "*d'une part, des caractéristiques de la formation et, d'autre part, de l'appréciation portée sur les acquis de la formation antérieure du candidat ainsi que sur ses compétences*".

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allow individuals to obtain comprehensive information on the assessment criteria used in the selection process ([104]).

Consequently, when called upon to rule on the constitutional legitimacy of the recalled provision of the *Code de l'éducation* ([105]), the *Constitutional Council* had the opportunity to specify the conditions that may justify a legislative limitation of the citizen's right of access to administrative documents ([106]).

After stating that, in the specific case, the processing of candidates' applications by the ICT platform had to be considered as only partially automated, the French judges held that the censured provision was constitutionally legitimate, since it was intended to pursue, in a proportionate manner, a specific objective of general interest (i.e. the independence and authority of the judgments of local evaluation boards).

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([104]) See CC, n. 2020-834, cit., point 12: "*Il résulte de la jurisprudence constante du Conseil d'État que les dispositions contestées réservent ainsi l'accès aux documents administratifs relatifs aux traitements algorithmiques utilisés, le cas échéant, par les établissements d'enseignement supérieur pour l'examen des candidatures, aux seuls candidats qui en font la demande, une fois prise la décision les concernant, et pour les seules informations relatives aux critères et modalités d'examen de leur candidature*".

([105]) A right which, in the French legal system, finds express constitutional recognition in art. 15 of the Declaration of the Rights of Man and of the Citizen of 1789.

([106]) This question was raised, in particular, in the context of a dispute brought before the *Conseil d'Etat* (EC, 15 January 2020, nn. 433296 and 433297) by the *Union nationale des étudiants de France* in order to challenge the refusal of two French universities to disclose the source codes and algorithms used to assess the applications of students registered through the *Parcoursup* platform.

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Firstly, examining the position of the student applicants, it was pointed out that, on the basis of art. L. 612-3, the latter may know, although at the end of the selection process, the general criteria established for the evaluation of applications at ministerial level.

Communication to which, according to the constitutional judges, should be added that concerning the selection criteria established by the local boards for the ranking of applications.

Secondly, with reference to the requirements of transparency of the procedure claimed by non-participants, it was noted that the absence of an express legislative provision recognising the right of access of third parties cannot justify the automatic exclusion of the latter from the group of those entitled to know the process for selecting candidates.

Indeed, such an interpretation of the legal framework would be disproportionate towards the general interest objective pursued by art. L. 612-3 and, therefore, not in compliance with the constitutionally guaranteed right of access to administrative documents ([107]).

Consequently, in order to consider the derogation from art. L. 311-3-1 and art. L. 312-1-3 CRPA to be legitimate, each university will be required to publish online, at the end

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([107]) See CC, n. 2020-834, cit., point 17: "*Or, une fois la procédure nationale de préinscription terminée, l'absence d'accès des tiers à toute information relative aux critères et modalités d'examen des candidatures effectivement retenus par les établissements porterait au droit garanti par l'article 15 de la Déclaration de 1789 une atteinte disproportionnée au regard de l'objectif d'intérêt général poursuivi, tiré de la protection du secret des délibérations des équipes pédagogiques. Dès lors, les dispositions contestées ne sauraient, sans méconnaître le droit d'accès aux documents administratifs, être interprétées comme dispensant chaque établissement de publier, à l'issue de la procédure nationale de préinscription et dans le respect de la vie privée des candidats, le cas échéant sous la forme d'un rapport, les critères en fonction desquels les candidatures ont été examinées et précisant, le cas échéant, dans quelle mesure des traitements algorithmiques ont été utilisés pour procéder à cet examen*".

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of the pre-enrolment procedure, the algorithmic formulas and criteria according to which the applications were examined.

It seems to follow from the judgment in question that any infringement of the rights of private individuals arising from the adoption of automated decision-making systems may be considered legitimate if it is aimed at the pursuit of an important public interest and if, in application of the principle of proportionality, it is strictly necessary in relation to the objective.

A conclusion that shows that, when dealing with automated administrative decisions, the most appropriate perspective of analysis is to seek a satisfactory balance between the multiple legal interests involved in the concrete case.

6. CONCLUDING REMARKS

At the end of this work, it seems possible to formulate some considerations regarding the need to regulate the institution of automated administrative decision-making process within the Italian legal system.

From what above observed it has emerged that the growing use of algorithmic formulas by public administrations has so far left the Italian legislator substantially indifferent, with the consequent statement of a supplementary role of administrative jurisprudence as keeper of the rights of private individuals involved in the exercise of public powers ([108]).

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([108]) On this point, see also D.U. GALETTA, *Algoritmi, procedimento amministrativo e garanzie,* cit., 510 ff.

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This approach to the issue of automated decisions has therefore resulted in the establishment of general principles, often supported by references to European legislation or guidelines ([109]).

Without going back into the merits of the matter, it seems necessary to point out that the Italian Council of State's significant statements are unable to satisfy the urgent need to define more precise and contextualised rules on the subject.

In fact, if the need for transparency and supervision of ICT systems is now unanimously recognised in doctrine and jurisprudence, the operational modes through which these principles can be concretely applied in relation to the different types of software in use in the public sector still are the subject of an intense debate.

On this point, it is to be hoped that the future legislative measures will not be limited to merely transposing the indications formulated by the administrative judges, but that they will establish a more articulate and complete discipline of automated administrative acts ([110]).

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([109]) See A. CELOTTO, *Come regolare gli algoritmi. Il difficile equilibriomento tra scienza, etica e diritto,* in *Analisi giuridica dell'economia,* n. 1/2019, 47 ff., who notes that, even at supranational level, the legal framework on the matter is still insufficient to provide a precise regulation of the phenomenon, with reference to which, also due to the EU's legislative competence on technological innovation, only a few general principles have been indicated so far.

([110]) A discipline which, however, can only be subject to further modifications as scientific research moves forward in the field of information technology. See M. BASSINI, L. LIGUORI, O. POLLICINO, *Sistemi di intelligenza artificiale, responsabilità e accountability. Verso nuovi paradigmi?* in F. PIZZETTI, *Intelligenza artificiale, protezione dei dati personali e regolazione,* cit., 334 ff., who stress that the rapid obsolescence of the rules designed to govern the process of technological transformation has always been a typical variable in the relationship between law and technology.

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In this regard, some interesting food for thought may be drawn from the analysis of the French legal experience, where there has been a progressive expansion of the regulatory framework of the use of automated processing in the adoption of individual decisions.

In particular, the changes deriving from *Loi* no. 2016-1321 introduced a number of important provisions, which, above all, met citizens' demands for transparency of public action.

From this perspective, the reinforced declination of the principle of transparency made by the French legislator led to the implementation of a form of social control on the use of these technological systems by public authorities.

They are now bound to be compliance with the reporting and publication obligations established (though imperfectly) in general.

Also in this case, however, the need to protect the legal position of individuals affected by the adoption of an administrative act with electronic processing has found further answers in some recent case law.

Measures which have provided an opportunity, on the one hand, to recognise the right to comprehensibility of the logical process followed by the software and to judicial and non-judicial review of the outcomes of the automated procedure; on the other hand, to specify that in such a context the traditional procedural guarantees may be legitimately derogated, under certain conditions, in the name of an equally relevant public interest ([111]).

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([111]) Indeed, these profiles have also been partly addressed by Italian administrative case law (see Cons. Stato, nn. 2270/2019 and 8472/2019, cit.), which emphasizes that "the use of robotized procedures cannot be a reason for circumventing the principles that shape our legal system and govern the conduct of administrative activity".

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Also in the light of these considerations, in a *de iure condendo* perspective, it is possible to state that the Italian strategy on artificial intelligence, currently only drafted ([112]), must deal, in a more practical point of view, with two main profiles.

First of all, that relating to the balance between the benefits offered by the use of automated systems to the activities of public authorities and the inalienable need to protect the individual positions that come into contact with them ([113]).

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([112]) See Strategy '*Italy 2025*' drawn up by the Ministry for Technological Innovation and Digitalization (available in *www.innovazione.gov.it*). In this document, with a view at promoting the spread of socially, culturally and democratically sustainable A.I., it is stated that "Artificial intelligence and *big data* are able to guide public decision-makers towards more and more conscious choices, efficiently managing a series of administrative procedures, especially if repetitive and with low discretionary power. Designing, developing and testing artificial intelligence solutions applied to administrative procedures and justice that are ethically and legally sustainable means implementing in a modern way the constitutional principles of efficient administration and transparent and brief due process. It is not something we can choose to do or not to do, it is something we have to do" (p. 18).

([113]) See the recent study by the European Union Human Rights Agency of 14 December 2020, *Getting the future right - Artificial intelligence and fundamental rights*, in *www.fra.europa.eu*, in which it is underlined that: "*The intent to increase efficiency drives the use of AI in the public sector - an aim that directly speaks to improving administration and benefiting citizens. Respondents in public administration by far most often indicate efficiency as the reason for considering the use of AI or for presently using AI. One respondent, who advises ministries on digital strategies and their use of AI, said that the main reasons for adopting AI are to improve the service to citizens and to reduce the costs of these services for public administration. Interviewees also indicate that public administration has particular requirements, meaning AI cannot be used for all purposes and needs particular attention when it comes to decision making. [...] . Public administration can only process data on a legal basis. Decisions need to be fair and transparent and pathways to challenge decisions need to be available and accessible*" (p. 81-82).

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This operation should be carried out with reference to the specific sector of activity in which public administrations use the aforementioned "organisational modules", as well as in compliance with the fundamental principle of proportionality of administrative action ([114]).

Secondly, and more generally, it is necessary to deal with the issue related to the identification of the types of administrative procedures susceptible to be automated, which should be carried out through a careful assessment of the concrete impact of ICTs in different cases.

In fact, it is only by delimiting the hypotheses in which the use of algorithmic formulas can actually contribute to the improvement of public action that it is possible to prevent the choice of digitalizing the performance of administrative proceedings from remaining within the organisational autonomy of each public administration.

The French experience seems to offer some interesting indications also in this respect, where it was noted that, in order to legitimately adopt a robotic administrative act, the proceeding authority must ascertain, among other factors, if it is possible to guarantee that the decision is knowable and comprehensible to its addressees ([115]).

Aware of the difficulties inherent in responding to the analyzed regulatory needs, it can be finally observe that the possibility of exploiting the advantages offered by the digital

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([114]) On the principle of proportionality of administrative action see, among many contributions, D.U. GALETTA, *Principio di proporzionalità e sindacato giurisdizionale nel diritto amministrativo*, Milano, 1998; Id., *Il principio di proporzionalità*, in M. RENNA, F. SAITTA (*eds.*), *Studi sui principi del diritto amministrativo,* Milano, 2012, 389 ff.; A. SANDULLI, *La proporzionalità dell'azione amministrativa,* Padova, 1998; S. COGNETTI, *Principio di proporzionalità. Profili di teoria generale e di analisi sistemica*, Torino, 2011; V. FANTI, *Dimensioni della proporzionalità: profili ricostruttivi tra attività e processo amministrativo,* Torino, 2012.

([115]) See CC., n. 2018-765 DC, cit.

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revolution in the public sector will depend, to a large extent, on the ways in which the automated decision-making process will be brought within the fundamental framework of the principle of legality of public action.

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