



Le futur du droit administratif

The future of administrative law

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Smart Cities for an Intelligent Way of Meeting Social Needs

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New technologies provide instruments to modernise public action, especially when Smart Cities are taken as a standpoint. The future of Administrative Law is thus likely to start from, and among cities.⁽¹⁾ The word “smart” implies choosing between at least two possible meanings.⁽²⁾ Actually, being “smart” either means finding rational and optimal solutions or discovering the different types of intelligence existing in a given context.⁽³⁾ In this second perspective, it is clear that the adjective “smart” qualifies the noun “city” as a clever attempt to identify the intelligences which, within the context in question, can be systematised in a certain order. Accordingly, *big data* and *data analysis* constitute more or less refined tools to discover what is already existing.⁽⁴⁾

Arguably, whenever this kind of interaction between technology and reality is driven by Man, it ends up with redefining reality itself. Yet, that may result either from the determining power of a rational logic operating in a given reality through an act of will or as a mere acknowledgment of the intelligences existing within said context. On the one hand, there are acts that result from will and authority; on the other hand, there are declaratory acts that identify current realities and give legitimacy to a certain matter in the very moment they certify its existence.

With regard to the Italian context, for instance, there are no official data about the number of municipalities, among the over 8,000 existing, which can be qualified

(1) J.-B. Auby, Conference “*Smart cities: l’innovazione nelle prossime città*”, Torino, 14th May 2018.

(2) The term “smart city” has not a clear definition and it is considered both an “umbrella term” for sector-specific notion and a quasi-official status according to EU reports and communications, see E. P. Goodman, *Smart Cities meet anchor institutions: the case of Broadband and the public library*, in *Fordham Urban Law Journal*, New York, 41:2014, 1665 et seq.

(3) The concept of “smart” has evolved from the notion of intelligent city, see M. Deakin, *From intelligent to smart cities*, in Id. (ed.), *Smart Cities, Governance, Modelling and Analysing the Transition*, London, New York, 2014, 1 ss.

(4) Within 2050, two thirds of the world’s population will live in urban centres compared to the current 50%. This highlights the importance to redesign cities and to discover their intelligence in order to cope with overcrowding and pollution. See S. E. Shmelev and I. A. Shmeleva, *Global urban sustainability assessment: A multidimensional approach*, in *Sustainable Development* 2018, 26:6, 904-920. – A. M. Gambino and M. Provenzano, *Smart cities e efficientamento energetico*, in G. Olivieri and V. Falce (eds.), *Smart cities e diritto dell’innovazione*, Giuffrè, Milano, 2016, 51-72.

as Cities (term of "noble ascent" related, originally, to a good management of public services and charities).⁽⁵⁾ Thus, the word "city" does not necessarily coincide with "municipality", and only certain municipalities can also be defined Cities. The current legal notion of cities represents the remnant of a historical process, so that its meaning cannot be grasped until the elements of that process, and the relationship of the city, the individual, and the state, are understood.⁽⁶⁾

The city is essentially identified as a legal order entrusted with the management and regulation of different flows. By tradition, the concept of "city" is associated with something which is the opposite of "countryside". Therefore, although there are municipalities in the countryside and municipalities in the city, only the latter are regarded as cities in the strictest sense.⁽⁷⁾

Every city deals with two different sets of flows, inbound and outbound.⁽⁸⁾ A more detailed analysis allows us to realise that a city also comprises self-standing orders as corporations, e.g. professional orders, which actually generate the circulation of goods, services and people moving into and out the city itself on a daily basis and not by accident. From an urban geography perspective, both physical and digital networks support the world city process, and enable global interaction.⁽⁹⁾ In such a "world city network", cities gain importance from outputs rather than from what remains stable within flows.⁽¹⁰⁾ Hence, networks carry a significant part in this process. Thence, the "magic" value of a "smart" city lies in its ability to regulate flows through a general order setting out specific and sectorial clusters of sub-orders.

As Santi Romano wisely remarked, a legal order identifies itself with institutions. As such, it is nothing but an organisation able to meet social needs.⁽¹¹⁾ If this is true, within a territorially undefined city there is a legal order regulating all other orders aimed at managing fluxes. Accordingly, it is possible to state that a smart city not only gathers a resident population, but rather a population made of fluxes, which makes institutional identification impossible⁽¹²⁾. A problem of legitimacy thus

arises.⁽¹³⁾ Who represents the city, and how is it possible to give legitimacy to its legal order? Arguably, this is not a matter of sovereignty, but rather a matter of subsidiarity when it comes to dealing with a gap between the need of being close to individuals and that of legitimising non-territorial autonomy, i.e. self-regulation ability. This shows that the subject representing tomorrow's smart cities cannot be individuals, but organised groups instead. As providing objective information, *big data* and *data analysis* should enable us to identify rules and legitimate administrative solutions. It may then be possible to understand that there are no *ex ante* rules, but norms that are deeply rooted in the mindset of the people carrying out the aforementioned analysis. After all, social sciences are not that different from hard sciences, since both postulate an existing order.

A reconstructive approach is what allows us to conduct legal reasoning from an *ex post* viewpoint on orders defining an *ex ante* norm. Rather than an act of will, the result is the identification of non-casual behaviors emphasizing a recurring definition. In that respect, referring to the old notion of *ius involuntarium* is unnecessary as it is enough to cite Santi Romano, who defined public administration as an organisation capable of meeting needs. Cities are perfectly able to do so.

Innovation must be compatible and accepted, and the word "smart" should be regarded as a synonym for "cozy".

Legitimation issues arise and are solved whenever the change *ex post* is accepted and becomes effective. Legitimation seems to be found only in effective and satisfactory regulations.⁽¹⁴⁾ From the smart city point of view, inability to achieve *results*, thus failure in fulfilling certain functions, leads to the loss of legitimacy. Many are the reasons for the lack of "Functional legitimacy", including the absence of ideas or authority in politics.

In this scenario, data analysis-based solutions may lead to an "algorithm government" and perhaps bring the need of consultations and even politics to an end.⁽¹⁵⁾ All data on smart cities that can be gathered from the internet and generate machine learning might become much more than simple "democracy tools" obtainable from consultation exercises.⁽¹⁶⁾ Such an "algorithmic government", not of individuals, but resulting from a temporary aggregation of data, may allow us to predict and to

(5) In the 1943 Italian legislation on nobility, besides individual peerages, also title related to communities was mentioned. Obviously, the following 1948 Constitution has eliminated all peerage. Still, it is possible to identify a gap in the current legislation: in the previous legal framework, cities had to manage public services and charities, while the law 267/2000 doesn't provide for such requirements, thus, once peerage has been erased, a city does not have to demonstrate a good management, especially with reference to public charity.

(6) G. E. Frug, *The city as a legal concept*, in *Harvard Law Review* 1980, 93:6, 1081.

(7) G. V. Fuguitt, *The city and countryside*, in *Rural Sociology* 1963, 28:3, 246 ff.

(8) R. Cavallo-Perin, Conference "Cities in administrative law", Campus Luigi Einaudi, Torino, 24th Apr. 2013, in honour of J.-B. Auby and his book *Droit de la ville* (J.-B. Auby, *Droit de la ville. Du fonctionnement juridique des villes au droit à la ville*, LexisNexis, 2^e éd. 2016).

(9) The digital infrastructure of Smart Cities can become more important than the physical one: J.-B. Auby, Conference "Smart cities: l'innovazione nelle prossime città", cit. – M. Castells, *The rise of the network society*, Oxford, Blackwell, 1996, *passim*.

(10) B. Derudder, 2006, *On conceptual confusion in empirical analyses of a transnational urban network*, in *Urban studies*, 43, 2027-2046.

(11) S. Romano, *The legal order*, Routledge, 2017, *passim*. – R. Cavallo Perin, *Organization of Public Administrations between Nation State and European integration*, in Id. – A. Police and F. Saitta (eds.), *150 years after Administrative Unification in Italy*, forthcoming. – G. M. Racca and R. Cavallo Perin, *Plurality and diversity of Integration models: the Italian unification of 1865 and the European Union ongoing Integration process*, in D. Sorace and L. Ferrara, *The Changing Administrative Law of an EU member state. The Italian case*, forthcoming.

(12) See J. Cobbe and J. Morison, *Understanding the Smart City: Framing the Challenges for Law and Good Governance* (June 31, 2018) in E. Slautsky (ed.), *The Conclusions of the Chaire Mutations de l'Action Publique et du Droit Public*, Sciences Po, June 2018. – R. P. Dameri and F. Ricciardi, *Smart city intellectual capital: an emerging view of territorial systems innovation management*, in *Journal of Intellectual Capital* 2015, vol. 16, Issue: 4, 860-887.

(13) The distinction between control and consent is important to several recent initiatives toward the creation of smart cities. For instance, pervasive interlinking of surveillance, computational processing, and virtual databases into the physical structure of cities is only legitimate if citizens can, both politically and in individual encounters, be said to have "consented" to it. But when that consent is remote or indirect, its force, validity, and scope should be vitiated. Internet "terms of service" are the ideal-type of desiccated, hollow, pro forma "consent" that is better termed obeisance, acquiescence, or learned helplessness. Thus, the overall pattern of relationships in the smart city results in a seamless "spectrum of control," with meritorious or merely creepy technologies directly imbricated with deeply disturbing ones. J. Sadowski and F. A. Pasquale, *The Spectrum of Control: A Social Theory of the Smart City* (August 31, 2015), in *First Monday*, vol. 20, No. 7, July 2015, 8.

(14) Cf. S. Bolognini, *Il paradigma smart city e le sue evoluzioni: strumento di governance?*, in G. F. Ferrari (ed.), *La prossima città*, Milano-Udine, 2017, 181 ff.

(15) J. Moison, *Algorithmic governance in the smart city: the end of politics and the beginning of a new governmentality?*, workshop in the conference *The future of administrative law*, Paris, June 21st and 22nd, 2018. – A. Papa, *Smart city and open government data*, in G. Olivieri and V. Falce (eds.), *Smart cities e diritto dell'innovazione*, Giuffrè, Milano, 2016, p. 21-393. – T. Frevert, O. Wagner, *Rechtliche Rahmenbedingungen behördlicher Internetauftritte*, in *Neue Z Verwaltungsrecht* 2, 2011, 76-82.

(16) J. Morison, *Algorithmic governance*, cit. – A. Preta, P. Peng, *Digital economy e web 3.0*, in G. Olivieri and V. Falce (eds.), *Smart cities*, cit., 89-102.

respond to predictions through data flows that provide evidence and take actual choices made by individuals into account once are recorded into huge data sets. Such an evolution may lead to a new form of government implying the disappearance of consultation and politics or, in other words, a government without politics.⁽¹⁷⁾ Yet, part of what concerns public administration today may be decided by computers in tomorrow's smart cities: a new belief in technology is emerging, and with it many new challenges that could make hearing and consultation procedures irrelevant. More particularly, it will be possible to replace traditional information take-over by means of machine learning techniques involving advanced algorithms to interrogate *data* and map the relevant connections.⁽¹⁸⁾

There are three main changing governance paradigms that shape the landscape of citizen-administration relationships. Firstly, the bureaucratic paradigm concerning the impartial application of rules and regulations by the public administration. Secondly, the consumerist paradigm related to the provisions on public services oriented to fulfilling the citizens' needs. Finally, the participation paradigm as a means of sharing responsibility between citizens and public administration for policy and service processes.⁽¹⁹⁾ Again, legitimation problems arising in connection with the automated issue of administrative acts should pass through many questions in terms of participation, transparency, and openness. The democratic legitimacy of municipalities requires redesigning the participatory processes in order to foster community engagement and make citizenry the architect of collective life. Within such a process, the smart city can contribute offering one of the most striking examples of data processing to be undertaken as an ordinary and necessary activity while developing a bottom-up process that has to be transparent.⁽²⁰⁾

Considering the link between participation and the use of IT tools, particularly for urban management, a new practice suitable for nurturing civic engagement is emerging: gamification.⁽²¹⁾ Gamified policy-making represents an attempt by local administrations to attract citizenry into public life and make decision-making more participatory.⁽²²⁾ In combination with the right policy tools and cautionary approaches, gamification could also help local administrators achieve concrete changes in contemporary democratic systems.⁽²³⁾

(17) J. Morison, *Algorithmic governance*, cit.

(18) "With the risks evidenced in S. Zuboff, *The Age of Surveillance Capitalism: The fight for a Human Future at the New Frontier of Power*, Hardcover, 2019; P.D. König, *Algorithmen und die Verwaltung sozialer Komplexität*, in *Zeitschrift für Politikwissenschaft* 2018, 28: 3, 289 ff.

(19) E. Tranos, D. Gertner, *Smart networked cities?*, in *Innovation: The European Journal of Social Sciences* 2012, 175-190.

(20) J. Morison, *Citizen participation: A critical look at the democratic adequacy of government consultations*, in *Oxford Journal of Legal Studies* 2017, 37(3), 641 ff.

(21) G. Sgueo, *Is Gamification Making Cities Smarter?*, in *Ius Publicum Network Review*, 2018. – Id., 'Major for a day'. *Is Gamified Urban Management The Way Forward?*, workshop in the conference *The future of administrative law*, Paris, June 21st and 22nd, 2018.

(22) G. Viale Pereira, M. A. Cunha, T. J. Lampoltshammer et al., *Increasing collaboration and participation in smart city governance: a cross-case analysis of smart city initiatives*, in *Information Technology for Development* 2018, 23:3, 526-553. – J. Cechanowicz, C. Gutwin, B. Brownell et al., *Effects of gamification on participation and data quality in a real-world market research domain*, proceedings of the *First International Conference on gameful design, research, and applications*, 2 Oct. 2013, 58-65.

(23) See: G. Sgueo, *Gamification, powers and democracies*, Bocconi University Press, 2018; see also A. Uskov and B. Sekar, *Smart gamification and smart serious games*, in D. Sharma, M. Favorskaya et al. (eds.), *Fusion of Smart, Multimedia and Computer Gaming Technologies*, Springer, 2015.

Gamification, however, is not the only example of how IT tools can influence the concept of smart city. Since city smartness can be associated with "greater effectiveness" in managing urban issues, the citizens' participation in democracy should tie in with simplified transparency through machine learning.

The principle of transparent information in the public sector refers to the universal availability of data, and requires that a constrained decision taken by a machine allows everybody to open and control it at all times. Moreover, modern machine learning techniques require large amounts of data to create reliable and secure Artificial Intelligences (AI)⁽²⁴⁾ representing an advantage in terms of competitiveness both in the economic and commercial sectors, since their circulation makes it possible to maximise economic and social values.⁽²⁵⁾ AI may allow us to develop a wealth of information and share best practices so as to ensure greater professionalism in the public sector while boosting service quality and efficiency.⁽²⁶⁾ Public interest, therefore could be pursued more successfully if Public Administrations acted as a producer, buyer, and/or user of AI.⁽²⁷⁾

All this considered, using a variety of IT tools may help public administration ensure legality whilst gamified policy-making may be a tool to engage disillusioned and disenfranchised citizenry in public life, thus ultimately make decision-making more participatory. Municipality delegitimation requires redesigning participatory processes and making them more appealing in order to foster community engagement while counteracting a decline in trust in the public administration. That way, citizens may become the makers of their collective life, thus transcend ordinary roles in society.⁽²⁸⁾ Such an involvement, however is yet very limited and might be overestimated.

Decisions are legitimized as far as they produce results resulting from *ex ante* solutions as well as *ex post* experiments. The results of those experiments should be confirmed by data analysis, and used as a basis for discussion amongst institutions. These may thus pursue innovation, and adopt new solutions that appear to be sustainable in terms of quantity or compatibility with the history of those very institutions, thus suitable.⁽²⁹⁾

(24) Cf. C. Djéffal, *Normative Guidelines for Artificial Intelligence*, in T. Wischmeyer and T. Rademacher (eds.), *Regulating Artificial Intelligence*, Wien, Berlin, New York, 2019, forthcoming.

(25) One of the aims that has to be considered is to allow France and the European States to act as a competitive interlocutor towards the two foreign giants, strongly affirmed on the world scene that are the United States and China and the emerging States in matter, Israel, Canada and the United Kingdom. France rests on a world-wide industrial fabric and has excellent research and training centers, has a multitude of nascent startups and lots of data. See C. "Villani, *Donner un sens à l'intelligence artificielle. Pour une stratégie nationale et européenne*, 28th March 2018, France, 45 ff.

(26) J. Cechanowicz, C. Gutwin, B. Brownell et al., *Effects of gamification on participation and data quality*, cit., p. 58. – Y. Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom*, Yale UP, 2006.

(27) See A. Tanda and A. De Marco, *Drivers of Public Demand of Enabled Smart City Services: A Regional Analysis*, in *Journal of Urban Technology* 2018, 25:4, 77-94. – T. Theurl and E. Meyer, *Digitalisierung und MemberValue*, in C. Bär, T. Grädler and R. Mayr (eds.), *Digitalisierung im Spannungsfeld von Politik, Wirtschaft, Wissenschaft und Recht*, Springer Gabler, Berlin, Heidelberg, 2018, 299-311; see also G. M. Racca, *The role of IT solutions in the award and execution of public procurement below threshold and list B services: overcoming e-barriers*, in D. Dragos and R. Caranta (eds.), *Outside the EU Procurement Directives - Inside the Treaty?*, *European Procurement Law Series*, vol. 4, Djøf Publishing, Copenhagen, 2012, 382-383.

(28) G. Sgueo, cit.

(29) J.-B. Auby, *Public Contracts and Smart Cities*, in G. M. Racca and C. R. Yukins (eds.), *Joint Public Procurement and Innovation: Lessons Across Borders*, Bruylant, 2019, forthcoming. – G. F. Ferrari, *Smartness and the Cities*, in G. M. Racca, C. R. Yukins (eds.), cit.

As already mentioned, it is likely that the future of administrative law will echo the future of smart cities and their challenges in years to come. Thus, it is time to look more thoroughly into the European context in order to understand whether smart cities may actually become constitutive elements of the European Union. Also, it may be worth wondering whether networks and advanced forms of cooperation among European Smart Cities may have a crucial role in the EU integration process.⁽³⁰⁾

Finding an answer to those questions entails facing institutional challenges. Indeed, the future relationships between Rome, Paris, Berlin and other capital cities may develop as long as their administrative system drives the European integration process.⁽³¹⁾ It is worth wondering how the relationships between cities may develop following a particular logic of representation, administration and fluxes – as opposed to the more traditional and homogeneous territorial logic, going from the small to the big scale – and therefore based on a new paradigm of mutual influence.⁽³²⁾

Another peculiar aspect to consider is a different relation between the city and the countryside as far as the EU is concerned. Unlike in other parts of the world, the urban-and-rural binary opposite has never been so marked there. In Europe in fact, cities have always had a relationship with the countryside while in the United States and in Eastern countries the contrast between urban and rural areas is more evident. From an institutional standpoint, such a peculiarity of Europe is very interesting.

In Europe, the countryside is not in opposition to its neighbouring cities, which it serves and supports. Such a notion of the countryside does not fully coincide with the idea of territory. Today, the city prevails because of its hegemony over the countryside, but steps forward to a fairer relationship may be taken by carrying out the aforementioned analysis of fluxes under an algorithmic analysis of new phenomena.

The city has actually become a network of relationships transport route, and fluxes, all of which have opened way to overcoming distances between urban and rural areas so as to ensure territorial continuity as well service proving.

Another issue to be discussed is individual freedom, collective interest, and public interest. It has long been argued that individual freedom should prevail over collective responsibility. Owing to the scarcity of natural resources and climate change issues, individual freedom (once regarded as a result of economic growth)

(30) R. Cavallo Perin, *L'organizzazione delle pubbliche amministrazioni e l'integrazione europea*, in R. Cavallo Perin, A. Police and F. Saitta (eds.), *L'organizzazione delle pubbliche amministrazioni tra stato nazionale e integrazione europea*, vol. I, in L. Ferrara and D. Sorace (eds.), *A 150 anni dall'unificazione amministrativa italiana – studi*, Firenze University Press, 2016, 3-36. Cfr. E. Tati, *Cities as actors in the EU integration process. The case of Sustainable Urban Mobility Plan*, workshop in the conference *The future of administrative law*, Paris, June 21st and 22nd, 2018. – S. De Falco, *Are smart cities global cities? A European perspective*, in *European Planning Studies* 2019, 27:4, 759-783. – G. Marinoni, *Forme di smart cities*, in G. F. Ferrari (ed.), *La prossima città*, Milano-Udine, 2017, pp. 81-96; see also *Urban Agenda for the EU 'Pact of Amsterdam'*, Agreed at the Informal Meeting of EU Ministers Responsible for Urban Matters on 30 May 2016 in Amsterdam, Netherlands.

(31) G. M. Racca and R. Cavallo Perin, *Plurality and diversity of Integration models: the Italian unification of 1865 and the European Union ongoing Integration process*, in D. Sorace and L. Ferrara, cit.

(32) See the communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *The urban dimension of EU policies – Key features of an EU urban Agenda*. Cfr. A. Argentati and N. Cusumano, *Horizon 20: The EU Framework Programme for Research and Innovation*, in V. Vecchi et al. (eds.), *Finanziamenti comunitari 2014-2020. Strategia, gestione e rendicontazione*, Milan, 2015, 43-59.

is now facing a crisis because the idea that it should prevail over collective interest has been questioned. In a smart city development perspective, the collective dimension appears to be essential and prevailing, whereby the limitation of individual freedom is regarded as a “smart” measure to adopt when necessary. For instance, collective interest prevails over individual freedom, limits on which are generally accepted when it comes to waste disposal, car access to the city centre, and other circumstances.⁽³³⁾ Smartness thus implies that each individual has to renounce to the “paradox of excessive freedom” and accept some restrictions.

Lastly, as already recalled, the evolution of the legitimacy dialectic within smart cities has worsened the crisis of traditional legitimation schemes and driven a paradigm-shift. As a result, the pivotal legitimation factor now lies upon the effective fulfilment of demands arising from the citizenry, no longer regarded as a community composed of individuals only, but also of different organisations. This interpretation underpins the analysis of what each one of us, not as an individual but as member of an organisation, regards as an adequate solution to meet their needs.

(33) R. Cavallo Perin, *Organization of Public Administrations between Nation State and European integration*, in Id. – A. Police and F. Saitta (eds.), cit. – Cf. A. Castro Lundin, A. Ozkil and J. Schuldt-Jensen, *Smart cities: A case study in waste monitoring and management*, in *Proceedings of the 50th Hawaii International Conference on System Sciences*, 2017, 1392 ff.