## The automated administrative decision: problematic profiles and desirable developments

In a context of continuous change and rapid scientific progress, the digital transition is now considered the indispensable driving force for making administration sustainable, both from an economic and a functional point of view.

Already the Madia Reform had initiated a primordial digitization of administrative activity, encouraging the use of information technology and technology, albeit in a purely instrumental and subsidiary key to the "human" decision of the administrative officer.

Over time, this computerization has become part of a broader and more ambitious plan aimed at favoring the transition from the analogue to the digital dimension of both the activity and the organization of the public administration: from the provision in electronic form and from remote administration, thus, arrived in the space of a few years to the cd. automation of administrative activity.

Today, the most recent technological evolution allows the administration to exploit a "predictive" type of information technology which, through the use of algorithms, is able to adopt "robotic" administrative measures that completely disregard human input.

The use of decision-making algorithms, if on the one hand allows the achievement of greater efficiency and cost-effectiveness of the administrative action (in terms of time reduction, lower risk of errors and - albeit with some clarifications - greater impartiality); on the other hand, it imposes a profound structural and organizational metamorphosis of the public administration, which involves the very modalities through which it carries out its function.

In light of the current national and supranational regulatory framework and the most recent jurisprudential approaches, the research project therefore aims to understand what implications the implementation of artificial intelligence systems (machine learning and deep learning) has on the action administrative and, in particular, on the administrative procedure (in its structure and in its discipline) and on the system of imputability of "predictive" administrative decisions (and of the consequent administrative responsibility with respect to such decisions).

The development of the project will allow to analyze the traditional legal institutions, principles and rules of the administrative procedure - built around the official "human being" - and to verify the legal sustainability of algorithmic automation. This is in order to understand, ultimately, how the public administration can best adapt its action to the robotic environment, contextualizing the principles of legality, impartiality, transparency and good performance.

It is believed that the outlined research project, carried out in a multidisciplinary perspective (administrative law, constitutional law, legal information technology), is consistent with the chosen Measure (Doctorates for the PA) since it is aimed at the integrated development of the following knowledge and skills: 1) reconstruct and interpret the legal framework of reference, national and supranational (including the secondary standards and the instructions of a technical / applicative nature that necessarily integrate said regulatory framework); 2) promote the digital transition of public administrations, contributing to the redesign and simplification of organizational models, as well as to the processes of selection and adoption of enabling digital technologies and solutions, in order to ensure greater effectiveness, efficiency and cost-effectiveness of public action.

In a legal context yet to be outlined, it is also believed that the proposed research program can provide an important contribution to the digital transition of administrative

procedures and, more generally, to the acceleration of digital transformation processes in the Public Administration.

In line with the proposed research program, the PhD student recipient of the scholarship will carry out an intense study and scientific research activity at the Department of Political and Legal Sciences of the University, which will also include participation in the cycle of doctoral lessons, conferences, and seminars. In addition, the doctoral student will carry out a research period abroad and will perfect his doctoral course at the subject (company / organization) involved.

Finally, with a view to enhancing the research results, the student can disseminate the results of his / her ongoing research by participating in the Student Conference (organized annually by the Doctoral Course in Political Sciences at the University of Messina) and publishing in journals national and international scientific studies and in the series of the Department of Political and Legal Sciences (Editoriale Scientifica).