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*Digitisation, Administration and Human Being: Towards a "Reserve of Humanity" in the New Italian Public-Contracts Code**

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ABSTRACT The paper investigates the proper role to be accorded to human beings in automated administrative procedures and the need to find a "reserve of humanity" in the execution of administrative functions; pointing out that it is indeed the approach established by the most recent Italian legislative interventions in the field of public procurement (the new Italian Public-Contracts Code - Legislative Decree no. 36 of 2023).

1. *Administrative automation and the role of the human being*

Automated decision making, at least in its most basic forms, has long been a reality in many public administrations.[1]

It is therefore not surprising that, in the wake of the progressive digitisation of our lives, the topic has also become increasingly central in legal studies. Indeed, in Italy[2] the first legal analysis on the subject date back over thirty years,[3] demonstrating that and the

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The paper takes ample inspiration from the author's monographic work G. Gallone, *Riserva di umanità e funzioni amministrative. Indagine sui limiti dell'automazione tra procedimento e processo*, Milan, CEDAM, 2023, also available in open-access format at: https://ciadig.catedradebuengobierno.es.

[1] For example, in Italy, for at least a couple of decades, automated procedures were used for the management of transfers implemented by some armed forces; see A.G. Orofino, *L'informatizzazione dell'attività amministrativa nella giurisprudenza e nella prassi*, in *Giornale di diritto amministrativo*, 2004, 1371; see, even before, also A. Ravalli, *Atti amministrativi emanati mediante sistemi informatici: problematiche relative alla tutela giurisdizionale*, in *Foro amministrativo - T.A.R.*, 1989, II, 261-262.

[2] Even older is the attention paid to the subject in Germany, where the debate on automation dates back to the end of the 1950s (in addition to K. Zeidler, *Über die Technisierung der Verwaltung: eine Einführung in die juristische Beurteilung der modernen Verwaltung,* Karlsruhe, 1959, and, by the same author, *Verwaltungsfabrikat und Gefährdungshaftung*, in *Deutsches Vervaltungsblatt*, 1959; H. Bull, *Verwaltung durch Maschinen: Rechtsprobleme der Technisierung der Verwaltung*, Hamm, 1964; S. Simitis, *Rechtsprobleme der Technisierung der Verwaltung*, Hamm, 1964; S. Simitis, *Automation in der Rechtsordnung der Rechtsordnung*, Hamm, 1964; M. von Berg, *Automationsgerechte Rechts und Verwaltungsvorschriften*, Köln-Berlin, 1968; A. von Mutius, *Zu den Formerfordernissen automatisierter Verwaltungsentscheidungen*, in *Verwaltungsarchiv*, 67, 1976, 116; a new impetus was registered from the 1990s onwards with P. Lazaratos, *Rechtliche Auswirkungen der Verwaltungsautomationauf das Verwaltungsverfahren*, Berlin, 1990, 35; R.M. Polomski, *Der automatisierte Verwaltungsakt*, Berlin, 1993, 22; N. Luhmann, *Recht und Automation in der öffentlichen Verwaltung,* Berlin, 1997, and then on the wave of the development of artificial intelligence technology with M. Martini, *Digitalisierung als Herausforderung und Chance für Staat und Verwaltung, publication of Deutsches Forschungsinstitut für öffentliche Verwaltung*, Speyer, 2016, 4). In Spain this field of studies has flourished more recently (I. Martìn Delgado, *Naturaleza, concepto y regimen jurìdico de la actuaciòn administrativa automatizada*, in *Revista de administración pública*, 2009; E.M. Menéndez Sebastián, *Las garantías del interesado en el procedimiento administrativo electrónico luces y sombras de las nuevas leyes 39 y 40/2015*, Valencia, 2017; J. Valero Torrijos, *Las garantías jurídicas de la inteligencia artificial en la actividad administrativa desde la perspectiva de la buena administración*, in *Revista Catalana de Dret Públic*, 58, 2019, 87; O. Capdeferro Villagrasa, *La inteligencia artificial del sector público: desarrollo y regulación de la actuación administrativa inteligente en la cuarta revolución industrial*, in *Revista de los Estudios de Derecho y Ciencia Política*, 30, 2020, 6) owing much, at least in principle, to the impulse proper of Italian scholarship but standing out, today, at the European level, for the quality of its elaboration.

[3] A. Predieri, *Gli elaboratori elettronici nell'amministrazione dello Stato,* Bologna, Il Mulino, 1971, 52; G. Duni, *L'utilizzabilità delle tecniche elettroniche nell'emanazione degli atti e nei procedimenti amministrativi. Spunto per una teoria dell'atto emanato nella forma elettronica*, in *Rivista amministrativa*,1978, 407; B. Selleri, *Gli atti amministrativi "in forma elettronica"*, in *Diritto e società*, 1982, 133; G. Caridi, *Informatica giuridica e procedimenti amministrativi*, Milan, Franco Angeli, 1983, 145; A. Ravalli, *Atti amministrativi emanati mediante sistemi informatici: problematiche relative alla tutela giurisdizionale*, 261-262; A.Usai, *Le prospettive di automazione delle decisioni amministrative in un sistema di teleamministrazione,* in *Diritto dell'informatica*, 1993, 17. Monographic studies include A. Masucci, *L'atto amministrativo informatico. Primi lineamenti di una ricostruzione*, Naples, Jovene, 1993 and U. Fantigrossi, *Automazione e pubblica ammini-*

current season is only the latest in a very long and articulated debate.[4]

It seems, however, that, partly because of its relative youth, the debate on the subject has, with the exception of a few founding studies,[5] refrained from constructing an organic and comprehensive legal theory of administrative automation. This reluctance is, probably, attributable to two different factors: on the one hand, the lack of a legal discipline of reference and, therefore, of a positive basis on which to graft categories and concepts and, on the other, a solid reliance, at least in the early stages, on the case-law that, needing to provide actual answers of justice to individual cases, has failed to offer a broader theoretical arrangement.

Given this framework, it comes as no surprise that we have lost sight, with a few meritorious exceptions, of what is perhaps the main theoretical crux of the automation phenomenon: the role to be acknowledged to the human being and, consequently, the legal external boundaries of machine use in the performance of administrative functions.

However, the future prospects of the technical evolution and, above all, of the use of artificial intelligence[6] make it necessary to formulate a clear legal stance able to regulate the "dark face" of the phenomenon.[7]

In particular, the issue arises as to whether there exists an incompressible legal sphere that shall remain prerogative of the human being and, therefore delimiting the scope and content of machine use in the performance of administrative functions.

The answer can only be affirmative and linked to what can be defined, without emphasis, as a basic ordinal option of an axiological nature.

In fact, defining the role of the person in the administrative decision-making process is tantamount, before any further dogmatic reflections, to confronting and questioning, on a philosophical and ethical level, the relationship between men and machines, as a declination of the theme of the relationship between subjects and objects.[8]

Today, the meta-legal bases of the argument are traceable in the almost universally-accepted approaches of postmodern thought.[9]

Indeed, despite the diversity of approaches,[10] there seems to be a shared fear that mankind, in pursuing the old and everlasting ambition to dominate the world,

strazione, Bologna, Il Mulino, 1993.

[4] There have been at least two "seasons" of study since the work of the pioneers of the subject. The first took place in the early 2000s at the stimulus of administrative jurisprudence (A.G. Orofino, *La patologia dell'atto amministrativo elettronico: sindacato giurisdizionale e strumenti di tutela*, in *Foro amministrativo - C.d.S.*, 2002, 2276; F. Saitta, *Le patologie dell'atto amministrativo elettronico e il sindacato del giudice amministrativo*, in *Diritto dell'economia*, 2003, 615; D. Marongiu, *L'attività amministrativa automatizzata*, Santarcangelo di Romegna, Maggioli, 2005; A.G. Orofino and R.G. Orofino, *L'automazione amministrativa: imputazione e responsabilità*, in *Giornale di diritto amministrativo*, 12, 2005, 1300). The second one, more recent and still in progress took off from the second half of the 10s of this century, is certainly richer from a quantitative point of view but moves, for the most part, still in the furrow traced by previous works.

[5] The reference is, first of all, to A. Masucci, *L'atto amministrativo informatico,* which has largely inspired subsequent works (such as that of D. Marongiu, *L'attività amministrativa automatizzata*) and remains to this day the main starting point and comparison in this field of research.

[6] "Advanced" automation by means of artificial intelligence (to distinguish it from what can almost oxymoronically be defined as "traditional" automation, to use the terminology suggested in G. Gallone, *Riserva di umanità e funzioni amministrative*, 17) opens up new legal scenarios that require reconsideration of the theoretical constructions proposed by early doctrine (including A. Masucci, *L'atto amministrativo informatico*, 58) that took deterministic algorithms as a reference. Indeed, the very expression "artificial intelligence", of which there is still no positive definition, is polysemic and lends itself to encompassing different technologies that range from *machine learning* to *natural language processing* and are united, not without a certain margin of approximation, by the mimetic intent of approaching the capabilities of the human mind.

[7] Made of *bias*, errors and non-controllability of computational outcomes. For a brief review of this "dark face" let us refer to G. Gallone, *Riserva di umanità e funzioni amministrative*, 26.

[8] For a broader examination, also from a historical perspective, see once again G. Gallone, *Riserva di umanità e funzioni amministrative,* 5.

[9] Without claiming to be exhaustive, on the impact of algorithms on our model of society, the concerned voices of H. Fry, *Hello World. Being Human in the Machine Age*, in translation by A. Migliori, Turin, Bollati Boringhieri 2018; B. Kaiser, *The Dictatorship of Data*, Milan, Harper Collins, 2019; S. Zuboff, *The Age of Surveillance Capitalism. The fight for a Human Future at the new Frontier of Power*, New York, *Public Affairs-Hachette Book Group*, 2019. Postmodernity is also, to some extent, the "post-humanity" imagined by S. Rodotà, *Il diritto di avere diritti*, Bari, Laterza, 2012, 341.

[10] In the Catholic world, the reference is first and foremost to P. Benanti, *Oracoli. Tra algoretica e algocrazia*, Rome, Luca Sossella, 2018 and by the same author *Le macchine sapienti. Intelligenze artificiali e decisioni umane*, Bologna, Marietti 1820, 2018. In this context, on 28 February 2020, at the initiative of the Pontifical Academy for Life, the Rome Call for AI Ethics was signed in the Vatican.

may end up making itself superfluous.[11]

In this cultural *milieu* and amidst the increasingly-heated ethical debate on the use of algorithms,[12] many calls for a return to an anthropocentric approach that focuses on the human person in his or her irreducibility and uniqueness.[13]

In particular, one hopes for the flourishing of a "digital humanism",[14] descendant from the age of "umanesimo giuridico".[15]

In particular, the main corollary of this approach is the need to reduce the machine (and, before that, the algorithm and the software of which it is an expression) to a mere *instrumentum* in the service of mankind, therefore relegating it to a mere servant function in support, not in substitution, of humanity.

This implies the need to find a balance between the amount of power delegated to the machine and that retained by human beings. According to the most accredited opinion,[16] such balance is to be identified through the criterion of "meta-autonomy", recommending that human beings have the power to decide what decisions to take, either exercising the freedom to choose, or whenever necessary surrendering that freedom through a choice that be however revocable in cases where reasons of opportunity and convenience may be deemed to prevail.

From a technical point of view, a possible solution is the construction of an artificial-intelligence model that is *human-centered designed* and which envisages the so-called *human-in-the-loop,*[17] placing people's knowledge and experience at the center of machine-learning processes. Such a model needs however to ensure renewed centrality to human being, in particular, with regard to the final moment leading to a decision, by providing that the computational result elaborated by the software, before turning into a final decision, would be subject to review by a natural person in charge of it.[18]

In this sense, it has been argued for a legal "reserve of humanity"[19] in the performance of

[11] This is the eschatological perspective of the "anthropocene" in Y.N. Harari, *Homo Deus. Breve storia del futuro*, Milan, Bompiani, 2017. A similar concern is shared by J. Kaplan, *People are not needed. Work and wealth in the age of artificial intelligence*, Rome, Luiss University Press, 2016.

[12] For a wide-ranging overview of the ethical debate around the use of algorithms see B.D. Mittelstadt, M. Taddeo, S. Wachter and L. Floridi, *The ethics of algorithms: Mapping the debate*, in *Big Data & Society*, July-December 2016, 1.

[13] The so-called *separateness of persons* to take up the fundamental teachings of J. Rawls, *A Theory of Justice*, Milan, Feltrinelli, 1982, 48. Consciousness, understood as awareness of one's own and others' existence and of the consequences of one's actions, remains the other trait that truly characterises the ego and the human being, making it irreducible to a machine. Consciousness, which is the ineliminable prerequisite for the moral and ethical relationship in any decision.

[14] G. Gallone, *Riserva di umanità e funzioni amministrative,* 32. The expression "digital humanism" has been employed by J. Nida-Rümelin and N. Weidenfeld, *L'umanesimo digitale. An ethics for the age of Artificial Intelligence*, translation by G. B. Demarta, Milan, Franco Angeli, 2019.

[15] From the teachings of G. Miele, *Umanesimo giuridico*, now in Id., *Scritti giuridici*, II, Milan, Giuffrè, 1987, 445. It is possible to discern also the influence of the neo-Thomist thought of J. Maritain, *La persona e il bene comune,* 2nd ed., Brescia, Morcelliana, 1963, 17. and passim, bearer of "a philosophy for the new times" that revolves around an "integral humanism".

[16] Among them L. Floridi, *Infosfera. Etica e filosofia nell'età dell'informazione*, Turin, Giappichelli, 2014, 185. The foundation, as an autonomous branch, of the philosophy of information dates back to the 1990s, to which the work of L. Floridi, *Philosophy and Computing: An Introduction*, London-New York, 1999, has contributed decisively.

[17] In contrast with the opposite and more radical model of *human-out-of-the-loop*. For an introduction to this human-based approach C.E. Bradley, *Human-in-the-loop applied machine learning*, in 2017 IEEE International Conference on Big Data, Boston, 2017.

[18] This is the solution put forward once again by L. Floridi, *Ethics of Artificial Intelligence. Developments, opportunities*, challenges, 98, according to which "human beings should retain the power to decide what decisions to make, exercising freedom of choice where necessary and ceding it in cases where reasons of primary importance, such as effectiveness, may prevail over the loss of control over the decision-making process" with the further clarification that "any delegation should also remain in principle reviewable, adopting as a last guarantee the power to decide again".

[19] The coining of the expression "reserve of humanity" (in spanish "reserva de humanidad") is due to J. Ponce Solè, *Inteligencia artificial, Derecho administrativo y reserva de humanidad algoritmos y procedimiento administrativo debido tecnológico*, in *Revista General de Derecho Administrativo*, 50, 2019. In Italy F. Fracchia and M. Occhiena, *Le norme interne: potere, organizzazioni e ordinamenti. Spunti per definire un modello teorico-conceptettuale generale applicabile anche alle reti, ai social e all'intelligenza artificiale*, Naples, Editoriale Scientifica, 2020, 137, have spoken, quoting again J. Ponce Solè, of a "tradizionale riserva di umanità" proper to law. It should, however, be noted that the use of the expression made by J. Ponce Solè, *Inteligencia artificial, Derecho administrativo y reserva de humanidad algorithmos y procedimiento administrativo debido tecnológico*, 50, is partially different from what is proposed here, given that the latter, indeed, imagined the existence of a "reserva de humanidad" as a balance to the lack of emotional empathy on the part of the algorithm, observing that "la AI no puede acabar consiguiendo disponer de máquinas con empatía emocional con los humanos, porque hace falta ser humano para ello, entonces

administrative functions,[20] thus indicating that minimum sphere of intervention that must inexorably remain individuals' exclusive prerogative (with the consequence of prohibiting full automation).

This terminological choice is not only explained by the evocative power of the formula but rests on specific dogmatic considerations.

First of all, the concept of "reserve", is a classic institution of public law that has passed from the liberal tradition to the contemporary constitutional state and conveys, in its various declinations (of law, jurisdiction, administration), a specific legal significance, identifying a material sphere -or sphere of action- that cannot be contested and is the exclusive prerogative of a specific State power or of a specific source of law. Moreover, this concept is well known in the administrative field, having been used for other purposes but essentially always in the sense of delimitation of a minimum legal space.[21]

The expression "reserve of humanity" seems then to convey greater depth than other, albeit successful and, expressions that -as will be said in the concluding remarks- have today penetrated into the normative fabric, such as "non esclusività algoritmica" (algorithmic non-exclusivity).[22] Indeed, insofar as it is constructed in purely negative terms as a mere limitation, the latter expression does not give any account of the positive scope of the concept, lending itself to an overly-reductive reading that risks relegating human intervention in the proceedings almost to a mere exception with respect to the rule of computerisation-automation.

2. *Constitutional law and the dogmatic basis of the "reserve of humanity"*

The pervasiveness of the "reserve of humanity" as a general legal principle, and the position it takes within the general theory of law,[23] emerges, with all evidence, at the level of super-primary legal sources.

Although the reserve of humanity does not find any explicit consecration in the Italian Constitutional Charter, it is certainly possible to trace, in the dense web of constitutional principles, a number of firm footholds that can constitute the normative and axiological basis on which to base the reserve.[24]

In fact, throughout the Italian Constitution's wording, it is possible to discern an absolute centrality of the human person, a direct result of the compromise reached, during the constitution-making process, between the political and constitutional traditions of the Left, liberal and democratic thought and Catholic thought. This is all the more perceived in the part relating to the "Principi fondamentali" ("Fundamental Principles") as well as in the provisions dealing specifically with the "Pubblica Amministrazione" ("Public Administration").

Starting from the latter, it is possible to

IA y empatía emocional sería una *contradictio in terminis*, y el sueño, en el sentido de aspiración, de la razón total (artificial en este caso) podría llegar a producir monstruos burocráticos que no resuenen emocionalmente ni se conecten con los humanos".

[20] G. Gallone, *Riserva di umanità e funzioni amministrative, passim*.

[21] This is the case, in italian scholarship of the "riserva di competenza" elaborated in doctrine since E. Capaccioli, *Manuale di diritto amministrativo*, CEDAM, Padua, 1983, 286 (later taken up by C. Marzuoli, *Potere amministrativo e valutazioni tecniche*, Milan, Giuffrè, 1985, 7 and 20-21) which, by distinguishing technical evaluations and administrative discretion, draws a sphere of exclusivity of the public administration with respect to the ascertainment of facts of a technical order.

[22] The expression "principio di non esclusività" was first used by A. Simoncini, *L'algoritmo incostituzionale: intelligenza artificiale e il futuro delle libertà*, in *BioLaw Journal - Rivista di BioDiritto*, 2019, 63. It was, then, textually taken up by the jurisprudence of the Council of State with the well-known ruling Council of State, Section VI, decision no. 8472 of 13 December 2019 (L. Carbone, *L'algoritmo e il suo giudice*, in www.giustizia-amministrativa.it, 2023; A.G. Orofino and G. Gallone, *L'intelligenza artificiale al servizio delle funzioni amministrative: profili problematici e spunti di riflessione*, in *Giurisprudenza italiana*, July 2020, 1738) and has, today, been taken up, as will be discussed below, in art. 30, paragraph 3, lett. b), of the new Italian Public-Contracts Code (Legislative Decree no. 36 of 2023).

[23] The authentically normative nature of the principles as legal norms that have all the characteristics of rules of conduct was first argued forcefully in doctrine in Italy by V. Crisafulli, *Per la determinazione del concetto dei principi generali del diritto*, in *Riv.intern.fil. dir*., XXI, 41-63, 157-81, 230; V. Crisafulli, *La Costituzione e le sue disposizioni di principio*, Milan, Giuffrè, 1952. The prevailing doctrine today seems to embrace a "strong" distinction based on qualitative and substantial characteristics, such as the superabundance of values and the juspoietic function of the principles (in these terms F. Modugno, *Appunti dalle lezioni sulle fonti del diritto,* Turin, Giappichelli, 2002, 56). For an overview S. Bartole, *Principi generali del diritto (diritto costituzionale)*, in *Enciclopedia del diritto*, XXXV, Milan, Giuffrè, 1986, 494 and, on the level of general theory, N. Bobbio, *Principi generali del diritto*, in *Nuovo digesto italiano*, XII, Turin, Giappichelli, 1966, 348.

[24] Thus *amplius* in G. Gallone, *Riserva di umanità e funzioni amministrative*, 41.

state that the Italian constitutional model of administration is undeniably that of a human administration, meaning an administration made by human beings and intended to serve them.[25] More specifically, the "Public Administration", as outlined in Articles 97[26] and 98 of the Italian Constitution,[27] is identified not only with "pubblici uffici" ("public offices") in their objective dimension but, above all, with "pubblici impiegati" ("public employees").[28]

Analogously, the provisions of Article 54, paragraph 2 of the Italian Constitution -a norm of not only symbolic, but also systemic value- call on "cittadini cui sono affidate funzioni pubbliche" ("citizens entrusted with public functions") for "disciplina ed onore" ("discipline and honour"),[29] thus suggesting that the performance of public functions is entrusted not to a depersonalised apparatus, but rather to citizens, i.e. human beings invested with public functions.

Article 28 of the Italian Constitution closes and seals the constitutional model of human administration. The principle of direct responsibility acts as the main factor for the legal legitimisation of public powers[30] and has as its final term not the apparatus as a whole, but rather the individual officers as natural persons (the only ones subject to criminal and administrative liability, in addition to civil liability).

However, it seems that the true constitutional cornerstone of the "reserve of humanity" in the performance of automated administrative functions must be traced outside the model of administration (which has a necessarily historical dimension and does not represent a definitive and stable acquisition over time), demanding us to turn our attention to the "Fundamental Principles" of the Italian Constitution.

Indeed, the existence of a sphere necessarily reserved to human intervention in the exercise of public power cannot but derive from the fundamental values that permeate the legal system, especially the personalist principle underlying the legal system and enshrined in Article 2 of the Italian Constitution and Article 1 of the Charter of Fundamental Rights of the European Union. [31]

The individual, in their irreducible uniqueness, is the absolute protagonist of the Charter and this prevents any equalisation, in terms of value, with the machine (which, moreover, is not recognized in the Constitution as having any specific protective status). The dignity of the person[32] as the main

[25] According to the parabola of progressive "personalisation" drawn by I.M. Marino, *Prime considerazioni su diritto e democrazia*, in E. Follieri and L. Iannotta (eds.), *Scritti in ricordo di Francesco Pugliese*, Naples, Edizioni Scientifiche Italiane, 2010, 165.

[26] Article 97, paragraph 3 of the Italian Constitution provides, in fact, that "le sfere di competenza, le attribuzioni e le responsabilità proprie dei funzionari" ("the spheres of competence, attributions and responsibilities of officers are determined in the organisation of offices") and the term "uffici" used therein clearly refers not to the set of material and instrumental resources necessary to perform public functions (identifying this with the "public offices organised in accordance with legal provisions" *ex* Art. 97, paragraph 2 of the Italian Consitution), but with the natural persons who hold this position. In these terms: R. Caranta, *Commentary on Article 97 of the Constitution*, in A. Celotto, R. Bifulco and M. Olivetti (eds.), *Commentary on the Constitution*, Turin, UTET, 2006, 1901.

[27] A clear personalistic accent in outlining the features of the constitutional model of administration can also be felt in Article 98 of the Italian Constitution, which refers directly to "pubblici impiegati" ("public employees"), clarifying, in the first paragraph, that they are at the "servizio esclusivo della Nazione" ("exclusive service of the Nation") and outlining, in the following paragraphs, some fundamental aspects of their legal status.

[28] This is the opinion of M. Monteduro, *Il funzionario persona e l'organo: nodi di un problema*, in *PA persona e amministrazione,* 1, 2021, 78.

[29] These are clearly concepts semantically closer to morality than to law and as such referable only to the individual. Part of the scholarship links them directly to the value of good performance (A. Cerri, *Fedeltà (dovere di)*, in *Enciclopedia giuridica*, XIV, Rome, Treccani, 1988, 4), differentiating the position of the civil servant from that of the ordinary citizen (M.G. Lombardi, *Contributo allo studio dei doveri costituzionali*, Milan, Giuffrè, 1967, 174).

[30] On the role that responsibility plays as the closure of the circuit of the legitimation of administrative powers, see the considerations of F. Merusi, *La responsabilità dei pubblici dipendenti secondo la Costituzione*: l'art. 28 rivisitato, in *Riv.trim.dir.pubbl*., 1986, 11; Id., *Dovere di rendere pubblico conto, responsabilità dei dirigenti e determininazioni di indirizzi e programmi* (1992), in *Scritti giuridici,* vol. III, Milan, Giuffrè, 1992, 3859, and the work of G. Berti, *La responsabilità pubblica (Costituzione e Amministrazione)*, Padua, CEDAM, 1994.

[31] On the personalist principle see, among others, E. Tosato, *Rapporti tra persona, società intermedie e Stato*, in Aa.Vv., *I diritti umani. Dottrina e prassi*, Rome, AVE, 1982, 695 and A. Ruggeri, *Il principio personalista e le sue proiezioni*, in *Federalismi*, 17, 2013.

[32] Considered by S. Rodotà, *Il diritto di avere diritti*, 184, the most significant innovation of post-war constitutionalism. The author sketches an evocative historical parabola of constitutionalist doctrines in which from homo hierarchicus one passes to *homo aequalis* to arrive at *homo dignus*. Dignity is also taken as the cornerstone of the supranational catalogues of human rights, being placed at the opening of both the 1948 Universal Declaration of Human Rights.

corollary of the personalist principle stands, therefore, as a barrier to the dehumanisation of the administration[33] as it does not allow entirely entrusting to the machine decisions that can, positively or negatively, affect the legal sphere of the individual-citizen. Moreover, doing otherwise would draw an asymmetry between subjects and objects, placing the former in a position of inferiority (given, precisely, by the subjection to the choice of others) that completely overturns the axiological order drawn by the Constitution.

The legal option in the sense of finding the existence of a "reserve of humanity" in the performance of administrative functions is also clearly reflected, and at the same time has repercussions, at the level of the general legal categories of administrative law, which have always been built on the assumption of the need for an indispensable personal substratum as the basis of administrative action.[34]

The main dogmatic referent in this respect is the organ theory.[35]

The "organicistic metaphor", also transposed at the constitutional level,[36] has penetrated so deeply into the legal culture of public law that it has become one of the constants in both general and sectoral regulations of administrative action.[37]

However, legal scholarship, including administrative scholarship, has clarified that the organic relationship constitutes only one of the possible mechanisms of formal legal imputation of the act.[38]

Moreover, precisely in relation to the phenomenon of administrative automation, legal scholarship has attempted to construct mechanisms of imputation capable of completely disregarding the *fictio of* organic identification and, therefore, the eliminable human component that it carries within itself.[39]

[33] See the more extensive considerations on this point in G. Gallone, *Riserva di umanità e funzioni amministrative*, 50.

[34] The legal need to establish certain criteria for the imputation of the content of automatic acts in order to avoid a sort of depersonalisation of administrative action by means of computers has already been highlighted, albeit with different nuances, by A.G. Orofino and R.G. Orofino, *L'automazione amministrativa: imputazione e responsabilità*, 1300; S. Civitarese Matteucci, *"Umano troppo umano". Automated administrative decisions and the principle of legality*, in *Diritto pubblico*, 1, 2019, 5, 22, who questions the existence of a "principle of preference for the 'anthropic decision'"; V. Brigante, *Evolving pathways of administrative decisions. Cognitive activity and data, measures and algorithms in the changing administration*, Naples, Editoriale Scientifica, 2019, 129, who argues the existence of a "required human component in administrative decision-making" highlighting the current difference between "serving" and "substitutive role in exercise of power"; D.U. Galetta and J.G. Corvalán, *Artificial Intelligence for a Public Administration 4.0? Potenzialità, rischi e sfide della rivoluzione tecnologica in atto,* in *Federalismi,* 3, 2019, 2; M.C. Cavallaro, *Imputazione e responsabilità delle decisioni automatizzate*, in this review, 1, 1-2, 2020, 72; A. Cassatella, *La discrezionalità amministrativa nell'età digitale*, in Aa.Vv., *Diritto amministrativo: scritti per Franco Gaetano Scoca*, vol. I, Naples, Editoriale Scientifica, 2021, 675; V. Neri, *Diritto amministrativo e intelligenza artificiale: un amore possibile,* in *Urbanistica e appalti*, 2021, 5, 581; R. Rolli and M. D'Ambrosio, *La necessaria lettura antropocentrica della rivoluzione 4.0*, in *Pa Persona e amministrazione*, 2021, 590.

[35] On the notion of organ, in doctrine, see: A. De Valles, *Teoria giuridica dell'organizzazione dello Stato,* I, Padua, CEDAM, 1931, 77; C. Esposito, *Organo, ufficio, soggettività dell'ufficio*, in *Annali dell'Università di Camerino*, Sez. giuridica, vol. 6, Padua, 1932, 257; U. Forti, *Nozione e classificazione degli organi*, in *Studi di diritto pubblico,* 1937, 18; V. Crisafulli, *Alcune considerazioni sulla teoria degli organi dello Stato*, in *Arch.giur*., 1938, 81; S. Romano, *Organi*, in *Frammenti di un dizionario giuridico*, Milan, Giuffrè, 1947, 145; L. Raggi, *Ancora sul concetto di organo*, in *Rivista trimestrale di diritto pubblico*, 1951, 301; S. Foderaro, *Organo (teoria dell')*, in *Nuovissimo digesto italiano*, XII, 1968, 214; S. Foderaro, *Organo delle persone giuridiche pubbliche*, in *Nuovissimo digesto italiano*, XII, 1968, 223; S. Agrifoglio and L. Orlando, *Teoria organica e Stato-apparato*, Palermo, La Palma, 1979; M.S. Giannini, Organi *(teoria generale)*, in *Enc.dir.*, XXXI, Milan, Giuffrè, 1981, 37; G. Berti, *La parabola della persona Stato (e dei suoi organi)*, in *Quaderni fiorentini per la storia del pensiero giuridico moderno. Itinerari moderni della persona giuridica,* 11-12, n. 2, 1982/1983, 1001; G. Marongiu, *Funzionari e ufficio nell'organizzazione amministrativa dello Stato*, in *Studi in memoria di V. Bachelet*, Milan, Giuffrè, 1987, 393 ff; G. Marongiu, *Organo e ufficio*, in *Enciclopedia giuridica*, XXII, Rome, Treccani, 1990.

[36] Article 97 paragraph 3 of the Italian Constitution. Thus M.C. Cavallaro, *Imputation and Responsibility for Automated Decisions*, 72.

[37] For further references please refer to G. Gallone, *Riserva di umanità e funzioni amministrative,* 71.

[38] In these terms M.S. Giannini, *Diritto amministrativo,* I, Milan, Giuffrè, 1993, 126, who takes up the teachings of private law and, in particular, of A. Falzea, *Capacità (teoria generale)*, in *Enciclopedia del diritto*, VI, Milan, Giuffrè, 1960, 14. Imputation by means of an organ is distinguished, in particular, from the other form of imputation, particularly studied in the civil law field, of representation under Art. 1387 of the Italian Civil Code. The elaboration of the category of imputation (in German *Zurechnung*), in its most general and unifying meaning, as a formal link between the conditioning fact and the conditioned fact as a pure relation of *sollen* (and, therefore, as a reference to the subject of legal consequences of the subject's own or another's action), is due to the School of the pure doctrine of law and, in particular, to H. Kelsen, *Lineamenti di dottrina pura del diritto,* Turin, Giappichelli, 1952, 51 and *passim*.

[39] From its very origins the figure of the organ has,

In Germany, which has elaborated the oldest and most original dogmatic reconstructions on the subject, and today seems to embrace forms of full automation,[40] there has been talk of *Verwaltungsfabrikat*[41] (i.e. of an "administrative product", as opposed to the traditional *Verwaltungsakt*), suggesting that its imputation may take place on a purely-objective basis, by virtue of the upstream organisational choice made by the public administration to avail itself of automation. A part of Italian scholarship has taken up this approach -albeit with some significant variations- and evoked, as a basis for the imputability of the automated act on an objective basis, the principle *causa causae est causa causati*, arguing that the will of the computer is, as to its genesis, the will of the Authority and, therefore, attributable to it.[42]

However, such reconstructions suffer from the basic limitation of thinking about automation as an eccentric phenomenon with respect to the traditional categories of administrative law. Such assumption is risky for legal guarantees, as it distances itself from the traditional safeguards that administrative legal science has laboriously constructed around administrative action and leads to the disarticulation of certain fundamental notions including, first and foremost, that of administrative measure itself.[43] Above all, such assumption appears totally inadequate when compared with the most advanced forms of automation (in particular, artificial intelligence) which, being based on algorithms with an open structure and a non-deterministic character, escape the full control of those who use them.

Therefore, it does not seem that sufficiently-convincing ideas have been offered to abandon, in the legal framing of automated-administrative activity, a model as dogmatically and normatively rooted and consolidated as that of organic immedesimation.

This also seems to be linked to the need not to break or inhibit, not even in part, the circuit of responsibility, which represents one of the main factors of legitimisation of public powers.[44] It is, in fact, quite clear that creating *ex novo* a mechanism of imputation of the administrative act to the public administration that does not pass through the natural person of the officer is tantamount to preventing, at least in part, configuration of some forms of liability (in particular, criminal

moreover, presented a clear and well delineated anatomy according to which its ownership can only belong to a natural person. On the level of general theory, the inescapability of a personal *substratum* to the figure of the organ has been recognised by A. Falzea, *Responsabilità penale delle persone giuridiche,* in *La responsabilità penale delle persone giuridiche in diritto comunitario*, *Atti del Convegno di Messina, 30 aprile - 5 maggio 1979*, Milan, 1981, 149, now in A. Falzea, *Ricerche di teoria generale del diritto e di dogmatica giuridica. Vol. III. Scritti d'occasione*, Milan, Giuffrè, 2010, 67. The majority of Italian administrative scholarship (M.S. Giannini, *Organs (general theory)*, in *Enc. dir*, XXXI, Milan, Giuffrè, 1981, 37 and G. Marongiu, *Organo e ufficio*) identifies two essential elements of the notion of organ: one objective, represented by the office or sphere of competence, meaning the portion of public power that is attributed to it, and the other subjective, represented by the holder of the organ (or officer), coinciding with the natural person that the public body uses to exercise its powers. The necessarily personal dimension of the officer is emphasised by M. Monteduro, *Il funzionario persona e l'organo: nodi di un problema*, 73-74. For a partially different and substantially isolated approach C. Esposito, *Organo, ufficio, soggettività dell'ufficio*, in *Annali dell'Università di Camerino,* vol. VI (sez. giur.), 1932, 251, who emphasises the structural connection existing between organ and legal personality of public law, excluding the identification of the former with the natural person.

[40] The reference is to the well-known Section 35a of the *Verwaltungsverfahrensgesetz*. For a comment to it E. Buoso, *Public Administration in Germany in the Age of Artificial Intelligence: Fully Automated Proceedings and Robotic Administrative Decisions*, in *Pa Persona e Amministrazione*, vol. 8, 2021, 501 and by the same author *Fully Automated Administrative Acts in the German Legal System*, in this review, 1, 1-2, 2020, 105.

[41] This is the thesis of K. Zeidler, *Über die Technisierung der Verwaltung: eine Einführung in die juristische Beurteilung der modernen Verwaltung*, taken up by the same author in *Verwaltungsfabrikat und Gefährdungshaftung*, 681.

[42] A. Masucci, *L'atto amministrativo informatico. Primi lineamenti di una ricostruzione,* 85-86, according to which through the program (the software) the authority "prepares in advance the decision for an indefinite number of cases" so that "the public administration is and remains the dominus of the entire procedure, since the computer cannot perform any operation that is not provided for by the program".

[43] Leaving aside the question of whether the subject can rise (or not, as it seems preferable) as an essential requirement of the administrative measure (in this regard, M.S. Giannini, *Atto amministrativo*, in *Enciclopedia del diritto,* IV, Milan, Giuffrè, 1959, 173; R. Villata and M. Ramajoli, *Il provvedimento amministrativo*, Turin, Giappichelli, 2006, 202; S. Perongini, *Teoria e dogmatica del provvedimento amministrativo*, Turin, Giappichelli, 2016, 188), it is necessary to come to terms with the idea that one can conceive of a legal act devoid of any, even minimal, predicate of humanity, thus distancing oneself from centuries of elaboration of the science of law. The idea that the administrative act is a *naturaliter* human act is implicit in M.S. Giannini, *Atto amministrativo*, 174.

[44] S. Rodotà, *Il diritto di avere diritti*, 403.

and administrative liability, as required by Article 28 of the Italian Constitution). And limiting the liability of public powers to only civil liability carries with it the danger of its definitive capitalisation with all the consequences that follow in terms of the conformative capacity of administrative action.[45]

Finally, to complete this picture, again from a dogmatic point of view, it seems that the "reserve of humanity" can find its basis, by keeping with the meta-juridical premises from which we began, in the legal nature of the algorithm (and, consequently, of the software that is its translation into machine language).[46]

As it is well known, the nature of the algorithm has given rise to a lively debate, originated in scholarship and nurtured in the Courts, which has mainly focused on the consequences in terms of the protection of the citizen recipient of the automated measure. In Italian scholarship, the oldest arguments have focused on the software used by administrations for the computer management of proceedings (and consequently of the algorithm underlying it), qualifying it, with different nuances, in terms of an administrative act. According to a first reconstruction, the programme act is "an (administrative) act that lays down general and abstract prescriptions" with which the administrative authority "directs" its own administrative action, predetermining its modalities and contents.[47] Moreover, it would not be a mere internal act since, although lacking direct and immediate effects, it would nevertheless be endowed with a certain external relevance, inasmuch as it is capable of conditioning the adoption of the final measure. Some other authors, again embracing an act-type framework, placed software in the *genus of* regulatory acts.[48]

However, these reconstructions seem to start from a -technical more than legal- misunderstanding of the concept of algorithm (and, consequently, of those of "automation" and "artificial intelligence"). The algorithm (and, consequently, the software that is its expression), as a logical procedure that solves a class of problems through elementary operations or instructions, never presents a content of ascertainment, evaluation, judgement or decision, but assumes descriptive and non-prescriptive value insofar as it indicates the steps of which the sequence is composed without imposing them. In other words, it neither expresses a command nor proposes to declare, preserve or innovate the reality of law because it simply does not set a legal horizon. The inadequacy of these reconstructions becomes even clearer if one looks at "advanced automation" by means of artificial intelligence. This, in fact, is based on open-structure algorithms that do not envisage a finite number of operations and therefore do not have the character of determinism. It is, therefore, difficult to imagine that such a type of algorithm would be capable to express a decision, a judgement or an assessment. Finally, it seems that the argument that the algorithm (and the software that is its expression) is a computerised administrative act is based on a fundamental misunderstanding represented by the undue confusion between the algorithm itself, and the legal vehicle on which it travels and through which it enters the procedure. In particular, it appears that the algorithm, in its static dimension, more correctly constitutes the object of the legal act[49] and, in particular,

[45] The risk is, in other words, that the public administration may knowingly adopt unlawful acts by taking into account the purely pecuniary consequences it faces in a comparative analysis between that cost and the benefits (even indirect) that it could obtain from such unlawful action. Such an approach cannot, on the other hand, be followed where individual liability (civil, criminal and administrative) of the individual civil servant (who remains directly exposed to the personal consequences of any breach of law) remains foreseeable, even in relation to automated administrative activities.

[46] G. Gallone, *Riserva di umanità e funzioni amministrative,* 87.

[47] A. Masucci, *L'atto amministrativo informatico. Primi lineamenti di una ricostruzione*, 56; A. Usai, *Le prospettive di automazione delle decisioni amministrative in un sistema di teleamministrazione,* 17; D. Marongiu, *L'attività amministrativa automatizzata,* 100. A part of Italian caselaw has also followed this act-like reconstruction; see in particular Council of State, Section IV, decision no. 2270 of 8 April 2019.

[48] The thesis of the regulatory nature is, instead, embraced by A. Boix Palop, *Los algoritmos son reglamentos: la necesidad de extender las garanti'as propias de las normas reglamentarias a los programas empleados por la administraciòn para la adopciòn de decisiones*, in *Revista de Derecho Pùblico: Teorìa y Metodo*, 1, 2020, 223.

[49] The object, in fact, by definition, remains external to the act so that it cannot coincide with it. In fact, the algorithms (and the *software*) are normally formed outside the procedural context by a person who sometimes does not even hold the quality of administrative officer. In administrative doctrine the object is defined as "term of volition" by P. Virga, *Il provvedimento amministrativo*, Milan, Giuffrè, 1972, 165. In similar terms A. M.

the object of the preliminary administrative volition with which automation is opted for.[50] This solution implies an approach that may be defined as "eclectic", given that the algorithm may run not only on administrative acts (if necessary, of a general nature, such as the call for tenders) but also on administrative regulations.

From this point of view, if we place ourselves in a dynamic (and not static) perspective, the algorithm (and the software that is its expression) is a mere *instrumentum* in the hands of the administration,[51] employed at the junction between the preliminary phase and the decisional phase (through the *input* of data and, subsequently, the performance, according to the sequence of instructions designed by the algorithm and of the calculations leading to the computational result).

This approach also seems to be endorsed by Art. 3-*bis* of Law n. 241 of 1990, as most recently amended, which, in opening up administrative activity to the use of telematics (in its various manifestations and, therefore, also in the forms of decision-making information technology), albeit failing to provide detailed rules, adopts the idea that computers and telematic tools are, in fact, "instruments".[52]

Moreover, starting from such a position on the legal nature of the algorithm, it is possible to draw a number of important corollaries, all consistent with the need for minimal human intervention in the automated process.

In the first place, if the algorithm does not substantiate itself in a decision, the computational result in *output* produced by the automation goes to integrate, in the scheme of the law of procedure, a particular profile of the "risultanze dell'istruttoria" ("results of the preliminary investigation") *ex* art. 6, par. 1, lett. e) of Law no. 241 of 7 August 1990 to be used as the foundation of the final administrative decision by the person in charge of the procedure.[53] The consideration that the administrative decision remains prerogative of the officer as a natural person thus implies and, in a certain sense, imposes, on a logical rather than dogmatic level, the existence of a sphere reserved to individuals in the performance of administrative functions.

Secondly, the nature of the algorithm as an *instrumentum* removes the latter from competition with human beings and, indeed, represents the legal projection of the ethical-philosophical conception that wants it (and, in particular, artificial intelligence) at the service of the person.

3. *The nature and scope of the "reserve of humanity"*

Having clarified the constitutional and dogmatic basis of the reserve of humanity, it remains to clarify its nature and scope.

As to the first aspect, it seems that it cannot be denied that, at least in its hard core, it rises to a legal principle endowed with immediate preceptive value.[54] In other terms, the "reserve of humanity", in its minimum meaning as the prohibition to exercise administrative powers in a totally automated form without any contribution from the human being, permeates and penetrates the regime of administrative action, conforming its statute and, therefore, contributing to designing the rules that preside over the spending of the special authoritative capacity of the Administration. In this sense, the "reserve of humanity" as a legal principle

Sandulli, *Manuale di diritto amministrativo,* Naples, Jovene, 1989, 670. For the evolution of the concept in civil law see E. Gabrielli, *Storia dogma dell'oggetto del contratto*, in *Rivista di diritto civile*, 2, 2004, 327 with further bibliographical references therein.

[50] See *amplius* in G. Gallone, *Riserva di umanità e funzioni amministrative*, 92.

[51] This is the intuition of A.G. Orofino, *La patologia dell'atto amministrativo elettronico: sindacato giurisdizionale e strumenti di tutela*, 2276, taken up by the same author in A.G. Orofino and R.G. Orofino, *L'automazione amministrativa: imputazione e responsabilità*, 1300. Outside Italy the reconstruction in question is shared and taken up expressly by I. Martín Delgado, *Naturaleza, concepto y regimen jurìdico de la actuaciòn administrativa automatizada*, 361. Italian administrative caselaw now also points in this direction and, in particular, Council of State, Section VI, decision no. 8474 of 13 December 2019.

[52] Article 3-*bis* of Law no. 241 of 1990 states that "Per conseguire maggiore efficienza nella loro attività, le amministrazioni pubbliche agiscono mediante strumenti informatici e telematici , nei rapporti interni, tra le diverse amministrazioni e tra queste e i privati" ("In order to achieve greater efficiency in their activities, public administrations shall act by means of computerised and telematic tools, in their internal relations, between the various administrations and between these and private parties"). The text of the original Art. 3-*bis* (introduced by Art. 3 of Law no. 15 of 11 February 2005) was amended by Art. 12 paragraph I letter b) of Law Decree no. 76 of 16 July 2020, converted with amendments by Law no. 120 of 11 September 2020.

[53] Thus already A.G. Orofino, *L'automazione amministrativa: imputazione e responsabilità*.

[54] G. Gallone, *Riserva di umanità e funzioni amministrative,* 141.

constitutes a profile of legality in its substantive meaning.[55]

Even though automation may be more or less advanced (and therefore, the personal component may be more or less recessive), the need to guarantee a *minimum* of humanity in the performance of the administrative function is always firm and inescapable. It is evident, therefore, that the crux of the matter shifts to the definition of this *minimum* with respect to which the principle in question naturally assumes preceptive force (with all the consequences for its possible violation).

In this regard, two points of necessary emergence of the "reserve of humanity" in the administrative procedure[56] have been suggested.

They coincide with the hubs that characterise the conduct of the automated procedure.

Indeed, two distinct moments of volition can be discerned in the automation of administrative functions:[57] the first and preliminary one is the moment, upstream of the investigation phase, when the Administration chooses (by means of an administrative or regulatory act) to use the algorithm; the second, downstream of the investigation phase (which sees the use of the algorithm as a tool), is when the Administration can make the product of the algorithmic operation (*output*) its own, incorporating it as the content of the final measure.

In both of these instances, the intervention of the human officer must necessarily take place.

As to the first point of emergence (coinciding, as said, with the choice of opting for automation, defining its modalities also through the identification of the algorithm to be employed), it appears preferable to speak of "preliminary" volition in order to distinguish it from the "definitive" volition expressed in the final administrative decision. The choice to opt for automation does not in fact define, not even in part, the substantive administrative relationship, resolving itself in an entirely internal affair.[58]

The second (and more important) point of emergence of the "reserve of humanity" in the administrative procedure is constituted by the adoption of the final administrative decision. This is the act destined to have direct effects on the legal sphere of the addressees and which, therefore, as a form of power, would imply, if adopted in a totally automated form, the subjection of the person to the authority and decision of the machine, drawing a reversal of values detrimental to the dignity of the human being.

Therefore, downstream of the investigative phase during which the algorithm is employed, it is necessary to always envisage the intervention of the human officer, who is called upon to choose whether or not to transpose the computational result expressed by the machine into a measurable form (as in a sort of "proposal" for an administrative decision).

Such need necessity cannot be excluded even in cases of *tout court*-bound activity.[59] indeed, although very authoritative voices of

[55] This connection is grasped, although reaching different conclusions by S. Civitarese Matteucci, *Umano troppo umano. Decisioni amministrative automatizzate e principio di legalità*.

[56] G. Gallone, *Riserva di umanità e funzioni amministrative,* 148.

[57] It is, moreover, almost superfluous to recall that the term "volition" is not used in a piscological-voluntaristic sense, but bearing in mind Giannini's notion of volition as hypostasis purified of any psychic connotation and understood in its procedural dimension, as it is formed and objectivised in the unfolding of administrative functions (M.S. Giannini, *Diritto amministrativo,* II, 241).

[58] In doctrine, the thesis of the merely organisational value of the upstream choice of opting for automation has been traced back to the "self-organising power that is proper and natural to each institution, whether public or private, whether it be an organised body or a simple office" by A. Masucci, *L'atto amministrativo informatico. Primi lineamenti di una ricostruzione*, 54.

[59] G. Gallone, *Riserva di umanità e funzioni amministrative,* 159. In Germany, the legislator seems to have followed this path in the aforementioned Art. 35a VwVfG, which, today, with a rather laconic provision, deals with the fully automated issuance of the administrative act ("vollständig automatisierter Erlass eines Verwaltungsaktes"), limiting itself to establishing that an administrative act may be issued entirely automatically, provided this is permitted by law and there is no discretion or power of assessment ("Ein Verwaltungsakt kann vollständig durch automatische Einrichtungen erlassen werden, sofern dies durch Rechtsvorschrift zugelassen ist und weder ein Ermessen noch ein Beurteilungsspielraum besteht"). It should, however, be noted that the scope of application of the legal regime drawn up by § 35a VwVfG does not appear clear, there being doubts as to its extensibility to artificial intelligence systems based on open self-learning algorithms (in terms P. Stelkens, H.J. Bonk and M. Sachs, in P. Stelkens (ed.), *VwVfG § 35a*, in *Verwaltungsverfahrengesetz. Kommentar,* 2018, Rn. 5-8; more extensively in P. Stelkens, *Der vollständig automatisierte Erlass eines Verwaltungsakts als Regelungsgegenstand des VwVfG*, in H. Hill, D. Kugelmann and M. Martini (eds.) *Digitalisierung in Recht, Politik und Verwaltung*, Baden-Baden, 2018, 102).

dissent have been raised on this point,[60] it seems that the "reserve of humanity" in its minimal meaning of prohibiting to conduct proceedings in a fully automated form, due to its constitutional value as a fundamental principle of public law, must operate with regard to every field of authoritative administrative action, without any distinction.[61] Moreover, beyond the difficulty of imagining authoritative administrative powers that are, in every respect, totally bounded, it is evident that the need to guarantee, on a constitutional level, respect for the dignity of the individual as well as the need to prevent breaking the circuit of responsibility also exists in relation to the latter.[62] Moreover, the use of advanced forms of automation by means of artificial intelligence poses, in terms of the dominability and knowability of the algorithm, issues that are substantially similar whether the power exercised is discretionary or tout court constrained, making human intervention and supervision desirable in any case.[63]

Especially if one adopts the more rigorous (and seemingly preferable) interpretation that wants the "reserve of humanity" to operate even with respect to completely bounded authoritative administrative activity, the most delicate passage in the construction of a legal theory of administrative automation becomes identifying a point of equilibrium in the *trade-off* between humanity and automation. It is, in fact, quite evident that the advantages that can be derived from automation in terms of speed, efficiency and impartiality of the administrative action risk of being thwarted by allowing the human officer to refuse the computational result and reaching a decision, without any constraint.

Once again, it seems that the balance can be found by bringing the phenomenon of administrative automation back to the models of general administrative law and, in particular, to the rules on the adoption of the final decision; in particular, by looking at the aforementioned Article 6, paragraph 1, lett. e) of Law no. 241 of 1990.[64]

In fact, the structure of this provision clearly reveals that the possibility for the officer to depart from the results of the preliminary investigation (and, therefore, in our case, from the computational result produced by automation) is an exception procedurally safeguarded by the need to meet an increased burden of motivation.

Moreover, there is a general, a duty to tend to harmony between the outcome of the preliminary phase and the final decision, between the proposed measure and the final measure. On closer inspection, this is an expression of the need for consistency that must permeate the development of the administrative action in all its steps, and consequently of the trust that the citizen must be able to have in it. Moreover, it would appear that, with regard to the specific hypothesis of automated-administrative proceedings, the ratio of Article 6, paragraph 1, lett. e) of Law no. 241 of 1990 is coloured by a further peculiar nuance, given that the favor towards the transposition of the computational result into the measure seems to imply a sort of simple *iuris tantum* presumption of correctness of the automated product, which is based on the tendency of greater reliability of the *software*.

The exceptional nature of the hypothesis outlined in Article 6, paragraph 1, lett. e) of Law no. 241 of 1990 seems to suggest a severe approach in the cases departing from the computational result, since generic and merely apparent reasons cannot suffice. This leads one to believe, also on account of the

[60] The reference is to J-B- Auby in the preface to G. Gallone, *Riserva di umanità e funzioni amministrative*, XV where he suggests a "variable sphere of application" of the principle of the reserve of humanity to be delimited according to a "criterion of proportionality" also in the light of "the greater or lesser importance of the administrative decisions taken".

[61] A partially different discourse is valid for the negotiation-type activity of the Public Administration and for the field of public services insofar as the moment of decision is absent and a substantial equiordination between men and machines is not detrimental to the dignity of the person because it finds its foundation in the will of the same, as party to the contractual relationship, and in the utility that can be derived from automation.

[62] In particular, if one moves from the perspective, which can indeed be shared, that even the bounded act has the substance of an administrative decision, on a par with the discretionary one (thus, most recently F. Follieri, *Decisione amministrativa e atto vincolato,* in *Federalismi*, 7, 2017, 20).

[63] This is also the case in administrative caselaw, which, after an initial closure (see Council of State, Section IV, decision no. 2270 of 8 April 2019) has now sided in favour of the admissibility of the use of automation also in relation to discretionary administrative activities (thus Council of State, Section VI, decision no. 8472 of 13 December 2019).

[64] Thus R. Rolli, M. D. Ambrosio, *La necessaria lettura antropocentrica della rivoluzione 4.0*, 590 and *amplius* G. Gallone, *Riserva di umanità e funzioni amministrative,* 169.

objective difficulty for the human officer to come up with a convincing reason justifying the deviation, that this possibility will tend to be limited to cases of manifest injustice, illogicality of the result or to the extreme hypothesis of calculation errors *stricto sensu* intended, meaning material errors committed at the time of *input*.

The motivation in dialectic with the algorithm (or even in response to the participatory contributions and, in particular, to any observations made by the applicant following the notice of refusal pursuant to art. 10-*bis* of Law no. 241 of 1990 based on the computational result elaborated by the machine) thus becomes the definitive seal of humanity to the administrative proceedings.

4. *The "reserve of humanity" in art. 30 of the new Italian Public-Contracts Code: on the way to a complete legal theory of administrative automation*

The debate around the configurability in our legal system of a "reserve of humanity" in the performance of administrative functions has the opportunity, today, to be confronted with a novelty of absolute importance.

Indeed, breaking the traditional aphasia of the Italian legislator,[65] the long-awaited new Italian Public-Contracts Code[66] has, in fact, had the merit of introducing, in Part II entitled "Della digitalizzazione del ciclo di vita dei contratti" ("On the digitalisation of the contract lifecycle"[67]), a sectoral regulation of administrative automation. Although it refers only to the field of public procurement and although it remains far from the canons of an organic regulation,[68] this normative novelty is welcome because it provides Italian scholarship and caselaw a solid legal basis and signals the urgency of constructing, on a dogmatic level, a complete legal theory of public decision-making automation.

Indeed, the fragments of the discipline, scattered in Articles 19 and 30 of the Code,[69] assume a transversal value that goes far beyond the boundaries of the awarding procedures as they appear to a large extent to be reconnaissive of the fundamental principles elaborated to date *in subiecta materia*.

Between the lines of this discipline, it is possible to discern a clear prevalence of the case law, to the detriment of the scholarship formant. In particular in Article 30, it is especially clear the echo of the caselaw of the Council of State,[70] from which the delegated legislator drew heavily. This can be explained, not only and not so much by the rather timid approach to the digitisation issue of the delegation act,[71] but probably also by the

[65] As a result of the suppression, by Article 64(2) of Legislative Decree no. 179 of 2016, of Article 1(1) of Legislative Decree no. 39 of 1993 (which recited "Administrative acts adopted by all public administrations shall normally be prepared by means of automated information systems") lacked, in our legal system, a general legal basis for recourse to administrative decision-making automation, although certain detailed provisions relating to particular sectors remained in force (as highlighted by G. Avanzini, *Decisioni amministrative e algoritmi informatici. Predetermination, predictive analysis and new forms of intelligibility*, Naples, Editoriale Scientifica, 2019, 41).

[66] Legislative Decree no. 36 of 31 March 2023, Public Contracts Code, hereinafter also referred to as the "Code".

[67] This expression is capable of restoring a broader and more pregnant dimension to the phenomenon of the digitalisation of public evidence: no longer merely formal and limited to the public phase of the choice of contractor, but substantial and extended to the executive phase of the negotiation relationship. This perspective was already suggested in G. Gallone, *La pubblica amministrazione alla prova dell'automazione contrattuale. Note in tema di smart contracts*, in *Federalismi*, 20/2020, 143.

[68] In addition to the aforementioned German experience, the reference is to the Iberian discipline contained in Article 41 of Ley 40/2015, de 1 de octubre, de Régimen Jurídico del Sector Público, significantly headed 'Actuación administrativa automatizada'. For a more in-depth analysis of the comparative data on the matter, let us refer to G. Gallone, *Riserva di umanità e funzioni amministrative,* 128.

[69] For a commentary on the Code's innovations on the digitalisation of public contract award procedures G. Carlotti, *I principi nel Codice dei contratti pubblici: la digitalizzazione*, in www.giustizia-amministrativa.it, 2023, A. Corrado, *I nuovi contratti pubblici e le procedure "automatizzate": le sfide del prossimo futuro*, in *Federalismi*, 19, 2023, 128.

[70] The reference is, first of all, to Council of State, Section VI, decision no. 8472 of 13 December 2019.

[71] Article 1 of Law no. 78 of 21 June 2022, Paragraph 2, identifies the delegation principles and directive criteria, but none of them is specifically dedicated to the issue of digitalisation. In detail, only letter (m) contains a reference, which is indeed laconic, to the "digitisation" and "computerisation of procedures", which is, moreover, expressly linked to the sole declared objective of "reducing and securing the time required for tendering procedures" and "for the conclusion of contracts". Lett. t) contains, on the other hand, a more specific criterion relating to the "identification of the hypotheses in which contracting authorities may resort to automaticity in the evaluation of tenders and typification of the cases in which contracting authorities may resort, for the purposes of awarding contracts, to the sole criterion of price or cost, with the possibility of excluding, for contracts which are not of a cross-border nature, anomalous tenders determined on the basis of mathematical mechanisms and methods", which however betrays a perspective limited to only one of the possible, varied applications of computerisation in the field of public evidence.

above-mentioned delay of the Italian legal scholarship in providing a stable and shared dogmatic arrangement to the phenomenon of administrative decision-making automation.

Moreover, it should not be forgotten that, following an already-tried and tested technique, in a manner not dissimilar to what happened with the Italian Code of Administrative Trial, the opening provision of the act of delegation (Article 1 paragraph 1) set out the need to adapt the regulation of public contracts "to European law and to the principles expressed by the case law of the Constitutional Court and the higher, domestic and supranational courts".

Therefore, it seems that -at least for the purposes of reconstructing the *voluntas legislatoris* from a historical perspective, while being aware that it does not necessarily coincide with the *voluntas legis*- one must also try to read the new provisions through the lens of caselaw, comparing them with the meaning that the expressions and concepts employed therein have taken on in administrative rulings.

A first ground for confrontation with the issue of automated decision is offered by Article 19, the debut provision of Part II of the Code. This article is notable, first of all, for its title "digital principles and rights", an expression that seems to betray the fascination of a certain part of the scholarship that for some time now has been talking about digital citizenship rights.[72] However, any great expectations as to the content of the article are largely destined to be shattered. In fact, the provision in question does not contain any list of rights, but instead makes extensive, perhaps superfluous, references to the C.A.D.[73] and to internal norms of the Code itself, accompanied by a heterogeneous series of provisions that, in addition to remain wanting in terms of systematicity, are all dictated *ex latere auctoritatis* and not *ex latere civis.*[74]

What is most interesting here is that Article 19 paragraph 6 explicitly mentions "automated decision-making processes", laying down certain minimum guarantees for their performance in terms of "traceability", "transparency", "accessibility" of data and "knowability" (which will indeed be reiterated and specified in Article 30).

The second part of paragraph 6 of Article 19 adds that "Platform operators shall ensure that the platforms comply with the technical rules referred to in Article 26". This is a provision of great general interest because it intercepts the crucial issue of the relationship between legality and administrative automation.[75]

It may well be said, in this regard, that the combined provisions of Articles 19 and 30 of the new Code definitively defuse the problem of the legal basis of administrative automation, at least in the field of public evidence. On the other hand, the question remains, at least in theory, open outside this sphere, even if, as it has already been observed, we are probably faced with a "pseudo-problem"[76] since, if we start from the idea that administrative automation is not an eccentric phenomenon, but is intimately

[72] On the emerging digital citizenship G. Pascuzzi, *La cittadinanza digitale. Competenze, diritti e regole per vivere in rete (Skills, rights and rules for living online),* Bologna, 2021, which also includes precisely the 'right to oppose automated processing' among the "digital citizenship rights". It cannot be overlooked that the category of 'digital citizenship rights' is already known in our domestic legal system. The so-called Code of Digital Administration (C.A.D.), Legislative Decree no. 82 of 7 March 2005, employs this expression several times and, moreover, provides for an entire section (the second of Chapter I) called "Digital Citizenship Charter".

[73] The Italian Code of Digital Administration. Thus, Paragraph 1 of Article 19, which requires compliance not only with the "principles" but also with the "provisions" (and, therefore, with the detailed provisions) of the "digital administration code, pursuant to Legislative Decree no. 82 of 7 March 2005". With a substantially redundant provision, it is added, in the following paragraph 3, that "The administrative activities and procedures connected to the life cycle of public contracts are carried out digitally, according to the provisions of this code and of the code set forth in Legislative Decree no. 82 of 2005, through the digital infrastructure platforms and services of the contracting stations and of the granting bodies; the data and information relating to them are managed and made usable in open format, according to the provisions of the code set forth in Legislative Decree no. 82 of 2005". A further reference to the C.A.D. is also contained in the following paragraph 4 on the subject of operability.

[74] Thus, for example, paragraph 5 of Article 19 of the Code, which identifies specific organisational duties of "contracting stations" and "granting bodies" to "safeguard IT security and the protection of personal data".

[75] The doctrine has long been questioned on this. See, in particular, S. Civitarese Matteucci, *"Umano troppo umano". Decisioni amministrative automatizzate e principio di legalità*. The troubled relationship between the principle of legality and the digitalisation of administrative functions has been investigated, with particular reference to the relationship with technical rules by F. Cardarelli, *Digital administration, transparency and the principle of legality*, in *Diritto dell'informatica*, 2015, 238.

[76] G. Gallone, *Riserva di umanità e funzioni amministrative,* 142.

consistent with the traditional categories of administrative law, and that *software* is an investigative means and not an administrative act, there is no need for a specific legal provision (which is indeed superfluous) authorising its use. In this regard, it is sufficient to observe how the same general law on administrative proceedings does not concern itself with defining and typifying the tools that may be employed in the course of procedural investigation, deliberately using broad formulas.[77]

Far more problematic is the cue offered by the second part of paragraph 6 of Article 19, according to which "Operators of the platforms ensure their compliance with the technical rules referred to in Article 26". This provision, in fact, reveals the existence of a second level of "legality" of automated administrative action represented by regulatory acts with a legal nature that has yet to be investigated[78] and that poses, even with respect to digitalisation, the question of the blatant decodification of the discipline of public procurement and the fragmentation of the legal nature of the regulatory text that we call "Code". It also raises the question of what the repercussions of any violation of the technical rules might be. It seems, however, that it cannot be seriously doubted that they stand as authentic rules of validity of administrative action with the consequence that their non-compliance gives rise to the illegitimacy of the final decision. This, moreover, irrespective of the thesis as to the legal nature of the technical rules to be followed (*id est* normative or regulatory act), given that, in the event of non-compliance with them, there would in any case be an indirect breach also of Article 26 and Article 19 paragraph 6, second part, of the Code.

Of even greater interest is the subsequent Article 30, expressly dedicated to the "use of automated procedures".

Confirming the above-mentioned dogmatic considerations, this title suggests that automation is only one of the possible ways of conducting administrative proceedings and that, more generally, the algorithm (and the *software* that is its expression in machine language) is, according to the provisions of the aforementioned Article 3-*bis* of Law no. 241 of 1990, only a tool. This can also be inferred from Paragraph 3 of Art. 30, which refers to "decisions made by means of automation" ("decisioni assunte mediante automazione"). This phrase has the virtue of clarifying that automation is not in itself a decision but only a tool for reaching it, an administrative operation functionalised to the exercise of administrative power.[79]

Article 30(1), relying on scholarship and caselaw, also distinguishes between the concepts of "automation" and "artificial intelligence".[80] The latter, although not explicitly defined,[81] is considered, like the "distributed registers",[82] to be just one of the

[77] Thus, Article 6(1)(b) of Law no. 241 of 1990, as amended and supplemented, according to which the person in charge of the proceedings "accerta di ufficio i fatti, disponendo il compimento degli atti all'uopo necessari, e adotta ogni misura per l'adeguato e sollecito svolgimento dell'istruttoria" ("ascertains the facts *ex officio*, ordering the performance of the necessary acts, and adopts all measures for the proper and prompt performance of the investigation").

[78] Article 26(1) of the Code states that "The technical requirements of the digital procurement platforms, as well as the compliance of such platforms with the provisions of Article 22(2), shall be established by AGID in agreement with ANAC and the Presidency of the Council of Ministers, Department for Digital Transformation, within sixty days from the date of entry into force of the Code".

[79] As G. Gallone, *Riserva di umanità e funzioni amministrative*, 96-97, had already tried to sustain, taking up the traditional notions of "administrative operation" from P. Virga, *Diritto amministrativo, II: Atti e ricorsi*, Milan, Giuffrè, 1997, 4 and G. Sala, *Operazione amministrativa*, in *Digesto delle discipline pubblicistiche*, vol. X, Turin, Giappichelli, 319. Indeed, D. Marongiu, *L'attività amministrativa automatizzata,* 85. had already opened up towards the qualification of automation as an "administrative operation".

[80] The difference had already been marked by Council of State, Section III, decision no. 7891 of 25 November 2021, published in *Diritto di internet*, 1, 2022, 157 with the comment by G. Gallone, *Il Consiglio di Stato marca la distinzione tra algoritmo, automazione ed intelligenza artificiale*, 161.

[81] Its positive definition will most likely have to await the final approval of the Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain pieces of Union legislation - COM/2021/206 final.

[82] The reference is to blockchain technology and the expression traces the one employed by the well-known Article 8b of the so-called competitiveness decree for the year 2019 (Decree-Law no. 135 of 14 December 2018, converted by Law no. 12 of 11 February 2019. On the applications of *blockchain* technology to the public sector M. Atzori, *Blockchain technology and decentralised governance: is the state still necessary?*, in *Journal of governance and regulation*, 2017, 6(1), 45; G. Gallone, *Blockchain, administrative procedures and corruption prevention*, in *Diritto dell'economia*, 3, 2019, 196; M. Allena, *Blockchain technology for environmental compliance: towards a choral approach*, in *Enviromental Law Review*, 4, 2020; M. Macchia, *Blockchain and pub-*

possible "technological solutions" for automating the procedure.[83]

Paragraph 1 seems, however, to imply that the choice for automation constitutes an option for the Administration to be expressed through a preliminary volition. In establishing that "In order to improve efficiency, contracting stations and awarding bodies shall, where possible, automate their activities"[84] the Code has implied that there is no such obligation on the part of the public administration. What is expressed by the Code is, at most, a *favor for* automation ("where possible"), remaining, conversely, substantially intact the discretion of each individual contracting station in choosing whether or not to resort to it.

Reading Article 30 as a whole, it emerges, moreover, that this preliminary option for automation, as the first point of emergence of the "reserve of humanity", can be expressed either in a normative way by law or regulation (thus arguing under Article 30, paragraph 1, where it invokes "compliance with the specific provisions on the subject" without specifying that these must have legal nature) or on the occasion and with regard to the individual procedure by means of a specific administrative act or the *lex specialis*. With regard to this last aspect it is, in fact, just the case to note that letter b) of paragraph 2 of Article 30, albeit with regard to the specific profile of the provision of "assistance and maintenance services necessary for the correction of errors and undesirable effects deriving from automation", establishes that the discipline of automation (and one must, *a fortiori,* also consider the option for the same) may be placed "in the acts of calling of tenders" ("negli atti di indizione delle gare").

A multilevel system of regulation of automation is thus outlined: normative-legislative (Article 30 in question), normative-regulatory (the "specific provisions" invoked by paragraph 1 of the same Article 30), the technical rules referred to in Article 26 and, finally, the general administrative acts calling for the procedures (*id est*, the call for tenders).

The "reserve of humanity" does, however, peep out even more clearly in the text of the Code in Article 30 paragraph 3, lett. b). After having given positive consecration to other fundamental principles (, in particular, the one of "knowability" and "non-discrimination"[85]), the provision in question enshrines the one of the "non-exclusivity of the algorithmic decision", acknowledging, with minimal variations, what has been affirmed on this point by the caselaw of the Council of State.[86] In particular, it is stated that by virtue of this principle, in any case, there must exist in the decision-making process a human contribution capable of checking, validating or refuting the automated decision" ("comunque esiste nel processo decisionale un contributo umano capace di controllare, validare ovvero

lic administration, in *Federalismi*, 2, 2021; G. Gallone, *Blockchain and big data in the public sector: insights on G.D.R. compliance*, in *Federalismi*, 14, 2022, 67.

[83] Moreover, it cannot be overlooked that paragraph 2 of Article 30 of the Code provides, as alternative, the "purchase or development" of such technological solutions. This outlines two possible scenarios (which scholarship jas already argued) with respect to software development: the direct development of the same by the Public Administration itself through its own internal resources, or the possibility of turning to the market and acquiring, against payment of a price, with contractual forms that may be different (including a mere licence for use), the availability of a programme developed by other parties, including private parties. With particular regard to this second possibility, letters a) and b) of paragraph 2 of Article 30 contain specific provisions designed to regulate the relationship with the developer-owner with a view to tackling the delicate problems of intellectual property addressed by the dichotomy between proprietary *software* and *open-source software* (in this regard, see A.G. Orofino, *Transparency beyond the crisis. Accesso, informatizzazione e controllo civico*, Bari, Cacucci, 2020, 212 and F. Bravo, *Access to Source Code of Proprietary Software Used by Public Administrations for Automated Decision-making. What Proportional Balancing of Interests?*, in this review, 1-2, 2020, 157). The hypothesis of outsourced *software* development, entrusted to a private party outside the administrative procedure, also seems to confirm, on a dogmatic level, the thesis, seen in the second paragraph, that it constitutes the object of the preliminary volition with which automation is opted for.

[84] In fact, the provision follows almost lavishly what is already prescribed in paragraph 7 of Article 19 of the Code, which states that "Where possible and in relation to the type of awarding procedure, contracting stations and awarding entities shall use automated procedures in the evaluation of tenders pursuant to Article 30".

[85] Article 30(3)(a) of the Code establishes, in particular, the principle of "knowability and comprehensibility" according to which "every economic operator is entitled to know the existence of decision-making processes".
The new concepts of "knowability and comprehensibility" are, in particular, an opportunity to give new life to the debate on the issue of "algorithmic transparency" (on it, also for further bibliographical references also from a comparative perspective A.G. Orofino, *La trasparenza oltre la crisi*, 193).

[86] The reference is to the Council of State, Section VI, decision no. 8472 of 13 December 2019, itself largely inspired by the work of A. Simoncini, *L'algoritmo incostituzionale: intelligenza artificiale e il futuro delle libertà*.

smentire la decisione automatizzata").[87] With this, the legislator has clearly attempted to outline the minimum scope (expressed by the phrase "in any event") of the "reserve of humanity" by making it coincide with an activity of "control", "validation" or "refutation".

Apart from its questionable topographical location in the text of the Code,[88] the words used, which were originally contained in a scholarly paper and then transfused by osmosis into a legal text, do not shine for particular rigor and clarity. First of all, the terminological choice to speak of an "automated decision" is questionable. This expression, although preferable to the one used by the administrative caselaw,[89] appears intimately contradictory since it is impossible to conceive, on a logical rather than legal level, a decision that is subject to "validation" (in which case, at most, it is a mere proposal). Moreover, it clashes with the dogmatic approach that, as we have seen, also seems to permeate the normative discipline under consideration, which considers the algorithm a mere *instrumentum* incapable of expressing an authentic decision in the legal sense. Therefore, it would perhaps have been lexically preferable to envisage the "computational result" or "algorithmic result" as the object of the human activity of control, validation and refutation.

In this sense, the expression used at the beginning of Article 30, paragraph 3 of the Code, where it speaks of "decisions taken by automation", seems more appropriate. This, in fact, in addition to being consistent with the thesis expressed in relation to the *ubi consistam of the* algorithm and automation, takes in consideration automation and administrative decisions as distinct procedural moments. At the same time, however, it has the capacity to clarify that the administrative act adopted at the end of an automated procedure has the nature of an administrative decision since it constitutes the first and only form of manifestation of will capable of producing constitutive effects externally,[90] with all the foreseeable repercussions in terms of its legal regime (also with regard to jurisdictional protection).

The formulation of Article 30 paragraph 3 lett. b) of the Code also suffers from a certain basic ambiguity insofar as, according to its letter, it would seem to contemplate three alternative modes of human intervention (*id est* control, validation and denial). The use of the disjunctive "or" could, in fact, lead one to believe that compliance with the principle of algorithmic non-exclusivity could be considered satisfied by ensuring only one of these forms of intervention. This would, however, lead to paradoxical consequences in as much as the "reserve of humanity" could also be said to be guaranteed by entrusting to the human officer an activity of mere control not capable of conditioning the *an* and content of the final decision. Leaving aside the apagogical argument and the associated risk of an emptying of the "reserve of humanity", it appears that the meaning of the phrase employed in lett. b) of paragraph 3 of Article 30 should be read in light of case law. In this sense, it cannot be overlooked that Council of State, Section VI, decision no. 8472 of 13 December 2019, from which the expression in question was, almost slavishly, borrowed, illuminated its meaning by expressly referring to the model of the HITL (human-in-the-loop).[91] It follows that the relationship between control, validation and denial is not to be understood in terms of alternation but according to an orthopedic reading that splits the phrase employed by the legislator in two.

[87] Clear is the echo of Council of State, Section VI, decision no. 8472 of 13 December 2019, which stated in its point 15.2 of the reasoning in law that "there must in any event exist in the decision-making process a human contribution capable of checking, validating or refuting the automatic decision".

[88] The value of the "principle" of "algorithmic non-exclusivity" would have suggested (if not imposed), that the same be mentioned also in paragraph 6 of Article 19 of the Code, where in fact express reference is made to the other two principles of the "transparency of the activities carried out" and of the "knowability of the automated decision-making processes" also enshrined in Article 30 paragraph 3.

[89] That it even expresses itself in terms of an "automatic decision" with a linguistic nuance that almost winked at an integral automation of the decision (so at the cited point 15.2 of Council of State, Section VI, decision no. 8472 of 13 December 2019).

[90] The decisional character of the automated administrative act had, indeed, already been affirmed, albeit on the basis of a completely different theoretical scenario, even by supporters in Italy (including A. Masucci, *L'atto amministrativo informatico. Primi lineamenti di una ricostruzione,* 83 and D. Marongiu, *L'attività amministrativa automatizzata,* 105) of the thesis of the administrative nature of software.

[91] Thus again in point 15.2 where it is stated that "In mathematics and information technology, the model is defined as HITL (human-in-the-loop), in which, in order to produce its result, it is necessary for the machine to interact with the human being.

More specifically, it would seem that the disjunctive "or" should refer only to "validate" and "deny", understood as possible opposing outcomes of the supervisory activity ("control") entrusted to the human officer. This interpretation is more in line with the dictate of the oft-mentioned Article 6 paragraph 1 lett. e), second part, of Law no. 241 of 1990, which recognises the possibility, when adopting the final measure, to "depart from the results of the preliminary investigation" as an alternative to their implementation.

It would appear, moreover, that the reference to this figure of the general law on administrative proceedings (and, therefore, also to the aggravated duty to state reasons connected thereto) must be deemed implicit in the text of Article 30 paragraph. 3 lett. b), unless one wishes to hold that the officer may always depart *ad nutum* from the computational result proposed by the machine. The latter interpretation is unconvincing because it relegates the result of the automation to the realm of total legal irrelevance and translates into a new profile of opacity of the administrative action.

Apart from these remarks, Article 30 paragraph 3 lett. b) of the Code is, without any doubt, an important normative clue from which to draw the existence, as an unexpressed and immanent principle in the system, of a "reserve of humanity" in the performance of administrative functions.

But, above all, it is a valuable aid in illuminating its nature and scope.

In the first place, the code provision offers confirmation, should it be necessary, in line with what has been said above, of the immediately preceptive (and not merely programmatic) value of the principle. By embedding the "reserve of humanity" into the Code, the legislator has clarified that it is a legal rule for the exercise of administrative powers (so much so that it is said, in the *incipit of* paragraph 3 of Article 30, that decisions taken by means of automation must "respect" the principle) and, as a consequence, as a rule of validity of the final decision. Moreover, the subsumption of the violation the "reserve of humanity" under the general category of "breach of law" pursuant to Article 21-octies of Law no. 241 of 1990, dispels any perplexity as to the qualification in terms of illegitimacy of the defect pertaining to the act adopted in fully automated form.[92]

Secondly, it cannot but be noted that the Code has enunciated the principle of non-exclusivity, once again in line with the caselaw formant, without distinguishing between discretionary and constrained activity and, therefore, appropriately embracing a broad and non-flexible declination of it (also expressed by the adverb "however").

These are, on closer inspection, only some of the insights that can be gained from a first reading of the Code.

With the hope that a general intervention on Law no. 241 of 1990 will soon be achieved, the time is now ripe and propitious to build, also on the foundations of this new regulatory basis, an updated and completed legal theory of administrative automation that revolves around the inalienable centrality of the human being.

[92] G. Gallone, *Riserva di umanità e funzioni amministrative*, 179.